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ANDREW BEAUMONT | MEREDITH FETTLING | FIONA ALDERSON
LISA O'HALLORAN | KIM WESTON

JACARANDA KEY CONCEPTS IN VCE

HEALTH & HUMAN DEVELOPMENT 1&2

SIXTH EDITION | UNITS

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Jacaranda Key Concepts in VCE Health and Human Development provides students and teachers with the most comprehensive resource on the market. Not only is it explicitly aligned to the Study Design, it is a suite of engaging and purposeful resources.

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Jacaranda Key Concepts in VCE Health and Human Development comes in the following formats:

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Fully aligned to the VCE Health and Human Development Study Design

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- key knowledge and skills stated at the start of each topic
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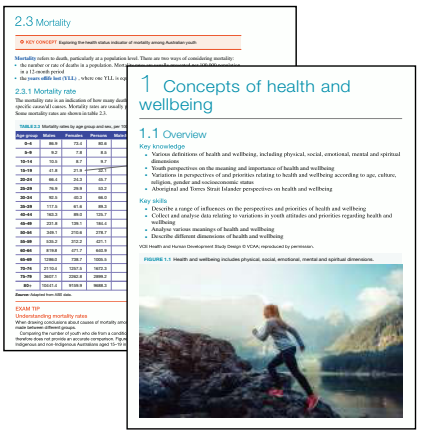

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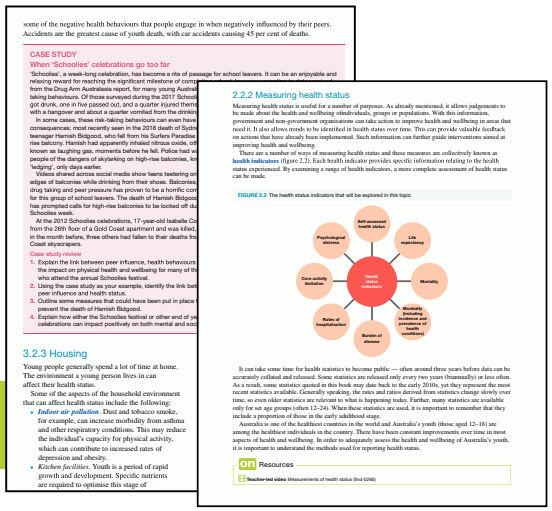

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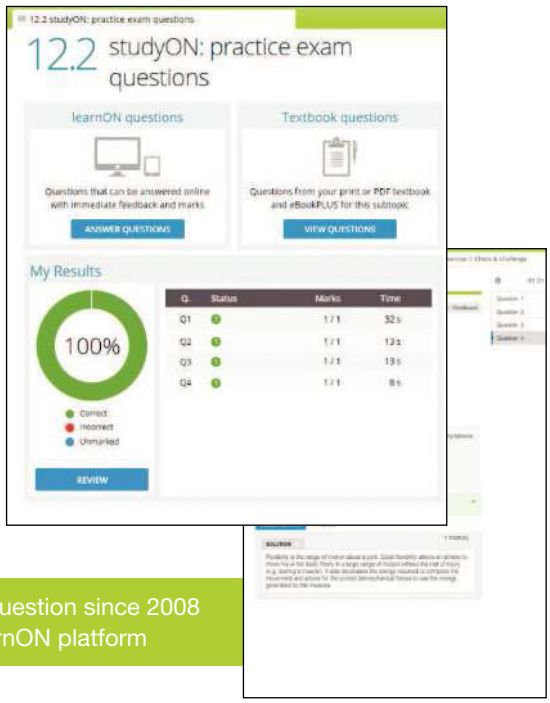

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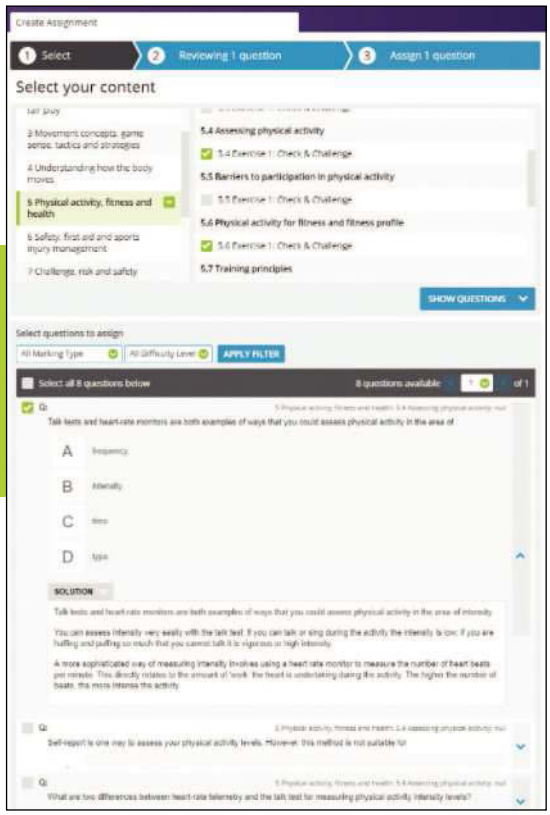

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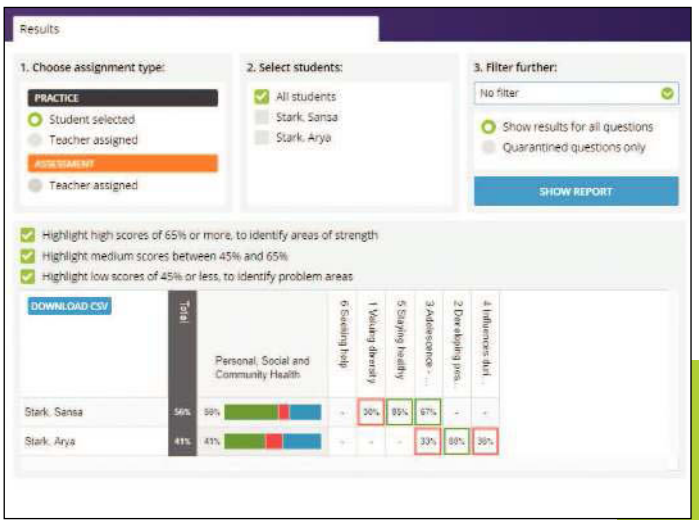

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UNIT 1 UNDERSTANDING HEALTH AND WELLBEING

AREA OF STUDY 1

Health perspectives and influences

OUTCOME 1

Explain multiple dimensions of health and wellbeing, explain indicators used to measure health status and analyse factors that contribute to variations in health status of youth

AREA OF STUDY 2

Health and nutrition

OUTCOME 2

Apply nutrition knowledge and tools to the selection of food and the evaluation of nutrition information

AREA OF STUDY 3

Youth health and wellbeing

OUTCOME 3

Interpret data to identify key areas for improving youth health and wellbeing, and plan for action by analysing one particular area in detail

1 Concepts of health and wellbeing

1.1 Overview

Key knowledge

- Various definitions of health and wellbeing, including physical, social, emotional, mental and spiritual dimensions
- Youth perspectives on the meaning and importance of health and wellbeing
- Variations in perspectives of and priorities relating to health and wellbeing according to age, culture, religion, gender and socioeconomic status
- Aboriginal and Torres Strait Islander perspectives on health and wellbeing

Key skills

- Describe a range of influences on the perspectives and priorities of health and wellbeing
- Collect and analyse data relating to variations in youth attitudes and priorities regarding health and wellbeing
- Analyse various meanings of health and wellbeing
- Describe different dimensions of health and wellbeing

FIGURE 1.1 Health and wellbeing includes physical, social, emotional, mental and spiritual dimensions.

KEY TERMS

Acupuncture a form of alternative medicine in which thin needles are inserted into the body. It is a key component of traditional Chinese medicine.

Ayurveda holistic Hindu science of health and medicine which sees physical wellbeing as being intertwined with emotional and spiritual wellbeing as well as the universe as a whole. Treatments include yoga, meditation, diet and herbal medicines.

Cognitive the mental action or process of acquiring knowledge and understanding through thought, experience and the senses

Dynamic continually changing

Emotional health and wellbeing relates to the ability to express feelings in a positive way. It is about the positive management and expression of emotional activities and reactions, as well as the ability to display resilience. Emotional health and wellbeing is the degree to which an individual feels emotionally secure and relaxed in everyday life.

Emotional intelligence an individual's ability to recognise and respond to either their own or others' emotions

Health a state of complete physical, mental and social wellbeing; it is not merely the absence of disease or infirmity

Health and wellbeing the state of a person's physical, social, emotional, mental and spiritual existence, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged

Infirmity the quality or state of being weak or ill; often associated with old age

Karma the spiritual principle of cause and effect whereby the intent and actions of an individual (cause) influence the future of that individual (effect)

Mental health and wellbeing relates to the current state of wellbeing relating to a person's mind or brain and the ability to think and process information. A mentally healthy brain enables an individual to positively form opinions, make decisions and use logic.

Nirvana a place of peace and happiness, where suffering is removed. In Buddhism nirvana means the cycle of rebirth has ceased, whereas in Hinduism the soul has been absorbed into the higher power of Brahman.

Physical health and wellbeing relates to the functioning of the body and its systems; it includes the physical capacity to perform daily activities or tasks

Self-disclosure the process of communication by which one person reveals information about themselves to another. This can be in the form of feelings, thoughts, fears, likes and dislikes.

Self-esteem reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgement of oneself as well as an attitude toward the self.

Social health and wellbeing relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations. It also includes the level of support provided by family and within a community to ensure that every person has equal opportunity to function as a contributing member of the society.

Spiritual health and wellbeing relates to ideas, beliefs, values and ethics that arise in the mind and conscience of human beings. It includes the concepts of hope, peace, a guiding sense of meaning or value, and reflection on your place in the world.

Subjective wellbeing refers to how people experience the quality of their lives and includes both how they feel about their lives and what they think about their own personal circumstances

Supernatural phenomena includes all that cannot be explained by science or the laws of nature, including things characteristic of or relating to gods, ghosts or other supernatural beings, or to things beyond nature

Wellbeing a complex combination of all dimensions of health, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0015).

1.2 Health and wellbeing

KEY CONCEPT Understanding the concepts and definitions of health and wellbeing

Understanding the concept of **health and wellbeing** is important for gaining an accurate knowledge of Australians' level of health and wellbeing. This understanding allows areas for improvement to be identified and targeted. A deeper understanding of health and wellbeing also allows us to make predictions about the likely effect that introduced strategies will have on the health and wellbeing of individuals.

on Resources

Teacher-led video What is health and wellbeing? (tlvd-0270)

1.2.1 Defining health and wellbeing

Health and wellbeing, although two separate terms, are now more commonly considered together as one concept. Their individual definitions are explored in this section, and will help explain the overall meaning of the terms when used together.

There has been ongoing debate about the meaning of the word **health** since the first commonly accepted definition was released by the World Health Organization (WHO) in 1946. It states that 'health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'.

FIGURE 1.2 Yoga is an activity that combines all dimensions of health and wellbeing, including the emotional and spiritual dimensions.

This definition is the one most commonly used by health professionals to define health. The 1946 WHO definition was the first to consider health as being more than just the physical aspects, and recognises the other dimensions of health — social and mental. Using such a broad definition to make a judgement about whether a person is healthy or not can be difficult (see figure 1.3). Although it has moved beyond disease and **infirmity**, it does not give everyone the opportunity to be considered healthy. For example, trying to achieve 'complete' wellbeing in even one of the dimensions identified is difficult. Some have argued that this definition makes good health unattainable for most people.

In 1986, the WHO clarified this definition of health as 'a resource for everyday life, not the objective of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities'. With this in mind, the definition of health becomes more inclusive and more achievable. The focus on personal resources and physical capacities means that health is dependent on an individual's own situation. A person can be considered healthy even if they do not have 'complete' wellbeing in the dimensions of physical, social and mental health.

FIGURE 1.3 Would this female athlete be considered healthy according to the 1946 WHO definition? Why or why not?

The WHO definition of health makes reference to the concept of **wellbeing**. Wellbeing and health are related, and are often described as how well an individual is living. Wellbeing is strongly linked to all the dimensions of health.

As health and wellbeing are related concepts, they will be considered together as one concept in this topic and throughout this book. Health and wellbeing relates to the state of a person's physical, social, emotional, mental and spiritual wellbeing and is characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged.

An individual's health and wellbeing is constantly changing; therefore, the WHO has used the term 'state' when defining health. Health and wellbeing can be optimal one moment, and then events, such as accidents, illness, relationship breakdowns and stressful incidents, can change a person's state of health and wellbeing quickly. Health and wellbeing can also improve quickly. For example, a person suffering from a migraine can be described as experiencing poor health and wellbeing. However, resting and taking medication may soon restore their health and wellbeing.

FIGURE 1.4 Overall health and wellbeing includes the five dimensions of health, as well as how a person feels about their life.

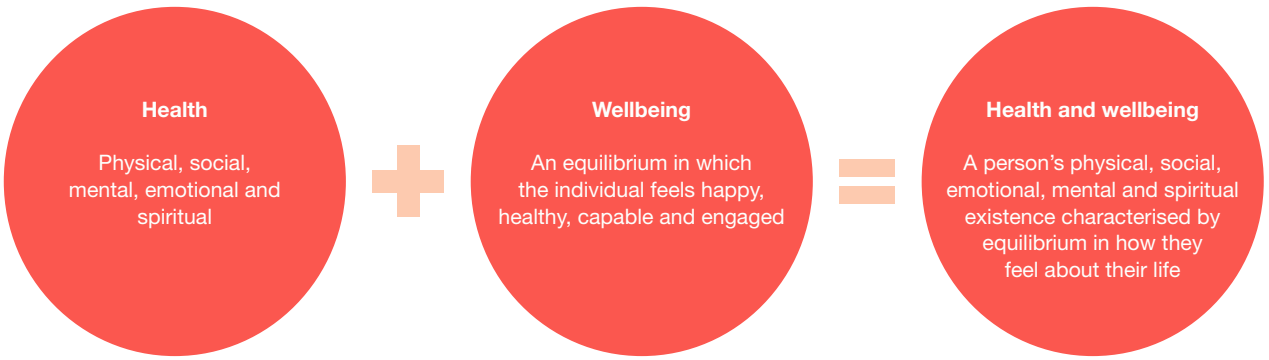


FIGURE 1.5 Factors that influence overall health and wellbeing

There are five different dimensions of health and wellbeing: physical, social, emotional, mental and spiritual. These will be discussed in detail in subsequent sections. However, when people discuss health and wellbeing they are often referring to **physical health and wellbeing** or physical ill health. Although some information is available about social, emotional, mental and spiritual health and wellbeing, physical ill health is generally easier to measure, and has become the main focus of many health and wellbeing statistics. Although the physical aspect of health and wellbeing is important, the other four dimensions should be recognised as equally important aspects of overall health and wellbeing. The Victorian government's Better Health Channel has identified a range of factors that have a major influence on an individual's overall level of health and wellbeing, and which can be seen in figure 1.5.

1.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) What is the 1946 WHO definition of health?
   (b) What would you consider to be a strength of the WHO definition of health?
   (c) What are the limitations of this definition?
2. (a) How did the WHO clarify this definition in 1986?
   (b) How did this change the way we view health?
3. Briefly explain what is meant by the term 'wellbeing'.
4. Briefly explain what is meant by the term 'health and wellbeing'.

1.2 Exercise 2 APPLY your knowledge

1. Devise your own definition of health and wellbeing. Share your answer with a partner.
2. Select four of the factors identified in figure 1.5 and identify ways in which they could affect overall health and wellbeing.
3. Choose eight factors from figure 1.5 that you believe are most important to your health and wellbeing.
4. Using an example, demonstrate how health and wellbeing is constantly changing.
5. Think of a person whom you believe has good health and wellbeing. Justify why you chose this person in light of your understanding of health and wellbeing.
6. Think of a person who you would consider to have poor health and wellbeing. Justify why you believe this person experiences this low level of health and wellbeing, referring to as many of the dimensions as possible.

studyON

1.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

1.3 Dimensions of health and wellbeing

KEY CONCEPT Understanding the dimensions of physical, social, mental, emotional and spiritual health and wellbeing

1.3.1 Physical health and wellbeing

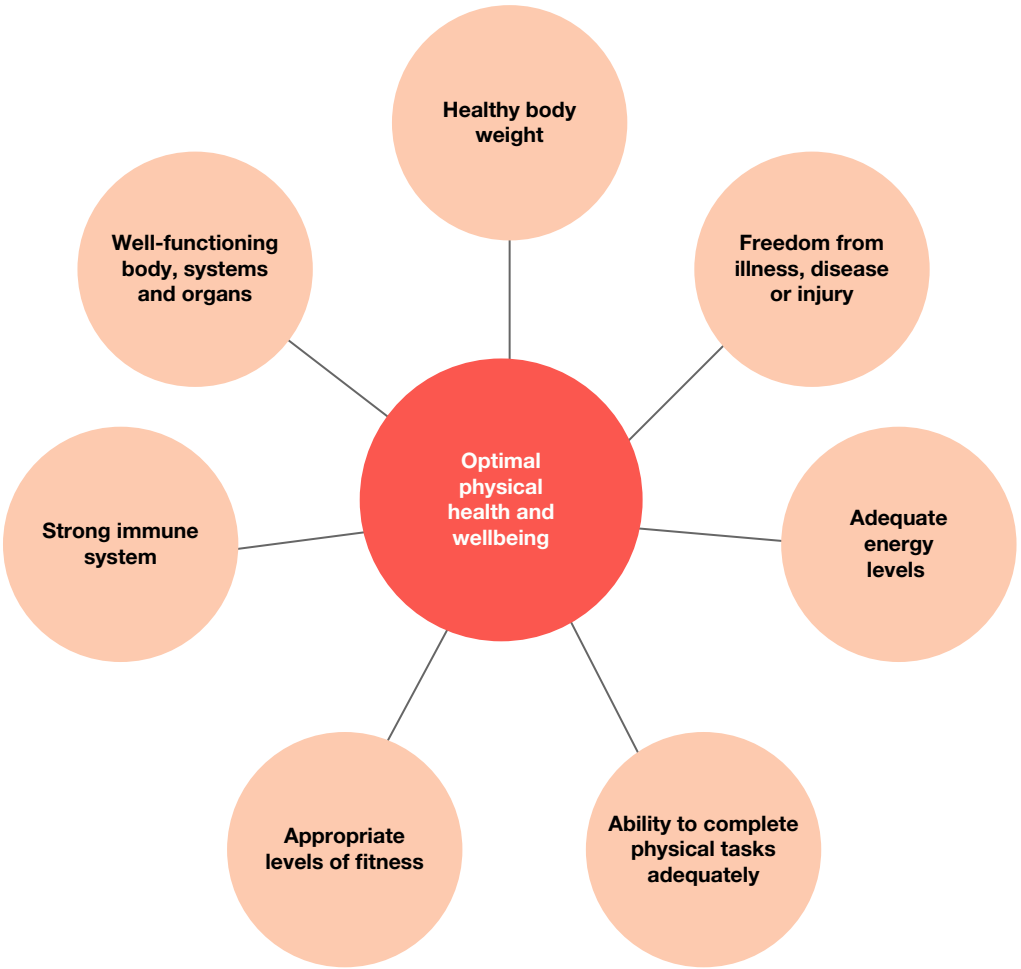
Physical health and wellbeing relates to the functioning of the body and its systems, including the physical capacity to perform daily activities or tasks without physical restriction (VCAA 2017). Most aspects of physical health and wellbeing can be readily observed or measured.

Physical health is supported by factors such as regular physical activity, eating a balanced diet, having enough rest/sleep, maintaining an ideal body weight, adequate energy levels and the absence of illness, disease or injury.

A person who is considered to have good physical health and wellbeing will demonstrate the following measurable physical characteristics or indicators.

- *Appropriate levels of physical fitness.* Regular physical activity ensures appropriate levels of physical fitness, while maintaining and improving physical aspects such as co-ordination, strength and endurance.
- *Healthy body weight.* A person who is physically healthy is an appropriate weight for their height, and is not carrying excess weight.
- *Ability to complete physical tasks adequately.* Appropriate rest and sleep ensure the body is able to function at its peak throughout the day and complete daily activities without fatigue.
- *Strong immune system.* A balanced diet ensures appropriate weight is maintained and assists in preventing other diet-related diseases.
- *Freedom from disease or illness.* A person who is physically healthy will have an immune system that is functioning adequately and capable of resisting infection and disease.

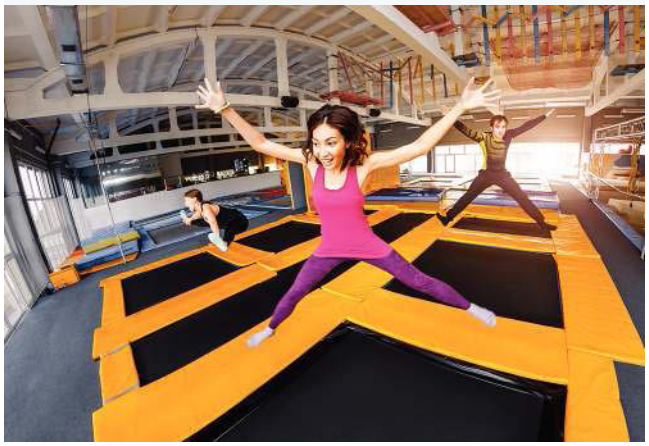
FIGURE 1.6 The characteristics of optimal physical health and wellbeing



Characteristics of physical health and wellbeing that cannot typically be measured include:

- *adequate energy levels.* Physical health and wellbeing includes having enough energy to adequately carry out daily tasks, which might include school activities, socialising and a part-time job. Lack of energy usually means that the individual's body systems are not functioning adequately. This could be a result of many factors, including food intake, exercise levels, illness and stress levels.
- *well-functioning body, systems and organs.* Physical health and wellbeing is ultimately reliant on the functioning of the body's systems. If the systems are functioning adequately, the person will usually display other characteristics of physical health and wellbeing (such as physical fitness, normal blood pressure, blood cholesterol and energy levels, and freedom from disease).

FIGURE 1.7 Physical fitness is an aspect of physical health and wellbeing.



1.3.2 Social health and wellbeing

Interacting with other people is an essential part of being human. **Social health and wellbeing** is concerned with the ability to form meaningful and satisfying relationships with others, as well as the ability to manage or adapt appropriately to different social situations. Someone who is experiencing a good level of social health and wellbeing typically has a good network of friends, and a supportive and understanding family. Social health and wellbeing also includes the level of support provided by family and within a community to ensure that every person has an equal opportunity to function as a contributing member of society.

FIGURE 1.8 University provides a wide variety of new social connections.

Like all dimensions of health and wellbeing, social health and wellbeing is **dynamic**. An individual can have a network of friends and a supportive family until they move away from home. In a new environment, those interactions can become more difficult, and their social health and wellbeing can suffer. However, making friends in their new environment can restore the individual's social health and wellbeing.

A person who is considered to have good social health and wellbeing will demonstrate the following characteristics.

- *Effective communication with others.* Social health and wellbeing includes being able to communicate clearly and appropriately in different situations with different groups of people. To ensure effective conversation, an individual must also possess effective listening skills, which will assist with their communication.
- *Supportive and well functioning family.* A supportive family will provide a positive and safe environment to learn social skills that would be appropriate for a range of different situations, while providing opportunities for varied social interactions.

- *Productive relationships with others.* When an individual experiences positive relationships, they feel safe to openly express their opinions, without fear of judgement. They also display confidence when in social situations, as they gain comfort from those around them.
- *Supportive network of friends.* Supportive friends will encourage an individual in whatever pursuit they choose. They will also encourage each other to take on new challenges, which will further open up the friendship circle and provide opportunities for new relationships to be formed.
- *Ability to manage or adapt appropriately to different social situations.* A person who experiences positive social health and wellbeing possesses the ability to read a social setting and act accordingly. For example, young people will act and communicate very differently around older adults such as their grandparents compared to when they are socialising among school friends.

FIGURE 1.9 The characteristics of optimal social health and wellbeing

1.3.3 Emotional health and wellbeing

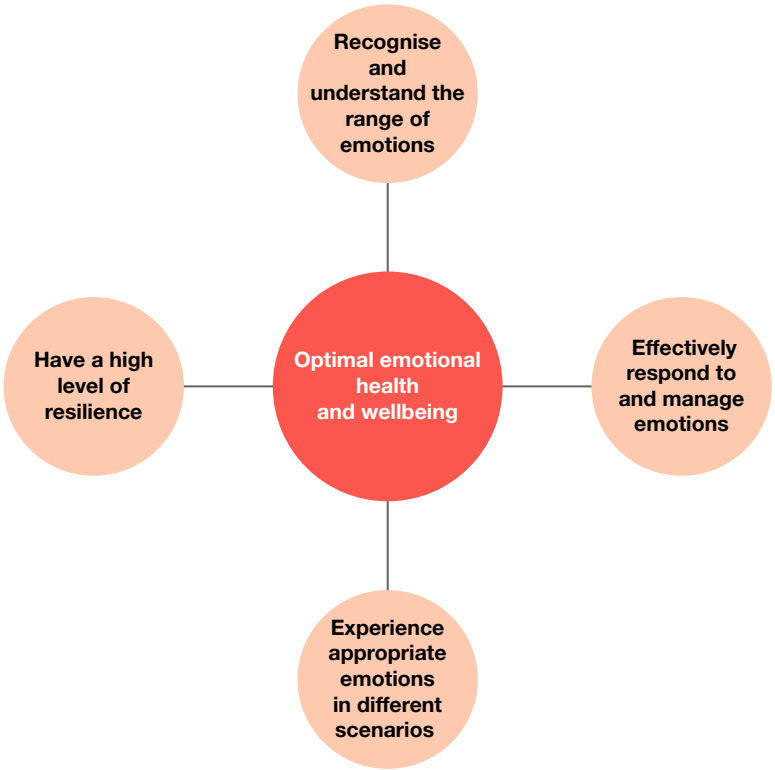
'Emotional health and wellbeing is defined as the ability to express feelings in a positive way. Emotional health is about the positive management and expression of emotional actions and reactions as well as the ability to display resilience. Emotional health is the degree to which you feel emotionally secure and relaxed in everyday life' (VCAA 2017). People who have positive emotional health and wellbeing are usually resilient, and have the ability to recover from events such as illness, change or misfortune. Emotional health and wellbeing is different for all people — for example, a two-year-old child might express a number of different emotions in a very short period. This would be normal for a child, but inapproprate for an adult.

The characteristics of emotional health and wellbeing are shown in figure 1.10.

A person who is considered to have good emotional health and wellbeing will demonstrate the following characteristics.

- *Recognise a range of emotions.* An individual who is emotionally healthy is able to recognise emotions in other people and respond accordingly.
- *Experience appropriate emotions in a given scenario.* A person who is able to recognise a range of emotions can then act accordingly; for example, by displaying a level of empathy to a person who is grieving the loss of a loved one.
- *Adequately respond to, express and manage emotions.* Different situations often result in different emotional outcomes. Emotional control is developed with age; for example, it is quite common for a toddler to throw a tantrum, however this is clearly not appropriate for an adult.
- *Possess the ability to recover from misfortune.* Everyone experiences grief and sadness throughout life; however, those people who manage to recover from grief or misfortune and continue on with their lives can be regarded as experiencing positive emotional health and wellbeing.

FIGURE 1.10 The characteristics of optimal emotional health and wellbeing



Researchers have found that people experience many emotions in their daily lives, and at least one emotion 90 per cent of the time. In a recent study of 11 000 people, which used a smartphone application to track real time emotions, joy was found to be the most frequent emotion experienced. Participants recorded love and anxiety as the next top two emotions (see table 1.1).

According to the study, participants experienced positive emotions 2.5 times more often than negative emotions. Often, emotions are connected. The research found that 33 per cent of the time people experienced multiple emotions at the same time. For example, the event of moving house may evoke feelings of both excitement and anxiety. According to research, embarrassment was one of the few emotions that people often experienced in isolation.

Emotional intelligence is also an important aspect of emotional health and wellbeing; it is an individual's capacity to recognise and respond to either their own or others' emotions. They use this information to guide their thinking and behaviour, and then act according to their environment or the situation around them. The case study below will help explain this concept.

TABLE 1.1 The top emotions experienced by the study participants

Emotion	Percentage
Joy	35
Love	30
Anxiety	29
Satisfaction	27
Alertness	24
Hope	22
Sadness	20
Amusement	16
Pride	13
Disgust	11
Anger	10
Gratitude	9
Guilt	5
Fear	5
Awe	5
Offense	5
Embarrassment	5
Contempt	1
Positive emotion only	41
Negative emotion only	16
Mixed emotion	33
ANY EMOTION	90%

Source: Trampe D, Quoidbach J, Taquet M 2015, 'Emotions in everyday life', *PLoS ONE 10*(12): e0145450. doi:10.1371/journal.pone.0145450.

CASE STUDY

Four signs you have high emotional intelligence

Emotional intelligence can mean the difference between behaving in a socially acceptable way and being considered to be way out of line. While most people will have heard of emotional intelligence, not many people really know how to spot it — in themselves or in others.

Emotional intelligence is essentially the way you perceive, understand, express and manage emotions. And it's important because the more you understand these aspects of yourself, the better your mental health and social behaviour will be.

It might be these are things you do without even really thinking — which can be the case for a lot of people. Or it might be that these are skills you know you need to work on.

Either way, improved emotional intelligence can be very useful in all sorts of circumstances — be it in work, at home, in school, or even when you're just socialising with your friends.

So if you want to know if you're emotionally intelligent, simply check the list below.

1. You think about your reactions

Emotional intelligence can mean the difference between a good reaction and a bad reaction to circumstances. Emotions can contain important information that can be useful to personal and social functioning — but sometimes these emotions can also overwhelm us, and make us act in ways we would rather not.

People who lack emotional intelligence are more likely to just react, without giving themselves the time to weigh up the pros and cons of a situation and really thinking things through.

People who are less able to regulate their negative feelings are also more likely to have difficulty functioning socially — which can exacerbate depressive feelings.

People with major depression have been shown to have difficulties understanding and managing their emotions. And research has also shown that more depressive symptoms are present in people with lower emotional intelligence — even if they are not clinically depressed.

2. You see situations as a challenge

If you are able to recognise negative emotions in yourself and see difficult situations as a challenge — focusing on the positives and persevering — chances are that you've got high emotional intelligence.

Imagine for a moment you lost your job. An emotionally intelligent person might perceive their emotions as cues to take action, both to deal with the challenges and to control their thoughts and feelings.

But someone with poor emotional skills might ruminate on their job loss, come to think of themselves as hopelessly unemployable, and spiral into depression.

3. You can modify your emotions

Of course, there are times when your feelings can get the better of you, but if you are an emotionally intelligent person, it is likely that when this happens you have the skills needed to modify your emotions.

For example, while average levels of anxiety can improve **cognitive** performance — probably by increasing focus and motivation — too much anxiety can block cognitive achievement.

So knowing how to find the sweet spot, between too much and too little anxiety, can be a useful tool.

It is clear that moderation is the key when it comes to managing our emotions. Emotionally intelligent people know this and have the skills to modify their emotions appropriately.

And this is probably why emotional intelligence has been shown to be related to lower levels of anxiety.

4. You can put yourself in other people's shoes

If you are able to extend these skills beyond your own personal functioning, then that's another sign that you have high levels of emotional intelligence.

Emotional intelligence can be particularly important in workplaces that require heavy 'emotional labour' — where workers must manage their emotions according to organisational rules.

This can include customer service jobs, where workers may need to sympathise with customers — despite the fact that customers may be yelling at them.

This is why workplace emotional intelligence training is now common — with the most effective training focusing on management and expression of emotions, which are directly linked to communication and job performance.

It's also worth pointing out that emotional intelligence is a cognitive ability that can improve across your lifespan. So if you haven't recognised much of yourself in the traits listed above, fear not, there's still time for you to work on your emotional intelligence.

Source: Mestre, J & Barchard, K 2017 'Four signs you have high emotional intelligence', *The Conversation*, 12 April, http://theconversation.com/four-signs-you-have-high-emotional-intelligence-71165.

Case study review

1. According to the article, what are the four traits of emotional intelligence?
2. Describe the emotional intelligence traits that are evident or missing in Kate or Jenny in the case study below.

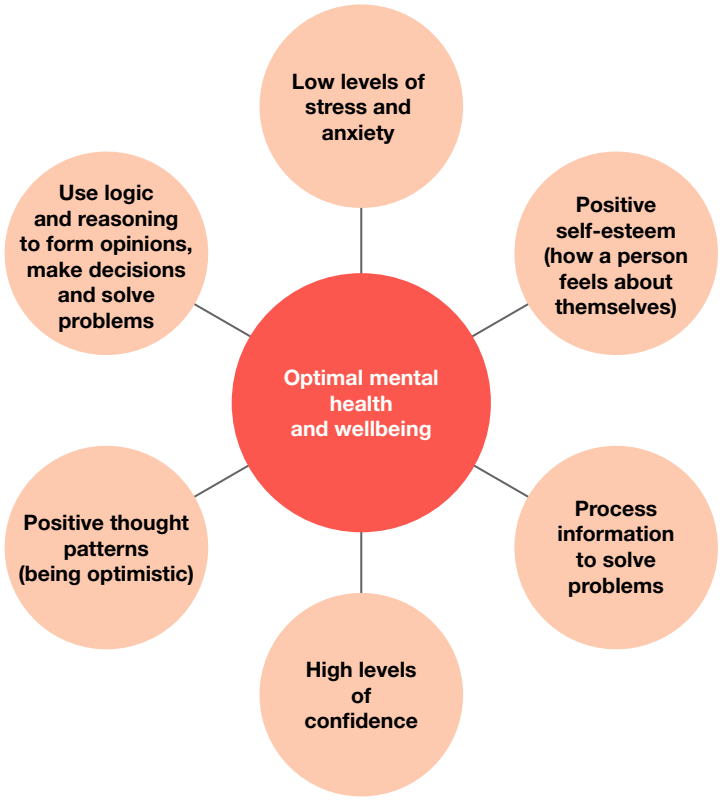
> Jenny and Kate, twin sisters, are both skilled netballers and have made the final trials for the state U17 Victorian Team. On the recent selection day, Jenny was successful and Kate narrowly missed out. Kate is devastated, while Jenny is thrilled but also upset for her sister.

3. Think of a time when you have had to put into practice each of the four traits listed in the article. Which trait do you find the hardest to display? Which trait do you think is the easiest to display? Explain.

1.3.4 Mental health and wellbeing

Mental health and wellbeing refers to the current state of wellbeing relating to the mind or brain and to the ability to think and process information. A mentally healthy brain enables an individual to positively form opinions, make decisions and use logic. Mental health is about the wellness, rather than illness, of the mind. It is associated with low levels of stress and anxiety, positive self-esteem and a sense of confidence and optimism (VCAA 2017) (see figure 1.11).

FIGURE 1.11 The characteristics of optimal mental health and wellbeing



Low levels of stress and anxiety. If a person is feeling stressed, their mental health and wellbeing may be compromised. For example, prior to examinations it is common for negative thoughts to take over the mindset and you may become stressed about what you don't know, instead of staying calm and focusing on all that you do know.

FIGURE 1.12 Relationship break-ups can be detrimental to mental health and wellbeing.

Positive self-esteem. This dimension of health and wellbeing also includes **self-esteem** and confidence. Self-esteem refers to how people feel about themselves. A person with positive self-esteem feels good about themselves. Self-esteem influences behaviour, as people with positive self-esteem are more likely to speak their minds and behave assertively.

Positive thought patterns. Positive thought patterns are also important to achieving mental health and wellbeing. This does not mean looking for the positive in every situation, but instead involves maintaining a realistic, optimistic mindset in the face of challenges. Research has shown that optimistic and hopeful people are mentally and physically healthier than those who have a more pessimistic outlook.

High levels of confidence. Confidence can be defined as believing in one's own worth and ability to succeed. Having confidence helps people to accept challenges, such as volunteering to give a speech, and increases their chances of success because they are not concentrating on failure. Individuals may have different levels of confidence in different aspects of their lives. Although it is based on past experiences, confidence can be affected by factors such as personal appearance or comments made by others.

Mental health and wellbeing is *not* the opposite of mental illness. Mental illness refers to specific, diagnosable mental disorders that affect only some people. Every person, on the other hand, experiences a level of mental health and wellbeing that can vary from day to day. Mental health and wellbeing can be affected by life events, such as breaking up with a partner or experiencing the death of a family member or friend.

WHAT IS THE DIFFERENCE BETWEEN MENTAL AND EMOTIONAL HEALTH AND WELLBEING?

Mental and emotional health and wellbeing are interrelated; however, they are not the same. Mental health and wellbeing is the ability to think and process information. It also relates to how an individual expresses their thoughts and responds to situations. Emotional health and wellbeing relates to how we express and manage our emotions.

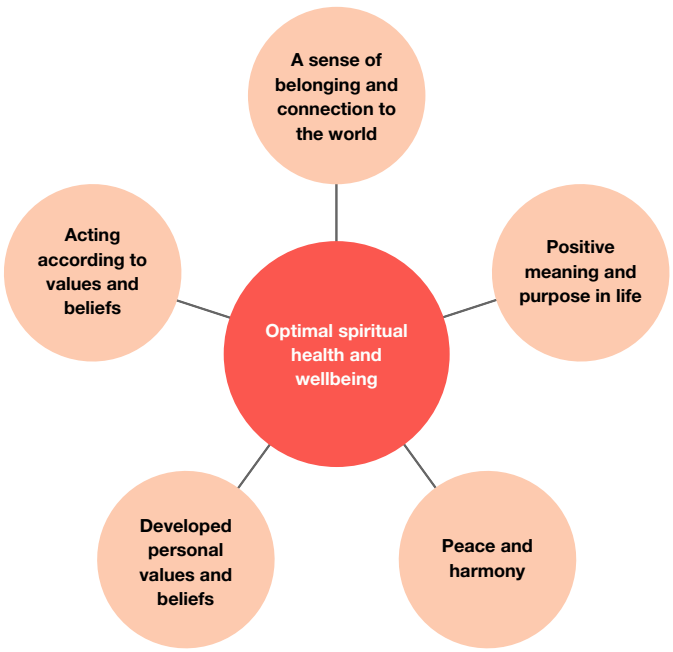
Exams can affect a student's mental health and wellbeing by raising levels of anxiety and stress. How each student manages their emotions to cope with levels of stress and anxiety is an example of emotional health and wellbeing.

An emotionally healthy student is able to recognise emotions that contribute to stress, such as fear and worry, and plan accordingly; whereas a student who is emotionally unhealthy might be unable to manage their emotions and remain in a state of ongoing distress throughout the entire exam period.

1.3.5 Spiritual health and wellbeing

Spiritual health and wellbeing can be defined as ideas, beliefs, values and ethics that arise in the mind and conscience of human beings. It includes the concepts of hope, peace, a guiding sense of meaning or value, and reflection on a person's place in the world. Spiritual health and wellbeing can also relate to organised religion, a higher power and prayer, values, a sense of purpose in life, connection or belonging (VCAA 2017) (see figure 1.13).

FIGURE 1.13 The characteristics of optimal spiritual health and wellbeing

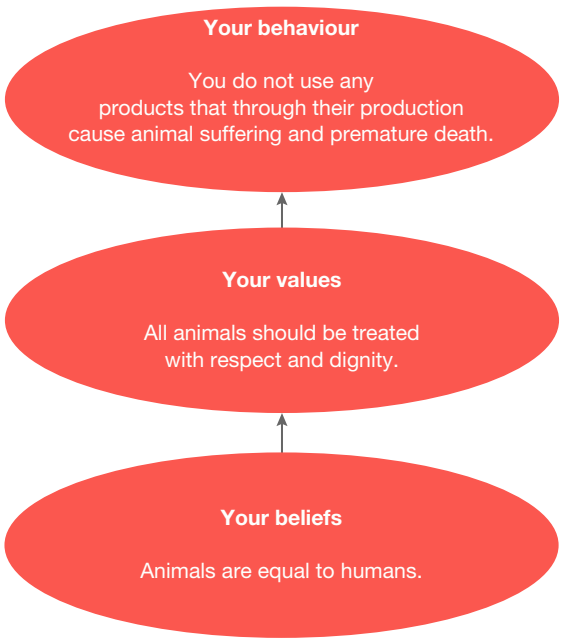


Sense of belonging. A positive sense of belonging is an important human need. When a person has a positive sense of belonging, they feel part of the society in which they live. Through this sense of belonging, people can realise their own self-worth and are therefore more likely to have positive self-esteem (which relates to mental health and wellbeing). When an individual feels they belong, they are more likely to find support in challenging times and often are able to view such challenges in a positive rather than a negative light. People may belong to many different types of groups, such as sporting, friendship, workplace, school, religious and, of course, family groups. Through these groups, people feel connected to their community. Having a feeling of belonging through being connected to others in either formal or informal groups can be a protective factor against mental disorders.

Acting according to values and beliefs. Values and beliefs start to be developed during childhood, and are shaped initially by an individual's parents. Values relate to what a person thinks is important in life and are used to justify their actions. Beliefs refer to what an individual believes to be true and right, and are often derived from their experiences. Beliefs change as new experiences arise and challenge existing beliefs.

Both values and beliefs influence an individual's behaviours and choices. For example, a person who is a strong advocate of animal rights and the environment may choose to become a vegetarian, and an individual who values physical fitness will be less inclined to misuse drugs and alcohol. Refer to figure 1.14 to see an example of how beliefs influence values and values influence behaviours.

FIGURE 1.14 Beliefs form a person's values and values inform behaviours.



Having meaning and purpose in life. Finding meaning and purpose in life is a key aspect to achieving spiritual health and wellbeing. A person who lives their life according to their values and beliefs can be said to be experiencing a meaningful life. People can often find meaning in life when they have a strong sense of belonging and feel they are contributing positively to society. This can be through relationships with family and friends, or through work or other community activities, such as volunteering.

Experiencing peace and harmony. Many people associate spiritual health and wellbeing with religion and prayer, as it provides an organised form of spirituality. However, those people who are not connected to any particular religion can experience spirituality through different experiences, such as through affirmations, yoga and meditation. People can experience a state of peace and harmony when they have positive spiritual health and wellbeing. An example is when we realise that we cannot control everything that happens in our lives, and look for the positive aspects in difficult situations.

FIGURE 1.15 Meditation promotes peace and harmony and, therefore, spiritual health and wellbeing.

CASE STUDY

'Life has thrown me a curve ball'

Beau Vernon: Possibilities, not disability, after life-changing accident

FIGURE 1.16 Beau Vernon (a) on the field for Leongatha Football Club and (b) in hospital after the accident

'On June 23rd 2012, my life changed forever.'

Beau Vernon hasn't forgotten the feeling of lying on the ground in his Leongatha jumper after being knocked in the head while reaching down for a ball, as he had done so many times before.

It was a standard bump that happens all the time in AFL, however it left the star midfielder with C5-C6 quadriplegia. In an instant, he went from a 23-year-old who never sat still, to facing the prospect of spending his life in a wheelchair. Beau spent the next eight months in a rehabilitation centre strengthening the muscles that still worked and learning how to adapt to life in a wheelchair; a scary concept for a young man who earlier had quit his commerce degree as he couldn't stand the thought of sitting down all day. But Beau does not let his disability define him. It has been his positivity when faced with adversity that has caught the attention and admiration of the football and wider community.

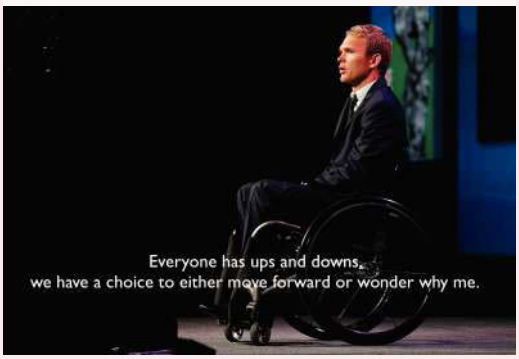
From very early days in his rehabilitation, his resilience shone through. He remained strong from the start. For the first three weeks he couldn't talk, eat or breathe on his own, yet when he woke from an induced coma, he was simply happy to be alive. Ever since, he has been looking for the positives in the situation instead of pondering 'why me?'. Beau has always been a goal-setter, and now more than ever it was these goals and the support of his family and friends that kept him motivated. Even though he has no movement in his fingers, stomach, back, chest muscles and legs, Beau was determined to be independent and not be reliant on a carer. He therefore had to overcome many challenges. One of these was to dress himself, a task that at first would take half a day, yet now takes only a few minutes. He can also drive himself and move in and out of his wheelchair in a matter of minutes. Beau's never give up attitude has seen him become a successful motivational speaker and in 2015 he delivered the opening address at the AFL season launch.

In 2015, three years after his injury, he took on the role of senior coach of Leongatha Football Club. Under his direction, the club won the flag in 2017 and in 2018 he moved across to coach Phillip Island, leading them to a convincing premiership in his first season.

Beau is now working for the AFL in risk management and is completing a business degree at university. He is also the national champion in hand cycling.

A message that Beau lives by is not to take things for granted and to appreciate what you have. 'How can I be happy despite being in a situation that I absolutely hate? I have discovered there are a number of reasons and one of these is being grateful for what you have got. I try to put myself in other people's shoes and say, "I am lucky compared to many".' Beau now lives in Melbourne with his wife, Lucy, and two children.

FIGURE 1.17 Beau addressing an audience in his role as a motivational speaker



Case study review

1. How has the accident impacted Beau's physical health and wellbeing?
2. Beau's strength in adversity has captured the attention of the football and wider community. Which dimension of health and wellbeing does this represent and why?
3. Health and wellbeing is said to be 'dynamic'. Identify an example of this in the case study.
4. What is a key message that is learnt through Beau's story? Share with a partner.

on Resources

Weblink Beau Vernon — making the most of it

EXAM TIP

If asked to describe a dimension of health and wellbeing, make sure you include examples of the characteristics of this dimension in your explanation. If the question is about describing spiritual health and wellbeing, an example such as a sense of belonging or peace and harmony would be appropriate.

1.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Define the five dimensions of health and wellbeing and give two characteristics that relate to each.
2. Classify the following as examples of physical, social, emotional, mental or spiritual health and wellbeing.
   (a) Having a sense of belonging
   (b) Having good fitness levels
   (c) Displaying positive thought patterns
   (d) Experiencing appropriate emotions in a given scenario

(e) Having a supportive network of friends
(f) Demonstrating high levels of confidence
(g) Engaging in effective communication with others
(h) Acting according to values and beliefs
(i) Maintaining a healthy body weight
(j) Managing emotions appropriately

3. Explain the term 'emotional intelligence'.
4. According to the information shown in table 1.1, what are the three most common emotions experienced?
5. Apart from practising a religion, what are some other ways that people can develop their spiritual health and wellbeing?
6. Which dimension of health and wellbeing is usually the focus of health statistics? Explain why.

1.3 Exercise 2 APPLY your knowledge

1. Explain how you think effective communication with others, and a supportive network of friends and family, contributes to social health and wellbeing.
2. Using examples, explain the difference between emotional and mental health and wellbeing.
3. Using examples show how mental health can impact emotional health and how emotional health can impact mental health.
4. How does emotional intelligence influence a person's emotional health and wellbeing?
5. Can a person still experience spiritual health and wellbeing if they are not religious? Explain.
6. Identify the top ten characteristics across all five dimensions that are important to your health and wellbeing.

studyON

1.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

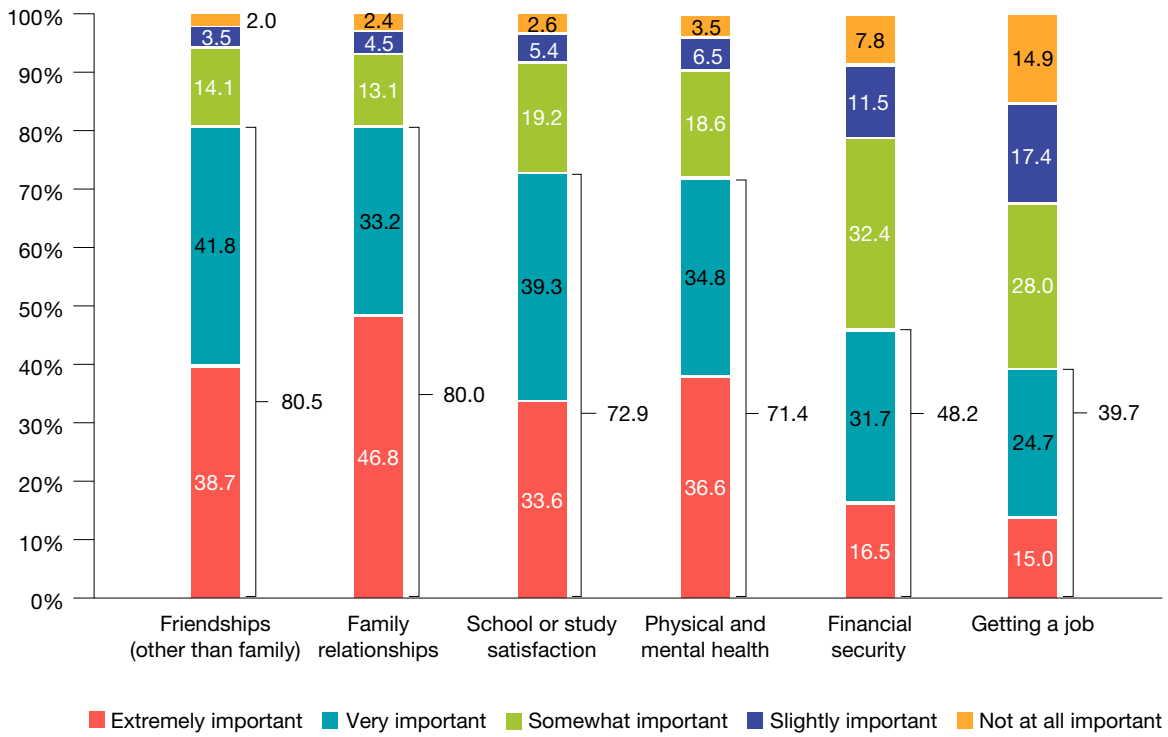
1.4 Youth perspectives on the meaning of health and wellbeing

KEY CONCEPT Understanding the different perspectives of youth on the meaning and importance of health and wellbeing

The concept of health and wellbeing means different things to people depending on their stage of life. Within a particular age group there can be many similarities in how people rate aspects of health and wellbeing. When young people were asked how much they valued family relationships, financial security, friendship, getting a job, and physical and mental health and wellbeing, family and friendship relationships were the two most highly valued aspects (see figure 1.18). This highlights the importance young people place on social health and wellbeing.

However, even within an age group, such as young people (aged 12–25), perspectives on health and wellbeing can vary significantly. Research undertaken by Mission Australia in 2017 with almost 19 000 participants identified many of these differences. When young people were questioned on their perspectives of health and wellbeing and what it meant to them, younger participants' thoughts were that 'health was maintained by a good diet — one that included daily servings of fresh fruit, vegetables and little junk food'. In contrast, the participants aged over 16 mentioned aspects not only relating to the physical dimension, including physical exercise, but also the social dimension of health and wellbeing. In particular, they mentioned that 'social relationships with their family and friends made them feel good and gave them a sense of wellbeing'. This demonstrates that as young people's life experience grows, they start to have a more holistic view of health and wellbeing, rather than a one-dimensional view.

FIGURE 1.18 What young people value



Note: Items were ranked by summing the responses for *Extremely important* and *Very important* for each item.

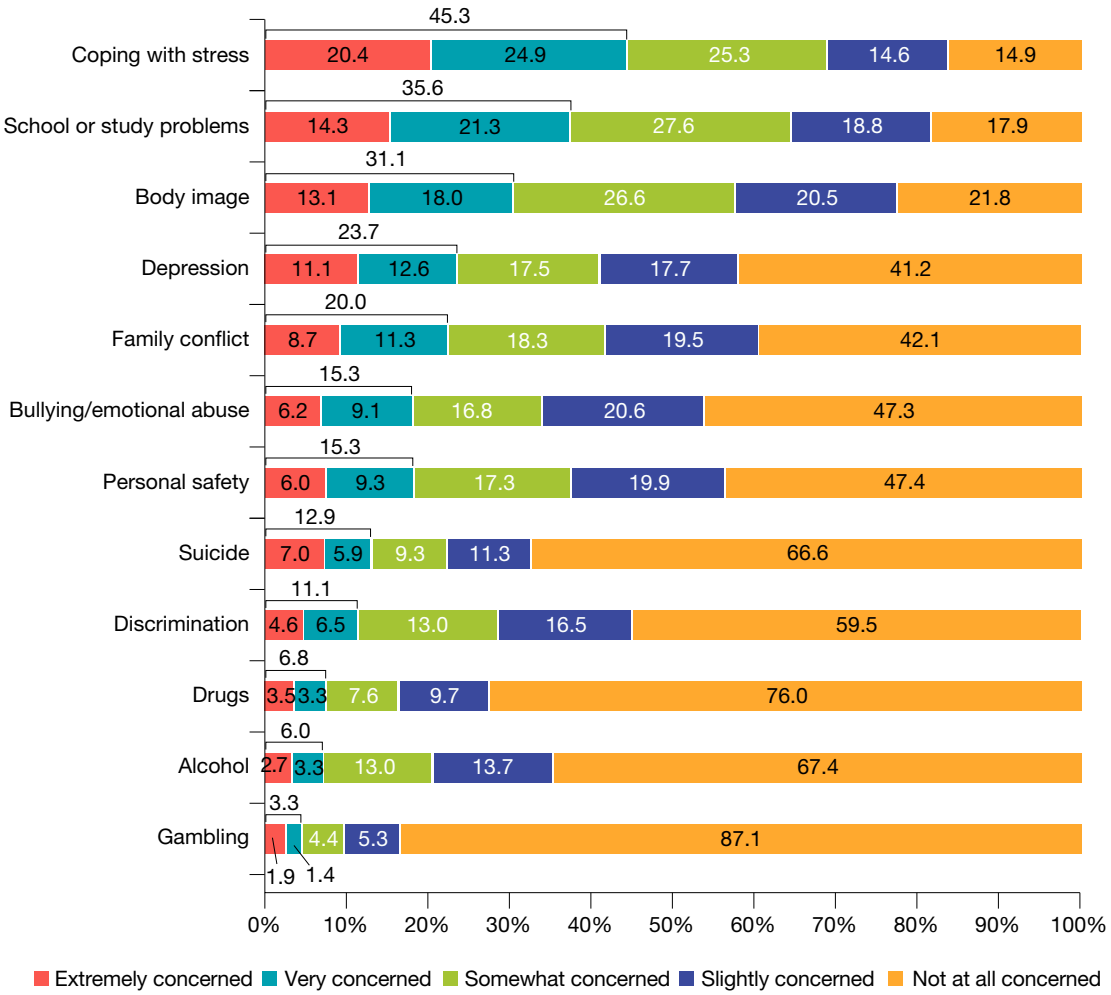
Mission Australia also asked the participants to write down how concerned they were about a number of different personal issues. As you can see from figure 1.19, the issues of most concern to young people related to the mental dimension of health and wellbeing, such as coping with stress, school and study problems, body image and depression. Youth and early adulthood are complex stages of life, with many young people experiencing pressures relating to study, work and relationships, which can culminate in high levels of stress during these years.

Body image issues can have a significant impact on youth health and wellbeing. In a period when young people need to feel a sense of belonging and acceptance from their peers, body image becomes very important. When young people strive for an (often unrealistic) ideal body shape, it is often their mental health and wellbeing that suffers.

Depression was the fourth most common issue identified as a concern of young people in the survey. Depression rates in young people have skyrocketed over the past decade. This could be partly because there is much greater awareness and less stigma surrounding depression, making it easier for youth to acknowledge if they have a problem. However, it also could be due to the emergence of new technologies. Cyberbullying and worries about body image have risen at the same time as the 'selfie culture' has gained momentum. Such technologies can appear to amplify young people's anxieties about self-worth and body image. For further information about mental health and wellbeing and young people, refer to the **Youthbeyondblue** and **ReachOut** weblinks in the Resources tab.

Coping with stress, school or study problems and body image were the top three issues of concern for both males and females as highlighted in table 1.2. The proportion of females concerned about all of these (and many of the other issues) was much higher than the proportion of males. Just under 60 per cent of females indicated that coping with stress was a major concern, as opposed to around 27 per cent of males. Females were also more concerned about school and study problems, with 43.8 per cent indicating this as a major concern, compared with 23.8 per cent of males.

FIGURE 1.19 Issues of personal concern for young people



Note: Items were ranked by summing the responses for Extremely concerned and Very concerned for each item.

Overall physical health and wellbeing (fitness, body weight, reductions in ill health) is usually good in this age group when compared with older age cohorts. Mental and emotional health and wellbeing are the leading causes of concern. Mental and emotional health and wellbeing largely relies on the nature of social networks, family, friends, school, work and other relationships during youth.

VicHealth, which is Victoria's leading health promotion agency, also conducted a survey to measure wellbeing and resilience in young Victorians aged 16–25. This survey took into consideration **subjective wellbeing**, which is an indication of how people feel and what they think about their own lives and personal circumstances. One thousand young Victorians participated in the telephone-based survey, which focused on seven key areas: standard of living, health, safety, future security, relationships, community connections and achievement in life. These results were formulated into a Personal Wellbeing Index (PWI) score. The study's key findings can be seen in figure 1.20.

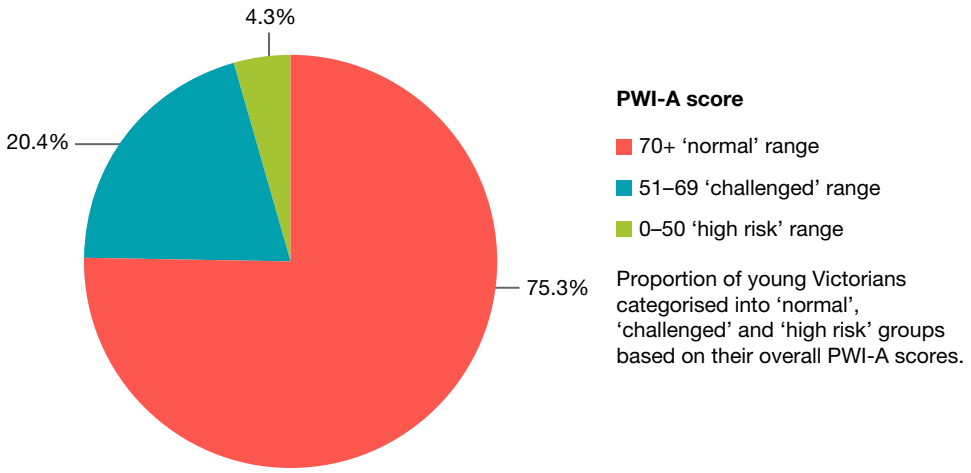
Based on these results, the majority of young people interviewed were in the normal range for the Personal Wellbeing Index. VicHealth has also identified factors associated with young people who have above average health and wellbeing. Findings suggest that these factors fit into the following categories: participation in sport and recreation, access to social support and a higher socioeconomic status background. These are compared with young people with a below average PWI, who are more likely to have limited access to social support, be unemployed, come from lower income households and live alone. The survey also found that females were 50 per cent more likely than males to be at high risk for depression.

TABLE 1.2 Gender differences in issues of concern for young people

Females	Extremely concerned%	Very concerned%	Somewhat concerned%	Slightly concerned%	Not at all concerned%
Coping with stress	**27.1**	**31.1**	24.8	10.6	6.4
School or study problems	**17.9**	**25.9**	28.3	16.9	11.1
Body image	**17.6**	**23.3**	29.2	17.8	12.1
Depression	12.9	15.0	19.5	18.5	34.1
Family conflict	10.4	14.0	20.3	20.9	34.4
Bullying/emotional abuse	6.8	11.2	18.8	22.1	41.2
Personal safety	6.5	10.8	19.3	21.3	42.1
Suicide	7.3	7.0	10.5	13.1	62.2
Discrimination	4.7	7.6	14.2	18.3	55.2
Drugs	2.7	3.5	7.8	10.2	75.8
Alcohol	1.9	3.5	14.0	15.0	65.6
Gambling	1.1	1.2	3.8	5.0	89.0
Males	**Extremely concerned%**	**Very concerned%**	**Somewhat concerned%**	**Slightly concerned%**	**Not at all concerned%**
Coping with stress	**10.1**	**16.7**	**26.5**	20.5	26.1
School or study problems	**8.6**	**15.2**	27.1	22.3	26.8
Body image	**5.9**	**10.9**	23.5	24.8	35.1
Depression	7.2	9.2	14.9	17.1	51.6
Family conflict	5.6	7.6	15.6	18.0	53.3
Bullying/emotional abuse	4.4	6.2	14.3	19.0	56.1
Personal safety	4.8	7.3	14.6	18.1	55.2
Suicide	5.4	4.1	7.4	8.9	74.2
Discrimination	3.5	4.7	11.2	14.1	66.4
Drugs	3.9	3.0	7.2	9.0	76.9
Alcohol	3.2	2.9	11.5	12.1	70.3
Gambling	2.2	1.7	5.1	5.8	85.2

Note: Items were ranked according to the summed responses for extremely concerned and very concerned for each item. Items are listed in order of national frequency

FIGURE 1.20 Proportion of young Victorians categorised by Personal Wellbeing Index score



on Resources

Weblinks Youthbeyondblue
ReachOut

1.4 Activity

In small groups, design and conduct a survey to find out about youth perspectives on health and wellbeing in your area. Collate the results and present to the class.

1.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. According to figure 1.18, what are the top three things that young people value?
2. (a) Use figure 1.19 to identify the top four causes of concern for young people.
   (b) Based on the data in figure 1.19, what are the three issues that young people are less concerned about?
3. Compare the gender differences in the concerns of young people shown in table 1.2. In your answer, include at least two examples of similarities and differences between the genders. Why do you think these differences and similarities exist?
4. What does the term 'subjective wellbeing' mean?
5. Figure 1.20 identifies that 75.3 per cent of young people were in the normal range for PWI. What does this mean?

1.4 Exercise 2 APPLY your knowledge

1. Complete the following question then share your results with the class. Are your results similar or different to the Mission Australia Survey?
   Rank the following values from 1–5, with 5 being the most important, in terms of the value that you place on each one.
   - Family
   - Financial security
   - Friendship
   - Getting a job
   - Physical and mental health and wellbeing

2. There are five different dimensions of health and wellbeing. (Physical, social, mental, emotional and spiritual). Place them in order of importance from one to five, with number five being the most important dimension in your life. Compare and discuss your answers to questions 1 and 2 with a partner.

studyON

1.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

1.5 Variations in health perspectives and priorities according to age, culture, religion, gender and socioeconomic status

KEY CONCEPT Understanding the different perspectives and priorities of the meaning and importance of health and wellbeing

In this chapter, a perspective is somebody's point of view and attitude towards health and wellbeing, whereas a priority is understood to mean that greater importance is placed on some aspects of health and wellbeing than others.

1.5.1 Age

Perspectives

Perspectives on health and wellbeing change across different age groups. Health and wellbeing perspectives increase in complexity as we age.

- Early primary-school-aged (prep to grade 4) children's views about health and wellbeing stem from the knowledge of what makes a healthy body, with the focus on growing up and being safe.
- When young people aged between 8 and 15 were asked in the 2014 *National Health Survey* (the most recent national health survey, undertaken by the Australian Bureau of Statistics) what the term 'health' meant to them, they listed diet, nutrition, weight, healthy food and junk food. Sports, fitness and personal hygiene were also mentioned, together with mental health concerns, depression and anxiety.
- Young adults' (15–24) views on health and wellbeing are often associated with body image. A person who has a positive body image and is happy with their physical appearance will more likely perceive themselves as healthy. An individual who partakes in regular physical activity will also more likely consider themselves to be healthy.
- As young people often spend considerable time online, there is also a strong online influence on what it means to be in good health and wellbeing. A person who boasts a large following on Instagram, through a desirable social stream filled with images of fun-filled social functions, and a 'perfect body' is often considered to be in good health and wellbeing, even though these social media platforms can often show only one aspect of the complexity of the young person's life.
- Similarly to the 15- to 24-year-old age group, physical appearance and body image are a major influence on perspectives of health and wellbeing in early adulthood (25–39 years). If a person has a positive body image, they are more likely to view themselves as having good health and wellbeing. A person's online profile can also be influential for building perceptions of health and wellbeing, in the same way it is influential for 15–24 year olds.
- Middle adulthood (40–64 years) perspectives on health and wellbeing are largely associated with illness prevention, as this is the time when chronic diseases, such as cardiovascular disease and

cancers, will often present themselves. So when asked their perspectives on health and wellbeing, responses from people in this age group mainly involve being free from illness and disease.
- People in later adulthood (65+) have similar health and wellbeing perspectives to those in middle adulthood, in that illness prevention is a priority. Health and wellbeing also becomes about a person's ability to live independently and with a degree of mobility.

It can be interesting to review the self-assessed health status of different age groups, as it reflects a person's perception of his or her own overall health and wellbeing at a given point in time. According to the Australian Bureau of Statistics' most recent data, younger Australians generally rate themselves as having better health status than older people, with 63.4 per cent of 15- to 24-year-olds rating their health status as being excellent or very good in 2014–15, compared with 34.5 per cent of people aged 75 years and over.

Priorities

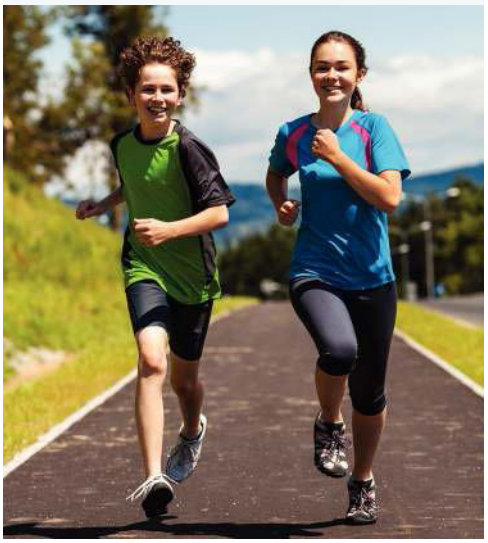
Children

Health and wellbeing priorities for this age group are set by parents/carers; for example, a priority of a parent or carer of a child may be to reduce sugar and salt intake. However without parental direction, excess sugar and salt will most likely be consumed by the child and therefore would not be regarded as a health and wellbeing priority by them, as children have limited knowledge on causes of ill health.

Through the early teenage years, priorities of health and wellbeing start to be set by the individual; for example, a teenager who is provided with lunch money will either choose a healthy nutritious lunch or may opt for a lunch that is high in saturated and trans fats, depending on the priority they place on their physical health and wellbeing and matters associated with exercise and weight control.

Social health and wellbeing is often a key priority for this age group as they place great importance on spending more time with friends rather than with family and at times may tend to hold these interactions in higher regard than family interactions.

FIGURE 1.21 Physical aspects, such as fitness, predominantly make up a young person's understanding of the term health and wellbeing.

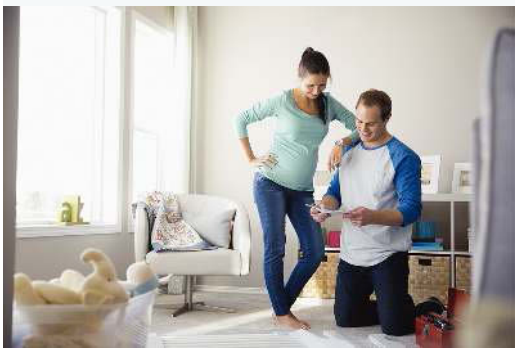


Young adults (age 15–24)

The 15- to 24-year-old age group has similar priorities of health and wellbeing to the younger group. Physical health and wellbeing is seen as a priority — for example, weight control, fitness, diet and nutrition are important. However, relationships and peer acceptance in this age group are also of high priority. Along with peer acceptance comes the added pressure of risk-taking behaviour; when questioned about health and wellbeing, many young people viewed an absence of harmful practices, such as drug and alcohol abuse, dangerous driving and unsafe sexual practices, as important to maintaining health and wellbeing.

Good mental health and wellbeing is a priority for young adults. Depression and anxiety are the leading causes of poor mental health and wellbeing among this age group, with the major causes being stress, school and study, and body image.

FIGURE 1.22 Early adulthood is a stage of great change, including starting a family.



Early adulthood (25–39 years)

Early adulthood is when the body is at its physical peak, so fitness is very important during this stage. Other aspects apart from fitness, such as weight control and body image, are also health and wellbeing priorities. Aspects of emotional health and wellbeing, such as managing emotions,

become a priority because early adulthood is a time when people usually secure their first full-time job, buy a house, marry and have children. With so many changes, this period can produce many emotions that can contribute to stress if not managed effectively.

Middle adulthood (40–64)

Due to the increased risk of cardiovascular disease and cancers at this age, health preventative practices become a major priority during middle adulthood. Government breast and bowel cancer screening are free for individuals over 50 as this is seen as a high-risk age for such diseases.

Accepting and adjusting to physiological changes, such as menopause, can also be a challenge for females in particular during this stage in life.

Later adulthood (65+)

Keeping physically active in order to maintain mobility and independence is a priority in later adulthood. Preventative health practices such as breast and prostate cancer checks, also become a priority as lifestyle diseases become more prevalent.

Mental stimulation and mental health and wellbeing increase in importance as people have often entered retirement and want to maintain cognitive functioning. Social health and wellbeing is also prioritised — family relationships take on different meanings as many people become grandparents. Grandparenting provides another opportunity for mental, emotional and physical health and wellbeing to be enhanced.

FIGURE 1.23 Later adulthood often encompasses becoming grandparents, which involves all the dimensions of health and wellbeing.

1.5.2 Gender

Perspectives

Men and women generally assess their overall health status similarly (54.8 percent of men and 57.6 per cent of women rated their health status as being excellent or very good in 2014–15). The major gender differences, according to research, are that females are typically more health conscious than males and have a more holistic view of their health and wellbeing, encompassing all dimensions; whereas males' concept of health and wellbeing is often associated with the physical dimension, with a focus on physical fitness.

Research has shown that males and females have different perspectives on what constitute health behaviours. Men are less likely than women to perceive themselves as being at risk of illness or injury and other health problems, and they are less accurate in reporting their levels of being overweight. Young men tend to connect health and wellbeing with fitness, with fitness being linked to the ability to participate in their chosen sport at a higher level. Young women viewed their health and wellbeing in a more complex manner, maintaining diet, exercise routines, appropriate body shape and a positive mental state.

FIGURE 1.24 Pregnancy is a common reason why females present more to healthcare centres compared with males.

Priorities

The health and wellbeing priorities of young males appear to be changing. This can be partly attributed to the increased role of social media and the desire to present themselves as physically attractive to their peers. Therefore there is a greater focus on the consumption of nutritious foods and not only regular physical activity.

Females, however, have always prioritised physical health and wellbeing, as many girls and women are forever striving for a 'more desirable physique', one often influenced by an unhealthy body image. For this reason, consumption of nutritious foods and regular exercise have traditionally been a major priority.

Social health and wellbeing is an equal priority for both males and females, although friendship groups may be formed through different means.

Mental health and wellbeing has often been of greater priority to females who tend to seek assistance more regularly and easily than males. Females, as a general rule, are often more open about their feelings and are more likely to problem solve and share personal matters with family and friends. Males, however, have only recently started to focus on matters associated with mental health and wellbeing and are slowly beginning to open up and seek assistance when needed.

1.5.3 Culture

Perspectives and priorities of health and wellbeing will be viewed together in this section.

Different cultures have different perspectives and priorities on health and wellbeing. Western cultures, such as in Australia, generally view health and wellbeing within the context of professional medical practice and intervention. Some other cultures, such as traditional Vietnamese, for example, believe that health and wellbeing and ill health may be a result of **supernatural phenomena**, and therefore prioritise and promote prayer or other spiritual or cultural interventions.

In many cultures, especially some Asian groups, decisions about health and wellbeing are made by the eldest male member of the family. The health and wellbeing of the family is seen as a greater priority than that of the individual. In cultures where an individual's behaviour reflects upon the family, mental disorders are often associated with shame and failure. Individuals from this type of culture may therefore be reluctant to discuss mental disorders, let alone accept assistance from health professionals, as receiving help involves **self-disclosure**. In this example, mental health and wellbeing is not considered an important aspect of health and wellbeing.

Traditional Chinese medicine takes on a holistic perspective of the body; each part is seen as being interconnected. Chinese medicine focuses on restoring harmony, which encompasses health and wellbeing, good weather and good fortune. Doctors prioritise the use of **acupuncture**, herbs and food to recover and sustain health and wellbeing, rather than the use of prescription medication.

In Indian culture, many believe in a traditional medicine called **Ayurveda** (Ayu, meaning *life*, and veda, meaning *knowledge of*). This practice relates to the human being in all its dimensions, and treatment aims to achieve balance in all these areas. Ayurvedic practice involves balancing the three doshas (dynamic energies) that exist within each person's body and mind. These doshas are known as Vata, Pitta and Kapha. When one dosha becomes too predominant, Ayurvedic practitioners prescribe specific nutritional and lifestyle changes to restore balance. Herbal supplements may also be prescribed to assist in the healing process. Many bodily symptoms can reflect a predominance of one dosha (see figure 1.26).

FIGURE 1.25 Chinese medicine uses herbs to help restore harmony in the body.

FIGURE 1.26 Some symptoms of imbalance within Indian Ayurvedic practice

vata	pitta	kapha
Dry skin	Stomach ache	Asthma
Insomnia	Burning eyes	Sinus congestion
Constipation	Anger	Apathy
Anxiety	Diarrhoea	Depression
Headaches	Manipulative behaviour	Possessive behaviours

1.5.4 Socioeconomic status

There are many variations in perceptions and priorities relating to health and wellbeing when comparing people from different socioeconomic groups. Socioeconomic status (SES) is a measure of a person's social and economic position based on income, education and occupation.

Perspectives

People from different socioeconomic groups have varying perspectives on what it means to be in good health. Those from the lowest socioeconomic groups generally have a lower level of health literacy and therefore may have less-informed opinions about healthy and unhealthy behaviours. For example, people from the lowest socioeconomic status groups are more likely to smoke cigarettes (see table 1.3) and be less concerned about the health implications than are those from the higher socioeconomic status groups.

Priorities

For people from the most disadvantaged socioeconomic groups, health and wellbeing is not often viewed as a major priority. In this group, there are other needs that must be prioritised, such as shelter, food, education for their children, and finding and maintaining employment. Taking care of health and wellbeing becomes a secondary matter, and is a major reason why the most socioeconomically disadvantaged people scored poorly on all indicators relating to health and wellbeing outcomes and associated risk factors in the National Health Survey.

According to the National Health Survey, those people with a lower socioeconomic status rated their own health status negatively, with higher rates of illness and disease. People in this group are less likely to use preventative healthcare — only 50 per cent of women from the low SES group participated in cervical cancer screenings, compared to 60 per cent of women in the high SES group (table 1.3) — and often wait until diseases have progressed before seeking treatment, contributing to this difference. This may also be a result of lower levels of education and health literacy. Another reason smoking rates are higher among this group is because of increased levels of stress. Stress is a major reason why people are likely to undertake unhealthy behaviours, such as tobacco smoking, drinking and illicit drug taking. To further investigate the link between increased levels of risky behaviours and low socioeconomic status, refer to the **Big Issue** weblink in the Resources tab for stories about *The Big Issue* vendors. *The Big Issue* is a magazine that is sold by socioeconomically disadvantaged Australians.

As mentioned earlier, people from a low socioeconomic group are less likely to spend money on preventative healthcare practices.

TABLE 1.3 Inequalities in selected health risk factors for the lowest and highest socioeconomic groups

	Year	Lowest socioeconomic group (%)	Highest socioeconomic group (%)	Rate ratio: lowest/highest socioeconomic group
Low birthweight	2015	6.3	3.9	1.6
Daily smoking	2015	21.3	7.8	2.7
Inactive or insufficiently active	2014–15	63	40	1.4
Overweight or obese	2014–15	66.0	58.0	1.1
High blood pressure	2014–15	26.0	21.0	1.2
Participation of women aged 20–69 in cervical screening	2015	50	60	0.8

Sources: ABS 2015; AIHW 2014a, 2015a, 2015b. AIHW 2018

EXAM TIP

When using income as a reason why people from low-SES groups have poorer health status, be mindful not to link lack of income to the ability to access healthcare. In Australia, the government-run health system known as Medicare (which will be discussed in topic 10) allows all people, regardless of their income, access to low-cost or free healthcare. Better responses will link a lack of income to inability to afford sports memberships or inability to afford nutritious foods and how this affects health status.

on Resources

Weblink The Big Issue

1.5.5 Religion

There are many different religions practised throughout the world and within Australia. Each has different priorities and practices relating to health and wellbeing. In this section Buddhism, Hinduism, Islam and Christianity will be discussed.

Perspectives of health and wellbeing are common across all religions, however some more than others focus on clarity of the mind and body (Hinduism and Buddhism in particular). Spirituality is clearly seen as an important aspect of a person's health and wellbeing, and for many religious followers, it is considered as important as elements of their physical health and wellbeing. Therefore health and wellbeing perspectives focus on an interrelation between the different dimensions, especially spiritual, mental and physical health and wellbeing.

Priorities of health and wellbeing will be discussed separately for each of the religions presented in this section.

Buddhism

Buddhism is the fourth-largest religion in the world, and is mainly practised in southeast Asia; however, many people from western cultures have also adopted these practices. Many Buddhist practices are aimed at achieving clarity of the mind. Buddhists strive to achieve a balance between mind and body. Breathing, physical postures and mindfulness are important aspects of Buddhist practices.

FIGURE 1.27 Spiritual health and wellbeing is the most important aspect of the Buddhist religion.

Spiritual health is what Buddhists believe is the key to promoting overall health and wellbeing. Buddhists aim to follow the Noble Eightfold Path using the practices of meditation, study of scriptures and rituals. These help the individual to work towards the enlightened state of **Nirvana**, which is the state in which suffering comes to an end.

Some other Buddhist practices and beliefs that influence health and wellbeing include the following:

- Some Buddhists believe that you will not become ill if you are a spiritually focused person; cures can be obtained by changing the mindset and using herbs.
- Birth is an especially precious time, as conception is seen as the beginning of life; contraception is acceptable.
- End of life practices are guided by having an alert mind and not being in excessive pain. Medication is allowed, although not if it dulls the consciousness.
- Dietary practices involve abstaining from alcohol and drugs as they impair the clarity of the mind; many Buddhists are also vegetarians.
- Western medicine is often avoided, including intensive care units, as they do not value peace and quiet. Some eastern medical practices that use animal products are also shunned.
- Organ donation is acceptable, and blood donation is considered honourable.

Hinduism

Hinduism is one of the world's oldest religions and is practised by 13 per cent of the world's population, most of whom live in India. Physical health and wellbeing is thought to be nurtured through Ayurveda. Similar to Buddhism, spiritual health and wellbeing is an essential part of Hinduism. Community worship, helping the needy and the welfare of society is seen as more important than the individual's needs and welfare.

Some other Hindu practices and beliefs that influence health and wellbeing include the following:

- Sickness and injury are thought to be caused by **karma**.
- Vegetarianism is common, and often non-vegetarians avoid consuming beef and pork. Fasting is also practised as it is seen as purifying the body.
- Birth control is acceptable, and there is preference for a son over a daughter. Many women continue to have children until they have a son.
- Artificial life support is discouraged as it interferes with karma.
- Treatment by a medical practitioner of the same sex is preferred, and women will often look to their husbands for advice on medical issues.

Islam

The Islamic faith is the second-largest religion in the world, with over 1 billion believers. They believe in one God, Allah, and have a commitment to the five pillars of Islam:

1. Bearing witness to the existence of one God and the prophethood of Muhammad
2. Praying five times a day
3. Giving alms to the poor
4. Fasting during the month of Ramadan
5. Performing a pilgrimage to Mecca, for those who are able

It is through a commitment to the five pillars that belief and faith are maintained, as well as social support and the ability to lead a healthy and productive life.

Some other Muslim practices and beliefs that influence health and wellbeing include the following:

- For every illness there is a cure, except for ageing and dying.
- Fasting during the daylight hours is practised during Ramadan. Ramadan is a month of intense prayer, from dawn to dusk. It is intended to bring the faithful closer to Allah, remind them of the less fortunate and develop self-control.
- Traditional medicines are often called 'medicine of the prophet' and are an alternative to modern medicine. For example, black seed (black caraway) is seen to cure every ailment except death; honey is listed in the Quran as source of healing; olive oil is seen as useful for coronary health; and dates are used to break the fast during Ramadan.
- Life is sacred, specifically:
  - birth control is allowed
  - abortion is not allowed, unless there is a risk of maternal mortality.
- Male circumcision is encouraged but not enforced.
- Alcohol consumption is forbidden.
- The consumption of pork is forbidden.
- Treatment by a medical practitioner of the same sex is preferred.

Christianity

The Christian faith encourages a person to take care of their health and wellbeing. The church teaches that life and physical health and wellbeing are precious gifts from God. There are many Christian denominations. Catholicism is the world's largest Christian denomination. The customs and restrictions listed below apply to Catholics.

- There are no particular dietary restrictions, although Catholics are encouraged to abstain from meat on Fridays during Lent. Fasting is expected on Ash Wednesday and Good Friday.
- Sexual activity is approved by God within marriage with the sole focus on procreation. Most methods of contraception are not supported by the Catholic Church.
- Baptism is very important, especially for a baby experiencing poor health, and administering the last rites (one of the sacraments) prior to death is also seen to be very important.

1.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Outline children's perspectives on health and wellbeing during early primary school.
   (b) How does this perspective change when children reach youth?
2. (a) Explain why people from low socioeconomic groups do not always make health and wellbeing a priority.
   (b) What do you think might be some barriers for them in achieving health and wellbeing?
3. How is traditional Chinese medicine different from western medicine?
4. What does the practice of acupuncture involve?
5. Explain the traditional practice of Ayurveda.
6. What is Ramadan?

1.5 Exercise 2 APPLY your knowledge

1. Briefly explain how health and wellbeing priorities change across the three adult lifespan stages.
2. Explain the differences in the way females and males typically prioritise and perceive their health and wellbeing. How is this changing?
3. Identify two cultural factors or beliefs about health and wellbeing that are different from your own perception of health and wellbeing.
4. Use figure 1.26 to decide which dosha most applies to your bodily symptoms. Score 3, 2, 1, for each dosha in order of relevance.
5. Identify the similarities and differences between the Buddhist and Hindu perspectives on health and wellbeing.
6. Do you believe there could be any implications for health and wellbeing for Muslims during Ramadan? Discuss.

studyON

1.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

1.6 Aboriginal and Torres Strait Islander perspectives on health and wellbeing

KEY CONCEPT Exploring the various meanings of health and wellbeing to Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people view health and wellbeing in a holistic manner as reflected in this definition outlined in the National Aboriginal Health Strategy (1998):

"Aboriginal wellbeing means not just the physical wellbeing of an individual but refers to the social, emotional and cultural wellbeing of the whole Community in which each individual is able to achieve their full potential as a human being, thereby bringing about the total wellbeing of their Community. It is a whole-of-life view and includes the cyclical concept of life–death–life."

This understanding of health and wellbeing is different to the definition we explored at the start of this topic, as culture has been added as a component of wellbeing. The significance of culture to Aboriginal and Torres Strait Islander people is demonstrated by the use of traditional knowledge and practices of traditional healers, which are often used alongside western medicine.

1.6.1 The importance of culture

Culture influences Aboriginal and Torres Strait Islander people in many ways. These include their reasons for using health services, the acceptance of treatment and the likelihood that they will adhere to treatment.

Culture also has an impact on how effective health promotion strategies are in reaching Aboriginal and Torres Strait Islander people.

According to the Closing the Gap campaign, Aboriginal and Torres Strait Islander people with a strong attachment to culture have significantly better self-assessed health status. Aboriginal and Torres Strait Islander people who speak Indigenous languages and participate in cultural activities also have better physical and mental health and wellbeing. The National Aboriginal and Torres Strait Islander Health Plan 2013–2023 identifies the importance of the link to culture in improving health and wellbeing. It states that being connected to culture, family and land contributes to significantly lower morbidity and mortality in remote communities. The plan also states that residents of communities in which traditional languages and cultural practices are valued and maintained are less likely to be obese, less likely to have diabetes and less prone to cardiovascular disease than Aboriginal people across the rest of the Northern Territory.

FIGURE 1.28 Culture is a very important component of Aboriginal and Torres Strait Islander health and wellbeing.

1.6.2 Connection to the land

Along with culture, land is fundamental to the health and wellbeing of Aboriginal and Torres Strait Islander people. The land is the core of their existence; it is their connection and spiritual relationship to 'country' which explains their identity. Land is central to health and wellbeing and when the harmony of this relationship is disrupted, ill health may occur. The following examples help to explain the connection to the land and its link to improved health and wellbeing outcomes for Aboriginal and Torres Strait Islander people.

Aboriginal law and life originates in and is governed by the land. The connection to land gives Aboriginal and Torres Strait Islander people their identity and a sense of belonging.

In the Murray River area, the Aboriginal people felt an affinity from the poor health of the Murray River to parts of their own health and wellbeing — both physical and mental. Aboriginal people had not been able to pass on traditional knowledge about the river, or undertake traditional activities that created a connection between them and the river. The impact on this was negative self-assessed physical and mental health and wellbeing.

Everything the local people did every day was related to being around the river. Consequently, moving further and further away from these locations and activities can be seen as harmful; and the impact is on both physical and mental health.

The land is my backbone … I only stand straight, happy, proud and not ashamed about my colour because I still have land … I think of land as the history of my nation. *Galarrwuy Yunipingu, Aboriginal musician*

In white society, a person's home is a structure made of bricks or timber, but to our people our home was the land that we hunted and gathered on and held ceremony and gatherings. *Nala Mansell-McKenna, Youth Worker, Tasmanian Aboriginal Centre*

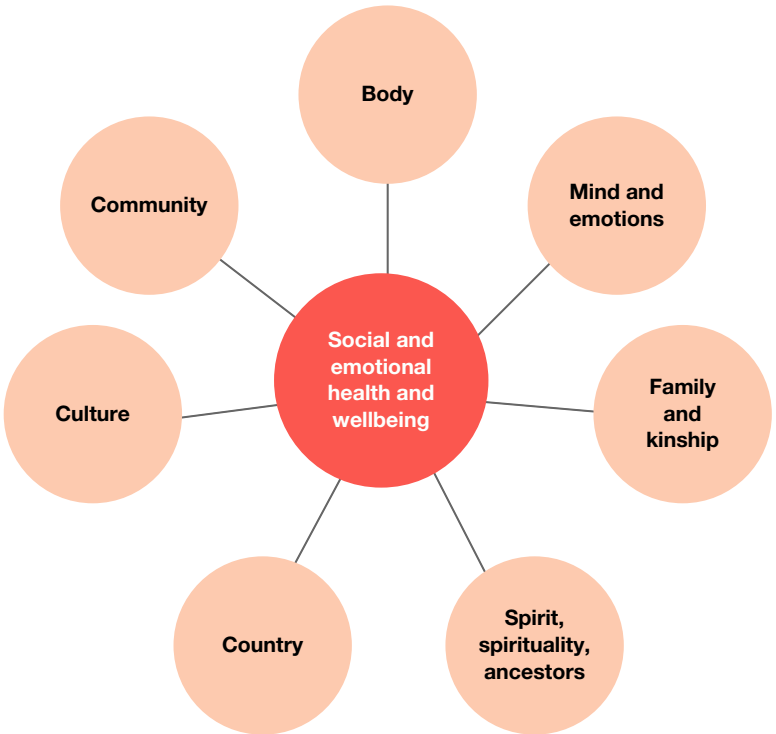
As seen from the above examples, the land or 'country' is the soul of Aboriginal and Torres Strait Islander people. It has also been referred to as their 'second skin'. Aboriginal and Torres Strait Islander people believe it is their duty to care for the land, and in caring for the land they are strengthening their culture and health and wellbeing. According to the Stolen Generations report, *Bringing Them Home*,

many Aboriginal people get sick when they are removed from their traditional land. Research increasingly confirms the strong link between Aboriginal health and wellbeing and land management. It is through land management practices that Aboriginal and Torres Strait Islander people feel empowered, which leads to lower stress levels and improved mental health and wellbeing. To further investigate the importance of Aboriginal and Torres Strait Islander people's connection to the land, go to the **Creative Spirits** weblink in the Resources tab to learn how land management improves health and wellbeing.

1.6.3 Social and emotional health and wellbeing

Social and emotional health and wellbeing is a holistic concept that recognises the importance of connection to land, culture, spirituality, ancestry, family and community, and how these affect the individual. Social and emotional health and wellbeing are the foundations of Aboriginal and Torres Strait Islander people's physical and mental health and wellbeing. Relationships between the individual, their family and their community greatly influence overall physical and mental health and wellbeing, as shown in figure 1.29. Positive family and community relationships affect social and emotional health and wellbeing, which is essential for Aboriginal and Torres Strait Islander people to lead successful and fulfilling lives. This conception of self is grounded within a collective perspective that views the self as inseparable from, and embedded within, family and community.

FIGURE 1.29 Social and emotional health and wellbeing from an Aboriginal and Torres Strait Islander perspective



CASE STUDY

Giant tent for Aboriginal health

ELEANOR HALL: Let's go now to Broken Hill in the far west of New South Wales, where health professionals are trialling an innovative approach to Indigenous healthcare.

Aware that many Aboriginal people are put off coming into imposing hospital buildings for their healthcare, the Aboriginal health service at Broken Hill has decided to build a giant tent and take its services out to the people.

The Maari Ma service pitches its tent at river banks and meeting places within remote Aboriginal communities, so that family groups can come to health clinics and not feel threatened by the traditional western approach of white walls and hospital corridors.

From Broken Hill, Nance Haxton reports.

NANCE HAXTON: The mobile marquee is the first project of its type in Australia, replacing hospitals and mobile caravans with a far more flexible approach to Aboriginal healthcare.

The main difficulty in providing medical services to remote Aboriginal communities has not been a lack of care available, but providing it in a way that is culturally appropriate and accessible.

Maari Ma Health regional director, Richard Western, says the marquee has overcome that hurdle. The tent can be easily transported to all of the remote communities that Maari Ma services, from Tiboburra in the north to Balranald in the south.

And Mr Western hopes it will ultimately turn around the 20-year life expectancy gap between Aboriginal people and the rest of the Australian population as they seek help for chronic illnesses before they become life-threatening.

RICHARD WESTERN: We've often gone out to meetings in Aboriginal communities and, you know, we end up in the local hall or the local club. You know, there's limitations on who can attend. We often have to do it during working hours. There's very limited facilities for mums and babies, or mums and kids.

So we wanted to get out of the pubs and the clubs and the halls and back onto the river banks and under the shades of the, of you know, the eucalyptus trees and back into doing business in an Aboriginal way.

NANCE HAXTON: Because from what I can gather if I'm correct, sometimes Aboriginal people have been unwilling to go to hospitals because it's really seen as a place of death?

RICHARD WESTERN: Yes, I think there is still a bit of, a bit of that, that Aboriginal people see hospitals as the place where people go to die because that, that is generally what has happened. And really the reason for that thinking comes about by Aboriginal people really accessing hospital or emergency services when, when they are critically ill from an illness and you know, we're working with our partners to change that.

NANCE HAXTON: Broken Hill-based Aboriginal health worker, Nola Wyman, says she has already seen the difference with more Aboriginal people going to the health service in the marquee's first six weeks of operation as they feel less threatened walking into a large open space than an imposing building such as a hospital.

She says she hopes this is just the beginning of a wider network of tents that will take health services to Aboriginal people in isolated areas around the country on a regular basis.

NOLA WYMAN: You can't move a building to, for example, the river is important to Bakandji people. If you have a marquee, then you can, with health service staff, health workers, you can say, 'Hey come to where what's important to us'. And this will give you an idea along with the information we give why it's important.

NANCE HAXTON: So it makes the health services less confronting?

NOLA WYMAN: It certainly does and it makes things like, if the tent is used for GP services for example, it's in an area where people, it's more accessible to Aboriginal people. And that is very important because there are so many barriers for Aboriginal people to access mainstream health services. This is just one of the ways that we can overcome those barriers.

Source: Haxton, N 2002, 'Giant tent for Aboriginal health', *The World Today*, 29 October, http://www.abc.net.au/worldtoday/stories/s713937.htm.

Case study review

1. Why are some Aboriginal people putting off attending the health services in Broken Hill?
2. How is the marquee health service culturally appropriate to Aboriginal people?
3. Why do Aboriginal people associate hospitals with death?
4. What other ways could the service be made more culturally appropriate for Aboriginal people?

on Resources

Weblink Creative Spirits

1.6 Activity

As a class, research the Stolen Generations. In your opinion, how has this affected the physical, social, emotional, mental and spiritual health and wellbeing of Aboriginal and Torres Strait Islander people?

1.6 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. How is the Indigenous definition of health and wellbeing different from the WHO definition of health and wellbeing?
2. Why do you think many Aboriginal and Torres Strait Islander people may be unwilling to attend healthcare centres?
3. How does a strong cultural connection improve the health and wellbeing of Aboriginal and Torres Strait Islander people?
4. Explain the term 'second skin' when referring to the connection Aboriginal and Torres Strait Islander people feel with the land.
5. How do you believe relationships between the individual and the community improve physical and mental health and wellbeing for Aboriginal and Torres Strait Islander people?

1.6 Exercise 2 APPLY your knowledge

1. Briefly explain the importance of the land to the health and wellbeing of Aboriginal and Torres Strait Islander people.
2. How is the practice of land management having a positive impact on the health and wellbeing of Aboriginal and Torres Strait Islander people?

studyON

1.6 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

1.7 Topic 1 review

1.7.1 Key skills

KEY SKILL Describe different dimensions of health and wellbeing

For this key skill, a description of the meaning of the term 'health and wellbeing', including the five different dimensions: physical, social, emotional, mental and spiritual, is essential. In order to provide an adequate explanation, an understanding of the definition is required.

When describing the term health and wellbeing, it is important that all the aspects of the concept are included. For example, health and wellbeing encompasses a range of aspects including the following:

- Health and wellbeing is constantly changing.
- Health and wellbeing is made up of five different dimensions.
- Wellbeing is about how you feel about your life across all five dimensions.

Below is an example of the description of health and wellbeing.

Health and wellbeing relates to the state of a person's physical, social, emotional, mental and spiritual existence; it is characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged.

You will also need to be able to describe each dimension of health and wellbeing. When describing the dimension, you need to include aspects of the definition as well as characteristics of the dimension. For example, social health and wellbeing relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations.[1] It includes having productive relationships with others, and displaying effective communication skills.[2]

1 A definition of social health and wellbeing is included in the description.

2 An example of factors that relate to social health and wellbeing are identified. You do not need to include all the examples as seen in the text.

Practise the key skill

1. Outline the difference between emotional and mental health and wellbeing.
2. Read the case study and answer the questions that follow.

Kate has been involved in the 'learn to row' program at her college. She has enjoyed all aspects of the program, including the challenge of learning a new skill, the increased social opportunities and the improvements to her fitness levels. Unfortunately there are only enough positions for eight crews and Kate has been unsuccessful at making the final squad.

Kate is devastated at this news, as most of her friends gained a position in the squad. She doesn't want to go to school the following week, upon finding out the news, as she is also feeling embarrassed and ashamed. Kate feels as though she will miss out on many experiences, while her friends immerse themselves in the program. She feels lonely and lost as she will feel left out of all their rowing discussions and social rowing events.

a. List the five dimensions of health and wellbeing and briefly explain what is meant by each one.
b. Suggest ways that Kate's not getting into the rowing squad could affect the five dimensions of her health and wellbeing
c. What dimension of health and wellbeing do you think Kate's story is focused on? Explain.

KEY SKILL Analyse various meanings of health and wellbeing

As explored in this topic, different groups of people have different perspectives on the meaning of health and wellbeing. An understanding of the different definitions is required to address this key skill adequately. When analysing these different meanings, you will be looking for the reasons behind their variance. For example, in the first WHO definition *health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.*[3] This definition of health was first used by health professionals, yet seemed to be very difficult to achieve. If we were to analyse this meaning of health you were considered either healthy or unhealthy if any of these dimensions were not at an optimal state.[4] WHO has since provided clarification on this meaning to say that 'health is a resource for everyday life, not the objective of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities'.[5] This explanation appears to be more inclusive and attainable, while also being dependent on individual situations, as it includes the resources that an individual has access to.[6]

Aboriginal and Torres Strait Islander people have a different meaning of health and wellbeing to the WHO definition discussed above. *Aboriginal and Torres Strait Islander health and wellbeing means not just the physical health and wellbeing of an individual but refers to the social, emotional and cultural health and wellbeing*[7] *of the whole community in which each individual is able to achieve their full potential as a human being; this brings about the total health and wellbeing of their community.*[8] *It is a whole-of-life view and includes the cyclical concept of life–death–life.*

3 WHO definition of health is defined.

4 Brief analysis of the meaning of the WHO definition.

5 Updated explanation of the WHO definition of health is provided.

6 Updated WHO definition is then analysed explaining the change and meaning.

7 Explain why cultural wellbeing is so important to Aboriginal people, when analysing this definition.

8 The Aboriginal definition includes the wellbeing of the community, whereas the WHO definition is more concerned about the individual.

Practise the key skill

3. Analyse the meaning of health and wellbeing to Aboriginal and Torres Strait Islander people.
4. How is this definition different to the WHO definition of health?

KEY SKILL Collect and analyse data relating to variations in youth attitudes and priorities regarding health and wellbeing.

This skill is about collecting data and analysing the results in relation to youth attitudes and priorities surrounding health and wellbeing. The best place to start would be your own classroom. Use the information that you have recorded from question 1 in exercise 2 of subtopic 1.4.

Once you have collected the data you can create a table showing class members' priorities in relation to health and wellbeing and analyse the findings; for example, a class of 25 year 11 students may have the following results when asked to rank the importance of the dimensions of health and wellbeing to them.

Ranking	Physical health and wellbeing	Mental health and wellbeing	Social health and wellbeing	Emotional health and wellbeing	Spiritual health and wellbeing
5 (most important)	8	9	10	6	0
4	8	10	7	5	0
3	5	3	6	7	1
2	3	2	2	4	4
1 (least important)	1	1	0	3	20

9 For this example only the data for the top three priorities has been analysed, to see what the students valued the most.

Adding up the data for just the top three priorities, the dimensions in order of importance for the class would be as follows:

1. Social health and wellbeing 23
2. Mental health and wellbeing 22
3. Physical health and wellbeing 21
4. Emotional health and wellbeing 18
5. Spiritual health and wellbeing 1

Using this information, we can see that this particular class ranks social health and wellbeing as being the most important to their health and wellbeing at this particular time. Mental health and wellbeing is the second most important, followed closely by physical health and wellbeing.

Why do you think that social health and wellbeing was seen as the most important dimension of health and wellbeing for this class?

A sense of belonging is very important to young people, and they achieve this through their relationships with their peers. Great importance is placed on friendships within and outside the school environment. It is through the support of friendship that other dimensions of health and wellbeing are developed. For example, friends often encourage us to participate in sports, which in turn improves our physical fitness and, therefore, our physical health and wellbeing.[10]

10 The text provides an analysis of the results from the class survey, explaining why social health and wellbeing has been chosen as the most important priority for their health.

Practise the key skill

5. Why do you believe that young people in the example provided above placed very little priority on spiritual health and wellbeing?
6. Health and wellbeing is constantly changing, so on any given day the results collected could be quite different. Identify three different scenarios that could occur throughout year 11 that may alter the results above.

KEY SKILL Describe a range of influences on the perspectives and priorities of health and wellbeing

This skill requires an understanding of a range of influences on how different people may perceive and prioritise health and wellbeing. To be able to do this, knowledge of each of the focus areas of age, gender, socioeconomic status, religion and culture is required.

When looking at a person's age, an understanding of what is occurring at the stages of the lifespan is important, to then be able to describe the differences of ageing on health and wellbeing priorities and perspectives. For example in early adulthood, a time of many changes including new job, relationships, marriage and children,[11] the health focus may shift from prioritising physical health and wellbeing to social and emotional health and wellbeing as building long-term relationships becomes more important.[12] In later adulthood, when the body is slowing down, being in good health and wellbeing can often be seen as being free from disease or illness and maintaining mobility and independence. All dimensions of health and wellbeing are seen as important; however, individual people may prioritise the dimensions of health and wellbeing differently.

11 Acknowledging what is occurring at the life span stage is important to understand different perspectives of age.

12 Influence of early adulthood on health and wellbeing is explained.

Other factors such as culture and religion have different perspectives on health and wellbeing, which can be seen in both Buddhist and Hindu religious practices. Spiritual health and wellbeing is seen as the most important dimension in relation to religion, as it is through this dimension that clarity of mind and body can be found. The spiritual practices of meditation, yoga, mindfulness and, in the case of Hindusim, the practice of Ayurveda all interconnect with the other four dimensions of health and wellbeing.[13]

13 A brief understanding of the religious practices of Buddhists and Hindus can help describe how they perceive and prioritise health and wellbeing.

Practise the key skill

7. Describe how people in the lowest socioeconomic groups may have different perspectives and priorities on health and wellbeing compared to those in the highest socioeconomic groups.
8. Male perspectives on health and wellbeing are slightly different to female perspectives on health and wellbeing. Describe these differences.

1.7.2 Topic summary

Health and wellbeing

- Health and wellbeing relates to the state of a person's physical, social, emotional, mental and spiritual existence and is characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged.
- Health and wellbeing is a dynamic concept and is always changing.
- Health and wellbeing is viewed by different people in many different ways and is therefore said to be subjective.

Dimensions of health and wellbeing

- There are five dimensions of health and wellbeing: physical, social, emotional, mental and spiritual.
- A range of factors influence how an individual views health and wellbeing, including age, gender, socioeconomic status, culture and religion.
- Physical health and wellbeing is defined as the functioning of the body and its systems; it includes the physical capacity to perform daily activities or tasks. Characteristics that relate to physical health and wellbeing include fitness levels, body weight, energy levels, cholesterol levels, blood pressure, and the absence or presence of disease.
- Social health and wellbeing is defined as the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations. Characteristics that relate to social health and wellbeing include a supportive network of friends, effective communication and productive relationships with other people.
- Emotional health and wellbeing is defined as being able to recognise, understand and effectively manage and express emotions as well as the ability to display resilience. Characteristics include the ability to recognise and express a range of emotions, adequately respond to and manage emotions, and the ability to recover from misfortune.
- Mental health and wellbeing refers to the state of a person's mind or brain, and relates to the ability to think and process information. Optimal mental health and wellbeing enables an individual to positively form opinions, make decisions and use logic. Characteristics of good mental health and wellbeing include positive thought patterns, low stress levels, high self-esteem and self-confidence.
- Spiritual health and wellbeing can be defined as ideas, beliefs, values and ethics that arise in the mind and conscience of human beings. It includes the concepts of hope, peace, a guiding sense of meaning or value and reflection on a person's place in the world. Spiritual health and wellbeing can also relate to organised religion, a sense of purpose in life, connection or belonging.

Youth perspectives on the meaning of health and wellbeing

- The concept of health and wellbeing means different things to people depending on their stage of life.
- The issues of most concern to young people relate to the mental dimension of health and wellbeing, such as coping with stress, school and study problems, body image and depression.
- Overall physical health and wellbeing (fitness, body weight, incidence of ill health) is usually good in this age group when compared with older age cohorts.

Variations in health perspectives and priorities according to age, culture, religion, gender and socioeconomic status

- A perspective is somebody's point of view and attitude towards health and wellbeing, whereas a priority is understood to mean that greater importance is placed on some aspects of health and wellbeing compared to others.
- Perspectives and priorities about health and wellbeing change across different age groups. Health and wellbeing perspectives increase in complexity as we age.
- Different cultures have different perspectives and priorities on health and wellbeing.
- There are many variations in perceptions and priorities relating to health and wellbeing when comparing people from different socioeconomic groups.
- Each religion has different priorities and practices relating to health and wellbeing.

Aboriginal and Torres Strait Islander perspectives on health and wellbeing

- Aboriginal and Torres Strait Islander people have a different perspective on health and wellbeing, which includes an emphasis on the importance of culture.
- Aboriginal health and wellbeing means not just the physical health and wellbeing of an individual, but refers to the social, emotional and cultural health and wellbeing of the whole community in which each individual is able to achieve their full potential as a human being, thereby contributing to the overall health and wellbeing of their community. It is a whole-of-life view and includes the cyclical concept of life–death–life.
- A connection with the land is essential to Aboriginal people and is seen as a major contributor to good health and wellbeing.

on Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0015).

EXAM TIP

Often questions require you to discuss how a particular factor impacts on one or more dimensions of health and wellbeing. To answer this type of question, you need not only an understanding of the factor but also an understanding of the key characteristics of each dimension of health and wellbeing. For example, if you are asked to discuss how being a member of a sports team impacts on the social dimension of health and wellbeing, you need to use examples about being a member of a sports team and link these to characteristics of the social dimension of health. A suitable response may be: Being a member of a sports team involves training and playing with other team members. This enhances social health and wellbeing as, through training and playing, you are *interacting and forming relationships* with team mates.

1.7 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Commencing secondary school is a major milestone in a young person's life.

a. Explain, using examples, how the transition to secondary schooling can have an impact on young people's mental and social health and wellbeing. **(4 marks)**

b. Describe opportunities secondary schools provide to enhance physical health and wellbeing. **(2 marks)**

c. How can young people's spiritual health and wellbeing be developed at a school that is not religious? **(2 marks)**

studyON

1.7 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

on Resources

Interactivities Crossword (int-6845)
Definitions (int-6846)

2 Measurements and indicators of health status of Australia's youth

2.1 Overview

Key knowledge

- Indicators used to measure the health status of Australians, including incidence and prevalence of health conditions, morbidity, rates of hospitalisation, burden of disease, mortality, life expectancy, core activity limitation, psychological distress and self-assessed health status
- The health status of Australia's youth

Key skills

- Analyse the extent to which health status data reflects concepts of health and wellbeing
- Draw conclusions from health data about the health status of youth in Australia

FIGURE 2.1 The health status of Australia's youth is generally good.

KEY TERMS

Burden of disease a measure of the impact of diseases and injuries; specifically it measures the gap between current health status and an ideal situation where everyone lives to an old age free of disease and disability. Burden of disease is measured in a unit called the DALY. (VCAA)

Chronic conditions any disease or condition that lasts a long time (usually longer than six months). It usually can't be cured and therefore requires ongoing treatment and management. Examples include arthritis and asthma.

Core activities relate to three main areas of life: self-care, mobility and communication

Core activity limitation when an individual has difficulty, or requires assistance, with any of the three core activities

Disability adjusted life years (DALY) a measure of burden of disease. One DALY is equal to one year of healthy life lost due to illness and/or death. DALY are calculated as the sum of the years of life lost due to premature death and the years lived with disability for people living with the health condition or its consequences. (AIHW, 2018)

Health indicators standard statistics that are used to measure and compare health status (e.g. life expectancy, mortality rates, morbidity rates)

Health status an individual's or a population's overall health (and wellbeing), taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors (AIHW, 2008)

Hospital separations episodes of hospital care that start with admission and end at transfer, discharge or death

Incidence refers to the number (or rate) of new cases of a disease/condition in a population during a given period

Kessler Psychological Distress Scale (K10) a scale of psychological distress based on the answers to ten questions about negative emotional and mental states in the four weeks prior to the interview. This system classifies psychological distress as low, moderate, high and very high.

Life expectancy the number of years of life, on average, remaining to an individual at a particular age if death rates do not change. The most commonly used measure is life expectancy at birth. (AIHW, 2018)

Morbidity ill health in an individual and levels of ill health within a population (often expressed through incidence, prevalence) (AIHW, 2018)

Mortality the number of deaths in a population in a given period (AIHW, 2018)

Prevalence the number or proportion of cases of a particular disease or condition present in a population at a given time (AIHW, 2008)

Psychological distress relates to unpleasant feelings and emotions that affect an individual's level of functioning

Years lost due to disability (YLD) a measure of how many healthy years of life are lost due to disease, injury or disability

Years of life lost (YLL) a measure of how many years of expected life are lost due to premature death

on Resources

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0016).

2.2 Self-assessed health status and life expectancy

KEY CONCEPT Exploring the self-assessed health status and life expectancy of Australian youth

2.2.1 What is health status?

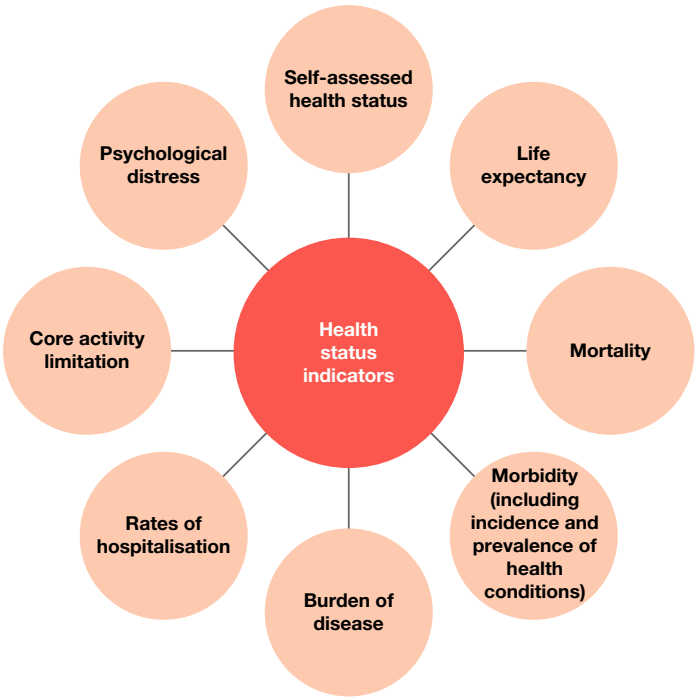
So far, the concept of health and wellbeing, and the five dimensions that contribute to health and wellbeing, have been examined. As well as exploring physical, social, emotional, mental and spiritual health and wellbeing, it is useful to be able to measure the level of health and wellbeing that individuals, groups or whole populations are experiencing. Measurable aspects of health and wellbeing provide an ability to make judgements relating to the **health status** of individuals, groups or populations.

2.2.2 Measuring health status

Measuring health status is useful for a number of purposes. As already mentioned, it allows judgements to be made about the health and wellbeing of individuals, groups or populations. With this information, government and non-government organisations can take action to improve health and wellbeing in areas that need it. It also allows trends to be identified in health status over time. This can provide valuable feedback on actions that have already been implemented. Such information can further guide interventions aimed at improving health and wellbeing.

There are a number of ways of measuring health status and these measures are collectively known as **health indicators** (figure 2.2). Each health indicator provides specific information relating to the health status experienced. By examining a range of health indicators, a more complete assessment of health status can be made.

FIGURE 2.2 The health status indicators that will be explored in this topic



It can take some time for health statistics to become public — often around three years before data can be accurately collated and released. Some statistics are released only every two years (biannually) or less often. As a result, some statistics quoted in this book may date back to the early 2010s, yet they represent the most recent statistics available. Generally speaking, the rates and ratios derived from statistics change slowly over time, so even older statistics are relevant to what is happening today. Further, many statistics are available only for set age groups (often 12–24). When these statistics are used, it is important to remember that they include a proportion of those in the early adulthood stage.

Australia is one of the healthiest countries in the world and Australia's youth (those aged 12–18) are among the healthiest individuals in the country. There have been constant improvements over time in most aspects of health and wellbeing. In order to adequately assess the health and wellbeing of Australia's youth, it is important to understand the methods used for reporting health status.

Resources

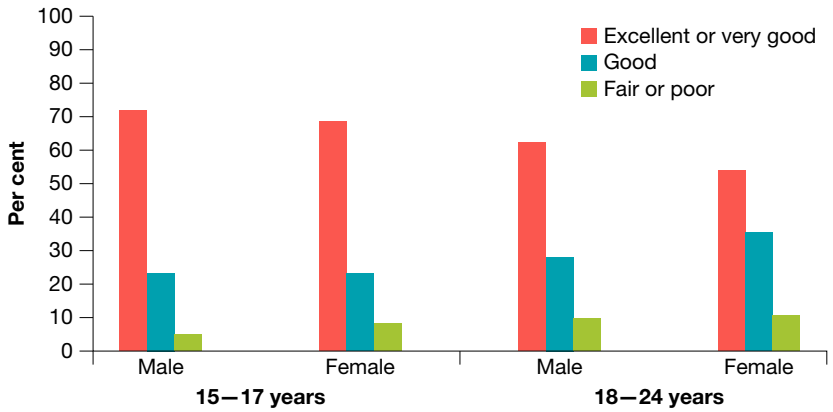
Teacher-led video Measurements of health status (tlvd-0260)

FIGURE 2.3 The youth stage of the lifespan is generally characterised by good health and wellbeing.

Self-assessed health status

Self-assessed health status is based on an individual's own perception of their health and wellbeing. People are asked to rate their level of health and wellbeing. Responses include excellent, very good, good, fair and poor. Self-assessed health status is a subjective measure as different people think about their health and wellbeing in different ways. One person may assess their health as excellent if they are physically fit, even if their mental and emotional health and wellbeing is poor. Another may take all five dimensions into account in forming their assessment. Young Australians generally rate their health status positively. Figure 2.4 shows the self-assessed health status of young Australians at selected ages. The majority of youth in both age groups rate their health status as excellent or very good, with slightly more youth aged 15–17 years rating their health status as excellent or very good compared to those aged 18–24.

FIGURE 2.4 Self-assessed health status of young people aged 15–24 years, 2011–12



Source: Adapted from ABS, *Australian Health Survey: Updated Results*, 2011–12.

Life expectancy

Life expectancy is one of the most common methods used to measure health status. It gives an indication of how long a person can expect to live if the current death rates stay the same. Unless stated otherwise, life expectancy data relate to a person born in the years provided. Table 2.1 shows life expectancy data for people of different ages in Australia.

TABLE 2.1 Life expectancy at different ages, 1901–10 and 2015–17

	Males		Females	
Age	1901–1910	2015–2017	1901–1910	2015–2017
Birth	55.2	80.5	58.8	84.6
30	66.5	81.4	69.3	85.2
65	76.3	84.7	77.9	87.3
85	87.7	91.2	89.2	92.3

Source: Adapted from ABS and AIHW data, 2019.

According to the Australian Bureau of Statistics data shown in table 2.1, the life expectancy of a child born in 2017 was 80.5 years for a male and 84.6 years for a female. Compare this to a life expectancy of 55.2 years for males and 58.8 years for females born between 1901 and 1910. This represents an increase in life expectancy of more than 25 years over the past century. The life expectancy of Australians is constantly improving, while death rates are decreasing.

The life expectancy for Australia's youth reflects the high figures experienced by all age groups in this country. According to table 2.2, a male aged 12 could expect to live to 80.9 years and a male aged 21 could expect to live to 81 years. As life expectancy is based on averages, it increases as people get older. Some individuals will not survive infancy or childhood, and this brings the average down for life expectancy at birth. Once an individual survives these stages, the likelihood that they will live beyond the life expectancy at birth increases.

TABLE 2.2 Life expectancy for Australia's youth and early adults at different ages

Age	Males	Females
12	80.9	85.0
13	80.9	85.0
14	80.9	85.0
15	80.9	85.0
16	80.9	85.0
17	80.9	85.0
18	80.9	85.0
19	81.0	85.0
20	81.0	85.1
21	81.0	85.1
22	81.1	85.1
23	81.1	85.1
24	81.1	85.1
25	81.2	85.1

Source: Adapted from ABS, *Life Tables, States, Territories and Australia, 2015–2017*, ABS cat. No. 3302.0.55.001.

Although life expectancy is a valuable indicator and reflects the overall health status of a population group or country, it doesn't provide information about how sick the population is or what the leading causes of death and ill health are. As a result, other indicators are required in order to make informed judgements about health status and these will be explored in the following subtopics.

Resources

Digital document Life expectancy worksheet (doc-32155)
Weblink Life expectancy

2.2 Activity

Access the **Life expectancy** weblink and worksheet in the Resources tab, then complete the worksheet.

2.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Define health status.
2. Why is it useful to be able to measure health status?
3. (a) What is meant by health indicators?
   (b) Identify four health indicators that can be used to measure health status.
4. Explain the following health status indicators:
   (a) self-assessed health status
   (b) life expectancy.
5. What percentage of 15- to 24-year-olds assessed their health status as 'excellent' or 'very good' according to figure 2.4?
6. Identify a similarity and a difference between those aged 15–17 and 18–24, as shown in figure 2.4.
7. Using table 2.1, explain how life expectancy changed from 1901–10 to 2015–17 for:
   (a) males at birth
   (b) females at birth.

2.2 Exercise 2 APPLY your knowledge

1. (a) Refer to figure 2.4 and outline the proportion of 15- to 24-year-olds assessing their health status as 'good' or 'fair or poor'.
   (b) Brainstorm reasons that may account for youth assessing their health status as 'good' or 'fair or poor'.
2. Outline one advantage and one limitation of using life expectancy in making judgements about the health status of a population or group.
3. (a) Using table 2.2, explain what happens to life expectancy as individuals move through youth and into the early adulthood stage of the lifespan.
   (b) Suggest reasons that account for this change.

studyON

2.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

2.3 Mortality

KEY CONCEPT Exploring the health status indicator of mortality among Australian youth

Mortality refers to death, particularly at a population level. There are two ways of considering mortality:

- the number or rate of deaths in a population. Mortality rates are usually presented per 100 000 population in a 12-month period
- the **years of life lost (YLL)**, where one YLL is equal to one year of life lost due to premature death.

2.3.1 Mortality rate

The mortality rate is an indication of how many deaths occurred in a population in a given period for a specific cause/all causes. Mortality rates are usually presented per 100 000 population in a 12-month period. Some mortality rates are shown in table 2.3.

TABLE 2.3 Mortality rates by age group and sex, per 100 000, 2017

Age group	Males	Females	Persons	Male:female ratio
0–4	86.9	73.4	80.6	1.2
5–9	9.2	7.8	8.5	1.2
10–14	10.5	8.7	9.7	1.2
15–19	41.8	21.9	32.1	1.9
20–24	66.4	24.3	45.7	2.7
25–29	76.9	29.9	53.2	2.6
30–34	92.5	40.3	66.0	2.3
35–39	117.5	61.6	89.3	1.9
40–44	163.3	89.0	125.7	1.8
45–49	231.8	139.1	184.4	1.7
50–54	349.1	210.6	278.7	1.7
55–59	535.2	312.2	421.1	1.7
60–64	819.8	471.7	640.9	1.7
65–69	1286.0	738.7	1005.5	1.7
70–74	2110.4	1257.5	1672.3	1.7
75–79	3607.1	2262.8	2899.2	1.6
80+	10441.4	9159.9	9688.3	1.1

Source: Adapted from ABS data.

A mortality rate of 21.9 per 100 000 means that, on average, 21.9 females in every 100 000 died in 2017 in this age group. According to the ABS, there were around 724 000 females in this age group in 2017, which equals 159 deaths.

The male:female ratio means that in 2017 an average of 1.9 males died in this age group for every female that died in this age group, meaning that males were almost twice as likely to die at this age compared to females.

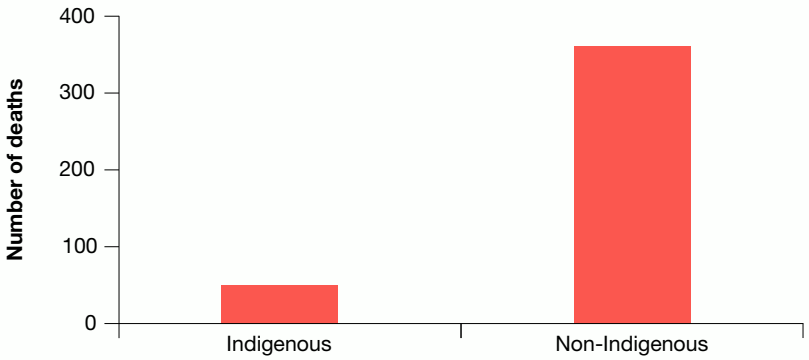
EXAM TIP

Understanding mortality rates

When drawing conclusions about causes of mortality among youth, it is important to ensure that fair comparisons are made between different groups.

Comparing the number of youth who die from a condition does not take the size of the population into account and therefore does not provide an accurate comparison. Figure 2.5, for example, shows the number of deaths among Indigenous and non-Indigenous Australians aged 15–19 in 2015.

FIGURE 2.5 The number of Indigenous and non-Indigenous deaths for those aged 15–19, 2015

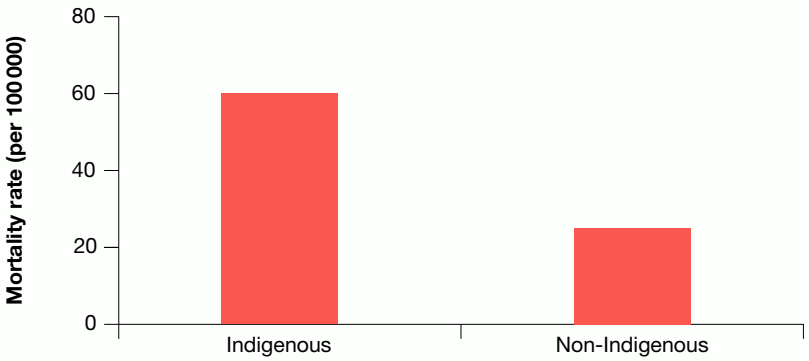


Source: Adapted from AIHW, *Aboriginal and Torres Strait Islander adolescent and youth health and wellbeing 2018* and GRIM Books, 2019.

Figure 2.5 appears to show that Indigenous people are better off as they have a much lower *number* of deaths. There were around 360 deaths for non-Indigenous people in this age group, compared to around 50 for Indigenous people.

However, when the size of the population is taken into account, the data show a very different story.

FIGURE 2.6 The rate (per 100 000) of Indigenous and non-Indigenous deaths for those aged 15–19, 2015



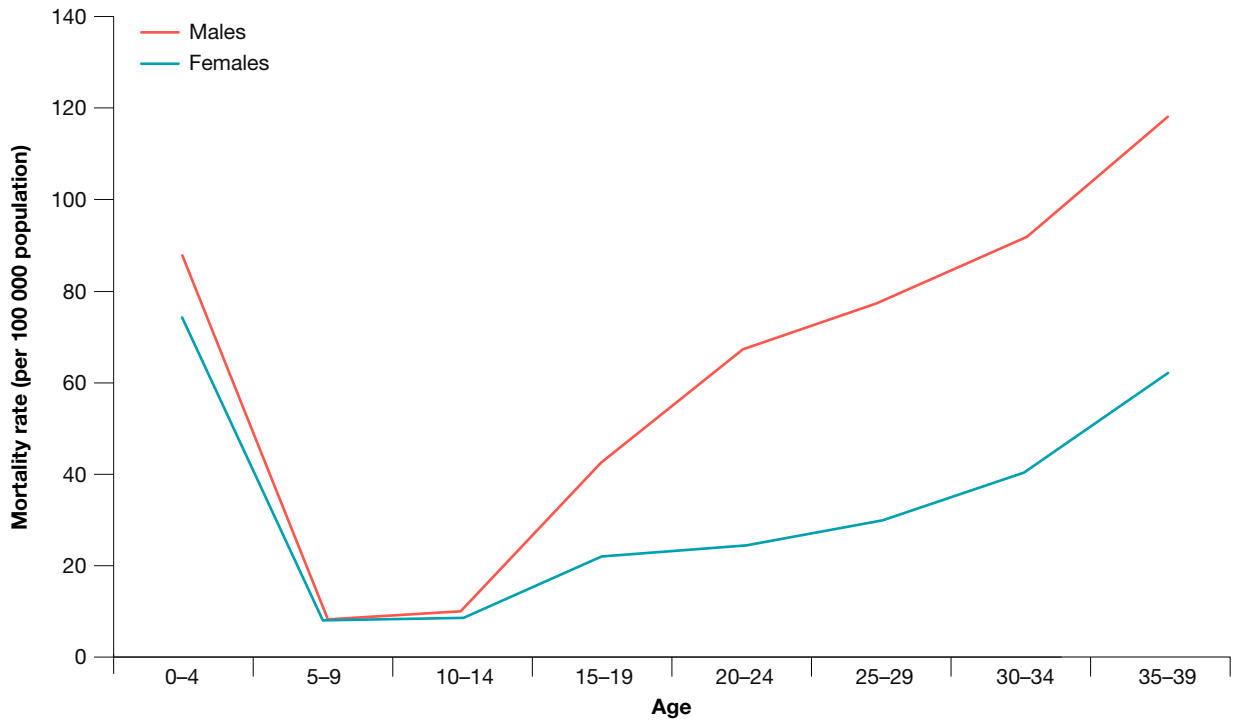
Source: Adapted from AIHW, *Aboriginal and Torres Strait Islander adolescent and youth health and wellbeing 2018* and GRIM Books, 2019.

When the total number of people making up each group is taken into account (the population of non-Indigenous Australians is much higher), Indigenous people experience much higher *rates* of mortality. The rate for non-Indigenous people is about 25 deaths per 100 000 people, whereas for Indigenous Australians the rate is about 60 deaths per 100 000 people. This difference could be missed unless the vertical axis on each graph is completely understood.

Youth has among the lowest mortality rates of all lifespan stages, second only to childhood mortality rates (see figure 2.7).

Mortality rates have also decreased significantly over time among youth (figure 2.8). In 1990, mortality rates were around 67 per 100 000 people aged 15–19 and around 19 per 100 000 people aged 10–14. These figures had decreased in 2017 to around 32 deaths per 100 000 and 10 deaths per 100 000 for those aged 15–19 and 10–14 respectively. Advances in technology, education and medical treatment were largely responsible for these decreases.

FIGURE 2.7 Death rates for infants, children, youths and early adults, 2017

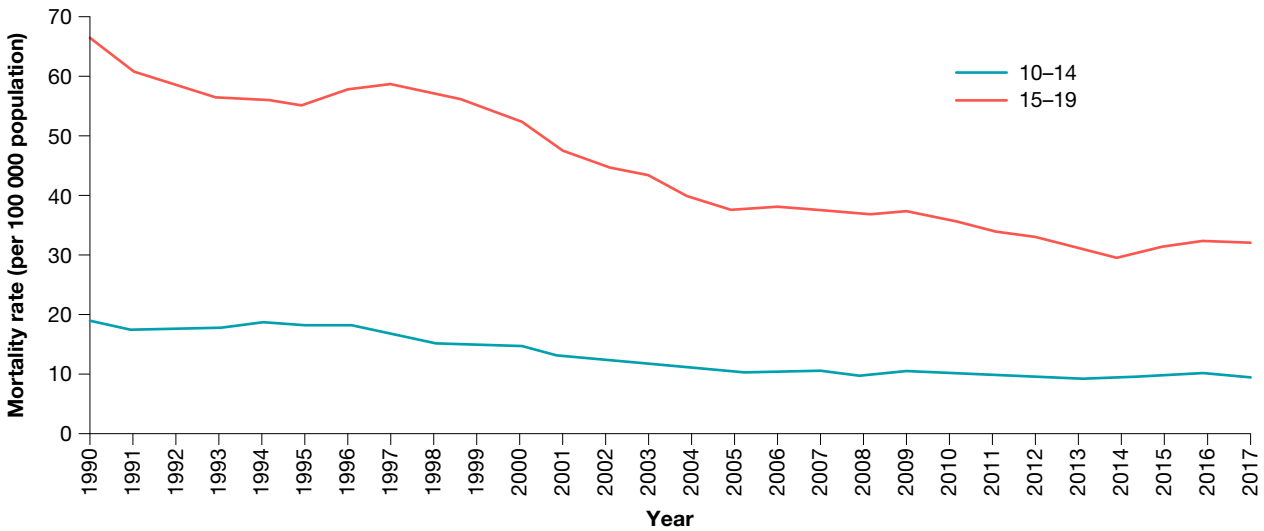


Source: Adapted from healthdata.org.

TRENDS

A trend is a general movement or pattern. Sometimes trend data is valuable because it shows what has been happening to the data over a period of time. For example, the death rate for those aged 15–19 in 2017 was around 32 per 100 000. This figure may seem high considering that youth is one of the healthiest stages of the lifespan. Yet when trend data are explored, it shows that the rates have actually decreased significantly compared to years gone by (see figure 2.8).

FIGURE 2.8 Death rates for Australians aged 10–14 and 15–19, 1990–2017

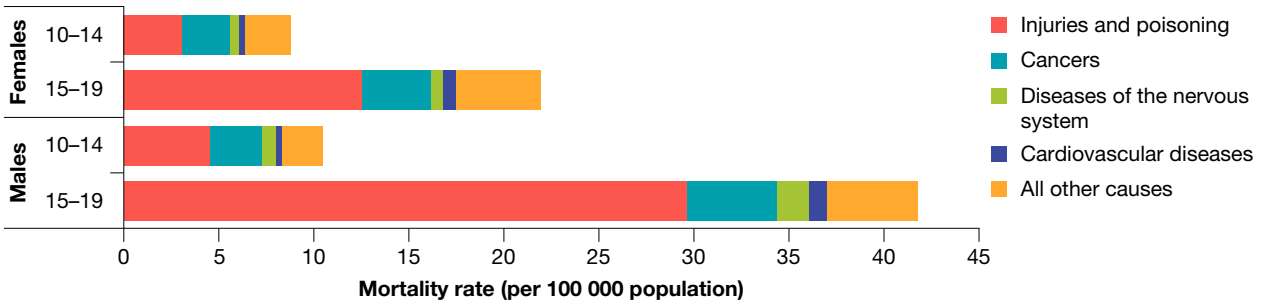


Source: Adapted from healthdata.org.

Death rates are low during youth because they have survived childhood (where factors associated with childbirth and genetic abnormalities are the leading causes of death) and lifestyle factors such as food intake, alcohol consumption and physical activity levels have generally not had time to have an impact on the body to the point of causing premature death.

The leading contributors to death among youth are shown in figure 2.9.

FIGURE 2.9 Mortality rates due to selected causes for those aged 10–19 according to sex, 2017



Source: Adapted from healthdata.org, 2019.

TABLE 2.4 The leading causes of mortality among youth explained

Cause of mortality	Description	Specific links to youth
Injuries and poisoning	Injuries relate to physical trauma or damage caused to body tissues by an external force. Specifically, injuries include road accidents, intentional self-harm, drowning and violence. Poisoning occurs when a substance interferes with normal body functions after it is swallowed, inhaled, injected or absorbed.	Deaths from accidental causes such as car accidents and drowning contribute significantly to mortality rates during the youth stage. Common causes of poisoning among youth include drug overdoses and alcohol poisoning.
Cancers	Cancer is characterised by the uncontrolled growth of abnormal cells. These cells can interfere with healthy cells and prevent them from carrying out their normal functions. Although the mortality rate associated with cancer is relatively low among youth compared to other lifespan stages, it is still the second leading cause of mortality among youth.	Among youth, the most common cancers include: • melanoma — cancer of the melanocytes, a type of skin cell • Hodgkin lymphoma — a form of blood cancer • testicular cancer — cancer of the testicles, therefore affecting only males.
Diseases of the nervous system	Diseases of the nervous system were the third most common cause of death among youth in 2017. The nervous system is made up of the brain, spinal cord and nerves.	Diseases affecting these structures in youth include: • cerebral palsy — a condition caused by damage to the brain that occurs either during pregnancy or shortly after birth

(Continued)

TABLE 2.4 The leading causes of mortality among youth explained *(Continued)*

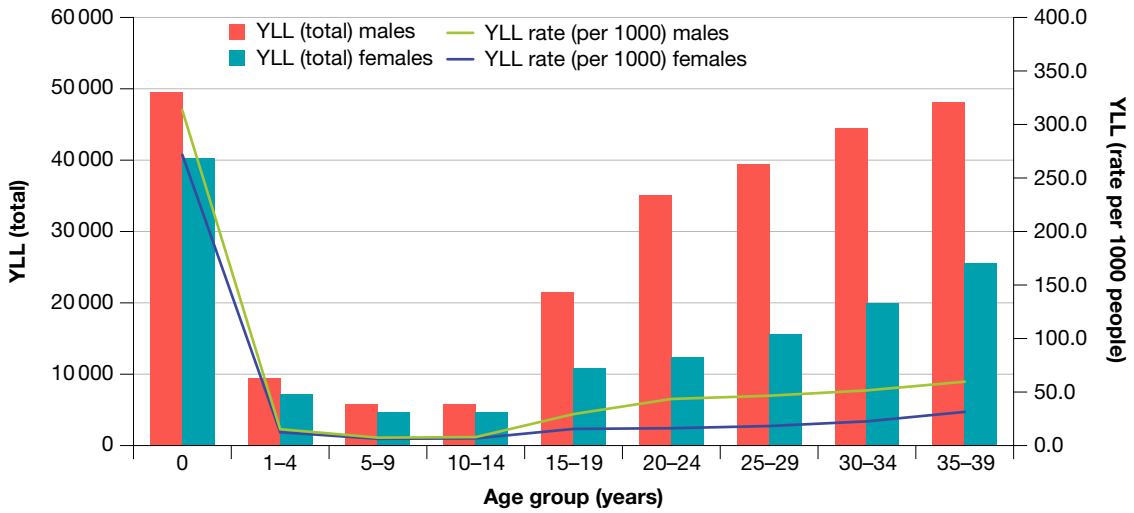
Cause of mortality	Description	Specific links to youth
		• epilepsy — a brain condition characterised by recurrent seizures • muscular dystrophy — a range of related conditions that cause progressive weakness and loss of muscle mass.
Cardiovascular diseases	Cardiovascular disease refers to diseases of the heart and blood vessels.	This cause of death is not common in young people, and when cardiovascular-related deaths do occur in youth, they usually arise from heart defects and genetic conditions.

2.3.2 Years of life lost (YLL)

Years of life lost (YLL) due to premature death is another way of measuring and comparing mortality. If a person dies from a given condition 30 years before the predicted life expectancy for their age, then they have contributed 30 YLL to that particular cause of death. For example, if a 14-year-old female dies in a car crash, and life expectancy for females that age is 84, then 70 years have been added to the YLL for injuries.

Figure 2.10 shows the total YLL and rate of YLL per 1000 people for both males and females in different age groups in 2017. Compared to other age groups, 10- to 19-year-olds experience relatively few YLL.

FIGURE 2.10 YLL number and rate for males and females by age group, 2017

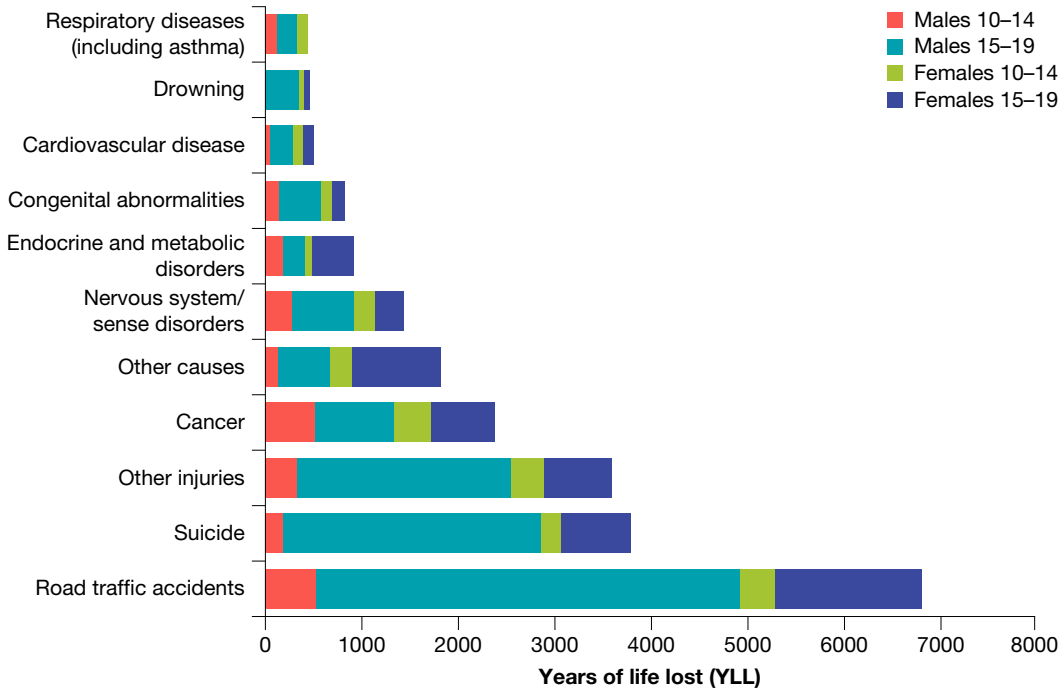


Source: Adapted from https://vizhub. healthdata. org/gbd-compare/, 2019.

The YLL that were caused by a range of conditions among young Australians are shown in figure 2.11.

For Australia's youth, road traffic accidents are the leading specific cause of years of life lost, and injury-related deaths account for the top three specific causes of YLL. Cancer is the leading non-injury related cause of death, followed by nervous system and sense disorders that include epilepsy and muscular dystrophy.

FIGURE 2.11 Years of life lost (YLL) for selected conditions by sex and age group



Source: Adapted from AIHW data.
Note: 'Other causes' is not considered to be a leading cause of death because it encompasses a range of conditions, each of which on its own contributes very few YLL.

on Resources

Digital document Injury worksheet (doc-32156)
Weblink Injury

2.3 Activity

Access the **Injury** weblink and worksheet in the Resources tab then complete the worksheet.

2.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. What is meant by 'mortality'?
2. Examine table 2.3 and answer the following questions.
   (a) Which age group has the greatest male:female ratio for mortality?
   (b) What does this number (ratio) mean?
   (c) Discuss reasons that may account for the ratio identified in part a.
3. (a) According to figure 2.7, how do death rates change for 10- to 14-year-olds compared with 15- to 19-year-olds?
   (b) Suggest reasons for this change.
4. (a) Describe the trend in death rates as shown in figure 2.8.
   (b) What factors may have led to this trend?
5. (a) What are the top three broad causes of death for males and females according to figure 2.9?
   (b) For each broad cause of death identified in part a, list the specific diseases or conditions that are most likely to have caused these deaths.

6. (a) Explain how mortality rate due to injuries changes for those aged 15–19 compared to those aged 10–14 as shown in figure 2.9.
   (b) Discuss possible reasons for these changes.
7. (a) State what the acronym 'YLL' stands for and explain what it means.
   (b) Outline how YLL are calculated.
   (c) If an individual dies at aged 15 and life expectancy for that person is 85 years, how many YLL have they contributed?
   (d) If 10 people die at age 79 and their life expectancy is 80, how many YLL have been contributed by those 10 deaths?
   (e) Out of c and d, which scenario has had a greater impact on the community in terms of YLL? Justify your response.
8. (a) Which sex contributes more YLL according to figure 2.11?
   (b) Suggest reasons for this.

2.3 Exercise 2 APPLY your knowledge

1. Discuss why death rates might be a more useful statistic than the total number of deaths.
2. Examine table 2.3 and complete the following.
   (a) Graph the male:female mortality ratio across the lifespan.
   (b) Using data, describe the pattern with regard to male:female mortality rates across the lifespan.
3. Explain why mortality data is useful in addition to life expectancy data in analysing health status.

studyON

2.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

2.4 Morbidity and burden of disease

KEY CONCEPT Exploring the health status indicators of morbidity and burden of disease among Australian youth

2.4.1 Morbidity

Not all conditions end in death, so it is useful to examine the effect that non-fatal conditions have on a population. This is where morbidity data is useful. **Morbidity** refers to ill health — including disease, injury and disability — in an individual, and the level of ill health in a population. The morbidity rate therefore refers to the rate of ill health in a population in a given period. There are two ways of considering morbidity:

- the number or rate of people reporting a condition (often represented as a percentage of a population, or the incidence and prevalence rates)
- the **years lost due to disability (YLD)**, where one YLD is equal to one 'healthy' year of life lost due to time lived with disease, injury or disability.

FIGURE 2.12 Many conditions, such as migraine, do not end in death but still affect the health status of youth.

By using two methods, it is possible to examine which conditions are the most common and which conditions have the biggest impact on health and wellbeing.

2.4.2 Incidence and prevalence of health conditions

Incidence and prevalence are two measures used to present morbidity data. **Incidence** refers to the number of new cases of a condition in a given period (usually 12 months) and **prevalence** refers to the total number of cases of a condition at a given time (see figure 2.13). Both incidence and prevalence data can be shown as the total number or the rate (often expressed per 1000 or per 100 000 population).

Incidence data are useful for identifying which conditions are increasing in diagnosis and which ones are decreasing. This can assist the government and health organisations in allocating resources and taking action to improve the health status of Australia's youth. Incidence and prevalence (see figure 2.13) provide two ways to look at how many people experience particular conditions. New cases add to the overall prevalence of a condition, while those who are cured or die from it reduce the number.

Table 2.5 shows the estimated incidence rates (per 1000) for selected age groups and conditions in 2017.

FIGURE 2.13 Incidence and prevalence

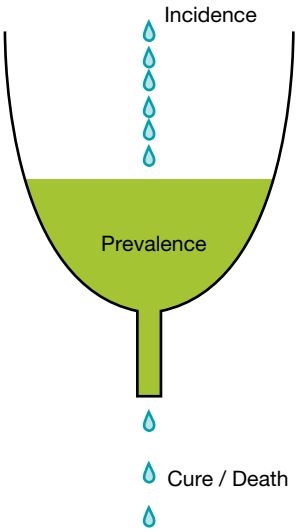


TABLE 2.5 Estimated incidence rates for selected conditions, per 1000 population, 2017

	Males		Females	
	10–14	15–19	10–14	15–19
Asthma	6.8	4.9	7.5	6.1
Migraine	24.0	22.8	31.5	30.8
Anxiety and depression	36.0	54.0	53.7	94.6
Eating disorders	3.6	8.18	6.6	14.8
Back and neck pain	18.9	33.4	23.3	42.2
Dental caries	304.5	487.7	333.3	500.5

Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

TABLE 2.6 Descriptions of the selected conditions shown in table 2.5

Condition	Description
Asthma	When exposed to certain triggers (e.g. cigarette smoke and air pollution), the lining of the air passages becomes inflamed and swollen, and extra mucus is produced. The muscles of the airways also tighten (bronchoconstriction), resulting in a narrowing of the airways that makes it difficult for the person to breathe.
Migraine	Migraine is a neurological condition characterised by severe headaches that can be experienced from as little as once or twice a year, or as often as two or three times a week. The pain is severe, throbbing and usually on one side of the head. A migraine attack can last from four hours to three days and is associated with a spasm of the blood vessels leading to the brain.

(Continued)

TABLE 2.6 Descriptions of the selected conditions shown in table 2.5 *(Continued)*

Condition	Description
Anxiety and depression	Anxiety is a condition characterised by extreme worry that interferes with the sufferer's daily life. Symptoms include panic attacks, physical fear reactions and attempts to avoid certain situations. Depression is a condition characterised by constant feelings of sadness and loss of interest, for no identifiable reason.
Eating disorders	Eating disorders are types of mental illnesses and include: • anorexia nervosa — symptoms include restricted eating, weight loss and a fear of weight gain • bulimia nervosa — sufferers binge, often secretly, on high-kilojoule foods, then try to compensate by dieting, over-exercising or throwing up. Feelings of shame or loss of control often accompany the bingeing. • binge eating disorder — symptoms include bouts of binge eating (e.g. eating much more than usual, to the point of discomfort, or when not physically hungry). Binge sessions can be followed by feelings of guilt, disgust and depression.
Back and neck pain	Back pain is common among youth and can be caused by poor posture, inappropriate forms of exercise and carrying heavy schoolbags.
Dental caries	Sometimes referred to as 'cavities' or 'tooth decay', dental caries occur when the tooth enamel breaks down due to excess acid in the mouth.

As can be seen from table 2.5, the incidence rate for asthma was 6.8 for every 1000 males in the 10–14 age bracket. If the size of the population in this age group is known, the total number of cases can be calculated (see box below).

CALCULATING THE TOTAL NUMBER OF NEW CASES OF A DISEASE

In 2017, there were approximately 756 500 males in the 10–14 age group. To calculate the total number of new cases, multiply the rate per 1000 by 756.5 (as there are 756.5 groups of 1000 in 756 500) to get the total number of new cases in 2017:

$756.5 \times \mathbf{6.8} = \mathbf{5144}$

So in 2017 there were approximately 5144 new cases of asthma among males in the 10–14 years age group.

The prevalence, or total cases, of selected conditions is shown in table 2.7. Statistics on prevalence can be useful for comparing the number of individuals suffering from certain conditions during a specified period. As with incidence, information about prevalence can assist with allocating resources and planning for the future. It also ensures that trends can be identified over time so that the health system can adapt to cater for the changing needs of Australia's youth.

TABLE 2.7 Prevalence (total number) of selected conditions, 2017

	Males		Females	
	10–14	15–19	10–14	15–19
Asthma	77 275	66 655	77 277	79 276
Migraine	81 777	128 361	102 149	165 825
Anxiety and depression	47 531	69 772	65 378	109 026
Eating disorders	1 118	4 153	3 590	16 150
Back and neck pain	23 291	51 641	25 994	60 308
Dental caries	112 486	178 378	115 733	178 442

Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

Data in table 2.7 are presented as the total number of people in each age group experiencing each condition in Australia, but the rate of prevalence for each condition can be calculated if the approximate size of the population is known (see box below).

CALCULATING THE RATE OF TOTAL CASES OF A DISEASE

First, divide the population number by 1000 (or 100 000 if you want to display the rate per 100 000).

For example, in 2017 there were approximately 715 500 females in the 10–14 age group:

715 500 ÷ 1000 = 715.5

In other words, there were 715.5 groups of 1000.

To calculate the rate, divide the number of individuals suffering from the condition by 715.5. For asthma (table 2.7), there were 77 277 females in this age group suffering from asthma:

77 277 ÷ 715.5 = 108 cases per 1000 females in this age group.

Table 2.8 shows prevalence data for the same conditions as table 2.7, expressed per 1000 population.

TABLE 2.8 Prevalence (per 1000) of selected conditions, 2017

	Males		Females	
	10–14	15–19	10–14	15–19
Asthma	88.1	101.7	108.0	109.5
Migraine	108.1	168.9	142.8	229.0
Anxiety and depression	62.8	91.8	91.4	150.5
Eating disorders	1.5	5.5	5.0	22.3
Back and neck pain	30.8	68.0	36.3	83.3
Dental caries	148.7	234.7	161.8	246.4

Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

2.4.3 Years lost due to disability (YLD)

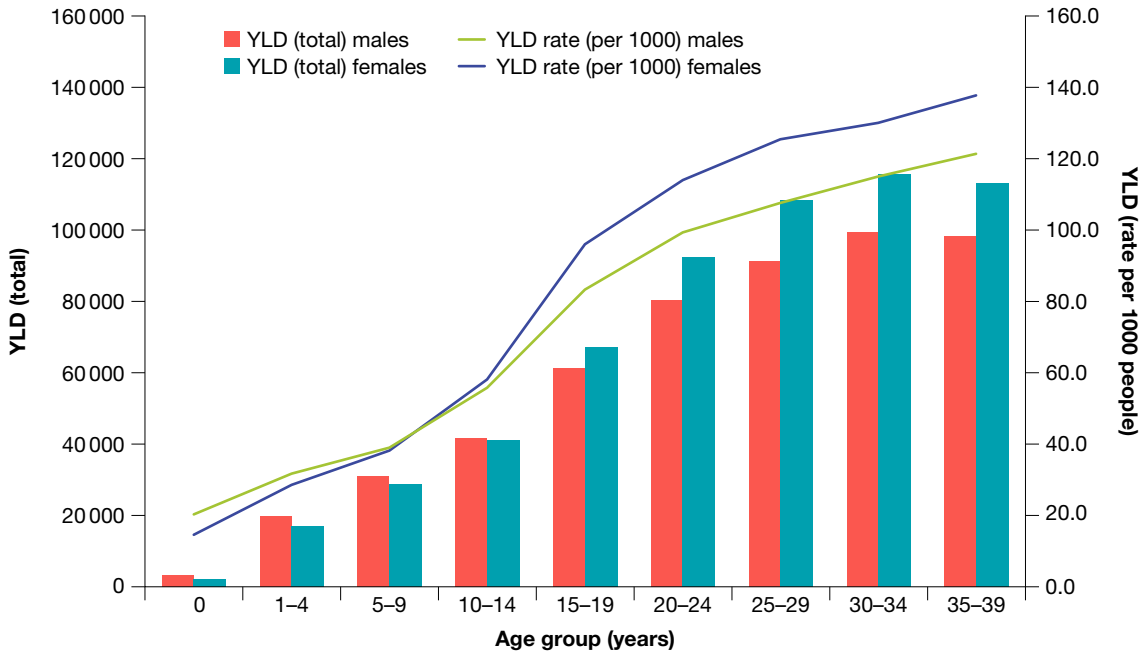
Years lost due to disability (YLD) is a measure of the impact of morbidity on a group or population. YLL and YLD are equal in value, in that one YLL and one YLD are each equal to one healthy year of life lost. The difference is that YLL is caused by premature death and YLD is caused by losing healthy years of life because of living with illness, disease or disability.

It would be difficult to compare the effect of asthma on an individual with the effect of losing a leg in a car crash. They are very different conditions and would impact on an individual in different ways. In order to address this issue, the World Health Organization (WHO) has given the most common conditions a disability weight, which is an indication of the severity of the condition and how much it interferes with normal life. The disability weights are incorporated into the YLD formula, so all YLD are relative and different conditions can be compared fairly. For example, even though headaches are more common among youth than asthma, they are considered to be less severe and this contributes to asthma contributing more YLD. As asthma contributes more YLD than headaches, it is considered to have a greater impact and be a greater concern.

Figure 2.14 shows the number and rate of YLD from age 0 to 39. Males experience a greater number of YLD in the 10–14 age group, but a lower rate than females. Females experience a greater rate of YLD in

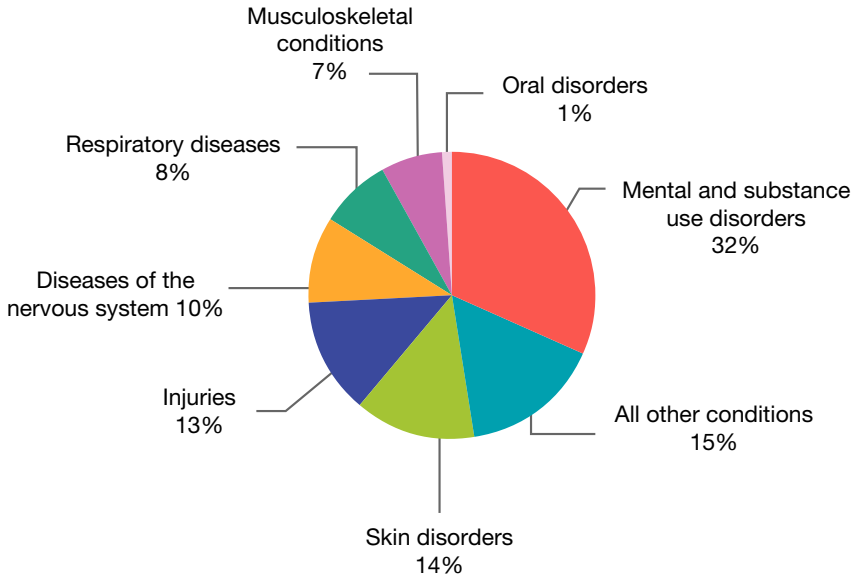
both the 10–14 and the 15–19 age groups compared to males and the increase in mental disorders among females in this age group is largely responsible for this change. Figures 2.15 and 2.16 show the breakdown of YLD for 10- to 14-year-olds and 15- to 19-year-olds according to cause in 2017.

FIGURE 2.14 YLD number and rate for males and females by age group, 2017



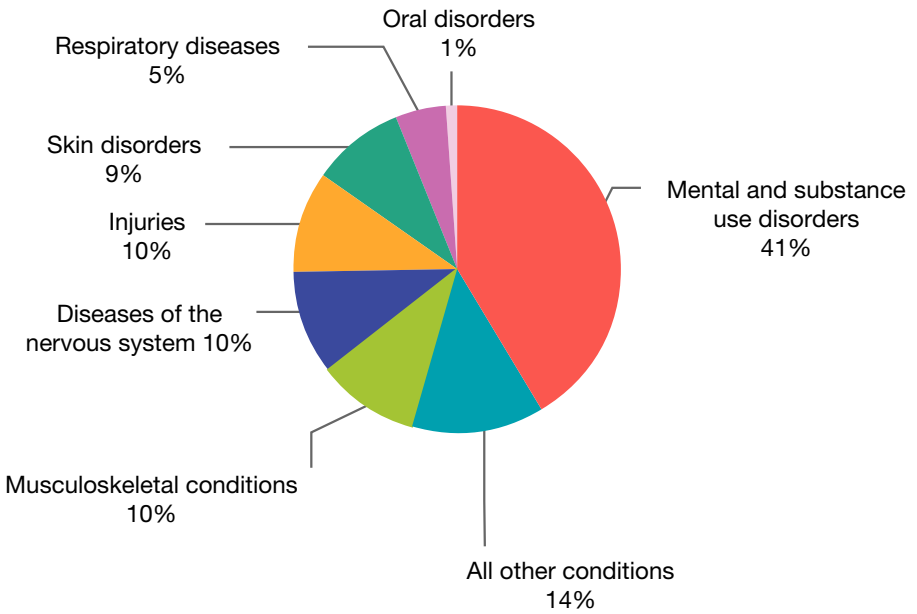
Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

FIGURE 2.15 Proportion of total YLD for 10- to 14-year-olds due to selected conditions, 2017



Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

FIGURE 2.16 Proportion of total YLD for 15- to 19-year-olds due to selected conditions, 2017



Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

As well as being leading causes of morbidity, injuries and diseases of the nervous system are leading causes of mortality and were discussed in the previous section.

TABLE 2.9 Descriptions of selected conditions shown in figure 2.15 and 2.16

Condition	Description
Mental and substance use disorders	Mental and substance use disorders include depression, anxiety and eating disorders, and alcohol and drug use disorders, Mental and substance use disorders are the largest contributor to YLD among youth and are therefore deemed to have the greatest non-fatal impact on health status. Mental and substance use disorders are common among youth and can be quite severe, which contributes to the high rate of YLD attributed to them.
Skin disorders	Skin disorders are the third leading contributor to YLD among youth and include acne, eczema, psoriasis and other forms of dermatitis. These conditions are often long lasting and, in some cases, can be severe.
Musculoskeletal conditions	Musculoskeletal conditions relate to a range of conditions affecting the bones, muscles and connective tissues (the tissues that connect bones to muscles). The most common musculoskeletal conditions among youth include: • juvenile arthritis — a group of conditions that cause joint pain and swelling in children and teens under the age of 16, for unknown reasons • back problems — include a range of conditions related to the bones, joints, connective tissue, muscles and nerves of the back, including back pain and disc disorders • joint reconstruction surgery — involves surgically rebuilding structures of the joint. Examples include shoulder and knee reconstruction surgery.
Respiratory diseases	Asthma and bronchitis account for the majority of YLD due to respiratory conditions among youth. Although more youth experience asthma than mental and substance use disorders, asthma is not considered to be as severe as mental and substance use disorders and therefore contributes fewer YLD.

CASE STUDY

Australia endures 'epidemic' of preventable ACL injuries

John Roumeliotis' promising football career was almost over before it had begun.

At 18 years old, the Epworth teenager had already suffered three crippling injuries to his anterior cruciate ligament, commonly known as the ACL.

The third time, he hadn't even returned to playing when he snapped his ACL jumping for a mark at training two days before he was due to step back on the field in his comeback game.

'I thought it was all over,' said the Calder Cannons player, who is still hopeful of playing in the AFL.

'I didn't really know what to do with myself. I was devastated.'

These stories are not unusual. Every day on fields and courts across the country, sporting heartbreaks like this are being repeated.

New research has revealed Australia has the highest rates of ACL reconstructions in the world, and they are being reported in younger and younger athletes, some as young as seven or eight.

It is not yet clear what is causing the growing rates of ACL damage but leading knee surgeon Christopher Vertullo speculated it could be partly caused by a lack of 'free play' in a generation of children often glued to electronic devices.

Early specialisation in individual sports could also be to blame, he suggested.

Associate Professor Vertullo, the director of Knee Research Australia, said that when he began practising about 16 years ago, he rarely had to treat patients aged under 15, or visit paediatric wards.

'Now every week I have to go there,' he said.

It is a phenomenon that he finds particularly heartbreaking, as many ACL injuries can be prevented with proper agility training, yet cause devastating long-term effects, including future knee reconstructions and debilitating pain through osteoarthritis.

His suspicions of an 'epidemic' of ACL injuries was recently confirmed by a study he led that found there were almost 200 000 ACL reconstructions performed in Australia in the 15 years to 2015.

Over the same period, the number of reconstructions jumped by 74 per cent in those under 25. But the biggest increase was seen in children aged five to 14, where the annual growth in ACL injuries was 8.8 per cent for girls and 7.7 per cent for boys.

Research out of La Trobe University in Melbourne has also identified a trend of repeat injuries in young people who undergo ACL surgery. In the 128 young people they studied who had undergone two surgeries, almost 30 per cent went on to have a third ACL injury.

The paper suggested that young people who sustained multiple ACL injuries may have to be counselled to switch to lower-risk sports.

'We feel [like the rate of repeat injuries] is too high and it is certainly concerning for their future knee health,' said lead researcher Associate Professor Kate Webster.

With the cost of ACL surgery in Australia estimated to come to $142 million each year, Associate Professor Vertullo is calling for a national prevention program to be established to teach volunteer coaches to introduce effective warm-up techniques.

'As soon as you implement it, it pays for itself,' he said.

The program is estimated to cost $2 million or $3 million, and would be delivered via an app.

Source: Dow, A, 2018 'Australia endures 'epidemic' of preventable ACL injuries', *The Sydney Morning Herald,* 22 April, www.smh.com.au/national/australia-endures-epidemic-of-preventable-acl-injuries-20180421-p4zay6.html.

Case study review

1. What does ACL damage refer to?
2. What factors does surgeon Christopher Vertullo think could be partly responsible for the growing rates of ACL damage?
3. How can ACL injuries be prevented?
4. What is the trend of repeat ACL injuries in young people?
5. What did the research paper suggest young people with multiple ACL injuries should do?
6. How can coaches assist in reducing ACL injuries?
7. Explain how an ACL injury could impact the health and wellbeing of youth.

2.4.4 Burden of disease

Burden of disease is a concept that combines mortality data with morbidity data so that conditions that contribute differently to death and illness can be compared. For example, cancer causes a lot of death and

illness while a chronic, or long-term, condition such as asthma causes a lot of illness but much less death. In the past, it was hard to compare these two conditions and decide where valuable funding should go. Burden of disease data was created to help overcome this problem.

Burden of disease is measured in **disability adjusted life years** (or **DALY**, pronounced 'dally'), where 1 DALY equals one year of healthy life lost due to premature death and time lived with illness, disease or injury. Using DALY, it is possible to compare the impact of different conditions equally — those that cause death, those that cause disability and illness, and those that cause both (table 2.10). A person who has lived a healthy life but dies suddenly 30 years earlier than the current life expectancy of their age has contributed 30 DALY. In contrast, a person who is still alive but has spent their last 10 years at only 'half health' has contributed five DALY.

Although ill health generally has greater impacts towards the end of life, YLD can be contributed at any stage of a person's life.

FIGURE 2.17 DALY are calculated by adding the fatal (YLL) and non-fatal (YLD) impacts of disease and injury.

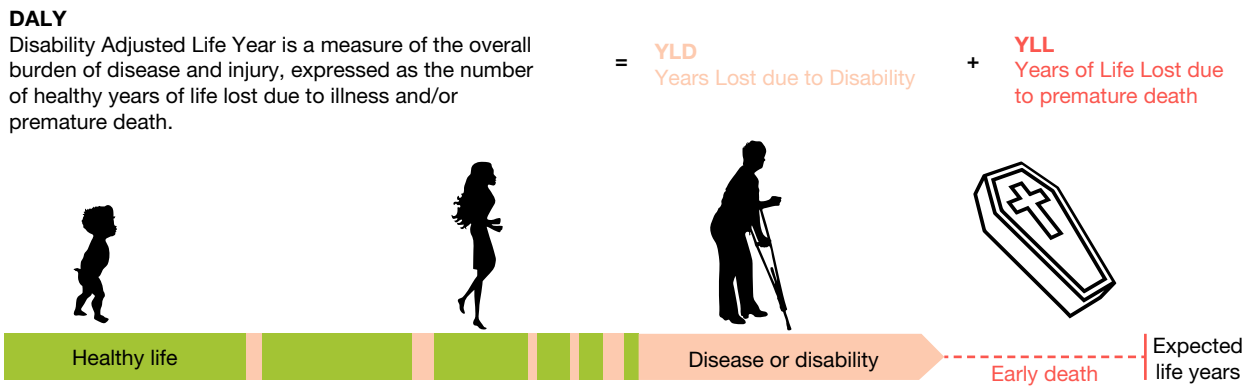


TABLE 2.10 Ten leading causes of burden of disease and injury for 10- to 19-year-olds in Australia, 2017

	10–14 years		15–19 years	
Disease group	**Number of DALY**	**Proportion of total DALY (%)**	**Number of DALY**	**Proportion of total DALY (%)**
Mental and substance use disorders	26 622	28.3	53 929	33.2
Injuries	15 051	16.2	34 811	21.4
Skin disorders	11 284	12.1	12 165	7.5
Neurological conditions	8926	9.6	13 574	8.3
Infectious diseases	8100	8.7	8752	5.4
Respiratory diseases (including asthma)	7033	7.5	6675	4.1
Musculoskeletal conditions	5501	5.9	13 450	8.3
Cancer	3080	3.4	4554	2.8
Infant and congenital conditions	2432	2.6	2555	1.6
Oral disorders	675	0.7	1045	0.6
All other conditions	19 647	21.1	11 140	6.8

Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

Neurological disorders common among youth include migraine and headache disorders as well as epilepsy — a condition characterised by seizures caused by a disruption to the electrical activity in the brain.

Infectious diseases include respiratory infections, meningococcal infections, food poisoning and sexually transmissible infections such as chlamydia, syphilis and gonorrhoea.

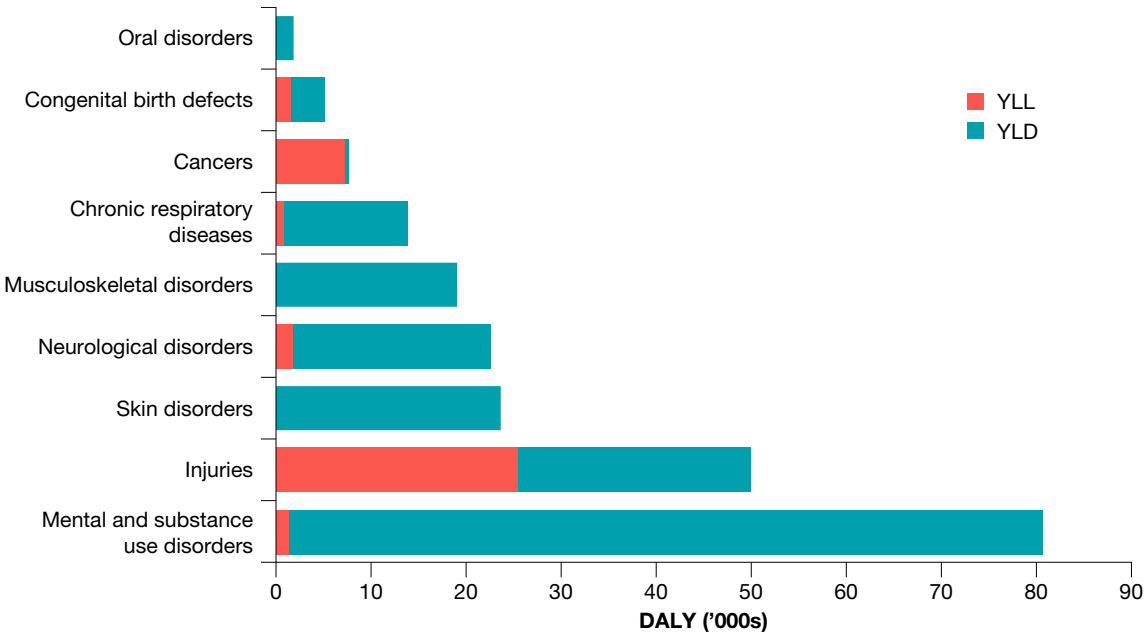
Infant and congenital conditions are those first occurring before or just after birth. Examples include:

- Down syndrome — a genetic condition characterised by having three chromosomes on the 21st pair instead of two. Individuals exhibit distinct facial features, reduced muscle mass and impaired intelligence.
- Muscular dystrophy — a group of disorders that cause progressive and irreversible weakness and wasting of the muscles.
- Birth defects — these result from missing or ill-formed body structures. They may have a genetic, infectious or environmental origin, although in most cases it is difficult to identify their cause.

Oral disorders include dental caries, gum disease and mouth injuries such as chipped or broken teeth.

Australia's youth experience a significantly greater number of YLD than YLL. According to data, in 2017 those aged between 10 and 19 had 210 785 YLD compared to 43 010 YLL, giving a total of 253 975 DALY. The top causes of DALY (with a breakdown of YLL and YLD) for this age group is shown in figure 2.18.

FIGURE 2.18 Burden (YLL, YLD and total DALY) for the top causes of DALY for 10- to 19-year-olds, 2017



Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

EXAM TIP

Using the correct unit of measurement is always important when analysing or explaining data. For example, the data in figure 2.18 show the total DALY attributable to each cause and the contribution to total DALY by YLL and YLD. The number of total DALY is shown in thousands (represented by the three zeros shown after 'DALY') and this must be reflected in the discussion. If mental disorders are stated as contributing approximately 80 DALY, this would not receive marks as the total DALY is around 80 000.

Resources

Digital document Burden of disease worksheet (doc-32157)

Weblink Burden of disease

2.4 Activity

Access the **Burden of disease** weblink and worksheet in the Resources tab, then complete the worksheet.

2.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) What is meant by the term 'morbidity'?
   (b) Explain why it is useful to examine morbidity data in addition to mortality data.
2. Outline the difference between incidence and prevalence.
3. State what the acronym 'YLD' stands for and explain what it means.
4. (a) Describe the change in rate of YLD for males and females according to figure 2.14.
   (b) Approximately how many YLD were contributed by males and females aged 10–14 and 15–19?
5. What are the top three causes of YLD for young Australians according to figures 2.15 and 2.16?
6. (a) What is meant by 'burden of disease'?
   (b) What is the unit of measurement for burden of disease?
7. What is the benefit of using DALY instead of morbidity or mortality data?

2.4 Exercise 2 APPLY your knowledge

1. If the incidence for a condition drops to 0 per 100 000 population, does this also mean the prevalence will be 0? Explain.
2. Explain how asthma can have a higher prevalence for males aged 10–14, but anxiety and depression have a higher incidence.
3. (a) Which three conditions led to the most burden of disease as shown in table 2.10?
   (b) For each of the three conditions, explain whether you think most DALY would be attributable to YLL or YLD.
4. Explain how mental and substance use disorders can be the leading burden of disease (DALY) for young Australians when these conditions cause relatively few deaths.
5. Referring to figure 2.18, identify:
   (a) the leading contributor to YLD
   (b) the leading contributor to YLL
   (c) the leading contributor to DALY.
6. According to figure 2.18, approximately how many DALY were contributed by:
   (a) mental and substance use disorders
   (b) injuries
   (c) skin disorders?

studyON

2.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

2.5 Hospitalisation, core activity limitation and psychological distress

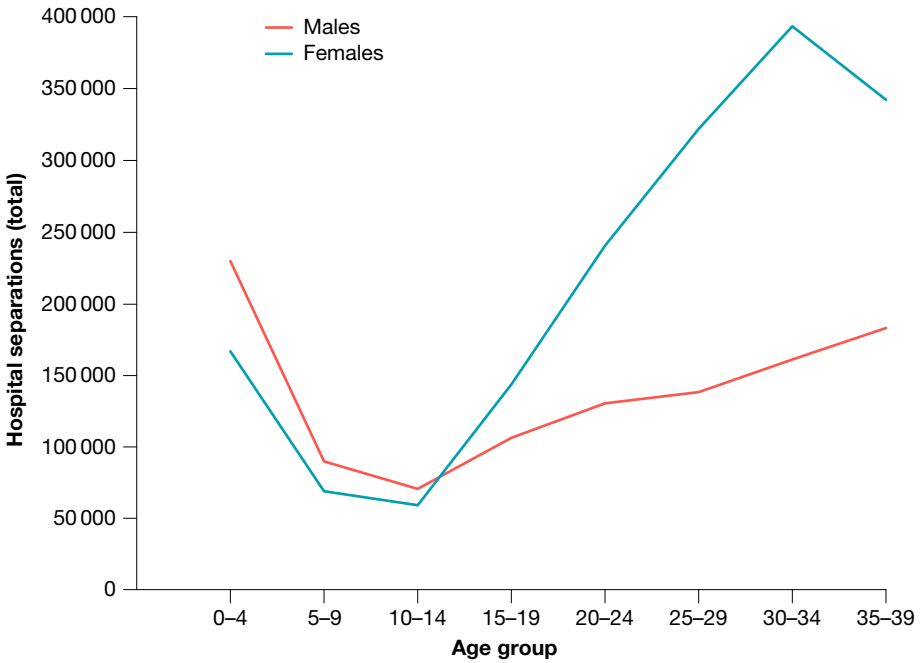
KEY CONCEPT Exploring the health status indicators of hospitalisation, core activity limitation and psychological distress among Australian youth

2.5.1 Rate of hospitalisation

Exploring the rate of hospitalisation among youth provides an indication of levels of ill health that require medical treatment. Hospitalisation can occur as the result of requiring care for **chronic conditions**, where the patient is admitted to receive treatment, and emergency care that involves unforeseen events that end up requiring medical care, such as car crashes and sporting accidents. Overall, the youth stage of the lifespan is characterised by relatively low levels of hospitalisations compared to other lifespan stages (figure 2.20).

FIGURE 2.19 Rates of hospitalisation provide important data relating to the health status of youth.

FIGURE 2.20 Total hospital separations by age group and sex, 2016–17



Source: Australian Institute of Health and Welfare 2018. *Admitted patient care 2016–17: Australian Hospital Statistics*. Health services series no. 84. Cat. no. HSE 201. Canberra: AIHW.

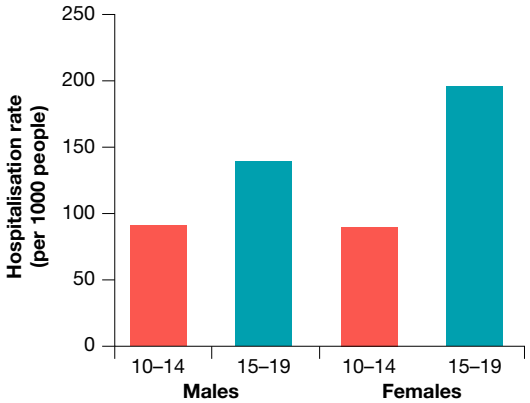
In 2016–17, there were a total of 380 208 **hospital separations** for those aged 10–19, with the majority occurring for those aged 15–19 (250 342 compared to 129 866 for those aged 10–14).

Males aged 10–14 experienced a higher rate of hospitalisation than females in the same age group. Females aged 15–19 experienced a significantly higher rate of hospitalisation than males in the same age group, largely as the result of:

- pregnancy and childbirth — there are over 20 000 hospitalisations across Australia each year due to pregnancy in the 15–19 years age group
- higher rates of mental and behavioural disorders, including eating disorders, which are significantly more common among females.

Overall, females in the 10–19 years age group were more likely to be hospitalised than males (203 025 and 177 159 separations respectively). The overall rate (per 1000) for hospitalisations is shown in figure 2.21.

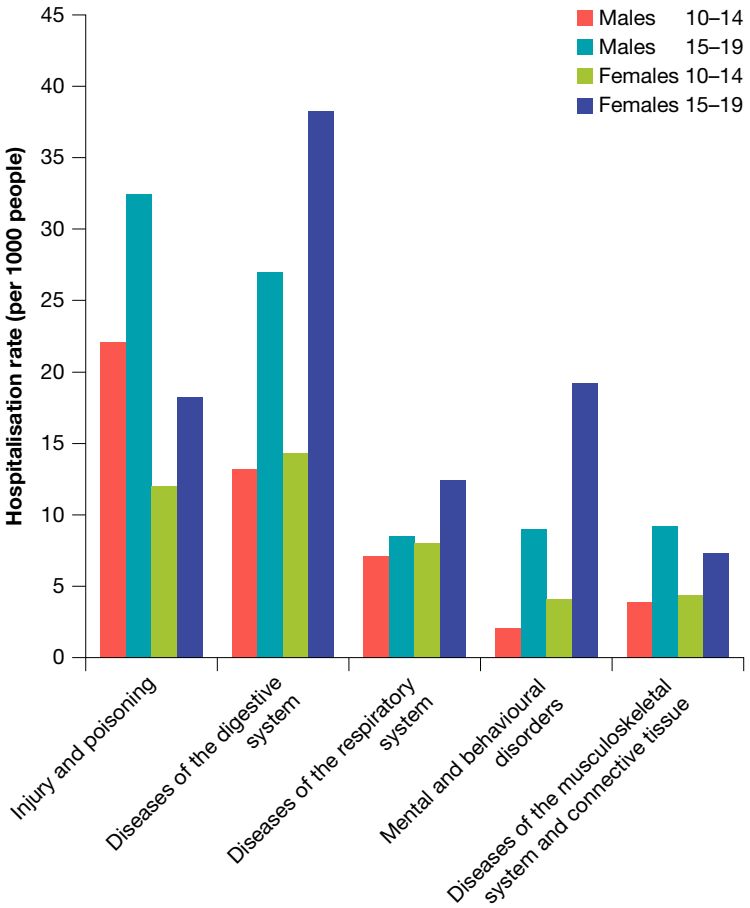
FIGURE 2.21 Hospitalisation rates for males and females aged 10–14 and 15–19



Source: AIHW, 2017.

The five leading causes of hospitalisation for those aged 10–19 are shown in figure 2.22.

FIGURE 2.22 Top five causes of hospitalisation for those aged 10–14 and 15–19, 2011



Source: AIHW, 2017.

Injury and poisoning are the leading cause of hospitalisation in the youth stage of the lifespan. Youth is a time of increasing independence and young people often have greater access to a range of settings that may be unsupervised, such as school, sporting grounds, streets and neighbourhoods. Youth is also characterised by an increase in risk-taking behaviours, particularly among boys. The peer group becomes increasingly important during this stage and risk-taking behaviour may be motivated by friends. The part of the brain that controls decision making is still developing during the youth stage. Valuing short-term gain over long-term consequences can lead to risky behaviours. As young people age, they often have more exposure to motorised transport, employment, alcohol and drugs which also contribute to this trend. The most common forms of injury requiring hospitalisation among youth are fractures and superficial wounds such as cuts and lacerations.

FIGURE 2.23 Dental surgery is a leading cause of hospitalisation among youth.

Diseases of the digestive system were the second most common cause of hospitalisation for 10- to 19-year-olds. The most common examples of these conditions include appendicitis (which requires the removal of the appendix) and dental surgery (including the extraction of wisdom teeth). Wisdom teeth are more likely to erupt during the later stage of youth.

Respiratory diseases were the third most common reason for hospitalisation and include conditions such as asthma and bronchitis.

Mental and behavioural problems were the fourth most common cause of hospitalisation for youth and include depression, anxiety, eating disorders and drug-induced mental disorders.

Diseases of the musculoskeletal system and connective tissues were the fifth most common cause of hospitalisation among youth and include muscle, joint and bone problems such as back and disc conditions, joint reconstruction surgery and treatment for arthritis.

2.5.2 Core activity limitation

Core activities relate to three main areas of life and are explained in table 2.11. If an individual has difficulty in any of the three core activities, they may have a **core activity limitation**. Core activity limitations can occur as the result of injury, developmental problems and chronic illness.

TABLE 2.11 The three core activities and examples relating to each

Core activity	Examples relating to the core activity
Self-care	• Bathing/showering • Dressing/undressing • Eating/feeding • Going to the toilet • Bladder/bowel control
Mobility	• Moving around away from home • Moving around at home • Getting in or out of bed or chair
Communication in own language	Understanding/being understood by strangers, friends or family, including use of sign language/lip reading

Surveys relating to core activities ask respondents whether they have difficulty or require assistance from another person or an aid (such as a wheelchair) to carry out the three core activities. Core activity limitations are classified based on whether, and how often, a person needs help, has difficulty, or uses aids or equipment with any core activities. A person's overall level of core activity limitation is determined by their highest level of limitation in any of the three core activities.

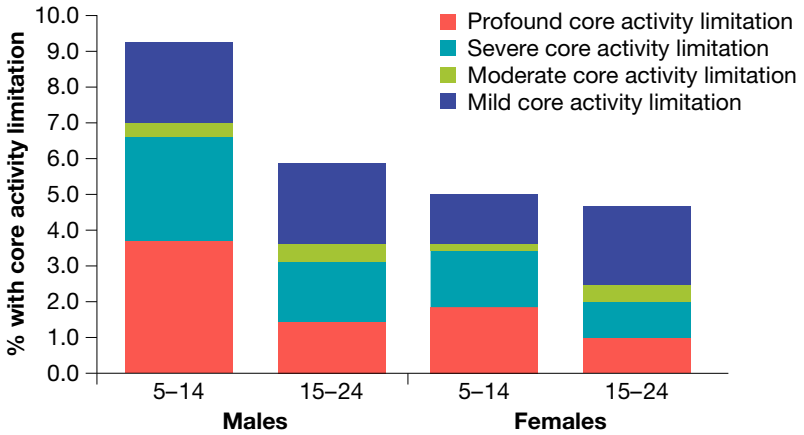
According to the Australian Institute of Health and Welfare, there are four main levels of core activity limitation:

- *Profound* — those who answered yes to always needing help are classified as having a 'profound core activity limitation'
- *Severe* — those who don't always need help, but may require help at times, are classified as having a 'severe core activity limitation'
- *Moderate* — those who have difficulty with the tasks are classified as having a 'moderate core activity limitation'
- *Mild* — those who simply require aids to undertake the task are classified as having a 'mild core activity limitation'.

The proportion and level of core activity limitations among young people are shown in figure 2.25. Note that the data available relate to those aged 5–24 and therefore include people in the childhood and adulthood stages of the lifespan. Although other lifespan stages are included, these data provide a reflection of the level of core activity limitation experienced by youth in Australia.

FIGURE 2.24 If an individual requires assistance from people or equipment, they may have a core activity limitation.

FIGURE 2.25 Proportion of males and females with a core activity limitation for those aged 5–24, by type of limitation, 2014–15



Source: Adapted from ABS, 4430.0 *Disability, Ageing and Carers, Australia: Summary of Findings*, 2015.

Males experience higher rates of core activity limitation than females in both age groups. Males in the 5–14 age group experience the overall highest rate of core activity limitations and the highest level of profound limitation.

2.5.3 Psychological distress

Psychological distress relates to unpleasant feelings and emotions that have an impact on an individual's level of functioning. Measuring psychological distress can provide information about the level of mental and emotional health and wellbeing experienced.

FIGURE 2.26 Psychological distress reflects mental and emotional health and wellbeing.

The proportion of individuals with very high levels of psychological distress can be measured using the **Kessler Psychological Distress Scale (K10)**.

The K10 is a scale of psychological distress based on the answers to ten questions about negative emotional and mental states in the four weeks prior to the interview.

1. During the last 30 days, about how often did you feel tired out for no good reason?
2. During the last 30 days, about how often did you feel nervous?
3. During the last 30 days, about how often did you feel so nervous that nothing could calm you down?
4. During the last 30 days, about how often did you feel hopeless?
5. During the last 30 days, about how often did you feel restless or fidgety?
6. During the last 30 days, about how often did you feel so restless you could not sit still?
7. During the last 30 days, about how often did you feel depressed?
8. During the last 30 days, about how often did you feel that everything was an effort?
9. During the last 30 days, about how often did you feel so sad that nothing could cheer you up?
10. During the last 30 days, about how often did you feel worthless?

The overall score is calculated by adding up the scores for each question which results in a score from 0 (the lowest possible score) to 40 (the highest possible score). Respondents can answer:

1. None of the time (0 point)
2. A little of the time (1 point)
3. Some of the time (2 points)
4. Most of the time (3 points)
5. All of the time (4 points).

For the data provided in this section, the overall score was used to classify the level of psychological distress according to the values shown in table 2.12.

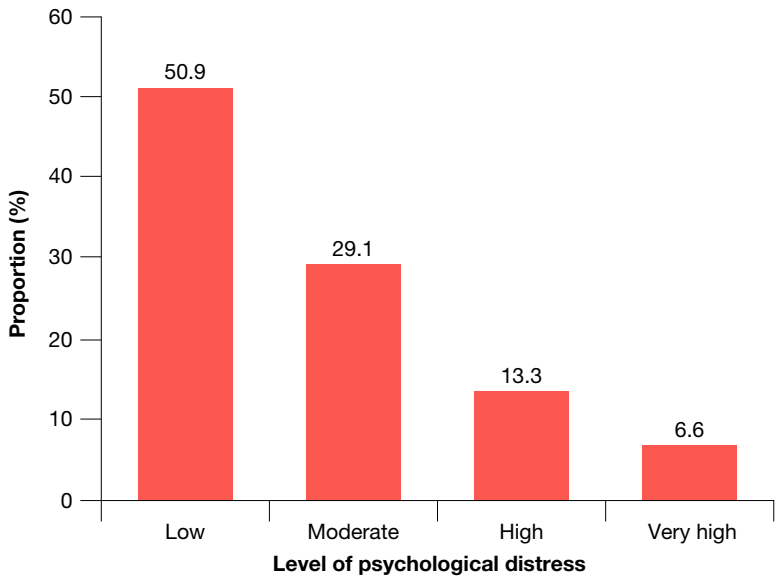
TABLE 2.12 The classifications of psychological distress

K10 total score levels	Score
0–5	Low
6–11	Moderate
12–19	High
20–40	Very high

Note that the Kessler Psychological Distress Scale is not a diagnosis, but an indication of the level of psychological distress experienced. While high levels of distress are often associated with mental illness, it is not uncommon for some people to experience psychological distress, but not meet criteria for a mental disorder. A diagnosis of a mental disorder can only be made by a medical doctor.

In 2013–14, one in five (19.9 per cent) youth aged 11–17 years had very high or high levels of psychological distress, at 6.6 per cent and 13.3 per cent respectively (figure 2.27).

FIGURE 2.27 Psychological distress levels in 11- to 17-year-olds, 2013–14



Source: Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR 2015, *The Mental Health of Children and Adolescents: Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing*, Department of Health, Canberra.

The proportion of those experiencing very high or high levels of psychological distress was higher for females aged 11–15 and 16–17 than males of the same age (9.5 per cent and 16.4 per cent compared with 4 per cent and 10.4 per cent respectively). A higher proportion of 16- to 17-year-olds had very high and high levels of psychological distress compared to those aged 11–15 (11 per cent and 16.2 per cent of 16- to 17-year-olds compared with 4.8 per cent and 12.2 per cent of 11- to 15-year-olds), shown in table 2.13.

TABLE 2.13 Kessler 10 level of psychological distress among 11- to 17-year-olds by sex and age group

Sex	Age group	Low (%)	Moderate (%)	High (%)	Very high (%)
Males	11–15 years	57.6	29.2	9.9	3.3
	16–17 years	53.0	29.4	11.8	5.8
	11–17 years	**56.3**	**29.3**	**10.4**	**4.0**
Females	11–15 years	49.8	28.9	14.7	6.6
	16–17 years	34.8	29.0	20.3	15.9
	11–17 years	**45.1**	**29.0**	**16.4**	**9.5**
Persons	11–15 years	53.9	29.1	12.2	4.8
	16–17 years	43.6	29.2	16.2	11.0
	11–17 years	**50.9**	**29.1**	**13.3**	**6.6**

Source: Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR 2015, *The Mental Health of Children and Adolescents: Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing*, Department of Health, Canberra.

2.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Complete the following table:

Concept	Explanation
Hospital separations	
Chronic conditions	
Core activity	
Core activity limitation	
Psychological distress	

2. Outline the different classifications of core activity limitation.
3. According to figure 2.25, approximately what proportion of the population experienced a core activity limitation in each of the following groups?
   (a) Males aged 5–14
   (b) Males aged 15–24
   (c) Females aged 5–14
   (d) Females aged 15–24
4. Briefly explain how psychological distress is measured.

2.5 Exercise 2 APPLY your knowledge

1. (a) Outline the change in the total number of hospitalisations between the ages of 0 and 39 as shown in figure 2.20.
   (b) Suggest possible reasons for the changes outlined in part a.
2. (a) Outline the difference in the overall hospitalisation rate for males and females aged 10–14 and 15–19 as shown in figure 2.21.
   (b) Suggest possible reasons for the differences outlined in part a.
3. (a) Outline one similarity and one difference between males and females as shown in figure 2.21.
   (b) Suggest possible reasons for the similarity and difference outlined in part a.
4. (a) Which age group (11–15 or 16–17) was most likely to experience high or very high psychological distress?

(b) What proportion of the age group identified in part a experienced high or very high psychological distress for the following groups?
   i. Males
   ii. Females
   iii. Persons
(c) In pairs, brainstorm reasons why youth may experience psychological distress.

5. Using data to support your response, write a paragraph describing the health status of Australian youth.

studyON

2.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

2.6 Topic 2 review

2.6.1 Key skills

KEY SKILL Analyse the extent to which health status data reflect concepts of health and wellbeing

For this key skill, a sound understanding of the concepts of health and wellbeing is essential, including knowledge of the five dimensions and examples that relate to each. Health status data can relate to any of the indicators discussed in this topic. To varying degrees, health indicators reflect various aspects of health and wellbeing. For this key skill, indicators and related data can be analysed to explain the extent that it relates to health and wellbeing. For example, life expectancy data provides an indication of how long an individual can expect to live, if mortality or death rates do not change. This reflects one aspect of the physical dimension of health and wellbeing, as it relates to the length of time the average individual can expect to live, but does not provide information relating to other aspects of physical health and wellbeing or the quality of life experienced in the other four dimensions.

The following steps can be taken to ensure an appropriate analysis of the extent to which health status data reflect concepts of health and wellbeing:

1. determine which health status indicator/s are evident in the data
2. consider which concepts of health and wellbeing are reflected by the indicator and associated data
3. identify the dimension/s of health and wellbeing that are reflected by the health indicator evident in table/graph and justify your choice
4. identify the dimension/s of health and wellbeing that are not reflected by the health indicator evident in table/graph.

In the following example, rates of low levels of psychological distress are analysed in relation to the extent that they reflect the concepts of health and wellbeing.

Psychological distress relates to unpleasant feelings and emotions that have an impact on an individual's level of functioning.[1] Psychological distress can be measured using the Kessler Psychological Distress Scale which is based on ten questions that relate to various feelings and emotions and reflect aspects of emotional and mental health and wellbeing. The questions ask about feeling depressed which is an aspect of mental health and wellbeing. Although most people feel sad from time to time, if these feelings are experienced most, or all of the time, it can indicate that emotional health and wellbeing is not optimal.[2]

1 An understanding of psychological distress and how it is measured is shown.

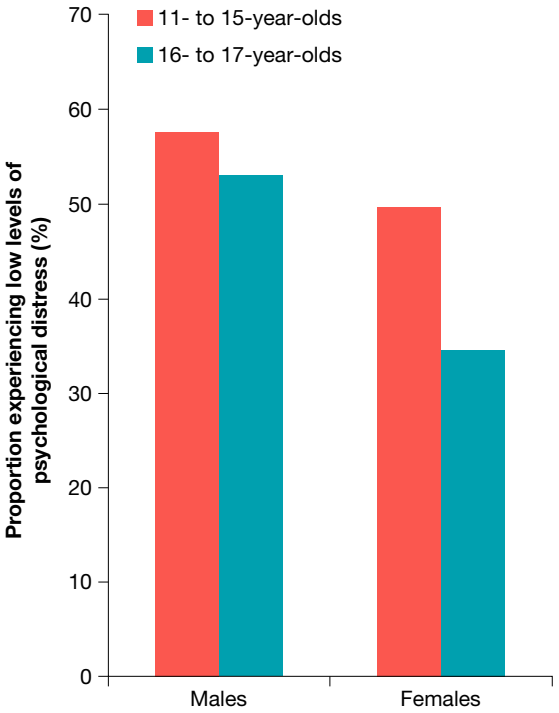
2 Aspects of psychological distress as a health status indicator are linked to the concept of health and wellbeing.

Although psychological distress data provides an indication of emotional and mental health and wellbeing, it does not reflect every aspect of these dimensions. It also does not provide any specific reflection on physical, social and spiritual health and wellbeing.[3] The graph shows that males have higher rates of low levels of psychological distress than females for both age groups which may indicate a higher level of emotional and mental health and wellbeing for the areas addressed in the Kessler Psychological Distress Scale.[4]

3 Aspects of psychological distress as a health status indicator are linked to the concept of health and wellbeing.

4 Data from the graph are referred to and linked to the concept of health and wellbeing.

FIGURE 2.28 Proportion of 11- to 15-year-olds and 16- to 17-year-olds classified as experiencing low levels of psychological distress, according to sex



Source: Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR 2015, *The Mental Health of Children and Adolescents: Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing*, Department of Health, Canberra.

Practise the key skill

1. Table 2.14 shows the proportion of 15- to 17-year-olds who assessed their health status as fair or poor. Using data from the table, discuss the extent to which self-assessed health status reflects the concept of health and wellbeing.
2. Discuss the extent to which rates of hospitalisation reflect the concept of health and wellbeing.

TABLE 2.14 Proportion of 15- to 17-year-olds who assessed their health as fair or poor, 2011–12

	Fair or poor self-assessed health status (%)
Males	4.9
Females	8.3

Source: ABS, Australian Health Survey: Updated Results, 2011–12.

KEY SKILL Draw conclusions from health data about the health status of youth in Australia

This key skill relates to the interpretation and analysis of data. Data concerning health status are presented using a range of different measurements and an understanding of the measures commonly used will assist in developing this skill.

Measures used to present data relating to health status include:

- self-assessed health status
- life expectancy
- mortality
- morbidity (including incidence and prevalence of health conditions)
- burden of disease (including DALY, YLL and YLD)
- rates of hospitalisation
- core activity limitation
- psychological distress.

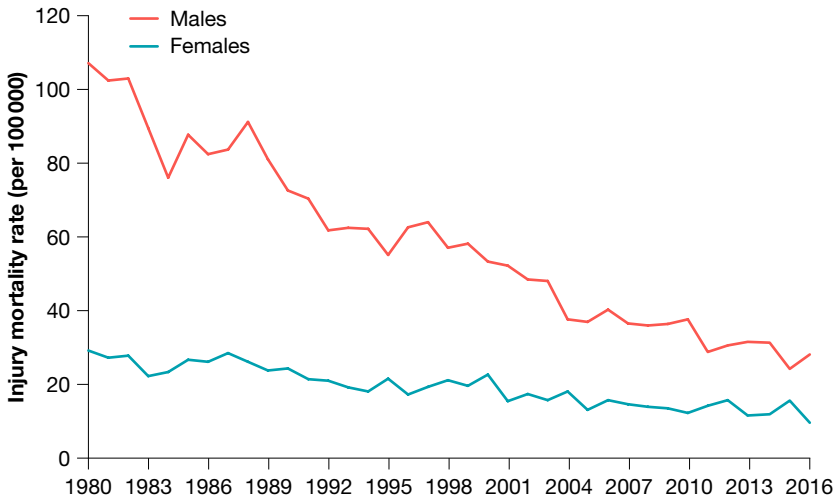
To become proficient at data analysis, it is necessary to be able to interpret data available in the form of graphs, tables and charts. A range of exercises in this topic provides the opportunity to practise this skill.

The following steps offer a systematic approach to interpreting graphs and tables:

1. Read the title of the graph or table — the title usually gives an indication about what information is presented in the graph. It may be located at the top of the graph or next to the figure number.
2. Read the horizontal and vertical axes (for a bar graph) and look at the units (e.g. is it percentage, year, number, rate, proportion, $, etc.).
3. Look at the key if there is one — this helps identify various elements of the data.
4. Read any notes that relate to the data — there may be additional written information at the bottom of the graph explaining various elements of the graph. An element of the data that may not make sense may become clear after reading these notes.
5. Look for trends, similarities and differences between the data. This will enable a better understanding of the data that the graph is actually presenting.

Figure 2.29 shows the injury death rate over time for males and females aged 15–19.

FIGURE 2.29 Injury death rate over time for males and females aged 15–19



Source: Adapted from AIHW, GRIM Books, 2019.

A response to the task 'Draw two conclusions relating to injury death rates according to figure 2.29' might include the following points.

- Males experienced poorer health status than females relating to injury death rates. According to the data, males consistently had higher death rates due to injuries between 1980 and 2016. In 2016, the rate for females was around 10 per 100 000 and for males at the same time was around 30 per 100 000.[5]
- The death rate due to injuries for males decreased more than the death rate for females between 1980 and 2016.[6] The male death rate decreased by around 80 per 100 000 (approximately 110 per 100 000 in 1980 down to 30 per 100 000 in 2016). The death rate for females decreased by around 20 per 100 000 (down from around 30 per 100 000 in 1980 to around 10 per 100 000 in 2016).[7]

5 A conclusion must be drawn to ensure the question is answered.

6 Use information from the graph, such as dates, to substantiate your answer.

7 Using figures from the graph shows an ability to interpret the data and draw conclusions from it.

Practise the key skill

3. Using data from figure 2.10 (in subtopic 2.3), draw conclusions relating to health status for 10- to 14- year-olds and 15- to 19-year-olds compared with other age groups.
4. Using data from figure 2.14 (in subtopic 2.4), draw conclusions relating to health status for 10- to 14- year-olds and 15- to 19-year-olds compared with other age groups.

2.6.2 Topic summary

Self-assessed health status and life expectancy

- Health status is an individual's or a population's overall health (and wellbeing), taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors (AIHW, 2008).
- Australia's youth generally experience excellent health status.
- Self-assessed health status, life expectancy, mortality, morbidity (including incidence and prevalence of health conditions), burden of disease, rates of hospitalisation, core activity limitation and psychological distress are all used to assess health status.
- Self-assessed health status is based on an individual's own perception of their health and wellbeing. Most youth in Australia assess their health status as excellent or very good.
- Life expectancy is an indication of how long a person can expect to live; it is the number of years of life remaining to a person at a particular age if death rates do not change (AIHW, 2008).
- For a male born in 2017, the life expectancy was 80.5 years and for a female it was 84.6 years.
- Life expectancy and death rates are continually improving for Australia's youth.

Mortality

- Mortality refers to death, particularly at a population level. The mortality rates for Australia's youth are among the lowest when compared to other lifespan stages.
- YLL relates to the fatal burden of disease.
- The leading cause of death and YLL among youth is injury and poisoning, and males are more likely to experience mortality during the youth stage than females.

Morbidity and burden of disease

- Morbidity relates to ill health in an individual and levels of ill health within a population.
- Morbidity can be measured using YLD, incidence and prevalence.
- YLD relates to the non-fatal burden of disease.

- Mental and substance use disorders, respiratory disease and skin conditions are the leading contributors to YLD among youth in Australia.
- DALY are used to measure burden of disease and are calculated by adding YLL and YLD.
- Mental and substance use disorders contribute most to the overall burden of disease for youth.

Hospitalisation, core activity limitation and psychological distress

- Hospitalisation rates of youth provide an indication of levels of ill health that require medical treatment.
- Youth experience low levels of hospitalisation compared to other lifespan stages.
- The leading causes for hospitalisations in youth are injury and poisoning, diseases of the digestive system and diseases of the respiratory systems.
- A core activity limitation exists when an individual sometimes or always requires assistance in one or more of three areas of life: self-care, mobility and communication.
- Over 4 per cent of youth experience a core activity limitation.
- Psychological distress relates to unpleasant feelings and emotions that have an impact on an individual's level of functioning.
- Females and older youth are more likely to experience psychological distress.

on Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0016).

2.6 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Figure 2.30 shows the rate of DALY (per 1000 people) and contribution to total DALY by YLL and YLD for those aged 10–14 and 15–19 in 2017. DALY is a measure of health status.

FIGURE 2.30 The rate of DALY (per 1000 people) and the contribution from YLL and YLD for those aged 10–14 and 15–19 in 2017

Source: Adapted from http://ghdx.healthdata.org/gbd-results-tool, 2019.

a. Identify what DALY stands for. **(1 mark)**
b. What does one DALY equal? **(1 mark)**
c. Explain what is meant by health status. **(1 mark)**
d. Using data from the graph, draw a conclusion relating to the health status of those aged 10–14 compared with those aged 15–19. **(2 marks)**
e. Discuss how DALY reflects the concept of health and wellbeing. **(3 marks)**

studyON

2.6 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

ON Resources

Interactivities Crossword (int-6866)
Definitions (int-6873)

3 Sociocultural factors affecting health status and behaviours of youth

3.1 Overview

Key knowledge

- Sociocultural factors that contribute to variations in health behaviours and health status for youth such as peer group, family, housing, education, employment, income, and access to health information and support services (including through digital technologies)

Key skills

- Explain a range of sociocultural factors that contribute to variations in the health status and health behaviours of Australia's youth

FIGURE 3.1 Friendship groups often have a positive impact on an individual's health status.

KEY TERMS

Blended family a family consisting of a couple, the children they have had together and their children from previous relationships

Indoor air pollution when the air inside a house or building contains pollutants, such as fine particles and carbon monoxide. It is often caused by inefficient cooking and heating practices.

Peer influence the social influence a peer group exerts on its members, as each member attempts to conform to the expectations of the group

Social gradient of health the higher a person's income, education or occupation level, the healthier they tend to be

Sociocultural factors the social and cultural conditions into which people are born, grow, live, work and age. These include socioeconomic status, social connections, family and cultural influences, food security, early life experiences, and access to affordable, culturally appropriate healthcare.

Step family a family formed after the remarriage of a divorced or widowed person that includes a child or children

on Resources

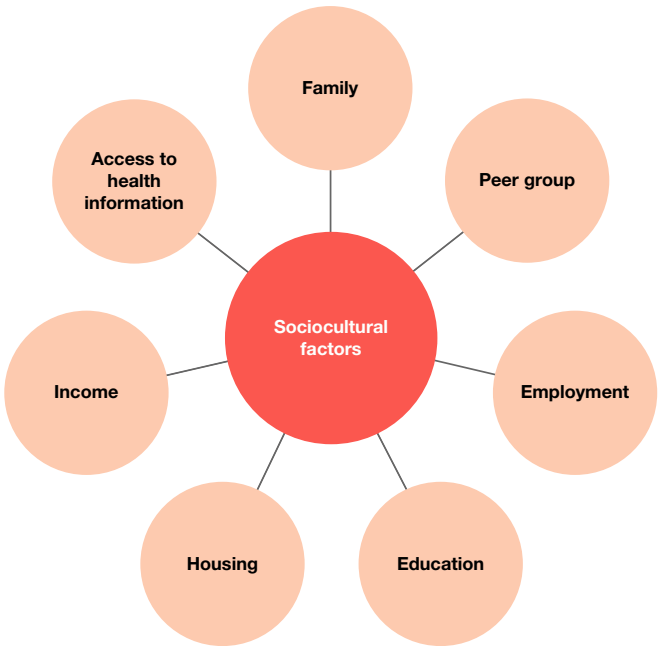
studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0017).

3.2 Family, peer group, housing and access to health information

KEY CONCEPT Explore how a range of different sociocultural factors, such as family, peer group, housing and access to health information can impact the health behaviours and health status for youth

FIGURE 3.2 Sociocultural factors that have an impact on youth health behaviours and health status



Sociocultural factors help determine an individual's or population's health and wellbeing, and are considered to be anything related to the social and cultural conditions into which people are born, grow, live, work and age that work to raise or lower the health status experienced. According to data from the Australian Institute of Health and Welfare (AIHW), sociocultural factors help to explain or predict trends in health status and why some groups are better or worse off than others. The sociocultural factors that will be discussed are shown in figure 3.2.

Health behaviours are behaviours of an individual that have either a negative or positive impact upon their health. For example, smoking cigarettes is a behaviour with a negative impact upon health, and regular exercise is a behaviour with a positive impact upon health. Both these examples are considered health behaviours.

3.2.1 Family

The family has a crucial role to play in the lives of young people, as it provides the environment in which they are raised. Through daily interactions, family members can have an important influence on young people's health behaviours and the choices that they make as they transition into adulthood. Research shows that parents/guardians, relatives and family friends are very important sources of support for young people when they need assistance with important issues (see, for example, figure 3.7). The family is also the main provider for many resources, such as shelter, food, clothing, emotional support and educational opportunities.

A favourable family environment, featuring close family relationships, good communication and strong parenting skills, is associated with positive health status. In recent times, social changes have resulted in a more diverse range of family structures. Social and cultural changes have also seen an increase in the number of single-parent families and same-sex families. Divorce and separation are also quite common among families, and many young people are being raised in two different home environments. These may include a **step family** or a **blended family**. These changes can have significant effects on young people. The conflicts and stressors they may be exposed to can lead to negative effects on their emotional and mental health and wellbeing and can lead to poorer overall self-assessed health status.

FIGURE 3.3 Family cohesiveness can have a positive impact on young people's health and wellbeing.

When young people have an unsettled family environment without strong parental influences, they may also be more likely to engage in unhealthy behaviours, such as unsafe sexual practices, tobacco use and experimenting with illicit drugs, all behaviours which may cause risk to the efficient functioning of the body and therefore negatively impact on physical health and wellbeing. An unsettled family environment can also have an impact on mental health and wellbeing, due to increases in levels of stress and anxiety. However, changes in family structure do not always have negative effects on young people; they can often be associated with building resilience, inner strength and determination, (enhancing emotional health and wellbeing), all factors that are associated with a positive transition into independent adult life and a reduced risk of a range of health concerns including mental disorders.

Topic 4 discusses the influence of the family on the consumption of nutritious foods and how the family can act as either an enabler or barrier to healthy eating. When a family encourages the consumption of nutritious foods, short- and long-term physical health benefits will occur. These positive impacts include weight management which reduces the risk of obesity and related conditions such as cardiovascular disease, as well as increases in bone strength and density, and the provision of adequate energy to decrease the

risk of anaemia, while improving overall health status. For more information on the effects and causes of anaemia, use the **Anaemia** weblink in the Resources tab.

A young person's involvement in physical activity is also often influenced and encouraged by their family. It is family that often provides the resources such as transport, equipment and financial support to enable sports participation. Regular exercise and participation in either recreational or sporting groups is linked to improvements in all dimensions of health and wellbeing and health status, such as weight management, (improving physical health and wellbeing) increased confidence and self-esteem, and lower levels of stress and anxiety (improving mental health and wellbeing). When young people engage in regular exercise, they are more likely to continue this behaviour in later life. This can have long-term effects on health status by decreasing the risk of lifestyle diseases, such as obesity, cardiovascular disease and type 2 diabetes, while also increasing life expectancy.

The family are the first social group to which an individual belongs and so it is here that first social interactions occur. An individual is taught appropriate social skills, including how to effectively communicate with others, the importance of productive relationships and a supportive network of friends (improving social health and wellbeing).

on Resources

Weblink Anaemia

3.2.2 Peer group

The peer group is increasingly influential during youth. Young people often turn to their friends first for support and advice, instead of family members. This is evident in figure 3.7 (section 3.2.4), with data from Mission Australia's 2018 youth survey, which shows friends as the first choice for support on personal matters. Teenagers are frequently influenced by their peers when making decisions about particular health behaviours. **Peer influence** can have a positive impact on health behaviour; for example, a group of friends who love playing soccer will influence participation in exercise, which will improve fitness levels, and promote physical health and wellbeing, while reducing the risk of conditions such as obesity and depression.

FIGURE 3.4 Drinking alcohol underage is often an outcome of negative peer influence.

Friendships are particularly important for young people, as they are often faced with uncertainties during this stage in their lives; it is their friends who can provide a constant source of support. It is not uncommon for young people to have a wide network of friends. For emotional support, however, having a number of close friends is important. Positive and respectful friendships enhance youth mental health and wellbeing, instilling confidence and self-esteem and reducing the risk of depression and mental disorders. Social health and wellbeing is also developed through increasing networks and forming new relationships. Peers can also influence physical health and wellbeing through the encouragement of healthy behaviours, such as participation in regular physical exercise and consumption of nutritious foods. Both these factors assist in the management of weight and reduce the risk of obesity and other chronic conditions, thereby improving health status.

Peer pressure, or peer influence, can have significant impact on young people's health status. As youth is often a stage of experimenting and taking risks, peer pressure may lead young people to take health risks and therefore decrease their health status. Binge drinking, illicit drug use and drink driving are often

some of the negative health behaviours that people engage in when negatively influenced by their peers. Accidents are the greatest cause of youth death, with car accidents causing 45 per cent of deaths.

CASE STUDY
When 'Schoolies' celebrations go too far

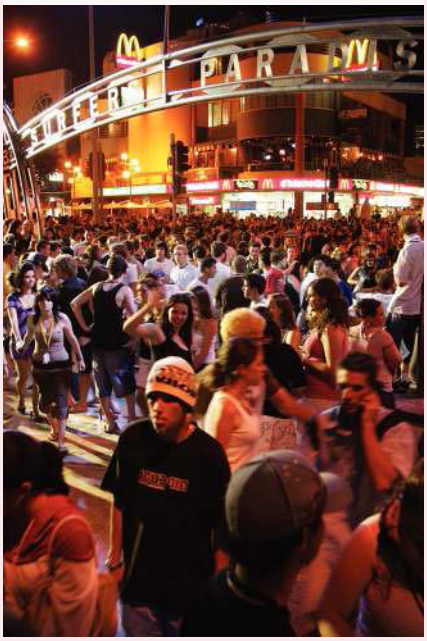
'Schoolies', a week-long celebration, has become a rite of passage for school leavers. It can be an enjoyable and relaxing reward for reaching the significant milestone of completing school, however according to data received from the Drug Arm Australasia report, for many young Australians, Schoolies is associated with harmful risk-taking behaviours. Of those surveyed during the 2017 Schoolies on the Gold Coast, three-quarters of Schoolies got drunk, one in five passed out, and a quarter injured themselves during the week. Just over a third ended up with a hangover and about a quarter vomited from the drinking.

In some cases, these risk-taking behaviours can even have fatal consequences; most recently seen in the 2018 death of Sydney teenager Hamish Bidgood, who fell from his Surfers Paradise high-rise balcony. Hamish had apparently inhaled nitrous oxide, otherwise known as laughing gas, moments before he fell. Police had warned people of the dangers of skylarking on high-rise balconies, known as 'ledging', only days earlier.

Videos shared across social media show teens teetering on the edges of balconies while drinking from their shoes. Balconies, alcohol, drug taking and peer pressure has proven to be a horrific combination for this group of school leavers. The death of Hamish Bidgood has prompted calls for high-rise balconies to be locked off during Schoolies week.

At the 2012 Schoolies celebrations, 17-year-old Isabelle Colman fell from the 26th floor of a Gold Coast apartment and was killed, while in the month before, three others had fallen to their deaths from Gold Coast skyscrapers.

FIGURE 3.5 Thousands of young people descend on the Gold Coast every year to celebrate the end of school.



Case study review

1. Explain the link between peer influence, health behaviours and the impact on physical health and wellbeing for many of those who attend the annual Schoolies festival.
2. Using the case study as your example, identify the link between peer influence and health status.
3. Outline some measures that could have been put in place to prevent the death of Hamish Bidgood.
4. Explain how either the Schoolies festival or other end of year celebrations can impact positively on both mental and social health and wellbeing.

3.2.3 Housing

Young people generally spend a lot of time at home. The environment a young person lives in can affect their health status.

Some of the aspects of the household environment that can affect health status include the following:

- ***Indoor air pollution***. Dust and tobacco smoke, for example, can increase morbidity from asthma and other respiratory conditions. This may reduce the individual's capacity for physical activity, which can contribute to increased rates of depression and obesity.
- *Kitchen facilities*. Youth is a period of rapid growth and development. Specific nutrients are required to optimise this stage of

FIGURE 3.6 Having adequate cooking facilities is essential for preparing nutritious meals.

development. If kitchen facilities are inadequate the availability of nutritious meals may be affected and result in an inability to consume the required levels of essential nutrients. Young people may be more likely to consume food out of the home, which can influence poor dietary choices such as eating foods high in saturated fat, sugar and salt. Consumption of these foods increases the risk of diet-related illness such as obesity, type 2 diabetes and cardiovascular disease later in life.

- *Overcrowding*. Young people living in overcrowded housing experience increased mental health issues, as it is difficult for them to find their own space. Overcrowded conditions also place an added strain on bathroom, kitchen and laundry facilities, According to AIHW data, 12 per cent of Indigenous Australians were living in overcrowded households in 2011, compared with 3.4 per cent of non-Indigenous Australians. They also experienced poorer health status, with greater rates of infectious disease, such as tuberculosis and hepatitis, than non-Indigenous Australians.
- *Drinking water quality*. Ground water naturally contains fluoride; however, in Australia just over 70 per cent of the population has access to artificially fluoridated water, which aims to prevent tooth decay and cavities. Whether or not an individual has access to fluoridated water can affect their health status. Just like folate is added to breakfast foods, fluoride is added to water to improve the dental health of Australians.
- *Housing safety.* An unsafe housing environment can cause a number of preventable accidents, leading to injury and premature death. The most common accidents include falling from unmaintained stairs, swimming pool accidents and electrocution from household electrical faults.
- *Household location.* The location of the family home will have a great influence on a young person's health status. If they live in a suburb that has plenty of opportunities for physical activity (such as parks and other recreational settings) they will be more likely to participate in physical activity. Physical activity assists in the management of weight and therefore reduces the risk of overweight and obesity and related conditions. People who engage in regular physical activity and have a connection to the community may have lower levels of stress and anxiety and therefore experience lower levels of mental illness. If they live in an area that has a large number of fast-food outlets they may be more likely to eat energy-dense processed foods, which can lead to weight gain and obesity-associated conditions.

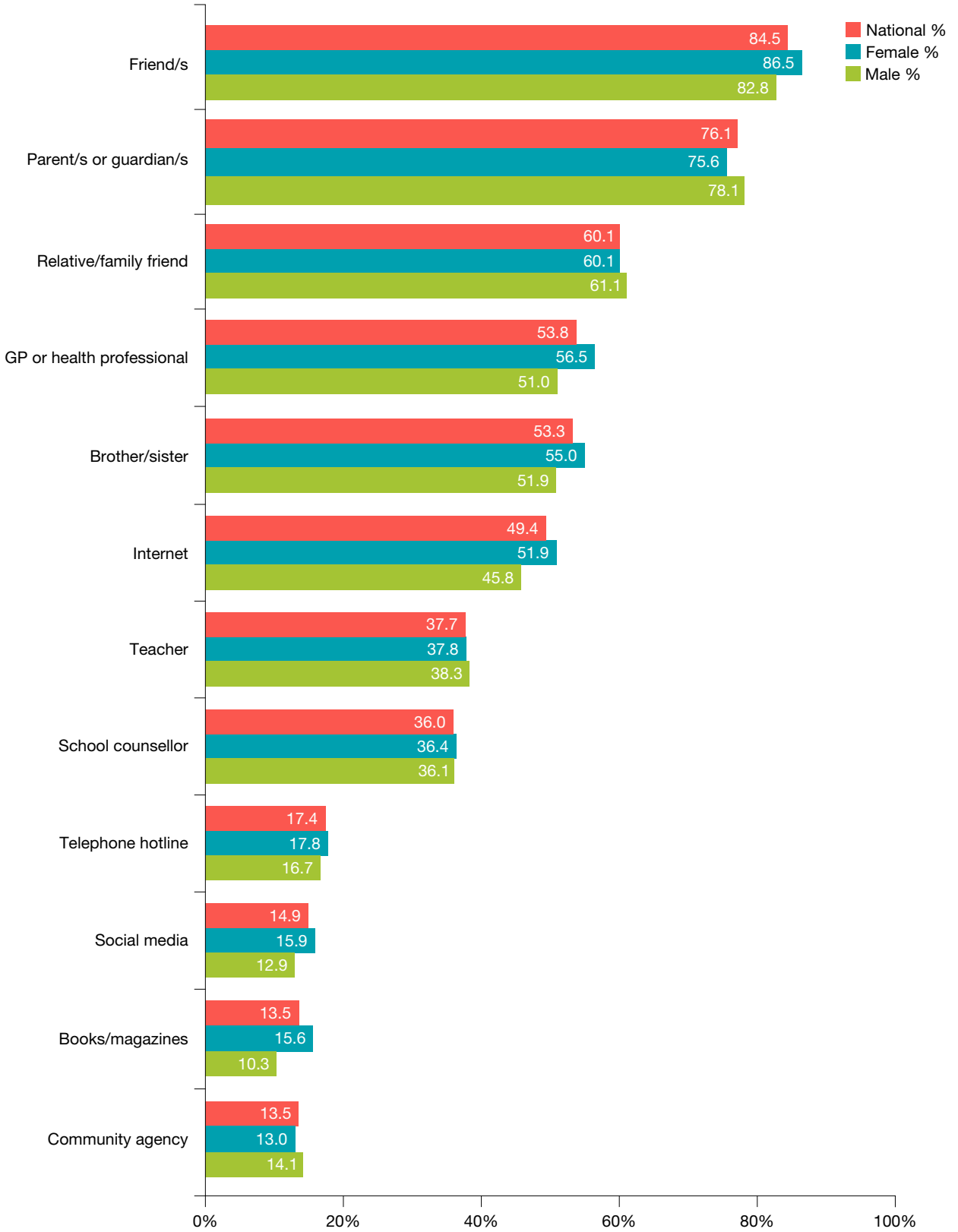
3.2.4 Access to health information (including through digital technologies)

In order to ensure young people are equipped with the knowledge and skills they need to make informed decisions about their health and wellbeing, access to health information is critical. Formal health education in the school setting is a safe place where young people can explore issues relating to healthy decision making and consequences. Health education in the school setting is an important source of information; however, young people often require specific information targeting their own health concerns.

A study conducted in 2013 into young people's experiences with health services found that there were a number of barriers that prevented young people from accessing information. These included concerns about confidentiality, fear of not being treated respectfully, location of services, inflexible opening hours, high cost and inadequate transport access. Not having their own Medicare card was also a significant barrier to young people accessing health services independently. The study found that if these barriers could be overcome, many more young people would be encouraged to access health services. This would allow a more preventative approach to young people's healthcare, which could improve health status.

When a young person does not have access to healthcare services, or is too embarrassed or ashamed to ask their friends or parents about a health concern, they are likely to consult the internet. A Mission Australia youth health survey from 2018 identified where young people go for support when seeking out health information. According to figure 3.7, 49 per cent of respondents have used the internet to seek advice on health and wellbeing issues. The internet immediately addresses the barriers of location, embarrassment and confidentiality, and therefore has become an increasingly popular avenue for young

FIGURE 3.7 Where young people go for help with important issues



Note: Respondents were able to choose more than one option. Items are listed in order of national frequency.

Source: *Mission Australia Youth Survey Report 2018,* p. 27.

people to access health information. Even if a young person does consult a GP, they often also check for side effects of medications and get second opinions from online reviews or forums. A popular example is ReachOut.com, a well-known youth mental health website where young people can access mental health information, and share positive stories and experiences about overcoming mental health difficulties.

Young people often use the internet to discuss topics they find difficult to talk about in person, especially if they feel marginalised and isolated. Issues around sexuality and identity are among popular topics discussed in online forums. Online forums may enable young people to feel empowered as they gain knowledge and insight in relation to their individual health concerns. This may lead to improvements not only in their physical health and wellbeing through illness prevention and therefore improvements in overall health status, but also to improvements in their mental health and wellbeing, as levels of stress and anxiety may be reduced. When used appropriately, the internet is a great source of health information for young people. However, it is important that young people also feel supported in accessing mainstream health services such as GPs and specialists. See the **Be the Hero!** weblink in the Resources tab: this is a VicHealth-funded initiative that further identifies 15 other websites to assist young people in accessing information surrounding youth health issues.

Resources

Weblink Be the Hero!

3.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Outline three ways in which the family group can influence positive health behaviours during youth.
2. Describe an example of when the family group can act as a stressor to a young person.
3. How can the family group promote positive emotional health and wellbeing of an individual?
4. What is the difference between a blended family and a step family?
5. Explain what is meant by the term ‘peer influence’.
6. How does the peer group have both a positive and negative influence on physical health and wellbeing of young people?
7. Identify three aspects of the housing environment that can act as enablers (aspects that improve health status) or barriers (aspects that reduce health status) to healthy behaviours and, therefore, affect a young person’s health status.
8. What are some known barriers to young people accessing health information?
9. Explain some ways young people use the internet to access health information.

3.2 Exercise 2 APPLY your knowledge

1. Explain using an example how the family can improve the health status of youth.
2. How can the peer group lead to variations in health status? (*Hint:* When linking to health status, refer to morbidity, mortality, life expectancy.)
3. Explain how the internet can break down barriers for youth when accessing health information.
4. Using figure 3.7, compare how male and female youth access health information. (*Hint:* When comparing, make sure you refer to similarities and differences in the information provided.)

3.2 Exercise 3 studyON: Practice exam questions

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

3.3 Education, employment and income

KEY CONCEPT Explore how a range of different sociocultural factors, such as education, employment and income impact on the health behaviours and health status of youth

This subtopic focuses on young people's socioeconomic status; however, it refers to employment rather than occupation.

3.3.1 Education

FIGURE 3.8 Educational opportunities will have a great impact on a young person's health and wellbeing.

Many young people spend a significant amount of time in formal educational settings. Through education in schools and higher education institutions, such as universities and TAFE colleges, young people are provided with the opportunities to gain knowledge and skills that enable them to enter the workforce. Educational institutions are also places where young people can form relationships and challenge themselves, which can lead to enhanced social, emotional and mental health and wellbeing. The quality of education a young person receives can be affected by the amount of resources an educational institution has at its disposal. For example, having access to advanced digital technology resources, such as 3D printing or classes in coding, can increase the opportunities available to young people in the future.

Education is also linked with better health status. Those with higher levels of education report fewer physical health concerns and better mental health and wellbeing than those with lower levels of education. The higher the level of education an individual receives, the more likely they are to take notice and act upon health promotion messages, such as participating in cancer screening programs. Educated individuals are also more likely to be aware of healthy behaviours, such as using sun protection methods and not smoking tobacco.

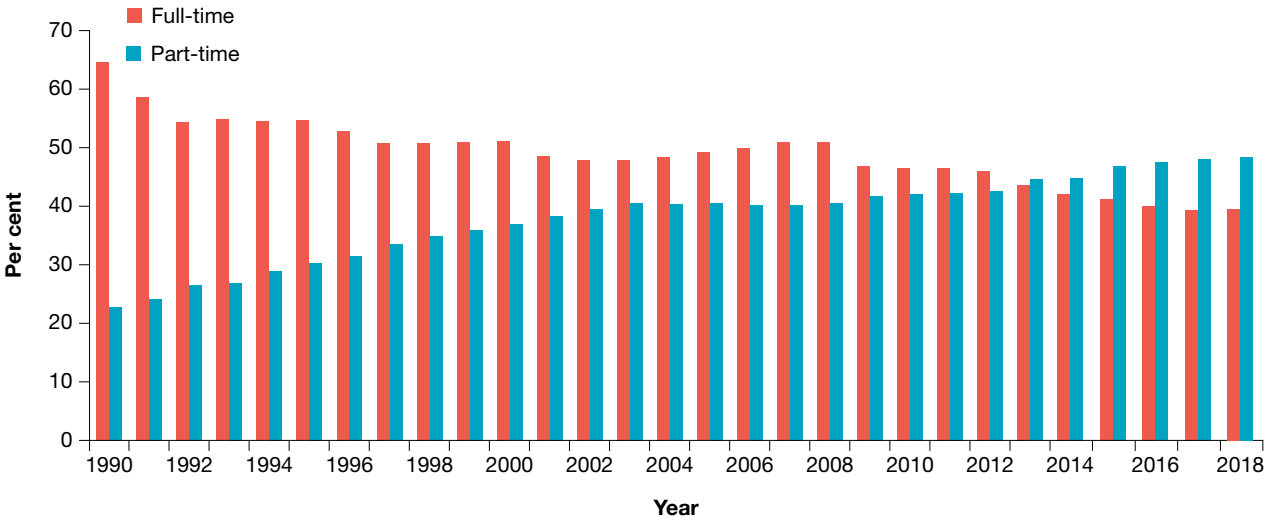
The educational environment is also an important resource for the understanding of the importance of health and wellbeing. Children are taught in schools the importance of nutrition, and are also provided with opportunities for regular physical activity through Physical Education classes and competitive school sports programs, enhancing physical fitness and therefore improving not only physical health and wellbeing but all other health and wellbeing dimensions, such as social and mental health and wellbeing. People with higher levels of education are also more likely to secure better paid jobs, which can lead to lower levels of stress and more income to pay for private health insurance and nutritious food, reducing rates of morbidity from conditions such as obesity and mental health disorders.

3.3.2 Employment

According to the most recent data from the Australian Bureau of Statistics, as of December 2018 the number of young people aged 15–24 who were involved in part-time work (48 per cent) was higher than those in engaged in full-time work (40 per cent) (see figure 3.9). This has changed dramatically since 1990, when the rates of young people in full-time work were three times higher than those in part-time work. The major reason for this trend is due to the higher rates of young people staying at school to complete year 12,

and increased numbers of young people undertaking further study after high school, as jobs are increasingly requiring higher skills or qualifications. In turn, this is increasing the demand for a more educated and qualified workforce.

FIGURE 3.9 Number of young people employed in either full- or part-time work, 1990–2018

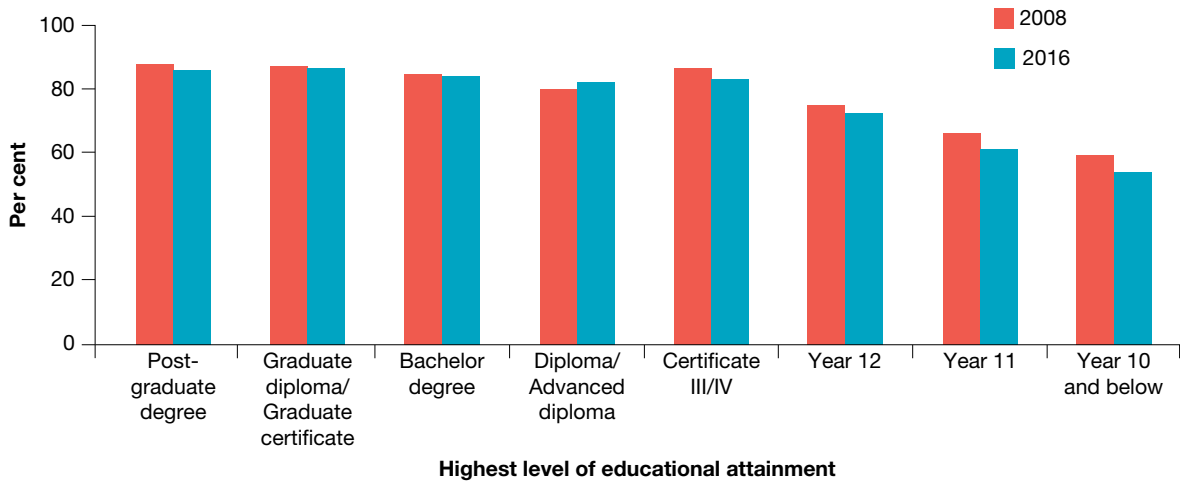


Note: Data are annual averages of monthly employment labour force figures (based on ABS 'original series' estimates), using the labour force population aged 15–24 as the denominator.

Source: AIHW analysis of ABS data 2018.

Data provided by AIHW's *Australia's welfare 2017* (figure 3.10) show that there are greater chances of employment with a higher level of education attainment. Those completing further education, such as a diploma or degree, experience higher rates of employment than early school leavers.

FIGURE 3.10 Employment rate by highest level of education, 2008 and 2016



Source: AIHW, *Australia's welfare 2017.*

Many young people will take on a part-time job for the first time while at school, or leave school early to enter full-time employment. Employment allows the individual to earn his or her own income and develop new skills. Through employment young people may learn general skills, such as cooking, cleaning, how to cooperate with others and assume responsibility, as well as learning job-specific skills. Being employed is an integral component of maintaining all five dimensions of health and wellbeing, and promotes health status.

EXAM TIP

Often questions related to data require you to be able to identify the trend. This is known as the pattern in the data, i.e. what the data is telling us.

To help you to clearly identify the trend, cover up the x- and y-axes with both hands. This allows you to temporarily ignore the actual data and simply look at the graph image. Then consider what you can see. For example, in figure 3.10, there is a downward trend in the graph as it moves to the right. Then look at the information in the data. In this case, as education levels decrease, the employment rates also decrease. This is the trend. This trend can also be read the opposite way; for example, when education levels increase, the employment rates increase.

The working conditions a young person experiences can have either a positive or negative impact on their health status. Occupational health and safety laws in Australia are designed to ensure that employers provide a safe environment for all their employees, including young people. These laws relate to the physical space, as well as safe use of machinery, training and supervision. They are intended to promote the health and wellbeing of Australian workers. Unfortunately, research has shown that the injury rate of young workers (15–24) is out of proportion with other worker age groups. Some of the reasons associated with the much higher injury rates are that young people may not always get proper training, may not understand their rights and responsibilities and don't see themselves as high risk.

The physical space in which a young person works can have an impact on their physical health and wellbeing. Working outdoors, for instance, can leave them exposed to UV radiation and other elements such as heat and cold. The tools and instruments that young people use at work can lead to injuries such as strains and cuts. Young people may be required to stack shelves, which can increase strength, but also the likelihood of back injury. Many young people work in fast-food outlets or other commercial kitchens. Facilities within these environments pose particular risks, including:

- burns from hot water, deep fryers, ovens and other appliances
- falls and injuries caused by slippery floors
- cuts and lacerations from sharp objects.

Other high-risk workplaces in which young people work are construction, retail and the manufacturing industry.

Working conditions must abide by Occupational Health and Safety laws to protect workers from harm. For more information on these laws, use the **WorkSafe Victoria** weblink in the Resources tab. Unpleasant or unfavourable working conditions can also influence young people's mental health and wellbeing by affecting their self-esteem and contributing to feelings of depression.

FIGURE 3.11 Many young people experience feelings of boredom or dissatisfaction at work, which can have an impact on their confidence and self-esteem.

Apart from some of the potential negative health effects of employment, there are many benefits to health status and health and wellbeing associated with part-time or full-time work. Positive workplaces provide opportunities for increased social interactions. Young people develop communication skills and build productive relationships, which enhance their social health and wellbeing. Mental health and wellbeing can also be enhanced, as the workplace can teach young people new skills, which in turn develops their self-esteem and confidence. Many workplaces can be physically challenging, such as undertaking a trade apprenticeship, allowing the individual to increase strength and

physical endurance, and therefore improve fitness and physical health and wellbeing. Employment can also provide young people with a sense of purpose and meaning in life and therefore promote spiritual health and wellbeing.

on Resources

Weblink WorkSafe Victoria

3.3.3 Income

When discussing the impact of income on young people, we need to include family income, as this has the most influence over the money available to young people. Family income determines the type of neighbourhood in which a young person grows up and the kind of school they attend. The quality of these settings is an important factor in determining healthy behaviours and young people's health status.

FIGURE 3.12 Skiing and snowboarding are popular sports that are expensive, and may not be available to young people from a low-income family.

For young people living in the family home and undertaking full-time education, parental income is often directly related to the amount of money they have to spend on essentials, such as food, education, transport and healthcare, as well as recreation, including dining out, music lessons and an internet connection. These resources can assist people in maintaining a healthy body weight, staying socially connected and accessing healthcare when required, which can improve health status by reducing morbidity and mortality rates.

Having adequate access to resources for life's essentials and recreation promotes the dimensions of social and mental health and wellbeing. Feeling a sense of belonging is very important to young people, and often this involves attending different social events that require a financial commitment. Belonging to sports clubs can often be expensive, and it is the family income that is likely to determine which activities young people are able to participate in.

The type of neighbourhood in which a young person grows up is also often determined by a family's income. Compared with low-poverty neighbourhoods, high-poverty neighbourhoods have fewer high-quality public and private services, such as community centres, schools, healthcare providers and support services. High-poverty neighbourhoods are also more likely to have more crime and street violence, and a greater exposure to negative peer influences. These characteristics can significantly affect youth health and wellbeing. For example, social health and wellbeing is influenced by the types of relationship a young person forms. These relationships can have either a positive or a negative impact on a young person depending on the values of their peer group. Productive relationships lead to increased confidence and self-esteem and, therefore, positive mental health and wellbeing outcomes; however, the opposite can also occur.

Socioeconomic status

As discussed in topic 1, the levels of education, income and employment (occupation) are often considered together as a person's socioeconomic status. Socioeconomic factors are important influences on health and wellbeing in Australia. In general, the higher a person's income, education or occupation level, the greater their level of health. This is a concept often termed the **social gradient of health**. In general, people from lower socioeconomic groups are at greater risk of poor health, and have higher rates of illness, disability and death than those from higher socioeconomic groups.

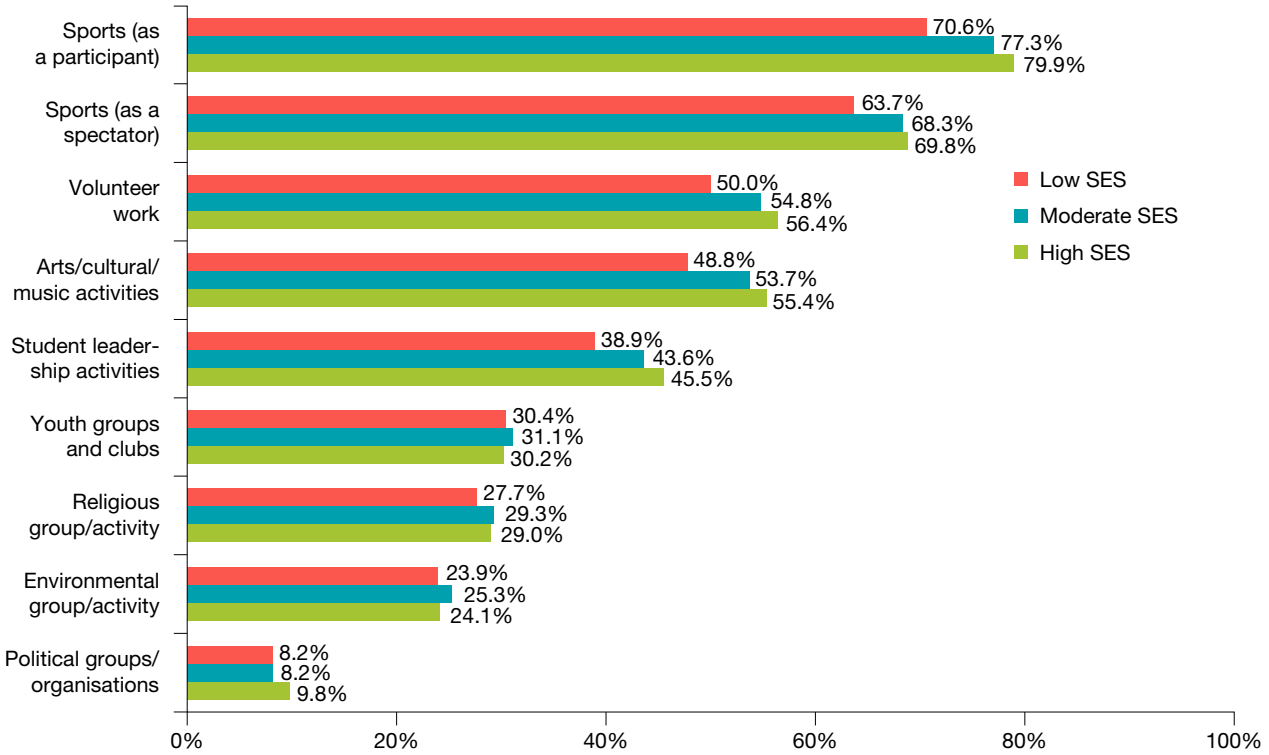
The results from Mission Australia's *Concepts of Community* report (2016) showed that young people from different socioeconomic backgrounds across Australia have different experiences and challenges, which impact on health behaviours and health status.

Although negative behaviour such as alcohol consumption and illicit drug use in young people has decreased or remained steady over the last decade, the 2016 *National Drug Household Survey* showed that young people living in the lowest SES areas of Australia were 2.7 times more likely to smoke than those living in the highest SES areas. However, in contrast, young people living in the highest SES areas were more likely to engage in risky drinking and to report that they had used cocaine and ecstasy in the last 12 months than those living in the lowest SES areas.

Participation within community/school groups is an important aspect of everyday life for young people, and is also associated with preventative health behaviours and therefore improved health status. Belonging to a group provides young people with a sense of purpose, confidence, resilience and, in the case of sporting groups, enhanced physical activity and fitness. Involvement in sporting and other activities has also been shown to reduce antisocial behaviour among young people. Data from the *Mission Australia Youth Survey* found that young people from low SES areas were less likely to be involved in each of the most common activities than young people from moderate and high SES areas (see figure 3.13).

Involvement in activities and groups has a positive impact on health status. People who feel connected to their community experience enhanced mental and emotional health and wellbeing and are therefore less likely to suffer from mental illness than those who feel disconnected from their community. Participation in lifelong regular physical activity also assists in weight management, reducing obesity-related conditions such as type 2 diabetes and cardiovascular disease later in life and increasing overall life expectancy.

FIGURE 3.13 Young people's involvement in activities and groups in the past year, by SES



Source: Mission Australia, *Concepts of Community: Young people's concerns, views and experiences, 2017.*

Resources

Digital documents ReachOut worksheet (doc-32158)

Weblink ReachOut

3.3 Activity

Access the **ReachOut** weblink and worksheet in the Resources tab, then complete the worksheet.

3.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. What does socioeconomic status refer to?
2. Explain the link between level of education and health status.
3. Referring to figure 3.10, how has the employment rate and level of education changed over time from 2008 to 2016?
4. Describe how employment could have a negative or positive influence on health status.
5. Describe how employment could positively impact the spiritual health and wellbeing of the employee.
6. What is the relationship between income and health status?
7. How does the neighbourhood in which you live affect your health behaviours and health status?

3.3 Exercise 2 APPLY your knowledge

1. (a) Refer to figure 3.9 and identify a relationship that exists in the data.
   (b) Describe a reason for the relationship identified in part (a).
2. Describe two different ways in which healthy behaviour is promoted at your school.

3. Emma is a year 11 student. Most students in her year level are going on the school trip to central Australia in term 3. Emma had been looking forward to attending this trip; however, her father has just been made redundant, and is now unemployed. She is now unable to attend because the family cannot afford it. Explain how family income can affect Emma's health and wellbeing in relation to this example. Use all the dimensions of health and wellbeing in your response.

studyON

3.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

3.4 Topic 3 review

3.4.1 Key skills

KEY SKILL Explain a range of sociocultural factors that contribute to variations in the health status and health behaviours of Australia's youth

This key skill requires an explanation of the sociocultural factors that have an impact on youth health behaviours and health status. The focus is on the following factors: peer group, family, housing, education, employment, income and access to health information and support services.

When addressing the key skill, it is important to link examples back to health status, which is 'an individual or population's overall level of health (and wellbeing), taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors' (AIHW 2008). Therefore, when linking health status to housing, you need to explain how housing could influence the impact of diseases or life expectancy. A house that is unsafe may not have a fence surrounding the backyard pool, which may lead to differences in life expectancy due to accidents such as drowning. Or when a young person is exposed to overcrowded housing conditions, they may suffer from higher levels of anxiety and stress, or potentially even increase their risk of infection due to lack of hygiene, caused by high demand for bathrooms and kitchen facilities. If the question asks how a factor can affect health and wellbeing, a link to a dimension of health and wellbeing should be made.

When explaining variations in health status you must be able to explain ways in which the impact of sociocultural factors will differ among individuals depending on the environment in which they have grown up. For example, a young person who has grown up in a high-income family will often have greater opportunities to enhance their health status than a young person raised in a low-income environment. They will most likely have access to private health insurance, while another family may have to rely solely on Medicare, which has limitations in some aspects of health coverage. For example, dental health can often be overlooked for those who do not have private health insurance, as it is extremely costly and could lead to differences in health status between the two groups.

A young person from a high-income family may also have greater exposure to different recreational and sporting activities, whereas a young person from a low-income family may have less access, decreasing their overall access to participation in physical activity. This may lead to weight gain and a higher risk of overweight and obesity compared to those who have greater access to physical activity opportunities.

Consider the following example:

Michael is 17 years old and in year 11 at school. Michael loves playing soccer with his friends at lunchtime and after school at the oval next to his house. He is also a passionate Melbourne Victory supporter, and attends matches with his father and sister on weekends. Michael plays competition soccer

on Sunday mornings and also helps coach his younger sister's team. Michael is a member of the local gym, where he regularly works out with his best friend. Michael works midweek at the local supermarket and has recently been promoted to the check outs. He is happy about this promotion as he now also receives a higher hourly wage. Overall Michael is a very happy and confident 17-year-old boy.

a. Identify three sociocultural factors that you believe would have a significant impact on Michael's health and wellbeing and health status.
Family, peer group, education[1]

1 Three sociocultural factors are identified.

b. Select one of these and explain how they may affect Michael's social health and wellbeing.
Family[2] has had an impact on Michael's health and wellbeing by sharing his passion for soccer. His father supports him by taking him to watch soccer games, which enhances his social health and wellbeing, as he is increasing his friendship networks by socialising with other Victory supporters and strengthening his relationship with his family.[3]

2 Family is identified as the sociocultural factor.

3 The link to social health and wellbeing is outlined clearly and two examples of social health and wellbeing are also provided.

c. Using the example provided in part b, explain two ways in which this sociocultural factor may affect Michael's health status.
With his family's encouragement he plays in a regular competition, which has increased his physical fitness and strength and assisted with weight management. Michael's high levels of fitness improve his health status by reducing his risk of morbidity from obesity. Through family connections he has also been offered the assistant coach role for his sister's team, which has increased his confidence and self-esteem, reducing the risk of morbidity from depression and anxiety.[4]

4 The second part of the question focuses on health status, so the relationship with disease, obesity and other related conditions as well as mental health issues such as anxiety and depression are discussed.

Practise the key skill

1. Complete a summary table of how sociocultural factors can have an impact on young people.

Sociocultural factor	Impact on youth health behaviours	Impact on health status
Peer group		
Family		
Housing		
Access to health information		
Education		
Employment		
Income		

2. Jenny has been suffering from nausea and vomiting, muscle aches and pain while going to the toilet. She has been researching her symptoms on the internet and believes she may have a urinary tract infection. Jenny is extremely self-conscious and embarrassed and does not want to visit a GP. What advice would you give Jenny in this situation, and how do you think your advice would lead to an improvement in Jenny's health status?

3.4.2 Topic summary

Family, peer group, housing and access to health information

- Sociocultural factors can either raise or lower the health status of an individual or population by influencing health behaviours.
- The family is initially the most important influence on youth health behaviours and health status, influencing many aspects such as education, healthy eating and the importance of exercise.
- Peer groups become more influential on health behaviours as young people transition from childhood to adulthood.
- Housing can lead to variations in health status due to factors such as safety, overcrowding, kitchen facilities, indoor air pollution and location. Injuries and mental health issues are among the most common concerns related to inadequate housing.
- Young people are more often using the internet for health-related information, especially if it relates to health topics about which they are embarrassed.
- Health professionals are a valuable resource for helping young people to maintain a positive health status, yet many are reluctant to seek help from them.

Education, employment and income

- The educational opportunities presented to young people can have various influences on health behaviours. Availability of resources at schools and increased opportunities enhance learning experiences. The higher the person's educational achievement, the higher their health status.
- The higher the level of education received, the more likely it is that the individual will take notice of health promotion messages and therefore undertake behaviours like participating in cancer screening programs.
- Many young people start employment, and the work environment can present many challenges and opportunities for health and wellbeing and health status.
- Employment can affect health status due to the physical environment of the workplace, the social interactions available, and the gaining of knowledge and skills. These can all affect physical and mental health and wellbeing and health status.
- Employment can also lead to increased stress and anxiety in young people, especially when they are starting out in the workforce.
- Income can act as either an enabler to health behaviours, and therefore health status, or a barrier to health behaviours and health status. Income provides essential resources such as adequate housing, food, clothing, educational opportunities and access to health services.

on Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0017).

3.4 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Danny is 15 and left school around the same time he was kicked out of home by his stepfather. He has been hanging out with a group of older people on the streets and they have introduced him to drugs. One night Danny was out with his friends and he decided to try ecstasy. After two hours he began hallucinating and started thinking his friends were out to get him. He could not control his thoughts and by the next day was in a psychiatric hospital having been diagnosed with drug-induced psychosis (a condition whereby the perception of

reality is altered and people see, hear, smell and touch things that are not there). Psychosis can be treated, but many individuals may experience further episodes of psychosis in the future.

a. Identify three examples of sociocultural factors from the case study that have affected Danny's health status. **(3 marks)**
b. Select one of these and explain how it has affected Danny's health status. **(2 marks)**
c. Discuss ways in which Danny's illness may have an impact on his future:
   - social health and wellbeing
   - physical health and wellbeing. **(4 marks)**
d. Explain how Danny's family situation may affect his recovery. **(3 marks)**

Question 2

Socioeconomic status includes factors such as education, income and employment. Explain, using an example, how all three factors are interrelated and can affect young people's health behaviours. **(4 marks)**

studyON

3.4 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

ON Resources

Interactivities Crossword (int-6849)
Definitions (int-6850)

School-Assessed Coursework Unit 1 AOS 1 Outcome 1

Area of Study 1 Health perspectives and influences

Outcome 1

Explain multiple dimensions of health and wellbeing, explain indicators used to measure health status and analyse factors that contribute to variations in health status of youth.

School-Assessed Coursework 1 online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Or, to download the assessment as a Word document, go to your eBook at www.jacplus.com.au, and go to the Resources tab.

on Resources

Digital document School-Assessed Coursework 1 (doc-30072)

4 Nutrition and youth health and wellbeing

4.1 Overview

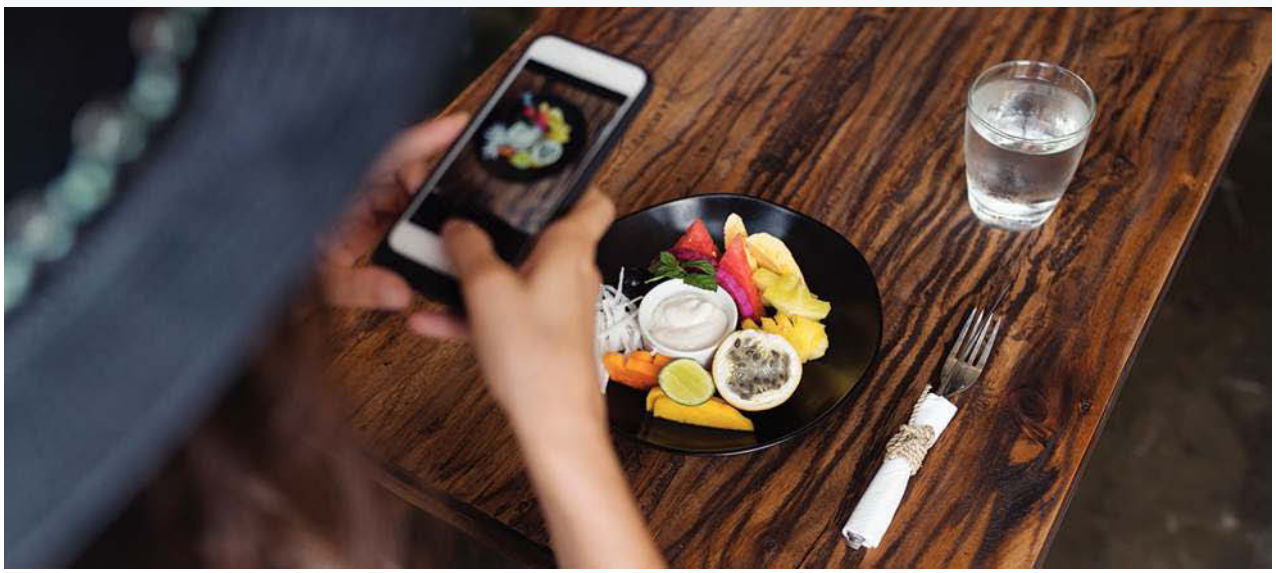
Key knowledge

- The function and food sources of major nutrients important for health and wellbeing
- The use of food selection models and other tools to promote healthy eating among youth, such as the Australian Guide to Healthy Eating, the Healthy Eating Pyramid and the Health Star Rating System
- The consequences of nutritional imbalance in youths' diet on short- and long-term health and wellbeing
- Sources of nutrition information and methods to evaluate its validity
- Tactics used in the marketing of foods and promoting food trends to youth, and the impact on their health behaviours
- Social, cultural and political factors that act as enablers or barriers to healthy eating among youth, including nutrition information sourced from social media and/or advertising

Key skills

- Explain the functions of major nutrients for general health and wellbeing
- Describe the possible consequences of nutritional imbalance in youths' diet on short- and long-term health and wellbeing
- Evaluate the effectiveness of food selection models and other tools in the promotion of healthy eating among youth
- Evaluate the validity of food and nutrition information from a variety of sources
- Analyse the interaction between a range of factors that act as enablers or barriers to healthy eating among youth

FIGURE 4.1 Young people's eating habits are often influenced by social media



KEY TERMS

Anaemia a condition characterised by a reduced ability of the body to deliver enough oxygen to the cells due to a lack of healthy red blood cells
Cartilage connective tissue that protects and cushions the joints, and provides structure and support to various body tissues
Cell membrane the outer layer of a cell that provides the structural support for the cell and allows nutrients, gases and waste into and out of the cell
Cholesterol a type of fat required for optimal functioning of the body that in excess can lead to a range of health concerns including the blocking of the arteries (atherosclerosis). Can be 'bad' low-density lipoprotein (LDL) or 'good' high-density lipoprotein (HDL).
Cultural factors the set of beliefs, moral values, traditions, language and laws (or rules of behaviour) held in common by a nation, a community or other defined group of people
Dental caries decay of teeth caused by a breakdown in the tissues that make up the tooth
Discretionary foods foods and drinks not necessary to provide the nutrients the body needs, but that may add variety. However, many of these foods are high in kilojoules and are therefore described as energy dense.
Food insecurity 'the state in which all persons obtain nutritionally adequate, culturally appropriate, safe food regularly through local non-emergency sources' (VicHealth, 2008)
Fortified when a nutrient has been artificially added to food to increase its nutritional value
Glycaemic index (GI) a scale from 0 to 100 indicating the effect on blood glucose of foods containing carbohydrates
Haemoglobin a component of blood, largely consisting of iron and protein, that transports oxygen throughout the body
Halal permissible by Muslim law, particularly in relation to how meat is slaughtered
Hard tissue tissue in the body that forms hard substances such as bones, teeth and cartilage
Kilojoule (kJ) a unit for measuring energy intake or expenditure
Kosher describes food (or premises in which food is sold, cooked, or eaten) satisfying the requirements of Jewish law
Macronutrient nutrient that is required by the body in large amounts (e.g. protein, carbohydrates, fats)
Metabolism a collection of chemical reactions that takes place in the body's cells. Metabolism converts the fuel in the food we eat into energy.
Micronutrient nutrient that is required by the body in small amounts (e.g. minerals and vitamins)
Orthorexia eating disorder characterised by an excessive preoccupation with eating 'healthy' food
Osteoporosis a condition characterised by a reduction in bone mass that makes bones more likely to break and fracture
Pasteurisation a process that kills microbes (mainly bacteria) in food and drink, such as milk, juice and canned food
Peak bone mass the maximum bone mass (i.e. density and strength) reached in early adulthood
Political factors the decisions and actions taken by government and non-government agencies on issues relating to healthcare, health policies and health funding
Protective nutrient any nutrient that acts to protect a person from a certain condition
Risk nutrient any nutrient that increases the chances of developing a certain condition
Role model a person whose behaviour can be emulated by others, especially by younger people
Social factors aspects of society and the social environment that impact on health and wellbeing
Soft tissue organs and tissues in the body that connect, support or surround other structures. They include skin, muscles, tendons, ligaments, collagen and organs.
Sterilisation the procedure of making an object free of live bacteria or other microorganisms
Stevia a shrub native to tropical and subtropical America, the leaves of which may be used as a calorie-free substitute for sugar
Vegan a type of vegetarianism that excludes foods of animal origin, including eggs and dairy

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0018).

4.2 Nutrients required during youth including carbohydrates, protein and fats

KEY CONCEPT Understanding the major nutrients of carbohydrates, protein and fats required during youth

Nutrients are substances that provide nourishment essential for the maintenance of life and for growth. When we eat, foods are broken down in the process of digestion to release nutrients. The body then uses these nutrients for many functions related to health and wellbeing, including the efficient functioning of the body and its systems, and the prevention of many diet-related diseases, which you will learn about in this topic.

Some foods have more nutrients in them than others, and some have nutrients that other foods may not have at all. The best way to maintain a balanced diet is to eat a wide variety of foods (see figure 4.2). The six categories of nutrients needed for optimal health and wellbeing include:

- carbohydrates (including fibre)
- protein
- fats
- vitamins, such as vitamin D and B-group vitamins
- minerals, such as calcium, sodium and iron
- water.

FIGURE 4.2 Eating a variety of nutritious foods every day is beneficial to health and wellbeing.

Carbohydrates, protein and fats are needed by the body in large amounts and are often called **macronutrients**; vitamins and minerals are called **micronutrients** because they are needed in only very small quantities. Regardless of the quantity needed by the body, each nutrient has a different role to play and all are important for health and wellbeing. Carbohydrates, fats and proteins contain significant amounts of **kilojoules (kJ)**, which can be converted into energy to be used by the body; however, carbohydrates are the body's preferred source of energy.

FIGURE 4.3 Energy contribution for carbohydrates, fats and protein

Carbohydrates 16kJ per gram

Fats 37kJ per gram

Protein 17kJ per gram

on Resources

Teacher-led video Nutrients and functions (tlvd-0271)

4.2.1 Carbohydrates

The main function of carbohydrates is to provide fuel for the body. As young people are growing at a rapid rate, a lot of energy is required for **metabolism** and growth. Glucose is the preferred fuel for energy in the human body and carbohydrates are rich in glucose. As a result, carbohydrates should provide the majority of a young person's energy needs.

Carbohydrates are broken down and the glucose molecules are absorbed into the bloodstream. Cells take the molecules from the bloodstream and store them, ready for use. In terms of energy production, one gram of carbohydrate will produce about 16 kJ of energy.

Glucose that is not used by the body is stored as adipose (or fat) tissue. Therefore, if a person eats too many carbohydrates, they can gain weight because of the increase in the amount of glucose being converted to fat. This process can be reversed if glucose is needed by the body.

CASE STUDY

Do sports drinks fuel or fool young athletes?

One only has to look around at any local sports grounds on the weekend to see children and adolescents gulping down either Powerade or Gatorade as their drink of choice. These commercial drinks were initially designed for athletes who train and sweat vigorously for prolonged periods of time, therefore significantly depleting their bodies and requiring not only rehydration but also fuel replenishment. Companies have since expanded their target market to include all children who play sports and their parents who believe that recharging with a sports drink is necessary after a one-hour game.

Research from the American Academy of Pediatrics has shown that routine ingestion of carbohydrate-containing sports drinks by children and adolescents should be avoided or restricted and water should be the number one source of hydration.

It is very rare that children and adolescents lose enough electrolytes during their athletic efforts to require replenishment. Sodium is the most common electrolyte lost in sweat, but most people consume enough sodium in their daily diet. Sports drinks also contain as much, if not more, added sugars as soft drinks do.

The best choice for replenishment of energy after exercise is water and a banana or orange. These fruits have natural sugars that enter the bloodstream at a steady rate, unlike the sports drink that not only is an artificial sweetener, but also causes blood sugar and insulin levels to spike.

FIGURE 4.4 A child fills up her Gatorade bottle during a sports session

Source: Adapted from Seidenberg, C 2016, 'Do sports drinks fuel or fool young athletes', *Sydney Morning Herald*, 28 July.

Case study review

1. Why were sports drinks first designed?
2. Why should children and adolescents avoid or restrict sports drinks?
3. Why is water and a banana/orange considered a better choice?

4.2.2 Food sources of carbohydrates

Most carbohydrates are found in foods of plant origin, and these are the body's preferred source of energy. However, carbohydrates are also found in sugar and foods containing added sugar, such as sports drinks, soft drinks and lollies. These foods contain fewer nutrients but contribute large amounts of energy, and so are not considered to be good food sources of carbohydrate.

Major food sources of carbohydrates include:

- vegetables
- rice
- bread

- pasta
- cereals
- fruits (such as oranges, grapes and bananas).

FIGURE 4.5 Carbohydrates can be sourced from a wide variety of foods.

4.2.3 Fibre

Fibre is a type of carbohydrate that is required for the optimal health and wellbeing of young people. Found in all foods of plant origin, fibre is not absorbed by the body. Rather, it travels through the digestive system, acting like a cleaner as it moves.

The benefits of fibre in the diet are numerous and include the following.

FIGURE 4.6 A selection of grains and seeds, which are high in fibre

- *Provides a feeling of fullness.* Fibre slows the absorption of glucose from the small intestine into the blood, therefore providing a feeling of fullness (satiety). This decreases the amount of surplus energy consumed from **discretionary foods**. Both of these characteristics of fibre assist in weight maintenance.
- *Reduces cholesterol levels.* Fibre reduces the amount of cholesterol absorbed by the body, which reduces the risk of cardiovascular disease later in life.
- *Absorbs water.* Fibre absorbs water, which adds bulk to the faeces and therefore helps in the removal of waste products, assisting in the prevention of colorectal cancer.
- *Prevents constipation.* Fibre assists in the movement of wastes through the digestive system. This, along with absorption of water, regulates bowel motions, decreasing the risk of constipation.

Food sources of fibre include:

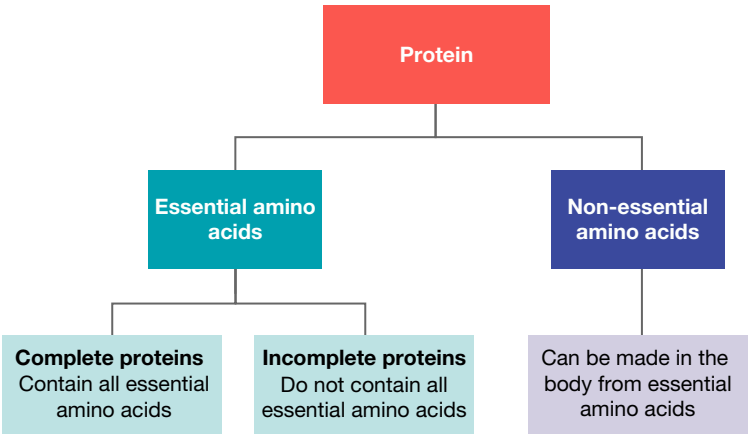
- bran
- wholemeal bread

- grains and seeds
- fruit and vegetables, preferably raw or with skins on (excellent sources include raspberries, apples, bananas, oranges, potatoes, broccoli and corn).

4.2.4 Protein

Protein has two main functions in the body. Its main function (and probably the most important for youth development) is to build, maintain and repair body cells. The second function of protein is to act as a fuel for producing energy. If a person does not have enough glucose (from carbohydrates) to use for energy production, protein can be used as a secondary source of energy. In times of starvation, muscle and other body cells may be broken down in order for the protein contained within them to be used for energy production. Protein yields about 17 kJ per gram when being used for energy. If eaten in excess, protein may be stored as adipose or fat tissue and can contribute to obesity in the long term.

FIGURE 4.7 Proteins are broken down into essential and non-essential amino acids.



Protein is made up of smaller building blocks called amino acids. There are 20 different types of amino acids that humans need to function properly. Eleven of these, called the non-essential amino acids, can be synthesised (or made) in the body from other amino acids. The other nine, called essential amino acids, cannot be synthesised in the body and must therefore be consumed (see figure 4.7). To ensure that all amino acids are being consumed regularly, protein from a range of different sources should be eaten. Many people get much of their protein requirements from meat, which is often rich in essential amino acids. Vegetarians must ensure they consume a large variety of non-meat protein sources to ensure that their nutritional needs are being met. These foods include nuts, beans, lentils and tofu.

Some food sources are termed 'complete proteins' because they contain all the essential amino acids in the quantities required for growth, repair and replacement of body cells. They are usually found in vast amounts in animal products (see figure 4.8). Some proteins can also be found in many foods of plant origin (see figure 4.9). These are usually incomplete proteins, and need to be eaten with other protein sources to ensure that all required amino acids are consumed.

FIGURE 4.8 The protein content of selected foods of animal origin

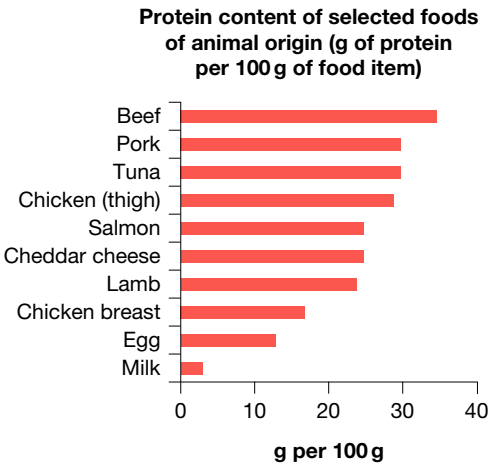
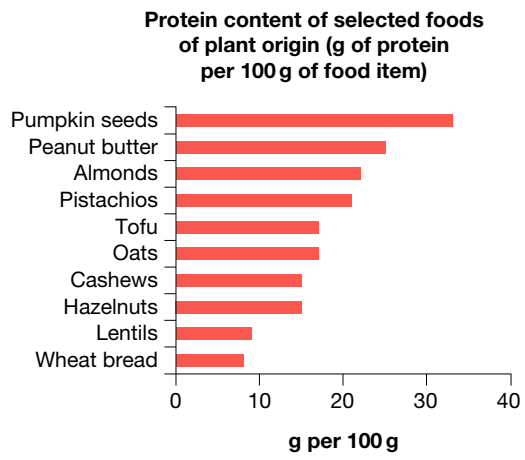


FIGURE 4.9 The protein content of selected foods of plant origin



Some rich animal sources of protein include:

- eggs
- milk, cheese and other dairy products (except cream)
- beef
- chicken and other poultry
- fish and seafood.

Some rich plant sources of protein include:

- soy products (tofu and soy milk)
- legumes
- nuts
- wholegrain cereals
- brown rice.

FIGURE 4.10 Rich food sources of protein

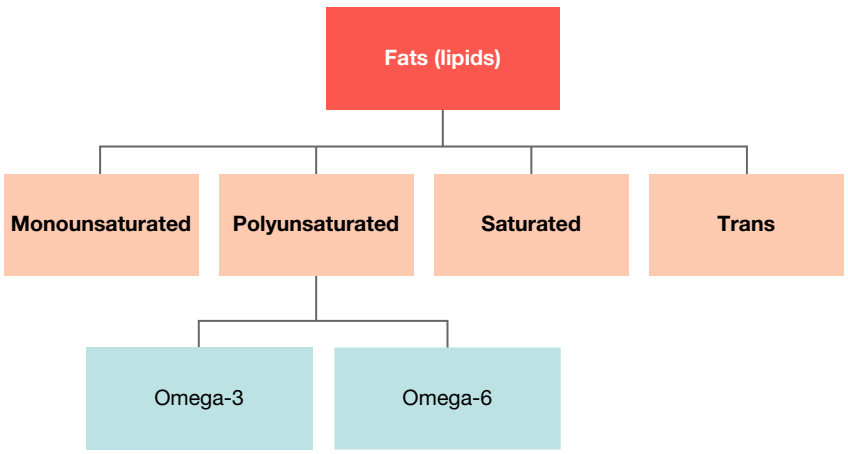
4.2.5 Fats

Fats (sometimes referred to as lipids) play a number of roles in health and wellbeing. Although fats are often associated with negative effects on the body, they are required for adequate health and development throughout the lifespan and are an essential part of a balanced food intake.

Like carbohydrates, the main function of fats is to act as a fuel for energy. Fats are a richer source of energy than carbohydrates and protein, yielding approximately 37 kJ per gram. This is why foods packed with fat but little else are referred to as 'energy dense' foods. How much fat to include in the diet should be determined by the amount of energy required by the individual. Balance is the key here, remember that most of an individual's energy should come from carbohydrates.

Fats are also required for the development and maintenance of **cell membranes**. Cell membranes form an important component of body cells. They are responsible for maintaining the structure of cells and allowing the transport of nutrients, gases and waste into and out of cells. Although all fats are a concentrated source of energy and are required for the development of cell membranes, not all fats are the same. There are some types of fats that have a positive impact on health and wellbeing, while other types have negative health and wellbeing outcomes.

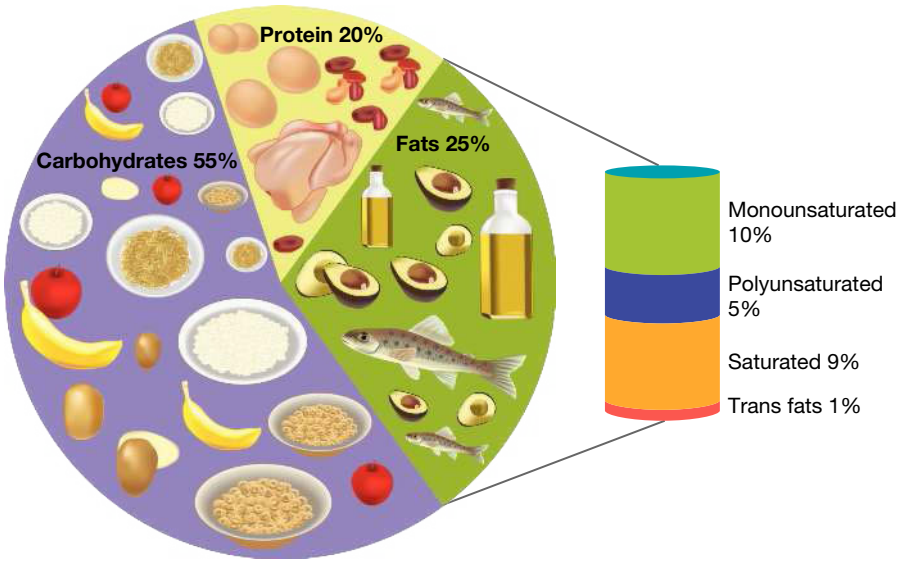
FIGURE 4.11 There are four different types of fats.



Fats can be classified into four broad categories based on their chemical makeup: monounsaturated, polyunsaturated, saturated and trans fats. Total fat intake should account for around 25 per cent of the total energy requirement (with carbohydrates and protein making up the other 75 per cent). Of this 25 per cent,

the majority should come from monounsaturated fats. Approximate recommended percentages of total energy intake from the different types of macronutrients are shown in figure 4.12.

FIGURE 4.12 A breakdown of the macronutrients and the average percentage of total energy intake that should come from each group



Monounsaturated and polyunsaturated fats

Monounsaturated and polyunsaturated fats are considered the 'good fats'. They carry out the necessary functions of fats and also have some benefits for health and wellbeing, such as reducing levels of **cholesterol** and promoting the health of the heart and blood vessels. The greatest health and wellbeing gains for youth can be achieved by replacing saturated and trans fats with monounsaturated and polyunsaturated fats. This can help reduce the risk of diet-related diseases, such as cardiovascular disease, later in life.

Monounsaturated fats are liquid at room temperature and begin to solidify if placed in the refrigerator. Monounsaturated fats are considered one of the healthier types of fats, because they assist in lowering low density lipoproteins (LDL, the 'bad cholesterol') and therefore decrease the risk of atherosclerosis (the deposition of fatty material on the inner walls of the arteries) and cardiovascular disease. Foods rich in monounsaturated fats include olive oil, avocado, canola oil and canola-based margarine, nuts such as peanuts, hazelnuts, cashews and almonds, peanut butter and other nut butters.

FIGURE 4.13 Nuts are a great source of the 'good fats'.

Polyunsaturated fats are also considered one of the healthy types of fats. There are two main categories of polyunsaturated fats: omega-3 and omega-6. Polyunsaturated fats are generally liquid at room temperature and when refrigerated. Both omega-3 and omega-6 fats act to lower LDL cholesterol in the bloodstream and increase HDL (good cholesterol), therefore reducing the risk of cardiovascular disease. Omega-3 polyunsaturated fats also promote the elasticity of the blood vessels and prevent blood clots, which can decrease the risk of heart attack and stroke. Many people in western countries consume too many omega-6 fats which, like all fats, can increase the risk of obesity and associated conditions including cardiovascular disease.

Food sources of polyunsaturated fats include:

- omega-3 — fish, particularly oily fish such as mackerel, trout, sardines, tuna and salmon; canola and soy oils, and canola-based margarines
- omega-6 — mainly nuts such as walnuts and Brazil nuts, seeds, and oil made from corn, safflower and soy.

FIGURE 4.14 Meat can be high in saturated fat.

Saturated and trans fats

Saturated and trans fats are sometimes known as bad fats, because they increase cholesterol levels in the blood and can therefore contribute to cardiovascular disease in the long term. Although consuming saturated and trans fats will satisfy energy and other requirements, they should be replaced by monounsaturated and polyunsaturated fats where possible.

Saturated fats are generally found in foods of animal origin and are often solid at room temperature. You can see saturated fat in fatty cuts of meat in the marbling throughout the meat or the fat that forms along the ends of cuts of red meat (see figure 4.14). Other foods containing high levels of saturated fat include full-cream milk, cream and cheese, some fried takeaway food, and most commercially baked goods, such as pastries and biscuits.

Although small amounts of trans fats are found naturally in certain foods, most trans fats are created when liquid oil is converted into solid fat by a process called hydrogenation. For this reason, they are generally found in processed foods such as pies, pastries and cakes (see figure 4.15). Margarines and solid spreads produced for cooking are sometimes high in trans fats, as are the products made from them.

Trans fats, along with increasing cholesterol levels and therefore the risk of cardiovascular disease, can also interfere with cell membranes and contribute to high blood glucose levels. This can contribute to impaired glucose regulation and potentially lead to diabetes mellitus (especially type 2).

FIGURE 4.15 Trans fats are often present in baked goods such as cakes and pastries.

Resources

Interactivity Time Out: 'Which fat?' (int-6851)

EXAM TIP

Often you will be asked to provide food sources of a nutrient. It is important to know a range of excellent sources for a particular nutrient as you may be asked to identify more than one food source.

4.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain what is meant by the following terms.
   (a) nutrient
   (b) macronutrient
   (c) micronutrient

2. What are the six categories of nutrients?
3. (a) What is the main function of carbohydrates?
   (b) How much energy does one gram of carbohydrate produce?
4. (a) How does fibre assist in both weight management and the prevention of colorectal cancer?
   (b) List four foods that are a major source of fibre.
5. (a) What is the main function of protein?
   (b) How much energy does one gram of protein provide?
   (c) List four food sources of protein.
   (d) What is the difference between a complete and non-complete protein?
6. (a) Explain two functions of fats in the body.
   (b) Outline the four different types of fat and a food source for each.
   (c) Which fats are considered the 'good fats'? Why?
   (d) Which fats are considered the 'bad fats'? Why?

4.2 Exercise 2 APPLY your knowledge

1. Explain why most of our energy needs should come from carbohydrates instead of fats.
2. Discuss the possible short- and long-term effects on youth who do not consume adequate amounts of fibre.
3. Outline a similarity and a difference between saturated and trans fats.
4. Discuss the possible short- and long-term consequences for youth who overconsume fats.
5. Draw up a table like the one below summarising the macronutrients, their function, energy per gram and two food sources.

Macronutrient	Function	Kilojoules per gram	Food sources
Carbohydrates			
Fibre			
Protein			
Fat			

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4.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

4.3 Nutrients required during youth including water, calcium, sodium and iron

KEY CONCEPT Understanding major nutrients of water, and minerals required during youth

4.3.1 Water

The human body can last several weeks without food, but only days without water. The body is made up of 50 to 75 per cent water. Water forms the basis of blood, digestive juices, urine and perspiration, and is contained in lean muscle, fat and bones. As the body can't store water, we need fresh supplies every day to make up for losses from the lungs, skin, urine and faeces. The amount we need depends on our body size, metabolism, the weather, the food we eat and our activity levels.

Adult women should consume around two litres (eight cups) and adult men 2.6 litres (about 10 cups) of fluids a day to prevent dehydration. Water is required for a number of bodily functions including:

- as a medium for all chemical reactions required to provide energy
- as a key component of many cells, tissues, blood and systems.

Water is the body's preferred source of hydration, and can also assist in weight management, especially when consumed instead of sugary drinks. As water contains no kilojoules, choosing to drink water instead of sugary drinks reduces the risk of obesity, cardiovascular disease and type 2 diabetes.

4.3.2 Sources of water

Water in its purest form is the best source, as many other drinks such as soft drinks and sports drinks often contain high amounts of sugar and additives, and therefore should be limited. Tea and coffee are also drinks that contain water. Water is also found in foods such as fruits and vegetables — some have higher water content than others.

FIGURE 4.16 Foods such as watermelon have a very high water content, but water should also be consumed in its pure form.

Food sources of water include fruits such as:

- watermelon
- apple
- orange
- tomato
- pineapple

and vegetables, such as:

- celery
- lettuce
- cucumber
- carrot.

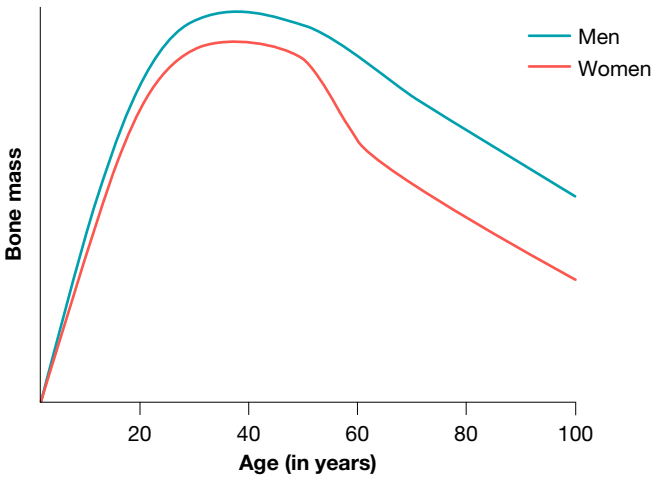
4.3.3 Minerals: calcium, sodium and iron

Calcium

Calcium is one of the key nutrients required for the building of bone and other **hard tissues** (such as teeth and **cartilage**) and is therefore extremely important during periods of rapid growth, such as during youth.

The youth stage signifies the greatest increase in bone density and contributes significantly to achieving optimal **peak bone mass**. It is therefore vital that youth get enough calcium during these years to build as much bone density as possible. The greater the bone density during this stage, the less chance the individual will have of developing **osteoporosis** later in life (see figure 4.17).

FIGURE 4.17 Changes in bone mass with age



Food sources of calcium include:

- most dairy products, milk, cheese and yoghurt
- sardines, salmon (with bones)
- green leafy vegetables (broccoli, spinach)
- **fortified** soy milk
- tofu made with calcium sulfate
- fortified orange juice.

Oxalic acid is present in spinach and binds to the calcium molecules, preventing all of the calcium from being absorbed. In fact, if oxalic acid is present when calcium is eaten, only 5 per cent of the available calcium may be absorbed. For this reason, it is important to obtain calcium from other sources as well, such as dairy (which does not contain oxalic acid).

Sodium

Sodium is an important mineral for the human body. It plays a role in the regulation of fluids from the body, including water and blood. Fluid is drawn to sodium, so the amount of sodium in the blood influences the amount of fluid that stays in the cells. Through this mechanism, sodium regulates the balance between fluid in the cells (intracellular fluid) and the fluid outside the cells (extracellular fluid).

Most Australians get more than enough sodium in their diet. According to the Better Health Channel, the average Australian consumes eight to nine times the amount of sodium they need for good health and wellbeing. High levels of sodium in the body can draw excess fluid out of the cells. This increases blood volume and contributes to hypertension (high blood pressure). Other effects linked to excess sodium include:

- *heart failure*. Increased blood volume and hypertension force the heart to work harder. Heart failure can result if the heart cannot keep up with the demand from the body.
- *stroke and heart attack.* Hypertension associated with excess sodium intake contributes to higher rates of stroke and heart attack, kidney disease and osteoporosis.

FIGURE 4.18 Yoghurt is an excellent source of calcium; however, flavoured yoghurt can also be high in sugar.

FIGURE 4.19 Excess sodium increases blood volume, which contributes to hypertension.

Food sources of sodium include:

- table salt
- olives
- fish
- meat (especially pork)
- cheese
- bread
- many processed foods, such as tomato sauce, packet soups, canned vegetables, pizza and pies.

CASE STUDY

There's more hidden salt in your diet than you think

Most of the salt consumed in Australia is already hidden in processed foods and meals, but there are some simple steps you can take to avoid eating too much of this palatable seasoning.

High salt intake is implicated in a variety of health problems; most importantly, in raising people's blood pressure. High blood pressure is a leading risk factor for cardiovascular and kidney disease.

Salt may also play a role in other health problems, such as osteoarthritis, cancer, asthma, Ménière's disease and obesity. Lowering your salt intake will improve your health and reduce your risk of experiencing these problems.

People are often unaware ... that bread is one of the biggest culprits for their high salt intake. Recent studies have shown that around 19 per cent of salt in the Australian diet comes from bread; and the bread and cereals group together contribute 32.5 per cent.

Other major sources of salt are processed meat products such as salami, sliced sandwich meats and canned meats (14.4 per cent) and convenience meals, such as pizzas, sandwiches or stir-fry dishes (8.4 per cent). And be careful if you pass on the salt but pour on the sauce — many sauces and condiments contain a lot of salt.

What you can do

The easiest way to lower dietary salt intake is to eat fresh, unprocessed foods and limit your intake of processed snacks and treats.

REDUCING DIETARY SALT
Comparison of salt in an example adult meal in one day

	Amount of salt in initial choice		Amount using lower salt options		Salt saved
Breakfast	Kellogg's Special K Forest Berries 45 g	0.41 g	Woolworths Great Start Berry 45 g	0.01 g	98% less salty Save 0.39 g
Snack	Arnott's Salada Light Original 50 g	1.49 g	Arnott's Vita-Weat 100% Natural Original 50 g	0.61 g	59% less salty
	Kraft Crunchy Peanut Butter 20 g	0.3 g	Coles Crunchy Peanut Butter No Added Salt 20 g	0.01 g	98% less salty Save 1.17 g
Lunch	Wattle Valley Soft Wholegrain Wraps 35 g	0.67 g	Goodness Superfoods Wholegrain Barley Wraps 35 g	0.23 g	65% less salty
	Primo Smallgoods Thinly Sliced English Leg Ham 50 g	1.45 g	Don Shaved Leg Ham English Lite 50 g	0.94 g	35% less salty
	Woolworths Homebrand Light Cheese Slices 21 g	0.84 g	Kraft Liveactive Light Cheese Slices 21 g	0.64 g	24% less salty
	Rosella Sweet Mustard Pickle 20 g	0.37 g	Spring Gully Green Tomato Pickle 20 g	0.14 g	63% less salty Save 1.37 g
Snack	Coles Fruit Filled Bar (Apple & Cinnamon) 40 g	0.32 g	Weight Watchers Raspberry Pie Bar 40 g	0.13 g	61% less salty Save 0.20 g
Dinner	International Cuisine Chicken Parmagiana Dinner 320 g	3.2 g	Weight Watchers Chicken Parmigiana 320 g	1.32 g	59% less salty Save 1.88 g
TOTAL SALT		**9 g**		**4 g**	**Salt saved: 5 g**

Nutrition labels in Australia indicate how much sodium (the unhealthy part of salt) a product contains. To calculate the salt content of a product, you need to multiply the sodium content by two and a half.

A low-sodium food contains less than 120 milligrams of sodium per 100 grams (or 100 millilitres) of food, while a high-sodium food has more than 600 milligrams per 100 grams (or 100 millilitres).

Source: *The Conversation*, 20 May 2014, https://theconversation.com/theres-more-hidden-salt-in-your-diet-than-you-think-25394.

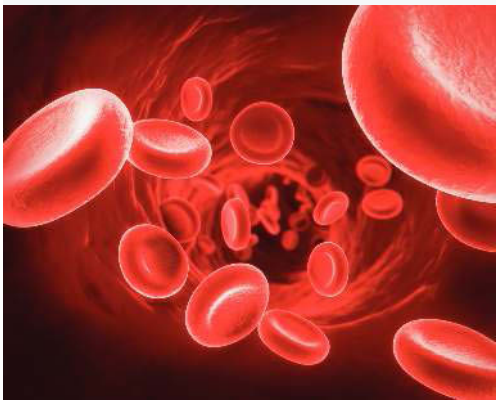
Case study review

1. What are some of the associated health concerns of a diet high in sodium?
2. Identify five major types of foods that contain excess sodium.
3. Think of three foods you regularly consume and think of a substitute food that has less salt. Share your ideas with a classmate.

Iron

Iron is an essential part of blood. As blood volume increases during youth, iron is needed in greater quantities (see figure 4.20). Iron is lost through blood from the body during menstruation, which begins for females during youth — therefore iron is especially important during youth.

FIGURE 4.20 As blood volume increases during youth, iron is required in higher amounts to make red blood cells.



Iron forms the 'haem' part of **haemoglobin**, which is the oxygen-carrying component of blood. A person who does not get enough iron may develop **anaemia**, a condition characterised by tiredness and weakness. Individuals with anaemia struggle to generate enough energy to complete daily tasks such as school work, sport and socialising. Red meat is a rich source of iron, but it often contains high levels of saturated fat. As a result, lean meat ought to be chosen and iron should also be gained from other sources. A balanced, varied diet is the best way to get adequate amounts of iron.

Food sources of iron include:

- lean red meat
- turkey and chicken
- fish, particularly oily fish (e.g. mackerel, sardines and pilchards), fresh, frozen or canned
- eggs
- nuts (including peanut butter) and seeds
- brown rice
- tofu
- bread, especially wholemeal or brown bread
- leafy green vegetables, especially curly kale, watercress and broccoli.

Iron from meat is usually absorbed best, although vegetarians can still get enough iron if they eat a variety of vitamin-C rich foods. Vitamin C changes the chemical make-up of iron from non-meat sources and increases the amount that is absorbed. Vitamin C should therefore be eaten if iron absorption needs to be maximised. Examples of foods high in vitamin C are kiwifruit, broccoli, blackcurrants, strawberries and citrus fruits, such as oranges.

4.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain the reason we need to consume water every day.
2. (a) List three functions of water.
   (b) Why is it a good idea to replace most drinks with plain water?
3. Why does the body require calcium?
4. (a) List three foods that contain high levels of calcium.
   (b) Even though spinach contains a lot of calcium, it is not considered the best food source of dietary calcium. Explain why.
5. (a) Explain a positive function of sodium in the body
   (b) Explain the possible health and wellbeing impacts of consuming excess sodium.

6. Describe the role of iron in the body.
7. Why is iron required in greater amounts during the youth stage of the lifespan?
8. Refer to figure 4.17 to answer the following questions.
   (a) Identify two trends evident in the graph.
   (b) Use the graph to help you explain a possible difference in health and wellbeing outcomes associated with differences in bone mass between males and females in older age.

4.3 Exercise 2 APPLY your knowledge

1. Explain how being dehydrated could affect your health and wellbeing.
2. List two likely consequences of not getting enough calcium.
3. Briefly outline the symptoms of low iron levels.
4. Why are females more at risk of suffering from anaemia than males?
5. Why are the demands for iron higher in youth than in childhood?

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4.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

4.4 Nutrients required during youth including vitamin D and the B-group vitamins

KEY CONCEPT Understanding major nutrients of vitamin D and B-group vitamins required during youth

4.4.1 Vitamin D

The main role of vitamin D is to absorb calcium from the intestine into the bloodstream. A lack of vitamin D can lead to low levels of calcium being absorbed and bones becoming weak. Most Australians get enough vitamin D from exposure to sunlight, during which UV rays are converted to vitamin D in the skin. However, there is growing evidence to suggest that some groups of people in Australia are deficient in vitamin D because they rarely go out into the sun. Youth with dark skin or those who always cover up when outdoors can become deficient in vitamin D. Although moderate exposure without any degree of sunburn is healthy, excessive sun exposure leading to sunburn is a major risk factor for skin cancer and should always be avoided. New wearable technology is aiming to overcome some of the health concerns of vitamin D deficiency and sun overexposure (see following box).

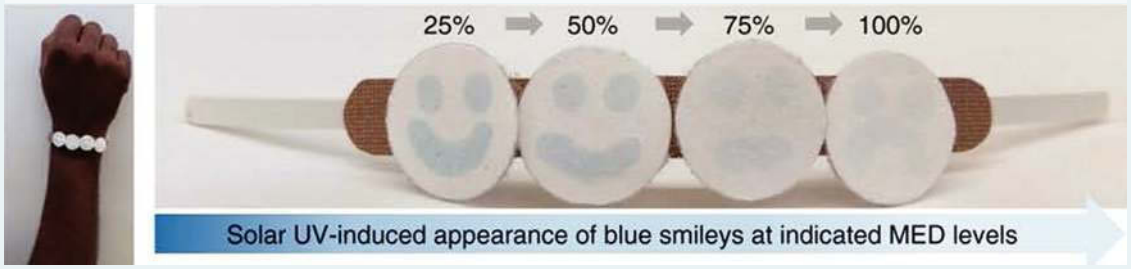
FIGURE 4.21 Most Australians get enough vitamin D from exposure to sunlight.

Food sources for vitamin D include:

- fish (particularly salmon, tuna, sardines)
- beef liver
- cheese and egg yolks
- milk fortified with vitamin D
- breakfast cereals and orange juice fortified with vitamin D.

NEW COLOUR CHANGE WRISTBANDS HELP YOU BALANCE TOO MUCH SUN VS NOT ENOUGH — NO MATTER YOUR SKIN TONE

FIGURE 4.22 Personalised paper-based wearable solar UV sensors suitable for people of different skin tones



The sun's ultraviolet (UV) radiations have both harmful and beneficial effects for our health. Too much exposure can lead to sunburn, skin ageing, eye damage or even skin cancer. With too little UV we may become vitamin D deficient.

Wearable wristbands have now been developed that indicate when an individual has achieved 25 per cent, 50 per cent, 75 per cent and 100 per cent of their daily recommended UV exposure.

Unlike relying on the UV index alone, which caters for only fair-skinned people, there are six sensors, each personalised for a particular skin tone.

Currently, the sensor comes as a wearable wristband with four smiley faces. As the wearer is exposed to more and more UV with increasing time in the sun, the smileys start lighting up one after another. Finally, a sad smiley appears when the wearer approaches their maximum-allowed UV dose — this acts as a warning sign to leave the sun.

This low-cost wearable technology aims to overcome issues of vitamin D deficiency and excessive sun exposure, which can occur when we are unaware of the UV index of the day. If it's cloudy, people assume that sun protection is not required and if the sun feels intense, maybe you put on sunscreen and a hat.

But irrespective of your judgement about this risk, in reality UV rays neither feel hot (it's the infrared rays that do this), nor are they visible to the human eye.

Source: Adapted from *The Conversation*, 26 September 2018, https://theconversation.com/new-colour-change-wristbands-help-you-balance-too-much-sun-vs-not-enough-no-matter-your-skin-tone-103754.

4.4.2 B-group vitamins: vitamins B1, B2 and B3

The B-group vitamins include vitamins B1, B2 and B3 (also known as thiamine, riboflavin and niacin). These vitamins are essential in the process of metabolising or converting the fuels (carbohydrates, fats and protein) into energy. A lack of these nutrients can lead to a lack of energy. As energy is essential for growth, a lack of the B-group vitamins can contribute to slowed growth of muscles and bones.

Rich food sources of the B-group vitamins include:

- Vegemite
- wholegrain cereals and breads
- eggs
- fish
- meats
- dark-green leafy vegetables
- milk.

FIGURE 4.23 Vegemite is one of the world's richest sources of B-group vitamins.

The B-group vitamins are very delicate and easily destroyed through cooking and processing. Getting enough of these vitamins from whole grains and unrefined sources is the best way to ensure that the recommended intake is met.

4.4.3 Folate (vitamin B9)

Folate is a B-group vitamin that is essential for optimal health and wellbeing. It plays an important role in DNA synthesis, and is therefore required for cells to duplicate during periods of growth. (It is also required in periods of maintenance, but not to the same degree.)

Folate also plays a role in the development of red blood cells, and a deficiency in folate can lead to folate-deficiency anaemia. Like iron-deficiency anaemia, folate-deficiency anaemia is characterised by tiredness, so a young person might at times struggle to participate in everyday activities, such as attending school or sporting activities.

FIGURE 4.24 A lack of folate can lead to folate-deficiency anaemia and, therefore, tiredness. This can have numerous effects on the health and wellbeing of youth.

Food sources of folate include:

- green leafy vegetables
- citrus fruits
- poultry and eggs
- many cereals, breads and fruit juices are fortified with folate.

The form of folate added to foods is a synthetic form of folate known as folic acid.

4.4.4 Vitamin B12

Vitamin B12 is another B-group vitamin that is required for adequate health and wellbeing during youth. Although it has a number of roles in the body, its main function during youth is for the formation of red blood cells. It works with folate in this capacity, ensuring the red blood cells are not only the correct size but also the correct shape to enable oxygen to be transported throughout the body. A deficiency of vitamin B12 can also increase the chance of becoming anaemic. Having this condition can prevent young people from participating in normal activities and can therefore have a wide range of effects on their health and wellbeing.

FIGURE 4.25 Foods from animal sources are good sources of vitamin B12.

Most foods of animal origin contain some vitamin B12, but particularly good sources include meat, eggs and cheese (figure 4.25). Because vitamin B12 is found only in food sources of animal origin, **vegans** are at particular risk of being deficient.

4.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain the link between sunlight and vitamin D.
2. Which groups are more at risk of vitamin D deficiency?
3. What is the main role of vitamin D in the body?
4. Why are vegans at particular risk of vitamin B12 deficiency?
5. Explain the role of the following nutrients and why each is important for youth health and wellbeing:
   (a) folate
   (b) vitamins B1, B2 and B3.

4.4 Exercise 2 APPLY your knowledge

1. Describe the effects on the health and wellbeing of youth who are deficient in:
   (a) vitamin D
   (b) B-group vitamins.
2. Refer to the article in section 4.4.1. How does the wearable UV technology overcome issues of vitamin D deficiency and UV overexposure?
3. Create a mind map that summarises the function and food sources of the vitamins covered in this topic and the impact on the short- and long-term health and wellbeing of youth.

studyON

4.4 Exercise 3 studyON: Practice exam questions online only

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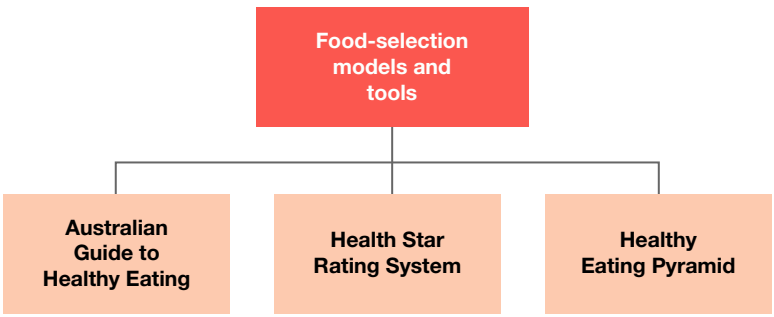
4.5 Food-selection models and other tools to promote healthy eating among youth

KEY CONCEPT There are several food-selection models and tools developed by government and non-government agencies to promote healthy eating

To assist Australian consumers, including youth, to consume a balanced diet and reduce the risk of short- and long-term consequences associated with nutritional imbalance, a number of food-selection models and tools have been produced by both government and non-government agencies. Food-selection models are tools that help youth to select foods that will meet their nutritional needs and to avoid consuming too many energy dense foods. Examples include the Australian Guide to Healthy Eating, the Health Star Rating System and the Healthy Eating Pyramid (figure 4.26).

FIGURE 4.26 Nutrition-related food models and tools implemented to promote healthy eating



on Resources

Teacher-led video The relationship between the healthy eating guides (tlvd-0272)

4.5.1 Australian Guide to Healthy Eating

The Australian Guide to Healthy Eating is a federal government initiative that provides nutrition advice with the aim of reducing the short- and long-term consequences associated with nutritional imbalance. The Australian Guide to Healthy Eating is a food selection model that provides a visual representation based upon the Australian dietary guidelines about the five food groups recommended for consumption each day.

The Australian Guide to Healthy Eating is presented in poster form (see figure 4.27). The main section of the Australian Guide to Healthy Eating is a pie chart that shows the proportions of foods that should be consumed from each of the five food groups: vegetables, fruit, grain, lean meats (or alternatives), and milk, yoghurt and cheese products.

Grain foods such as bread, cereal, rice and pasta should account for around 30–35 per cent of total daily food intake. These foods are high in carbohydrates, which provide fuel for energy production, and high in fibre, which assists with weight management and maintains digestive health.

Vegetables and legumes/beans are the second biggest section and should account for around 30 per cent of daily food intake. These foods include fresh, frozen and tinned vegetables, legumes such as lentils and chickpeas, and beans such as kidney beans. These foods are high in nutrients such as fibre, protein and folate, which assist in promoting optimal health and wellbeing among youth. They are also high in fibre and low in energy, which can assist with weight management.

Meats and meat alternatives should account for around 15 per cent of total food intake. These foods provide much of the protein that is required for the development of **hard tissues, soft tissue**, energy and blood. They also contain iron and vitamin B12, which are required for the production of red blood cells.

Although fruit contains many of the vitamins and minerals required for optimal health and wellbeing, it can contribute to weight gain if not used for energy. As a result, fruit should make up around 10–12 per cent of total food intake.

Milk and other dairy products should also account for around 10–12 per cent of total food intake. These foods are rich in calcium and are required for optimal bone development.

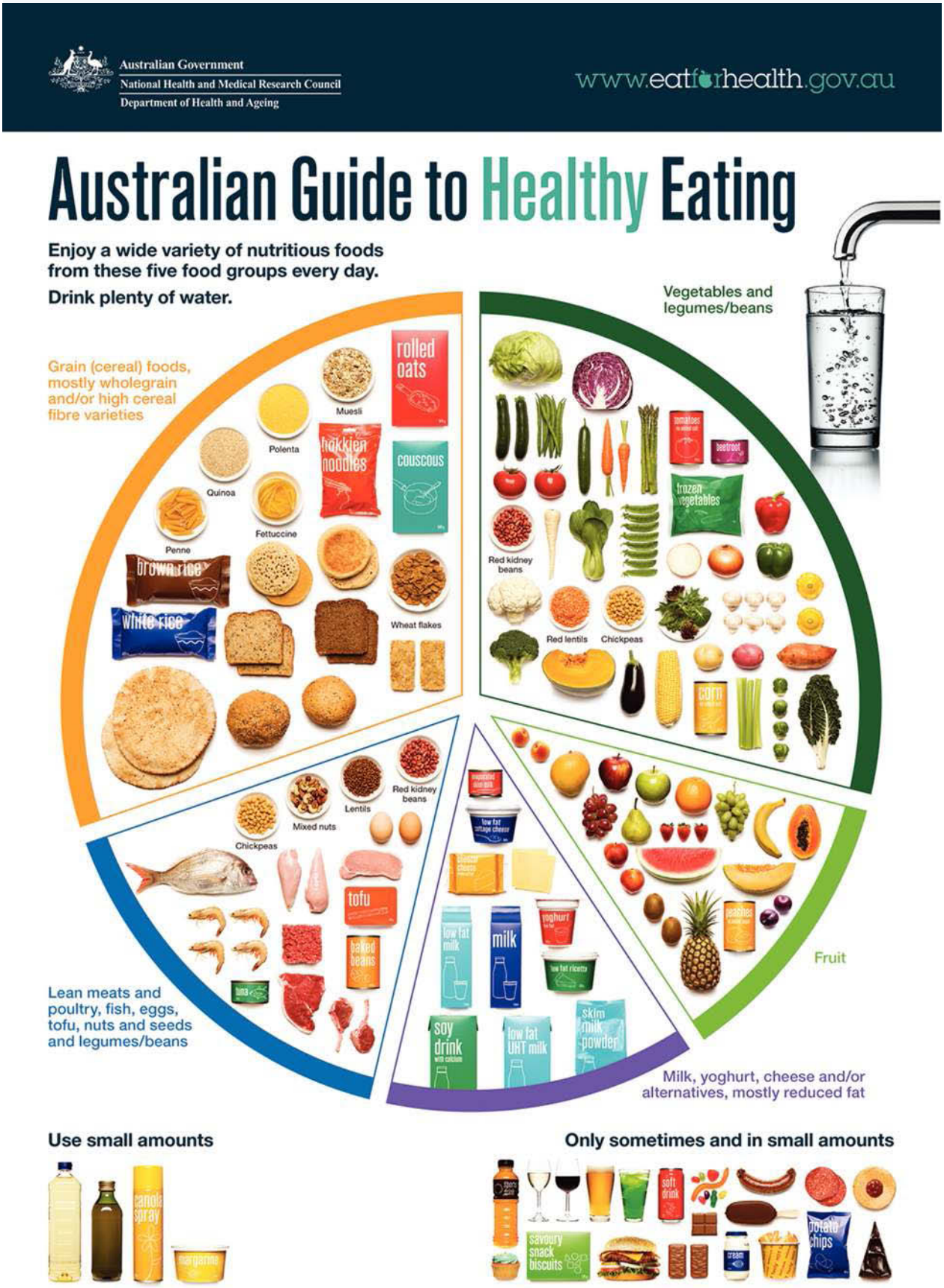
The Australian Guide to Healthy Eating recommends that people consume plenty of water, represented in the poster by a glass being filled from a tap. Water is required for many body processes but does not contribute any energy and so can assist in maintaining healthy body weight.

The healthier fats are shown in the bottom left corner of the Australian Guide to Healthy Eating poster, and include foods such as margarine and canola spray. These foods contain monounsaturated and/or polyunsaturated fats and can assist in reducing the risk of cardiovascular disease.

The foods shown in the bottom right corner of the Australian Guide to Healthy Eating poster are foods which consumers are advised to consume sometimes and in small amounts. They are not necessary to provide the nutrients the body needs, but may add variety. Many of these foods are high in saturated fats, sugars and/or alcohol, and are therefore described as energy dense. Other discretionary foods are high in salt and therefore increase overall sodium intake. Examples of discretionary foods include pies and other pastries, cakes, processed meats, soft and sports drinks, cordial, alcohol, potato chips, chocolate and biscuits.

The Australian Guide to Healthy Eating is a useful model that provides basic nutrition advice; however, it does not provide information on serving sizes, and composite foods (which are those containing food from a number of different groups, such as pizza or a casserole) are not included, making the model difficult to follow.

FIGURE 4.27 The Australian Guide to Healthy Eating

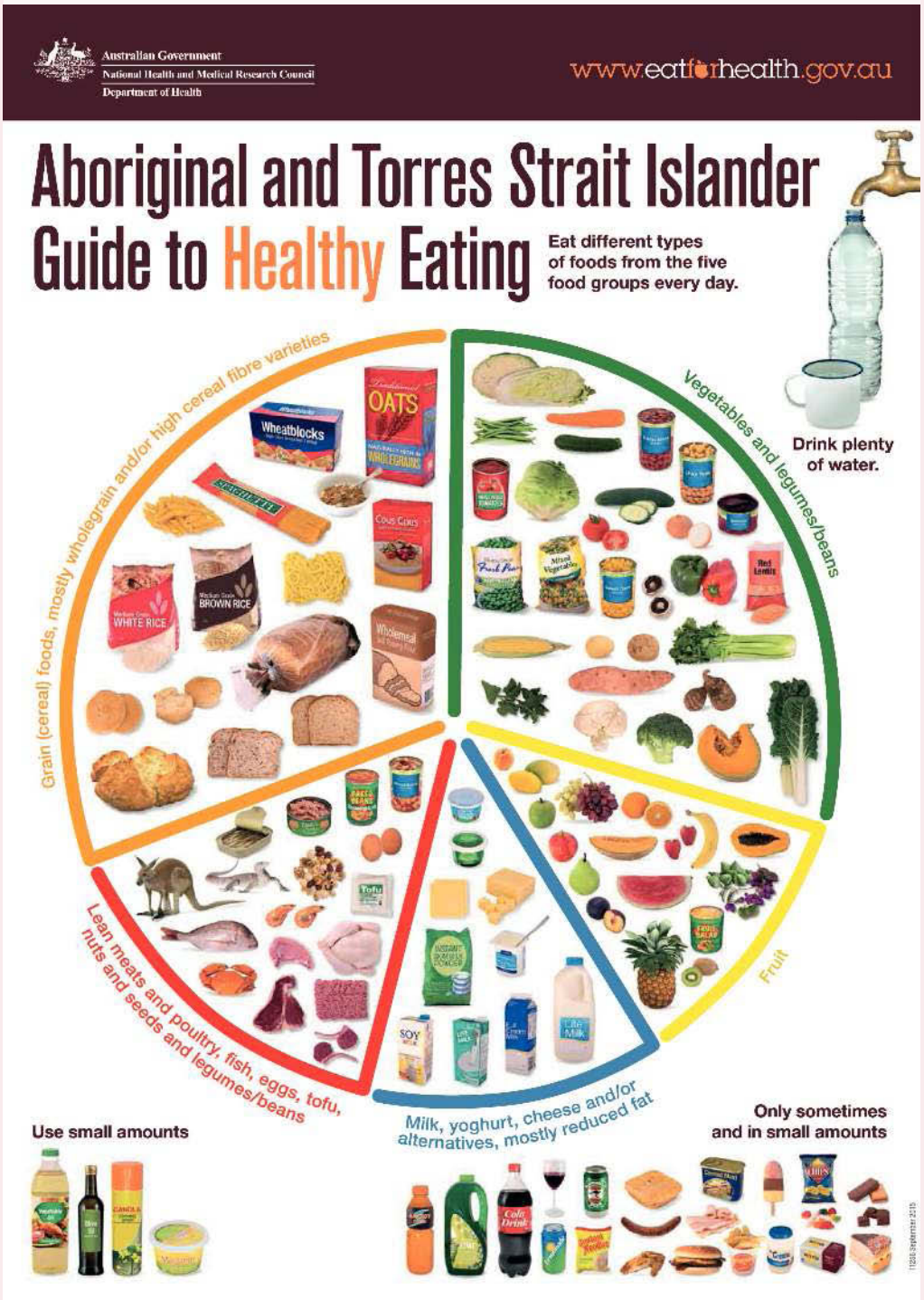


CASE STUDY

Aboriginal and Torres Strait Islander Guide to Healthy Eating

The National Health and Medical Research Council has specifically adapted the Australian Guide to Healthy Eating to cater for the Aboriginal and Torres Strait Islander population group and especially those who live in some of the more remote areas of our country. Figure 4.28 shows the Aboriginal and Torres Strait Islander Guide to Healthy Eating.

FIGURE 4.28 Aboriginal and Torres Strait Islander Guide to Healthy Eating



Case study review

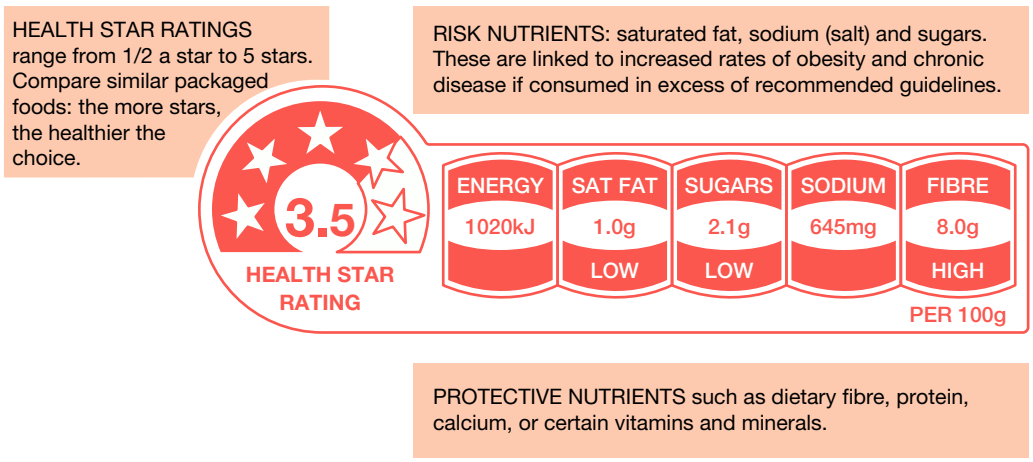
1. Identify some differences between the foods represented in each of the five food groups from the Aboriginal and Torres Strait Islander chart compared to the Australian Guide to Healthy Eating as seen in figure 4.27.
2. Choose one example from each food group and provide a reason why you think this food was included in the Aboriginal and Torres Strait Islander chart.

4.5.2 The Health Star Rating System

In June 2014, the federal government endorsed the Australian Health Star Rating System on food labels as an educational tool to assist people in making healthy food choices. The Health Star Rating is a labelling system that rates the overall nutritional profile of packaged food and assigns it a rating from ½ a star to 5 stars on the front of the pack. It provides a quick, easy, standard way to compare similar packaged foods. The more stars, the healthier the choice. The Health Star Ratings are designed to take the guesswork out of reading labels. For busy shoppers, they help consumers to compare quickly and easily the nutritional profile of similar packaged foods and to make informed, healthier choices when shopping.

The Health Star Rating system is based on comparing energy (kilojoules), **risk nutrients**, such as saturated fat, sodium (salt) and sugars, and **protective** (positive) **nutrients** such as dietary fibre, protein and the proportion of fruit and vegetable, nut and legume content. All nutrients are compared based on 100 g or 100 mL of the product, to enable the consumer to have an at-a-glance comparison of products within the same category. The Health Star Rating System is voluntary and companies do not have to pay a fee when applying for a Health Star Rating for a product (see figure 4.29).

FIGURE 4.29 The nutrients analysed as part of the Health Star Rating System



The Health Star Rating System aims to promote healthy eating throughout the Australian community. It is a tool which can be easily used by young people when making decisions about food selection at the supermarket. Most packaged foods carry a nutrition information panel, which provides important information about the contents of the food. It provides a quick and easy way to compare similar packaged food and helps youth make healthier choices without having to refer to the nutritional panel.

Choosing foods that are higher in protective/positive nutrients and lower in risk nutrients (saturated fat, sodium, sugars and energy) will help contribute to a balanced diet and lead to better health and wellbeing. However, a high Health Star Rating doesn't mean that the food provides all the essential nutrients for a balanced diet. The Health Star Ratings are one tool to assist youth in following a healthy diet, but consideration should be given also to other food-selection models.

FIGURE 4.30 The Health Star Rating is a simple and easy food-selection tool.

on Resources

Weblink How does the Health Star Rating System work?

4.5.3 The Healthy Eating Pyramid

The Healthy Eating Pyramid was developed by Nutrition Australia, a non-government organisation. The pyramid represents foods from the five basic food groups as represented in the Australian Guide to Healthy Eating and arranges them into four levels, indicating the proportion of different types of food that should be consumed. The Healthy Eating Pyramid promotes good health and wellbeing by encouraging food variety and a diet based on minimally processed foods from the five food groups, healthy fats, limited salt and added sugar, and sufficient water (see figure 4.31).

The 'foundation' layers (the bottom two layers) contain foods of plant origin: vegetables and legumes, fruits and grains. These foods should make up the majority of an individual's daily food intake. These foods are nutrient dense and assist in providing youth with optimal amounts of carbohydrates, fibre, B-group vitamins and folate. The middle layer includes the milk, yoghurt, cheese (and alternatives) food group, which primarily provides calcium and protein; and the lean meat, poultry, fish, eggs, nuts, seeds and legumes food group, which provides protein, iron, and mono and polyunsaturated fats.

The top layer consists of foods that contain monounsaturated and polyunsaturated fats, which youth should consume in small amounts to support heart health and brain function. Benefits occur when people choose foods that contain these healthier fats, instead of foods that contain saturated fats and trans fats. The pyramid encourages individuals to drink water because it provides the best source of hydration for the body without adding extra sugar, and therefore energy, to the diet. It also recommends that salt intake and added sugar should be limited. Salt is a rich source of sodium, which is an essential nutrient, but the average Australian already consumes too much salt and added sugar, and this is linked to increased risk of diseases such as heart disease, type 2 diabetes and some cancers. The Healthy Eating Pyramid provides youth with a simple visual tool promoting healthy food intake. However, a limitation of the healthy eating pyramid is that serving sizes and provisions for composite foods are not provided, making it difficult to apply every day.

FIGURE 4.31 The Healthy Eating Pyramid

TABLE 4.1 Summary table of the Australian Guide to Healthy Eating, Health Star Rating System and the Healthy Eating Pyramid

	Objective	How is information presented?	Target audience	How are foods classified?	Developed by	Strengths/Limitations
Australian Guide to Healthy Eating (Australian government initiative)	A food selection guide that visually represents the proportion of the five food groups recommended for consumption each day.	Pie chart format with the five food groups separated into portion sizes. Discretionary foods and healthy oils off to the side of the picture	All Australian population	Classification of foods into five food groups that form the basis of a healthy diet, as defined in the Australian Dietary Guidelines. Discretionary foods, defined by high levels of saturated and trans fats and sodium off to the side.	National Health and Medical Research Council (NHMRC)	**Strengths:** Simple visual guide for all people to use as a quick reference. The five food groups can be easily understood and recognised. Proportions are understood. **Limitations:** Can be difficult to break mixed foods, such as casserole or pizza, into particular groups. Servings sizes are not available.
Health Star Rating (Australian government initiative)	Simplifies the nutrition information available on back-of-pack to differentiate between individual foods more likely to be part of a healthy diet and those that are less healthy.	Front-of-pack label to be applied voluntarily by food retailers and manufacturers using relevant policy documents.	Consumers at point of purchase. Food retailers and manufacturers.	A nutrient profile model is used to score individual products from 0.5 to 5.0 stars. The calculation considers energy, negative nutrients the Australian Dietary Guidelines recommend eating less of (saturated fat, sugars and sodium), and foods the ADGs recommend eating more of (fruits, vegetables, nuts and legumes) as well as in some instances, allowing points for protein and dietary fibre content.	Australian federal, state and territory governments in partnership with food industry, consumer and public health groups.	**Strengths:** Simple visual guide to use while shopping, to make identifying a healthier product easier. **Limitations:** It is based on nutrients, not whole foods, so a packet of lollies which has excessive sugar may have two stars compared to natural Greek yoghurt which has only one.
Healthy Eating Pyramid (Non-government initative)	A simple visual guide to the types and proportion of foods that we should eat every day for good health.	The Healthy Eating Pyramid depicts the five core food groups, plus healthy fats, as the foundation of a balanced diet based on the Australian Dietary Guidelines (2013).	All Australians aged 1 to 70 years	The foods are categorised into the five food groups as depicted in the Australian Dietary Guidelines with the inclusion of healthy fats. The bottom layer of the pyramid is the foundation layer and is made up of vegetables, fruits and grains. The middle layer has milk, yoghurt, cheese and alternatives and lean meat, poultry, fish and eggs. The top layer is made up of healthy fats.	Nutrition Australia, a non-government organisation	**Strengths:** Simple visual guide including the five food groups, as well as healthy fats, and herbs and spices to address alternatives to salt **Limitations:** Fruit is included in the foundation layer and people may believe they can eat as much fruit as vegetables. Portion sizes are not included so people can still overconsume.

Source: Adapted from https://www.mdpi.com/2072-6643/10/4/501.

EXAM TIP

If a question asks you to explain a specific food selection model or tool, make sure you use the language of the model/tool in your response. For example, when discussing the Healthy Eating Pyramid, use key terms such as 'foundation layers'.

Resources

Weblink Nutrition Australia Healthy Eating Pyramid

4.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain, using an example, what is meant by a food-selection model.
2. Identify and explain two food-selection models young people can use to promote their health and wellbeing.
3. Discuss a limitation of either the Australian Guide to Healthy Eating or the Healthy Eating Pyramid.
4. Identify three examples of risk nutrients and two examples of protective nutrients that may be included in the calculations for a product to receive the Health Star Rating.

4.5 Exercise 2 APPLY your knowledge

1. Explain the similarities and differences between the Australian Guide to Healthy Eating and the Healthy Eating Pyramid.
2. The Health Star Rating System is a food-selection tool. Using this as an example, explain the difference between a food-selection model and a food-selection tool.
3. (a) Identify the five food groups identified in the Australian Guide to Healthy Eating.
   (b) Identify the key nutrients provided by each group.
   (c) Explain how these nutrients can have an impact on youth health and wellbeing.
4. Justify the effectiveness of the Health Star Rating System in promoting healthy eating for youth.
5. Record everything you eat over a 24-hour period, then draw up either a pie chart with approximate proportions as per the Australian Guide to Healthy Eating, or the Healthy Eating Pyramid with the correct number of layers and food groups. If choosing the Australian Guide to Health Eating, include a section outside the pie chart for discretionary items. For each food item you consumed, put a stroke in the appropriate section of the food-selection model.
   (a) Was your diet over the past 24 hours consistent with the proportions suggested by the Australian Guide to Healthy Eating or the Healthy Eating Pyramid?
   (b) Did you have any difficulties completing this activity? Why or why not?
   (c) Prepare an analysis of your intake. Be sure to include the following:
      i. Were you eating mainly grains and vegetables?
      ii. Did you consume any foods from both the dairy and meat groups?
      iii. Were there any food groups of which you do not consume the adequate proportions as reflected in the Australian Guide to Healthy Eating or the Healthy Eating Pyramid?
      iv. Discuss the possible short- and long-term consequences of your diet if it continued over time.
      v. Suggest changes that could be made to minimise the risk of any short- or long-term consequences identified in part iv.
   (d) Discuss any difficulties you had in classifying each food item into the five food groups and explain how these challenges could be overcome.
   (e) Discuss with a partner who completed the task using a different food model from you. Which food model do you believe is easier to use in terms of analysing your diet and providing nutrition advice?

4.5 Exercise 3 studyON: Practice exam questions online only

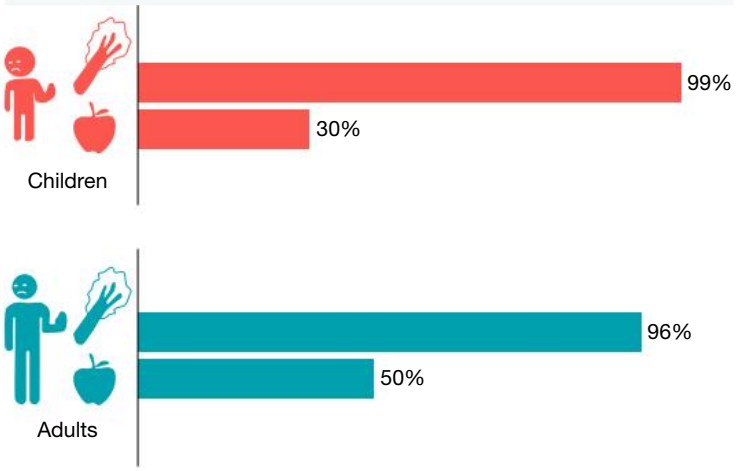
To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

4.6 Consequences of nutritional imbalance

KEY CONCEPT Understanding the consequences of nutritional imbalance in a youth's diet on short- and long-term health and wellbeing

Good nutrition is essential for everyone, but it's especially important for young people. Youth is the third fastest stage of growth and development during the lifespan. During the adolescent growth spurt, the average female is expected to grow 16 cm in height and 16 kg in weight, and the average male is expected to grow 20 cm in height and 20 kg in weight. This means that a balanced diet high in nutritious foods is essential to fuel the body during this time.

FIGURE 4.32 The number of Australian adults and children who are underconsuming the recommended daily intake of fruits and vegetables (*Australia's Health 2018*)



Unfortunately, many young Australians do not eat a balanced diet and are therefore not consuming sufficient nutrients during this time. The major nutrients required during youth are found in many different food sources, including fruits and vegetables.

According to the Australian Institute of Health and Welfare (AIHW) report *Australia's Health 2018,* many Australians are not eating the recommended amount of serves of fruit and vegetables on a daily basis. (The recommendation is that Australians consume two fruits and five vegetables per day.) As figure 4.32 shows, the vast majority (99 per cent) of children aged 5–14 did not eat the recommended daily serves of vegetables, while almost a third (30 per cent) did not eat the recommended daily serves of fruit. These figures changed slightly for adults aged 18–64, with 96 per cent not eating the recommended daily intake of vegetables and 50 per cent not eating the recommended serves of fruit. A lack of sufficient fruit and vegetables may lead to deficiency in certain nutrients. For example, fruits and vegetables are excellent sources of B vitamins (including folate), iron, water and fibre. A low intake of fruits and vegetables may result in an underconsumption of these nutrients.

According to the Better Health Channel, one in three teenagers buys unhealthy takeaway food every day. When you compare meals prepared at home to those purchased and prepared out of the home, takeaway food is almost always higher in fat, salt and sugar. It is also usually lower in nutrients, such as calcium and iron, and served in larger portions, which means more kilojoules. If the nutritional intake during youth is not balanced and nutrients are not consumed in appropriate proportions, the risk of a range of negative consequences increases. These consequences can occur as a result of over- or under-consumption of specific nutrients and can occur in both the short and long term. The short-term consequences of nutritional imbalance are discussed in detail in table 4.2.

FIGURE 4.33 A balanced diet does not mean eating the same amounts of all foods — some foods should be eaten only in moderation.

4.6.1 The short-term consequences of nutritional imbalance

TABLE 4.2 Nutrient imbalances and their short-term consequences for health and wellbeing

Nutrient imbalance	Short-term consequences for health and wellbeing
Insufficient B-group vitamins and iron	B-group vitamins and iron are essential nutrients that contribute to the production of energy in the body. If these nutrients are not consumed on a regular basis, energy levels may decrease, initially impacting on physical health and wellbeing. Apart from the inability to perform everyday tasks due to extreme feelings of fatigue, an individual may be less likely to partake in exercise, which then will reduce levels of fitness, also impacting on physical health and wellbeing. Feelings of fatigue may also reduce the ability to socialise with friends and concentration levels in school will decrease, impacting on both social and mental health and wellbeing. If fatigue is ongoing and an individual has to withdraw from particular activities, their sense of belonging to that particular group may decrease, therefore also impacting on spiritual health and wellbeing.
Insufficient fibre	Insufficient fibre increases risk of constipation. There are two types of fibre: soluble and insoluble fibre. Soluble fibre allows more water to remain in the stools, making waste softer and easier to pass through the intestines. Insoluble fibre adds bulk to faeces, assisting in the removal of waste products. Constipation interrupts the efficient functioning of the body and its systems, impacting upon physical health and wellbeing. However it could also become quite embarrassing for the individual and lead to increased stress levels, decreasing mental health and wellbeing.
Insufficient water	Water is essential for the optimal functioning of body systems throughout the life span. Common symptoms of dehydration include thirst, dry mouth, headaches, decreased blood pressure, dizziness, fainting, tiredness and constipation. In the most severe cases, dehydration can lead to unconsciousness and death. Dehydration ultimately impacts negatively on the efficient functioning of the body and its systems, therefore decreasing physical health and wellbeing.
Excessive sodium consumption	Hypertension, otherwise known as high blood pressure, can be a result of excessive salt/sodium intake, as sodium draws fluid from the cells into the bloodstream, increasing blood volume and therefore increasing blood pressure. Hypertension predominantly impacts on physical health and wellbeing as it reduces the efficient functioning of the heart and blood vessels, potentially causing long-term damage. (Long-term hypertension increases the risk of cardiovascular disease and stroke.)
Excessive saturated and trans fat	Excessive saturated and trans fats in the diet can increase the body's cholesterol level. Too much cholesterol circulating within our bloodstream leads to fatty deposits developing in the arteries. An individual may be unaware they have high cholesterol and therefore its impacts are on physical health and wellbeing in the same way that hypertension impacts the body.

GLYCAEMIC INDEX

The amount of glucose contained within carbohydrate-rich foods, and how much such foods affect the levels of blood glucose, is measured using a system called the **glycaemic index (GI)**. The glycaemic index rates foods from 1 to 100 based on how quickly they cause blood-glucose levels to rise. Foods that cause blood glucose to increase sharply are called high GI (with a score of more than 70, for example white bread), while those that have a more sustained impact on blood glucose are called low GI (with a score less than 55, foods such as milk). Those in between these numbers are termed medium GI, such as basmati rice. Eating foods with a low-GI rating gives a more sustained energy release and can therefore assist in carrying out the biological processes required during the day. In contrast, high-GI foods give the body a quick hit of glucose that then drops off just as quickly (see figure 4.34). As blood glucose levels decrease, hunger increases. As a result, high-GI foods can contribute to overeating.

FIGURE 4.34 The effect on blood glucose of high- and low-GI foods

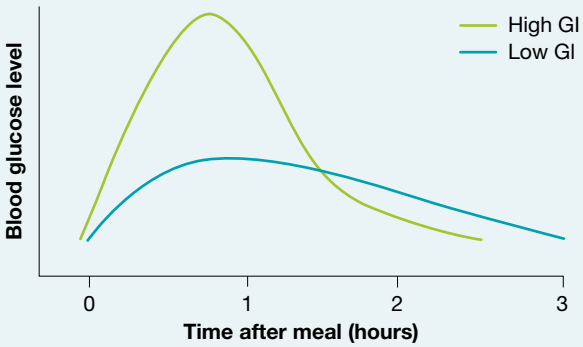
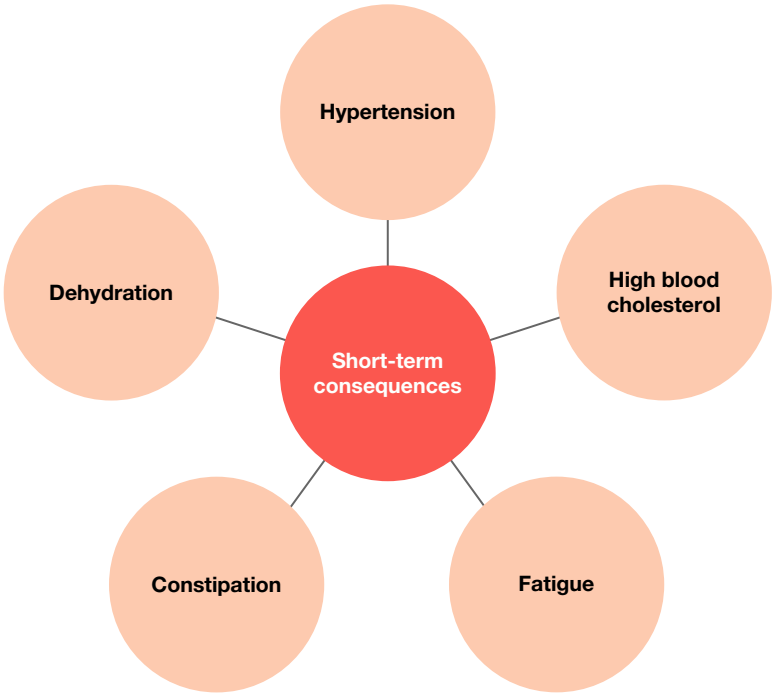


FIGURE 4.35 Short-term consequences of nutrition imbalances on youth health and wellbeing



4.6.2 The long-term consequences of nutritional imbalance

As well as contributing to short-term consequences, nutrient imbalance is associated with many long-term health consequences. Many of the long-term consequences of nutrient imbalance are associated with overconsumption of nutrients, as seen in data from the *Australian Health Survey 2011–12*. The teenage years are critical in forming life-long eating habits. However, many teenagers are forming unhealthy food consumption habits, for example four out of ten young people consume burgers and soft drinks on any given day. This teenage diet is putting young people at risk of developing chronic health conditions later in life, such as dental decay, overweight or obesity, cardiovascular disease, anaemia and osteoporosis. These long-term consequences are discussed in detail in table 4.3.

FIGURE 4.36 The long-term consequences of nutritional imbalance

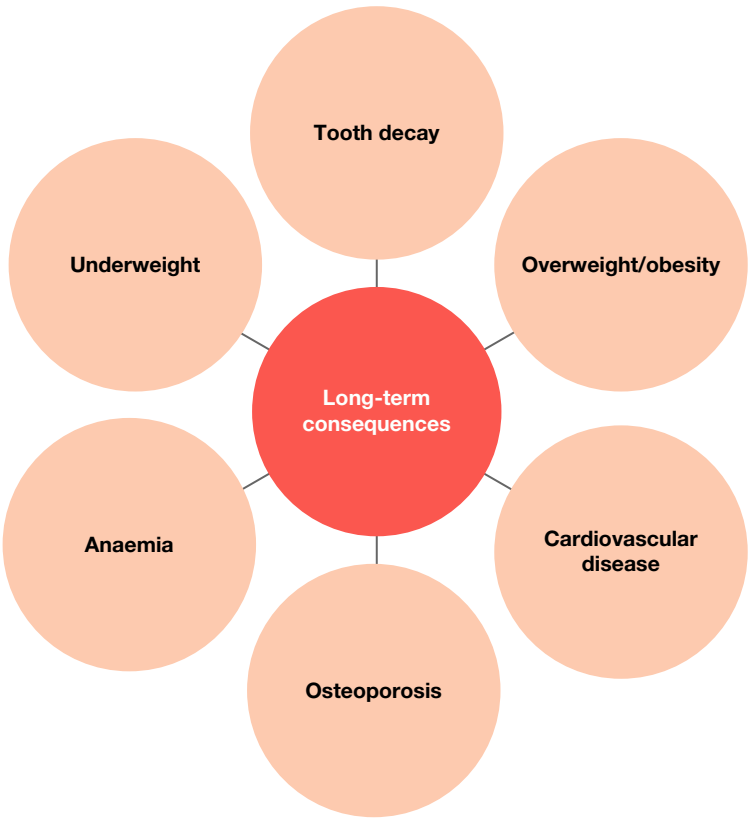
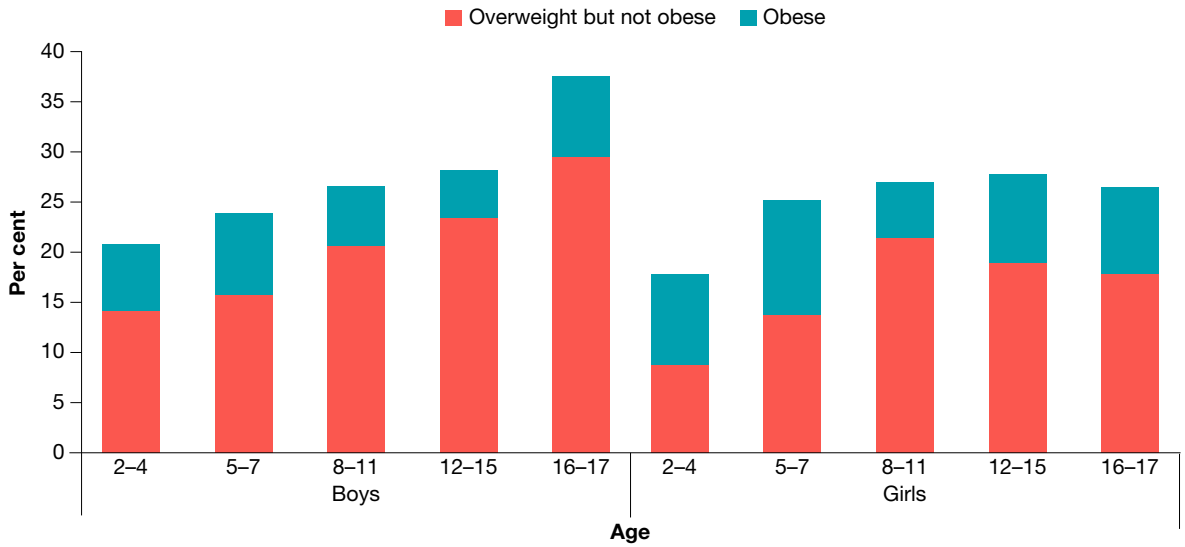


TABLE 4.3 Nutrient imbalances and their long-term consequences for health and wellbeing

Nutrient imbalance	Long-term consequences for health and wellbeing
Overconsumption of sugar (simple carbohydrates)	Sugars are a type of simple carbohydrate found naturally in some foods such as fruit and honey, and added to many processed foods such as cakes and soft drinks. Sugars are a food source for bacteria in the mouth. These bacteria produce acids which can contribute to dental decay and the development of **dental caries**. Dental caries impact physical health and wellbeing as they may cause periodontitis (inflammation and infections of tissue in the mouth) and can also lead to loss of teeth. An individual suffering tooth decay may feel embarrassed and have low self-esteem, impacting negatively on mental health and wellbeing. They may also withdraw from social activities, reducing opportunities for communication and the development of relationships, impacting on social health and wellbeing.
Overconsumption of saturated and trans fats, carbohydrates and proteins	Carbohydrates, fats and proteins are essential for energy production, but if eaten to excess can be stored as adipose (fat) tissue. Over time, this can lead to weight gain, overweight and/or obesity. The most immediate consequences of overweight and obesity in youth are social discrimination (associated with poor self-esteem and depression), negative body image and eating disorders, which all have an impact on mental health and wellbeing. Overweight youth are more likely to develop sleep apnoea and have a reduced ability to exercise, which decreases fitness levels and has a negative impact on physical health and wellbeing. Overweight and obesity rates have been steadily increasing for youth over time (see figure 4.37). Saturated and trans fat increase the process of atherosclerosis by increasing levels of low-density lipoprotein (LDL) in the blood. Low density lipoprotein is a type of cholesterol that can stick to the walls of blood vessels and cause the blood vessels to narrow. This process can eventually restrict blood flow or stop it completely. Atherosclerosis is the underlying cause of many types of cardiovascular disease, including heart attack and stroke, negatively affecting physical health and wellbeing.
Overconsumption of sodium	Excessive sodium in the diet can lead to hypertension. Long-term hypertension increases the risk of stroke and heart attack and therefore cardiovascular disease. Apart from the obvious physical health and wellbeing impacts, chronic disease may impact on an individual's relationships, and opportunities for socialisation, as well as causing stress and anxiety, therefore impacting on both social and mental health and wellbeing. Excess sodium intake is also responsible for calcium excretion into the urine, and therefore leads to demineralisation of bones and osteoporosis, affecting physical health and wellbeing. Women are at a higher risk than men later in life. Osteoporosis suffers are often anxious about falling and may restrict their social activities, impacting on social and mental health and wellbeing.
Underconsumption of iron, folate, vitamin C, vitamin B12	These vitamins and iron are required for the production of red blood cells. Youth is a period of rapid growth and red blood cells are required to keep up with energy demands. If these nutrients are underconsumed, anaemia can occur. Anaemia causes tiredness and weakness and may also lead to withdrawal from activities, impacting on physical and social health and wellbeing. Constant feelings of tiredness may also impact negatively on emotional health and wellbeing, as they may generate feelings of isolation and helplessness.
Underconsumption of calcium	Calcium is an essential nutrient during the growth periods of youth. It is responsible for building bone strength by increasing bone density. If calcium is underconsumed during this period, an individual is at risk of having porous, weak bones later in life, as well as an increased risk of osteoporosis. This increases the risk of fracture and breaks, impacting negatively on physical health and wellbeing.

FIGURE 4.37 Prevalence of overweight and obesity among males and females aged 2–17 years, 2014–15



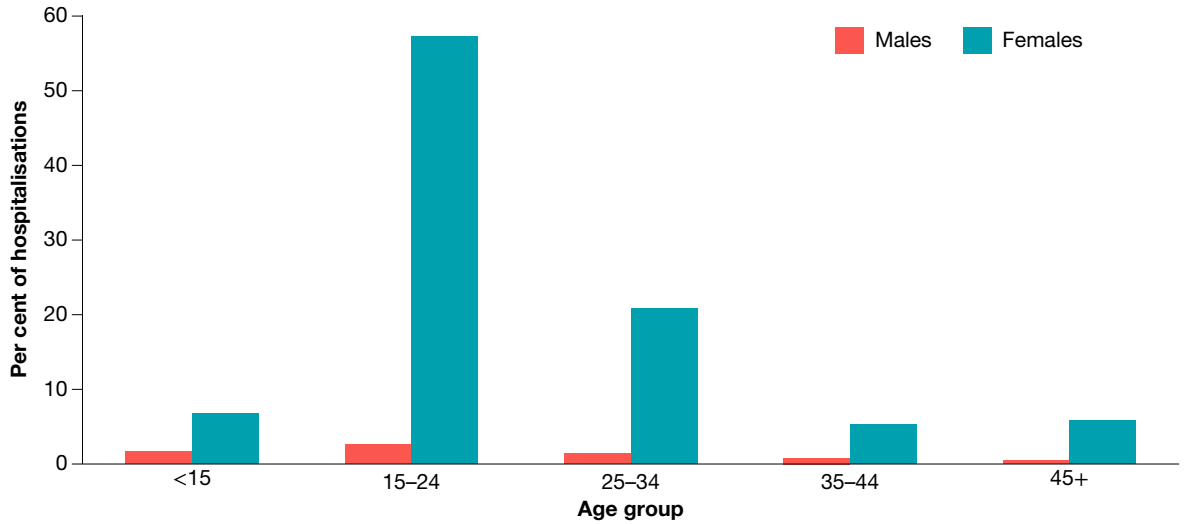
Source: AIHW, *Australia's Health 2018*.

Underweight

Although overweight and obesity are significant issues for youth, underweight is also a concern. Underweight often indicates undernourishment, which means the nutrients required for optimal health and wellbeing are not present. Severe undernourishment, which occurs in many individuals with an eating disorder, can contribute to long-term developmental problems. Growth may be slowed as the nutrients required for hard tissue formation are not present. Although peak bone mass is not reached until early adulthood, bone density increases significantly during youth. Calcium, phosphorus and vitamin D are all essential nutrients for this process. If the intake of these nutrients is deficient, weakened bones may be the result. In many cases, this will develop into osteoporosis later in life.

Eating disorders may occur at any stage of life, but research suggests that they occur most often among young women (see figure 4.38).

FIGURE 4.38 Hospitalisations with a principal diagnosis of eating disorders by age and sex, 2015–16



Source: AIHW, *Australia's Health 2018.*

4.6 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Explain the glycaemic index.
   (b) Outline the consequences that a high-GI diet can have on the health and wellbeing of youth.
2. (a) Discuss how nutritional imbalance may contribute to low energy levels.
   (b) Explain three ways in which this could have an impact on youth health and wellbeing.
3. Outline the role that fibre can play in optimising health and wellbeing in the short term.
4. (a) Explain how a nutritional imbalance may contribute to dental health problems among youth.
   (b) Discuss how dental caries can impact on youth health and wellbeing.
5. (a) Using figure 4.37, identify the trend shown in the data regarding overweight/obesity and age.
   (b) Using figure 4.37, outline a similarity and a difference between overweight/obesity in males and in females.
6. (a) Using figure 4.38, identify a trend in hospitalisations due to eating disorders by age and sex in 2015–2016.
   (b) Explain potential reasons why females are overrepresented in data relating to eating disorders compared to males of the same age.
7. Explain the short- and long-term consequences of a diet high in sodium.
8. Identify the following health consequences as either short- or long-term impacts of nutritional imbalance.
   (a) Feelings of fatigue
   (b) Dental decay
   (c) Osteoporosis
   (d) Lack of concentration in school
   (e) Dehydration
   (f) Overweight/obesity

4.6 Exercise 2 APPLY your knowledge

1. Explain how nutrient imbalance can contribute to obesity.
2. Discuss how youth could reduce the risk of developing osteoporosis in later life.
3. Explain how being underweight can affect youth health and wellbeing.
4. Discuss how anaemia could have an impact on youth health and wellbeing.
5. Describe how one of the food-selection models discussed in subtopic 4.5 could reduce the short- or long-term consequences of nutritional imbalance among youth.
6. Design a concept map, table, poster or short video outlining the possible short- and long-term effects of nutritional imbalance among youth.

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4.6 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

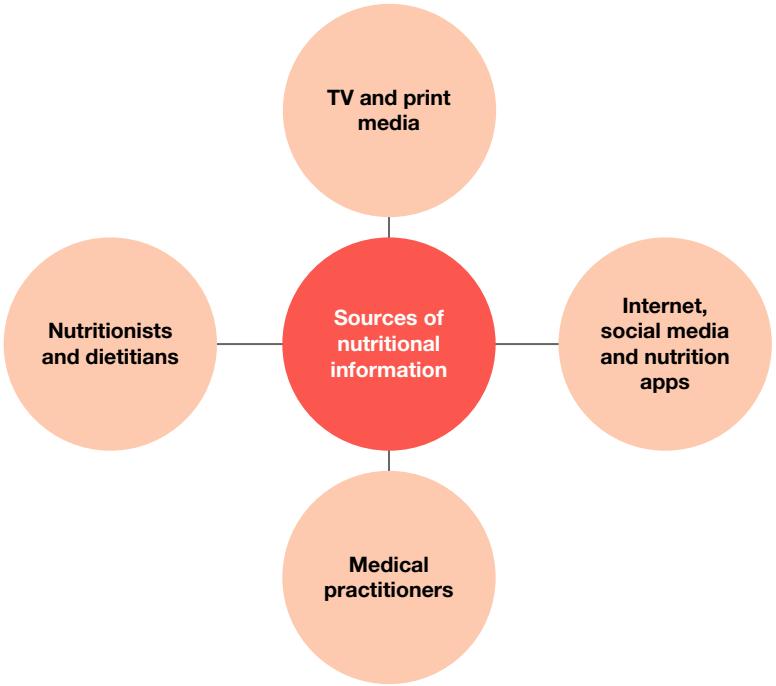
4.7 Sources of nutrition information and strategies to evaluate their validity

KEY CONCEPT Understanding different sources of nutrition information and evaluating the validity of these strategies

Finding reliable nutrition information can be challenging. There are so many different sources of nutrition information, including television, print media, the internet, social media and of course medical practitioners, dietitians and nutritionists. According to the United States Academy of Nutrition and

Dietetics, television, magazines and the internet were the most popular sources, while medical professionals including doctors, dietitians and nutritionists were less likely to be consulted when it came to nutrition information. These sources of information will be discussed alongside strategies to help you evaluate their validity.

FIGURE 4.39 Sources of nutritional information



4.7.1 Dietitians and nutritionists — what is the difference?

Many nutrition professionals refer to themselves as either a nutritionist or a dietitian, but in Australia professional nutrition practice is not regulated by the government, so it is important to understand the difference between the two professions.

A nutritionist will have completed a tertiary qualification in fields related to food science, nutrition and public health. Their main role is to help individuals achieve optimal health and wellbeing by providing information about the impact of food choices on health and wellbeing. Nutritionists often work in community or public health roles, including research, and may coordinate, design and implement health promotion programs aimed at improving healthy eating among the Australian population. Nutritionists are not qualified to provide medical treatment for an individual or group.

A dietitian also has tertiary-level qualifications in food, nutrition and dietetics; however, they have also completed additional study, which involves working in professional practice, such as public health settings, hospitals and medical therapy. They can provide dietary treatments for many conditions, including diabetes, food allergies and overweight and obesity. A dietitian is better suited to provide individual nutritional advice compared with a nutritionist, who generally works with broader health promotion/nutrition community programs.

4.7.2 Television, print media and the internet as sources of nutrition information

Food and nutrition advice is often included in stories broadcast on television. These are usually supported by new dietary advice. Television presenters may report the findings of the latest study on nutrition; however, this can often just be a snapshot without the details about the scope of the study and how it compares with other similar studies. Television reporters are also not qualified to provide nutrition advice, and what is presented in the media is often sensationalised to capture the attention of the viewers.

When evaluating information about nutrition presented on television, the best strategy is to ask questions. It may not be a factual report; it may be a testimonial, which means that the presenter is giving a personal endorsement for a particular product in return for a fee. So whether it is a testimonial or an advertisement, you cannot be sure that the information is based on scientific fact, and therefore reliable. You will need to look for further information.

Magazines are another popular source of nutrition information. But are they reliable? Many magazines use nutrition professionals to write their articles; however, many do not. When reading nutrition articles written in magazines, you must consider the following:

- How large was the study population?
- What are the author's nutrition credentials?
- Have they written any other relevant material?
- Are there any other references to back up the claims?

FIGURE 4.40 Magazines are a popular source of nutrition information.

Media coverage, whether in the print media or online, is often very good at selling stories and using scare tactics in the headlines of articles about health. It is important to ensure you read the entire article, not just the catchy headline, to make sure you have the full story. Over the years, for example, there have been many stories about substances reported to potentially cause cancer. In 2015, processed meat was linked to cancer; in 2016, it was 'very hot' drinks and, more recently in 2018, it was a common weed killer that was apparently carcinogenic.

The case study below highlights that it is important to understand when information is misinterpreted by the media.

CASE STUDY

Things that cause cancer are all around us, if you believe the news — how worried should we be?

In 2015, we heard that processed meat was carcinogenic to humans, and red meat probably was too.

And with Monsanto back in the news in 2018, we were reminded that glyphosate — the active ingredient in common weed-killers — was 'probably carcinogenic' too.

Cancer science misreported and misinterpreted

In the examples above, the alert was sounded by the International Agency for Research on Cancer (IARC) at the World Health Organization (WHO), as part of its Monographs Program.

A big part of the IARC's role is to bring together scientific experts to identify things that cause cancer, based on the available scientific evidence.

Every year, cancer biologist Darren Saunders from the University of New South Wales braces himself for the release of the IARC reports.

'You can almost mark it in your diary every year when they release a report, and know that it's going to be misconstrued and misinterpreted by everybody,' Dr Saunders said.

The problem, he said, was how the reports were communicated to the media and the public.

'They put these statements out there, and then they leave all of the work up to people like me to try and interpret this information for people.'

The difference between hazard and risk

When the IARC releases a report, the potentially carcinogenic agents examined are placed into one of the following groups:

- Group 1 — Carcinogenic to humans, e.g. solar radiation (sunlight), smoking, eating processed meat
- Group 2A — Probably carcinogenic to humans, e.g. eating red meat, glyphosate
- Group 2B — Possibly carcinogenic to humans, e.g. coffee
- Group 3 — Carcinogenicity not classifiable, e.g. tea
- Group 4 — Probably not carcinogenic to humans, e.g. caprolactam — a chemical used to make synthetic fibres.

But these groupings only describe the amount of evidence there is that a substance is carcinogenic — not how carcinogenic it is.

So you can end up with two different carcinogens in the same IARC grouping, where one will hugely increase your risk of getting cancer and the other might just shift it by a minuscule percentage, Dr Saunders said.

For example, processed meat — including salami, sausages and bacon — is in Group 1, along with tobacco smoke, plutonium, asbestos and even sunlight (solar radiation).

'If you eat processed meat, yes, it might slightly increase your chances of getting cancer,' Dr Saunders said.

'But if you get exposed to tobacco smoke or plutonium, you have a really big chance of getting cancer.

'So even though the evidence puts smoking and processed meat in the same [IARC] group, the relative risk of those carcinogens causing cancer is not equivalent.'

He said this was a point that was often missed by media covering IARC cancer findings, even though the agency did provide that information.

Salami and cigarettes

Weighing up the cancer risk of smoking versus eating processed meat is something that the Cancer Council has to consider when planning its education campaigns.

Unlike occasionally eating sausages or ham, there is no safe level of smoking — and this is critical for the way that risk is communicated, according to Anita Dessaix, director of cancer prevention and advocacy at Cancer Council New South Wales.

'The relative risk of consuming too much processed meat is a lot smaller compared to something like tobacco,' Ms Dessaix said.

Beware sensational cancer headlines

Despite researchers' best efforts, the news media's need for attention-grabbing headlines often trumps careful consideration of the evidence.

'Sensationalism sells,' an IARC spokesperson said, referring to media coverage following the processed meat findings in 2015.

'We did see a few media outlets — particularly in the English-language coverage — that played on fears and confused the public, without asking their source any questions.'

Tips for interpreting news about cancer

- It's important to **read the whole story**, not just the headline.
- Keep an eye out for **caveats.** Research on carcinogens — including processed meat, red meat and glyphosate — can come with caveats, and people often miss the part of the story that explains why a substance might not be harmful.
- Keep an eye out for whether the research is about the **evidence** that something causes cancer (like the IARC reports), or the **actual risk** of a substance causing cancer.

- Remember, strong evidence that an agent **can cause cancer** doesn't mean there's a high likelihood that it **will give you cancer.**

Source: Khan, J 2018, abc.net.au, 'How to make sense of news about what causes cancer', 24 November, https://www.abc.net.au/news/health/2018-11-24/how-to-make-sense-of-news-about-what-causes-cancer/10386298.

Case study review

1. Why are processed meat and cigarette smoking classified in the same IARC group?
2. Why do you think media coverage often overlooks the truth behind headlines such as 'processed meat causes cancer'?
3. What strategies could be used to ensure that media coverage on cancer is factual and not fiction?

4.7.3 Internet, social media and nutrition apps

There are many sources of nutrition-related information on the internet and many nutrition apps. But how do you know if the information has come from a credible source? You can employ the R.E.A.L. strategy, which will help you evaluate whether your source is reliable.

R — Read the URL. Non-commercial sites, such as those ending in . org, . edu and . gov, are generally reliable sources. Websites with a URL ending with .com may be commercial sites trying to sell a product, and therefore may not be a reliable source of information.

E — Examine the site's contents. Look at the author, publisher and organisation. What are their credentials? Who funds the website or app? Check if the material is current.

A — Ask about the author's name. Can you find the details of the author or publisher if you wish to contact them?

L — Look at the links. What type of pages are they linking to? Are these credible sources and do their web addresses end in .gov, .edu, or .org?

FIGURE 4.41 Be mindful of the R.E.A.L. strategy when searching for nutrition information online.

There are many nutrition-related apps that allow you to scan barcodes to highlight the nutrients in the product, revealing the 'good' and 'bad' products. The apps help you identify alternative products by comparing the nutrition information. However, when using nutrition-related apps, use the R.E.A.L. strategy, but also find out who developed the product. Consider if they are qualified to provide this information. Check if they are affiliated with a particular brand, supplement company or dieting program.

To become an informed consumer of nutrition information, you also need to be aware of other clues that indicate a source of information is unreliable. These clues include:

- claims that appear unrealistic, such as this 'natural product' speeds up metabolism and leads to weight loss
- products that claim to be quick and easy remedies for weight loss, without the need for dieting and exercise
- testimonials as evidence of effectiveness, such as 'I lost 15 kg using this product'
- sites that provide online diagnosis and treatments
- requirements that you eliminate entire food groups like fruits, vegetables or wholegrains
- advice to eat a single food or drink only for a long period of time (if you do this you will be missing out on essential nutrients).

Resources

Weblink Bowel Cancer Australia

4.7 Activities

1. Using the **Bowel Cancer Australia** weblink in the Resources tab, use the R.E.A.L. strategy to analyse the validity of the Bowel Cancer Australia website.
2. Search the internet and try to find a website which contains information you would not trust. Identify the main reasons why you believe this would not be a valid source of information. Show this website to a partner and see if they also believe it to be untrustworthy once they have used the R.E.A.L. strategy.

4.7 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Explain the difference between a dietitian and a nutritionist.
   (b) Who would you visit if you needed advice regarding a nutrition-related disease? Why?
2. Why is it useful to understand when a TV presenter is presenting a testimonial while reporting on nutrition information?
3. What are the three things to consider when reading nutrition-related articles?
4. Why is it best to source information from the internet from sites with a URL finishing in .org, .au, or.edu?
5. Identify two other clues you can use when assessing the validity of a nutrition source.

4.7 Exercise 2 APPLY your knowledge

1. Sarah feels ill after she consumes breads and cereals. She thinks she might be intolerant to gluten. Sarah wants to do some research online herself first before consulting a doctor for advice. What advice would you give to Sarah when researching this condition online to ensure that the information she receives is reliable?

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4.7 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

4.8 Food trends and food marketing tactics and their impact on youth health and wellbeing

KEY CONCEPT Understanding the marketing tactics used to promote foods and food trends to youth and their impact on health and wellbeing outcomes

With the digital culture explosion, the marketing and tactics used by food manufacturers has dramatically changed, influencing a number of different health and wellbeing outcomes. The marketing of energy-dense processed foods continues to have a strong share of the market, while the new trend of 'clean eating' and food delivery services such as Uber EATS are gaining momentum. Both of these concepts and other marketing strategies will be explored in this subtopic.

Gone are the days when the marketing of food products was a one-sided relationship, with children and youth passively viewing TV commercials and print advertisements. In today's digital society, young people interact with products and brands every day. Young people allow marketers to connect with them and their friends online. Each online interaction is carefully tracked, which allows companies to collect vast amounts of data and use sophisticated social marketing techniques to build digital profiles of their customers. The digital era is constantly evolving, as is the way youth interact with different food brands and different food trends. There is a wide variety of well-known strategies and tactics used by multinational companies to promote their food products to young consumers, who at times may lack the information and ability to understand the consequences of their decisions. Common marketing strategies can be seen in figure 4.42.

FIGURE 4.42 There are many different types of marketing strategies.

One in four Australian teenagers is either overweight or obese, and this rate is projected to rise in the future. One significant influence is the fact the online world is saturated with marketing of processed, energy-dense foods. According to the Australian Bureau of Statistics' *Australian Health Survey 2011–12*, and as mentioned in subtopic 4.2, four out of ten young people consume burgers and soft drinks on any given day. The teenage years are critical in forming life-long healthy eating habits. The unhealthy diet of many teenagers is putting them at risk of developing chronic health conditions later in life.

4.8.1 Immersive marketing

Immersive marketing is a technique that involves seamlessly integrating advertising into a complete experience for the consumer. The aim is to create an emotional relationship between the consumer and a particular brand. For example, the My Coke Rewards program encourages the user to enter a code, which can be found on any Coca-Cola product. Each code is worth a certain amount of points. The more you buy, the more points you accrue. The points can be used to earn rewards, which include gift cards, televisions,

more Coke products and online games, and can also be used to donate to specific charities. The longer users are connected to this program, the stronger the relationship they build with the brand.

Other immersive marketing strategies can be found in supermarket promotions. The popular Coles Little Shop promotion aimed to turn the regular supermarket trip into an 'experience' while promoting and building brand alliances with 30 different supermarket products. The promotion was hugely successful for Coles; however, health advocates slammed the inclusion of unhealthy products such as Nutella, chocolate milk and Tim Tams as part of the collectable range. The campaign, which Coles said was not directly targeted at children, won the 2018 National Parents Voice 'Shame Awards' for its huge impact on children's 'pester power'. Through children playing with the mini shop products, parents found pester power for the items to be at an all-time high, encouraging the creation of unhealthy food habits.

FIGURE 4.43 The My Coke Rewards program and the Coles Little Shop promotion are examples of immersive marketing strategies.

The following statement from Carol Kruse, a Coca-Cola executive, shows how companies such as Coke deliberately target young people through online marketing.

> We're especially targeting a teen or young adult audience. They're always on their mobile phones and they spend an inordinate amount of time on the internet … We did some online consumer studies with Yahoo! and Nielsen that determined [that] yes, indeed, an online ad unit can make an emotional connection and encourage consumers to buy more of our products.
>
> *Carol Kruse, Coca-Cola executive responsible for developing My Coke Rewards*

4.8.2 Infiltration of social media

Marketers are constantly advertising new food and drink promotions via Facebook, YouTube, Instagram, Twitter and other popular digital platforms. They also regularly tempt young people with a variety of competitions, either offering free products or prize money. For example, a young person may find a code on a product they have bought with an invitation to enter a draw to win $1000 in prize money. Once they have entered the code and registered online, they are encouraged to share with their friends on social media so their friends can also enter the competition. The young person has become a promoter of the product without even realising it. To register for such a competition, the young person usually provides personal details such as their name, address, phone number, year of birth, and email address. This is all the information the marketer needs to build up a profile of the young person so they can include them in future marketing campaigns.

4.8.3 Collection of personal data

Data collection is vitally important to many multinational food and beverage companies. Consumers are tagged with unique identifiers when they go online and can be easily tracked and profiled. Their patterns of behaviour can be analysed and more targeted and personalised marketing techniques can be used.

4.8.4 Location-based mobile marketing

Through the collection of a mobile phone number, marketers have the ability to follow young people throughout their daily lives. This is done via sophisticated tracking techniques such as Geofencing, which is targeted digital marketing that aligns a retailer to a particular geographical area and then targets clients through alerts and messages on their phone when they enter that particular area. These companies have the ability to offer enticing marketing offers, aiming to take advantage of the impulsive nature of youth when they are in close proximity to particular food outlets, and even more so at particular times of the day when food cravings may increase.

4.8.5 Celebrity endorsements

Along with online strategies and techniques, marketers also use a variety of other methods, such as celebrity endorsements and product placement in television shows to develop a relationship between the consumer and the products they are trying to sell. According to research, the use of celebrity endorsements in marketing can not only enhance brand recognition, but also the desirability of the product, leading to a positive association, particularly among youth aged 13–15.

A study undertaken in April 2016 by Melissa Bragg at the Department of Population Health, New York University School of Medicine, found that popular celebrities, defined as those who had won teen choice awards, were associated with 26 different food products, of which 81 per cent were nutrient poor. Music celebrity endorsement is particularly effective because, according to the study, youth spent almost two hours listening to music each day.

FIGURE 4.44 Celebrities such as Taylor Swift have been linked to Diet Coke.

The most commonly advertised food products were sugary foods, lollies and soft drinks. When young people associate products with popular celebrities, such as Beyoncé (Pepsi), One Direction (Coke) and Taylor Swift (Diet Coke), and Will.i.am (Doritos, Dr Pepper, Pepsi and Coke), they are more likely to consume such foods. This leads to an increase in the already high numbers of youth experiencing overweight and obesity, and the potential of developing type 2 diabetes and even cardiovascular disease

later in life. Although Taylor Swift is linked to 'the healthier alternative' of Diet Coke, the artificial sweeteners in this product can have negative health outcomes in the long term, including links to dehydration, type 2 diabetes and cancer.

4.8.6 Product placement

Product placement is an advertising technique used by food and drink companies to subtly promote their products through appearances in television, film or other media. It is often seen as a beneficial way to promote a product without interrupting the viewer, the way traditional advertising does.

FIGURE 4.45 American Idol is well known for its association with and marketing of Coca-Cola.

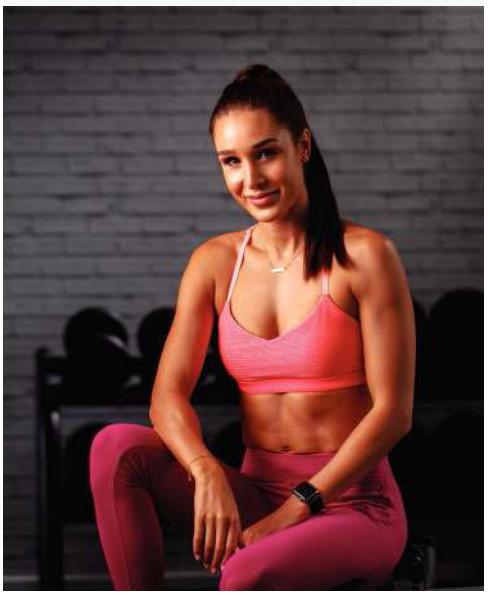
American Idol had one of the most obvious examples of product placement with their big red Coke cups sitting on display in front of the celebrity judges, who were also endorsing the products. Coke signed on as the major sponsor in 2002 with a $10 million fee. The cups became such a part of the show that they were even used on tour in a campaign across America. Coke ended its 13-year sponsorship with the TV show in 2014, reflecting the show's decline in popularity.

Product placement is a clever marketing technique because the viewer is in contact with the brand for extended periods. They are less likely to change channel, as they would if the product was in a Coke commercial. This technique can create a subconscious emotional connection with the product, increasing its desirability.

4.8.7 Marketing by social influencers/bloggers

Social influencers are not necessarily just celebrities, but are also people who are influential in the online world, particularly on Instagram and Twitter. They attract large numbers of followers because people are turning to them as a 'trusted' source of information. Marketing companies realise the power these social influencers have when it comes to selling their brands, and are tapping into this market. There are a number of companies, including TRIBE, a Melbourne-based organisation, that link social influencers with the brands, and brands with social influencers. This means it is becoming more difficult to determine whether a product being endorsed by a social influencer is simply another advertisement.

FIGURE 4.46 Kayla Itsines is a well-known social media influencer.



4.8.8 Impact of food trends on health and wellbeing — clean eating

The health and wellbeing trend of 'clean eating' is now widespread in the marketing of food products. The idea behind the clean eating phenomenon is relatively simple: eating whole or real foods, which have not been manufactured, refined or over-handled, and are therefore as close to their natural state as possible.

Companies tap into this by tailoring their products to be healthier. As consumers' interest in healthy eating increases, they become willing to pay more for healthier options. For example, McDonald's is investigating how to create fries that still taste good, but without the fat. Natural sweeteners such as **stevia** (found in Coke Life) are beginning to replace sugar and artificial sweeteners.

Marketers know that consumers are prepared to spend more money on healthier products, and that there is a greater consumer interest in finding out where food is coming from. The Australian market for certified organic food is also increasing, as consumers are researching more about the production of their food. The market for organic food has grown along with the 'clean eating' trend.

'Clean eating' has experienced long-term trending on many popular social media platforms. Instagram, Twitter and Facebook are full of beautifully crafted photos of food perfection. Many young people choose to follow the trends of their favourite food bloggers and opt for the food they recommend. It is also commonplace for youth to upload pics of their food and gain instant approval from their friends.

FIGURE 4.47 Snapping pictures of 'beautiful' foods is a popular pastime.

The impact of 'clean eating' on health and wellbeing outcomes

'Clean eating' is usually associated with considerable physical health and wellbeing benefits to young people, including decreases in weight over time and a reduction in the risk of developing type 2 diabetes and some cancers. However, according to Rhiannon Lambert, a registered nutritionist in London who treats young people with eating disorders, the number of clients presenting at her clinic has doubled over the past year due to the 'clean eating' trend. The pressure to be seen to be consuming wholesome foods can lead to increased anxiety and stress in young people, impacting negatively on mental health and wellbeing. Feelings of guilt may also emerge and consuming so-called 'bad' foods can negatively impact emotional health and wellbeing. According to experts, young people can start following this movement in an innocent attempt to eat more healthily, but can easily become fixated and obsessive about food quality and purity. When food is associated with terms such as 'good', 'bad', 'clean' and 'dirty' it can be become linked to choices about morality, and this is when obsessive behaviours can start. Such obsessive behaviour can negatively impact upon social health and wellbeing as relationships are tested when a family or friend may try to provide support.

The term used to describe this pattern of distorted eating is **orthorexia**, a condition that includes symptoms of obsessive behaviour in pursuit of a healthy diet. If a product comes from a package, box or can, it is usually considered off limits for people following this trend. Having these kinds of food restrictions is unsustainable, and often involves people eliminating entire food groups from their diet, such as dairy or meat. In such cases these must be replaced with protein-rich beans or tofu and fortified soy products for health and wellbeing to be maintained. If there is a dietary imbalance due to underconsumption of essential nutrients such as iron, a person is at risk of anaemia, which negatively impacts physical health and wellbeing as the body and its systems are compromised.

Many people following this diet are unaware that the processing of foods can improve the safety of the food supply. It eliminates and prevents microbes from multiplying and spoiling food, potentially causing disease. **Pasteurisation** and **sterilisation** are the two most common processing treatments that aim to destroy any harmful microbes or enzymes.

4.8.9 Impact of food trends on health and wellbeing — food delivery services such as Uber Eats and Deliveroo

Young people are drawn to the convenience of using delivery apps such as menulog, Deliveroo, Foodora and the most popular, Uber Eats, for their midweek dinners. Research by comparison website 'finder.com.au' revealed that Australians are spending $2.6 billion every year on such convenience. In 2018 Mexican was the most sought-after cuisine, with over 4.7 million burritos ordered. Although searches for healthy food items has increased, hot chips are still the most popular single menu item ordered.

Takeaway sales, predominantly due to the rise in popularity of Uber Eats, grew by 18 per cent in just three years, according to the Australian Bureau of Statistics.

While these delivery apps address immediate needs of quick easy solutions to midweek meals, their use may have negative implications on not only physical health and wellbeing, due to an increase in the consumption of energy dense foods, but also mental and social health and wellbeing.

For the family, eating at the dinner table promotes social and mental health and wellbeing benefits — not only is it a great way to spend quality time together, but it also develops communication and social skills for children, while also providing time to build positive and productive relationships. It may also be a time when discussions lead to problem solving, reducing levels of stress and anxiety of family members.

Takeaway food is packaged conveniently to be consumed on the go or often in front of the television, promoting passive, anti-social behaviour that diminishes the opportunities for social interactions and may impact on relationships in a negative manner.

For couples or friends, the act of cooking is also a form of teamwork and important for promoting healthy relationships, leading to improved emotional health and wellbeing.

FIGURE 4.48 Uber Eats is changing the way Australians consume food.

4.8 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. What is meant by the term 'one-sided relationship' in relation to marketing?
2. Explain how immersive marketing techniques build relationships with the consumer.
3. Why do companies encourage consumers to sign up for competitions and rewards online?
4. How does location-based mobile marketing work?
5. Celebrity endorsement is often associated with sugary foods, lollies and soft drink.
   (a) Describe three short-term consequences on health and wellbeing if young people follow the advice from such celebrities.
   (b) Describe three longer-term consequences of the consumption of unhealthy foods promoted through celebrity endorsements.
6. Explain why marketing companies are now targeting social influencers and bloggers. Do you believe this is an effective marketing strategy?
7. How has the 'clean eating' trend had a negative impact on the health and wellbeing outcomes of some young people?
8. What are the implications for health and wellbeing if the current trend continues of four out of ten young people consuming burgers and soft drinks on any given day?
9. How may the rise in popularity of food delivery apps such as Uber Eats impact on social and mental health and wellbeing of young people and their families?
10. Explain one positive and one negative impact on physical health and wellbeing of the increase in use of food delivery apps for midweek dinners by young people.

4.8 Exercise 2 APPLY your knowledge

1. Describe the type of marketing techniques that McDonald's regularly uses to target children and youth. Place these in the categories shown in figure 4.42.
2. Can you find an example of food product placement in the media? How does this company subtly promote their product? How effective do you believe this strategy is in enticing young people to purchase this product?
3. Investigate the different impacts on health and wellbeing of consuming stevia instead of artificial sweeteners.
4. Using your knowledge of food delivery apps, explain how their increase in popularity may impact in a positive manner on social, spiritual and mental health and wellbeing.

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4.8 Exercise 3 studyON: Practice exam questions online only

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4.9 Enablers and barriers to healthy eating

KEY CONCEPT Analysing the interactions between social, cultural and political factors that act as enablers or barriers to healthy eating among youth

There are many factors that affect the food choices that young people make. These factors can all interact to determine the health behaviours and ultimately the health status of young people. In topic 3 we discussed the term 'factors' with a focus on sociocultural factors. In this topic they are split into two separate categories of '**social factors**' and '**cultural factors**'. **Political factors** will also be discussed, and can be defined as the decisions and actions made by government and non-government agencies on issues relating to healthcare, health policies and health funding. All three factors interact to act as either enablers or barriers to healthy eating.

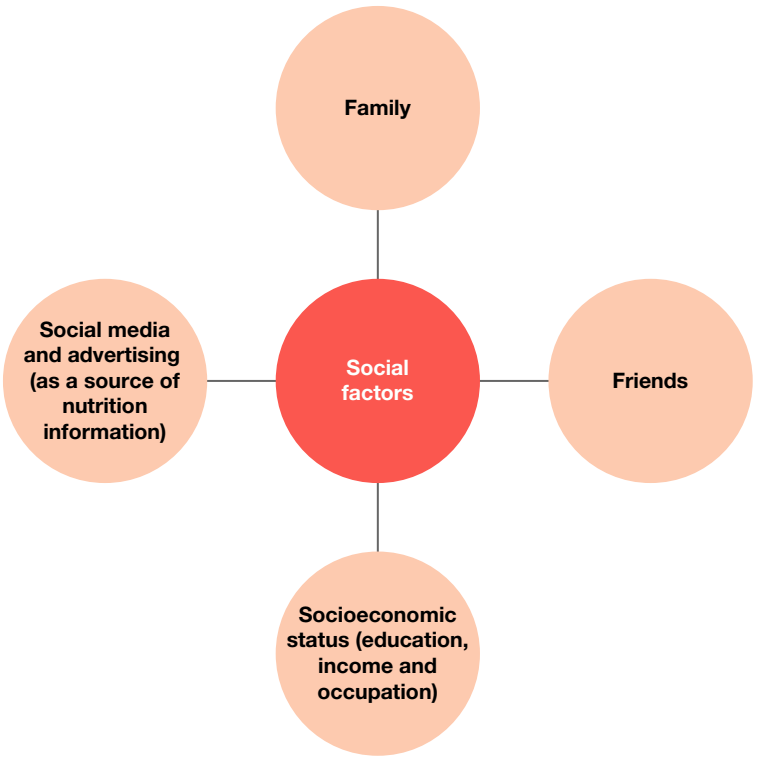
4.9.1 Social factors

Eating is often considered a social activity. There are therefore many different social factors that can act as either enablers or barriers to healthy eating among youth. These factors are shown in figure 4.49.

Family

Food intake, patterns and behaviours associated with healthy eating are generally developed through the family network. The family unit can act as an enabler or a barrier to healthy eating among youth. A young person's family can act as an enabler when they encourage the consumption of fruit and vegetables; however, they can also act as a barrier if they are more likely to choose energy-dense processed foods.

FIGURE 4.49 Social factors that act as enablers or barriers to healthy eating



The family plays a key role in promoting the consumption of healthy food, and this can best be done through **role modelling**. When parents and caregivers model healthy eating practices, children are more likely to copy this behaviour. For example, if eating breakfast is always part of the child's daily routine from a young age, then youth are more likely to start the day with breakfast, which is an important component of eating a balanced diet.

If parents choose healthy options when away from home or when food shopping this also encourages young people to eat healthily. Most young people rely on the family to provide their meals, so when nutritious meals are provided they learn to value the importance of healthy eating practices. Many young people also learn how to cook and prepare meals in the home. When they are shown how to quickly and easily prepare healthy meals, they are more equipped to do so in the future.

FIGURE 4.50 Family members influence young people's choices about healthy food.

Role modelling and the provision of food in the family can also act as barriers to healthy eating. For example, when family members are consistently modelling poor eating practices by consuming energy-dense food with high sugar content, it becomes easy for young people to copy this behaviour. If family members make unhealthy choices when eating out and shopping, the young person is more likely do so. When breakfast is not part of the daily routine in the family, the younger members are more likely to go without. This then often leads to them snacking on unhealthy products earlier in the day because they are hungry.

Friends

The peer group becomes increasingly important as young people gain their independence and spend more time away from the family home. Just like family, the peer group can act either as an enabler or a barrier to healthy eating.

Enablers to healthy eating. Friends are likely to consume similar foods when together. If friends are eating lunch in a shopping centre food court, it is likely that they will choose similar types of foods and if one friend is particularly health conscious they may influence others in the group to be the same.

Barriers to healthy eating. Peers may encourage the 'ideal' thin body shape and pressure other teens to skip meals or cut entire food groups out of their diet, thus acting as a barrier to healthy eating. This may lead to distorted eating patterns among young people.

Youth may also practise unhealthy eating patterns through the consumption of energy dense processed foods if this is the norm for their social group. Friends are also a powerful influence on the social parameters of how much food is eaten. A study conducted at the University of Minnesota has found that if your friends eat less food, you're also likely to eat less and continue to eating less when you are alone. Peer pressure is particularly influential when eating out. For example, if a number of people in a social group order an entrée, other people are more likely to follow, and the same is true for desserts. When ordering the main meal, if a few people order healthy meal items, the other people present are more likely to follow suit.

FIGURE 4.51 Friends can be highly influential on the types of foods young people consume.

4.9.2 Socioeconomic status: income, education and occupation

Income

Cost can be a major enabler or barrier to healthy food consumption. Low-income groups, who find it difficult to achieve a balanced healthy diet, are often referred to as experiencing **food insecurity**. According to the *Australia's Health 2018* report, although the consumption of adequate serves of fruit (two) and serves of vegetables (five) for the population as a whole is very low, those with low socioeconomic status were twice as likely to not consume any vegetables and less likely to consume two or more fruits per day.

Energy-dense processed foods are often less expensive than nutritious fresh food, and therefore can become the food of choice for those on low incomes. Transportation can also be a barrier to enabling healthy food choices for young people, as they are less likely to travel long distances for healthy foods, and become reliant on the foods around them. Often lower socioeconomic areas have a large selection of take-away and fast food restaurants and few fresh produce markets, unlike higher socioeconomic status areas.

FIGURE 4.52 A family of four can be fed for as little as $19.95 at McDonald's.

Income can also act as an enabler, as those with a higher income have increased choice of food, and are also more likely to consume nutritious food products that may be more expensive. They can also afford a wide selection of fruits and vegetables, regardless of the season and price. Organic foods are more expensive and therefore can be more easily accessed by those earning a higher income.

Education

Access to quality education and health literacy are strongly associated with healthy food behaviours. Many studies have confirmed that people with higher levels of education are more likely to choose healthier lifestyles, including a greater consumption of fruits and vegetables. This is also because higher education levels generally lead to greater income-earning capacity and increased income to spend on nutritious foods.

FIGURE 4.53 Learning is enhanced with a healthy diet.

Education can also promote awareness of healthy behaviours, such as the importance of eating a balanced diet, and is therefore linked to an increase in the likelihood of adopting these behaviours.

Lower levels of education can be seen as a barrier for some young people when it comes to adopting healthy food choices. They may not understand the importance of consuming a balanced diet, and may under- or over-consume particular nutrients. A common nutrient that is often under-consumed by youth is calcium, as many young people skip breakfast. When young people are equipped with the knowledge about the importance of calcium, and the foods that are high in this nutrient, they are more inclined to include these in a daily breakfast routine.

Occupation

Young people's occupation and working conditions can act either as enablers or barriers to healthy eating. Employment conditions can influence food choices through the impact of time available outside work for meal planning and food shopping. This may act as a barrier to healthy eating, as workers who have only a 15-minute meal break may rely on takeaway food that is likely to be energy dense, due to its convenience and speed. Different types of work environments, such as shift work and working long hours, can also have an influence on the type of foods consumed. When work is stressful, people are more likely to turn to instant meals, which often have higher levels of sodium and fats than home-prepared meals. Kitchen facilities and the type of food available in and around the workplace can also have an impact on young people's eating habits, and whether they adopt healthy eating practices.

Occupations with flexible working hours may act as enablers to healthy eating. This is because they allow more time to shop and prepare nutritious meals at home. The location of an individual's workplace may also act as an enabler to healthy eating if it is close to a variety of food venues and supermarkets that allow healthy choices, in comparison to a workplace reliant only on a small takeaway café with limited healthy choices.

Nutrition information sourced from social media and advertising

As mentioned in subtopic 4.7, young people source large amounts of health information from the internet and social media rather than from health practitioners. Finding credible nutrition advice via social media is becoming more complex. The increase in nutrition bloggers and social influencers endorsing food products can often cause confusion about whether information is opinion or fact, healthy or unhealthy.

An example of this is when social influencers or bloggers post pictures of supposedly healthy products such as an acai bowl, claiming its health benefits, when in fact the serving size is too large and the toppings have high levels of sugar. This misrepresentation of the health benefits of certain foods can be a barrier to healthy eating, as people can believe they are making healthy choices, when in fact this is not correct.

Another barrier to healthy eating is when an individual follows the opinion of an online nutritionist. As online nutrition content is not overseen by a regulatory agency and is not checked for accuracy, there is no guarantee the nutrition advice is healthy.

Young people need to understand when they are presented with misinformation. They should also be able to identify a reputable author or blogger, while searching for links to government or credible organisations. One useful tip when using Instagram for food options is to check you are following credible

health professionals and dietitians. Look for hashtags such as #dietitian, #dietitiansofinstagram and #rdchat that signal they are qualified to give nutrition advice.

If using information from a book, magazine or website, the R.E.A.L. strategy (outlined in subtopic 4.7) is a useful technique.

Some online organisations that provide evidence-based food, nutrition and health information that can enable healthy eating include:

- Better Health Channel (Victorian Government)
- Eat for Health (Australian government)
- Smart Eating for You (Dietitian's Association of Australia)
- Nutrition Australia.

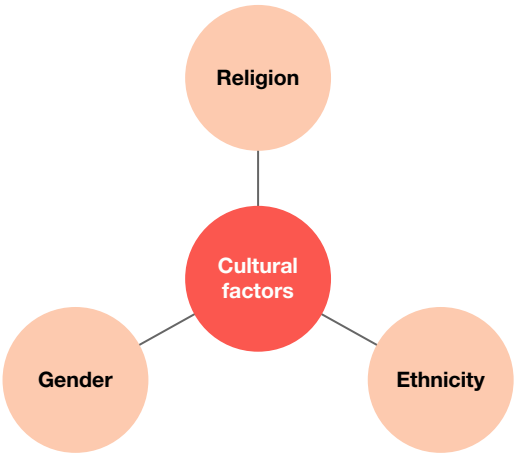
on Resources

Weblinks Better Health Channel
Eat for Health
Smart Eating for You
Nutrition Australia

4.9.3 Cultural factors

There are many different cultural factors that can act as enablers or barriers to healthy eating. These factors are represented in figure 4.54.

FIGURE 4.54 Cultural factors that have an impact on healthy eating



Religion

Religion can play an influential role in the food choices of young people and their families. There are many different religious groups in Australia, and certain groups uphold particular regulations around the consumption of food. These include:

- People following the Hindu religion tend not to eat beef, as cows are considered sacred. It is not uncommon for many Hindus to cut out meat altogether and become vegetarian. This is not a concern to health and wellbeing if they include protein and iron supplements in their diet. If not, it can become a barrier to healthy eating as an individual may choose to fill up on foods that are higher in saturated and trans fats than low-fat meats and fish. They may also be at risk of anaemia, impacting on physical health and wellbeing.
- In Islam and Judaism, the eating of pork is prohibited, and all other meats consumed must be **halal** or **kosher**, which ensures the processing and food preparation are in line with the guidelines of Islamic or Jewish law. Jewish law prohibits causing pain to animals, and so this rule must be followed in the processing of animal products.
- Observant Muslims abstain from eating and drinking from dawn to dusk during the month of Ramadan. Although this sounds extreme, evidence has shown no negative impacts on health and wellbeing, except for those with health conditions such as diabetes.

Ethnicity

The ethnic group to which a young person belongs has a significant impact on the type of foods that they consume. In many schools today, the typical lunch box does not contain the traditional Vegemite or ham

and salad sandwich, as the demographics of students within schools are changing. Australia's multicultural society can be seen within the variety of different foods consumed in the school yard.

Different ethnic groups select different foods, traditional to the environment in which they have been brought up. For example, African and Afro-Caribbean groups often consume foods containing various meats, rice and wheat. Eastern and far-Eastern groups are more likely to consume foods with large amounts of herbs, spices and vegetables. The menu from a school in Bologna, Italy, can be seen below.

TYPICAL ITALIAN SCHOOL MEAL
First course: Potato-filled pasta with tomato sauce
Second course: Ricotta cheese croquettes, cabbage and salad
Snack: Homemade cookies

Ethnicity and culture play a major role in the type of foods young people consume. In different cultures, energy-dense foods may be chosen. In countries such as Germany, traditional dishes consist of bratwurst, which is sausage composed of pork, beef or veal and is traditionally served with sauerkraut, potato salad or a bread roll. In other countries, such as Japan, traditional meals are quite light, consisting of fish, rice and vegetables (see figure 4.55). The types of food consumed within cultures can either enable, or act as a barrier to, healthy eating.

FIGURE 4.55 Japanese cuisine is considered to be very healthy and is a contributing factor to Japan's high life expectancy.

Gender

Gender plays a role in influencing young people when it comes to food selection. The life expectancy of Australian women is 84.8 years, while for men it is 81 years. Contributing to these differences are health-related beliefs and behaviours, which can begin during youth. Research from the Australian Institute of Health and Welfare in 2016 confirms that Australian males consume fewer fruit and vegetables than females. Men aged 18–44 also eat a smaller variety of vegetables. On average, males consume fewer high-fibre foods, fewer low-fat foods and more soft drinks than females.

Research has identified that men face specific barriers to eating foods such as fruit and vegetables; these include time, cost, lack of cooking skills and lack of the understanding of recommended serving sizes. A study undertaken in 2008 identified this behaviour among younger men aged 18–25, who were generally unconcerned about the risks to health and wellbeing of diets low in fruit and vegetables. Food marketing also often links masculinity to the consumption of animal products — for example, meat-pie advertisements usually target men, and often those in the construction fields.

Females, on the other hand, are regarded as having a greater understanding of the importance of healthy eating behaviours and are more concerned about the types of foods they consume. This could be associated with the cultural norm of the ideal body shape for females to be thin. This may make females more conscious of their food habits and more likely to consider dieting than males.

FIGURE 4.56 Meat-pie manufacturers typically target male construction workers with their advertising campaigns.

4.9.4 Political factors

Political factors can act as either enablers or barriers to healthy eating among youth. These are represented in figure 4.57.

Food policies and laws and trade arrangements

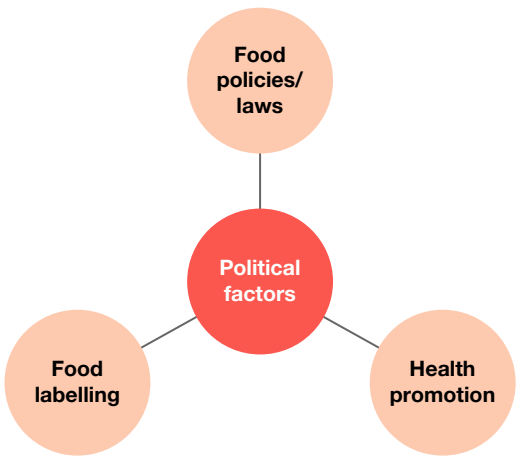
Food policies and laws have a large impact on many parts of the food industry in Australia. Food Standards Australia and New Zealand (FSANZ) are responsible for enforcing the food standards code, which sets out rules and regulations for the food industry. Laws and standards regarding storage, processing, display, packaging, transportation, labelling and disposal of food are just some of the examples that FSANZ enforce.

FSANZ also enforce food laws such as mandatory fortification of foods to improve the health outcomes for Australians. For example, Australian millers are required to add folic acid (a form of the B-vitamin folate) to wheat flour for bread-making purposes. Folate, which occurs naturally in foods such as green leafy vegetables, is necessary for healthy growth and development.

Food laws and trade arrangements also affect the availability of food within a country. An example of a current food policy is the implementation of health-related food taxes.

Price is one of the most influential factors for consumers when deciding which foods to buy. Currently, fresh fruit and vegetables are exempt from the GST, which gives an incentive to buy them rather than less healthy processed foods. This is an example of how food laws can encourage healthy choices in food consumption. However, some government ministers have called for the GST to be added to fresh foods. This may have the effect of decreasing the nutritional quality of our food choices. Figure 4.32 shows that 99 per cent of Australian children and 96 per cent of Australian adults failed to consume the recommended serves of vegetables every day. According to researchers at the University of Queensland, raising the price of these fresh foods would lead to an estimated increase of 90 000 cases of heart disease, stroke and cancer each year, increasing healthcare costs by around $1 billion.

FIGURE 4.57 Political factors and their influence on healthy eating among youth



Some groups in Australia argue that a tax should be imposed on sugary drinks, with the aim of decreasing their consumption by making them less affordable and therefore reducing rising rates of obesity. Similar taxes have already been implemented in many countries, such as France, the UK and some states of the United States.

CASE STUDY

Beverage companies are winning the sugar tax debate

Australia is now one of the fattest nations on Earth.

Sixty per cent of us are overweight or obese, and by 2025 that figure will rise to 80 per cent.

Despite this, Australia still has no national obesity strategy.

What we do have are two key federal programs — the Healthy Food Partnership to encourage healthy eating, and the Health Star rating, a front-of-pack labelling system.

But the rules for these two initiatives have been set by committees made up of government and public health advocates, as well as food industry representatives.

Companies like Coca-Cola, Pepsico, Unilever, Nestlé and Kelloggs have a seat at the table setting the policies that shape consumption of their own sugar-laced products.

As Australia's obesity and diabetes rates continue to soar, public health advocates have told *Four Corners* the industry has been obstructing and delaying policy outcomes that would lead to better health.

And they have likened their tactics to those deployed by the tobacco industry.

When it comes to a sugar tax, the heavy lobbying work has been done by the Beverages Council. Last month, the United Kingdom became the 28th country in the world to introduce a sugar-sweetened beverages tax.

FIGURE 4.58 The drinks most likely to be taxed if Australia implemented the sugar tax.

Beverage		Sugar content (grams/100mL)	Tax
	375mL can soft drink	10g/100mL	$0.15
	2L soft drink	10g/100mL	$0.80
	600 mL sports drink	6g/100mL	$0.14
	200mL fruit drink (6 pack)	10g/100mL	$0.48
	1.25L flavoured mineral water	7g/100mL	$0.35
	250mL energy drink	11g/100mL	$0.11

The overseas experience of the sugar tax is a reduction in the consumption of sugary drinks, especially by those from low socioeconomic groups, and an increased consumption of water or a diet low in sugar alternatives.

There is strong public support in Australia for a sugar-sweetened beverages tax if the funds raised are put towards obesity prevention programs, such as making healthier food cheaper. Public health authorities, including the World Health Organization and the Australian Medical Association, as well as advocates such as the Obesity Policy Coalition, support the introduction of a sugar-sweetened beverages tax.

Estimations, based on US evidence, are that about 10 per cent of Australia's obesity problem is due to these sugar-filled drinks.

So why doesn't Australia come on board?

So far, the Beverages Council has been extremely successful in preventing any talk of a tax on sugary drinks becoming a reality in Australia.

In its 2016 Annual Report, the Beverages Council admitted to spending a 'vast amount of resources' lobbying against a sugar tax.

The council boasted of its success at 'keeping the topic of a tax off the table from both of the major political parties'.

Ms Martin said the health impact of too much sugar in Australians' diets is well known, but there was a good reason why a sugar tax had not gained much traction in Australia.

'It's not that the public aren't on board, the politicians aren't on board,' she said.

FIGURE 4.59 Twenty-eight countries around the world have implemented some kind of sugar tax.

'The reason that a lot of the politicians aren't on board is because of this influence that we're seeing of groups like the Beverages Council ... working against effective recommendations.'

Source: Brissenden, M 2018, 'Big sugar and the 'big flaw' in Australia's federal health programs', *Four Corners*, 30 April, http://www.abc.net.au/news/2018-04-30/big-sugar-and-the-big-flaw-in-australias-health-programs/9707204.

Case study review

1. What is the percentage of adults that are likely to be overweight and obese by 2025?
2. Who would pay the additional sugar tax and what types of drinks would be taxed?
3. What changes have been made to the diets of those living in countries where the sugar tax has been implemented?
4. Explain, using an example, how the revenue made from the sugar tax could be used to help manage the obesity problem in Australia.
5. According to the article, what is one of the main reasons Australia has not implemented the sugar tax?
6. Use the R.E.A.L. strategy, which you learned in subtopic 4.7, to test the validity of this article.

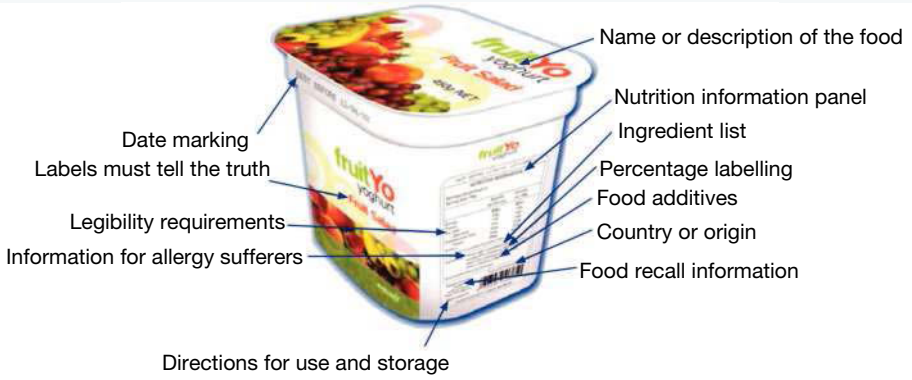
on Resources

Weblink Why Australia needs a sugar tax

Food labelling

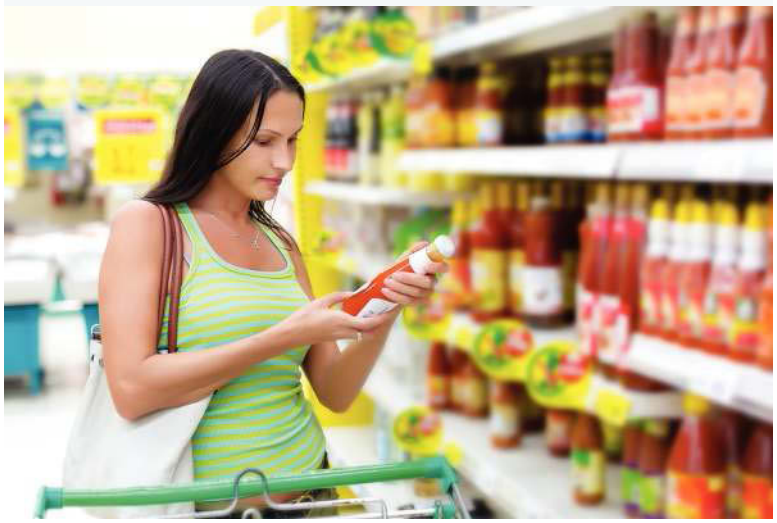
Food labelling laws determine what a consumer knows about the product they are purchasing. This information will often then influence the choices of food that are available and the impacts on individual diets. Food labelling laws, according to Food Standards Australia New Zealand (FSANZ), mandate that all packaged food must have a label that includes information such as a nutrition panel, use by or best before date, country of origin, and manufacturing details (see figure 4.60).

FIGURE 4.60 FSANZ has strict labelling requirements for packaged foods.



Food labelling can be confusing for young people if they are unfamiliar with reading and comprehending the information. The main focus is to try to reduce the selection of products that have added salt and sugar, and those that are high in saturated or trans fats. When labels are clear and easy to understand, they can act as an enabler to healthy food choices. Food labels can be useful when comparing similar products. There are also programs such as the federal government's Health Star Rating System (discussed in subtopic 4.5) to assist people when shopping for food products.

FIGURE 4.61 Food labels are an important component of selecting healthier foods.



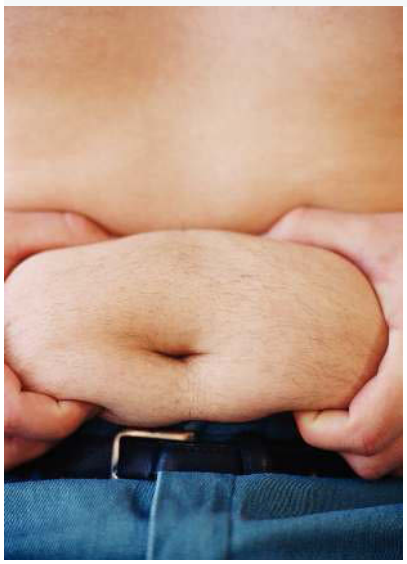
Health promotion

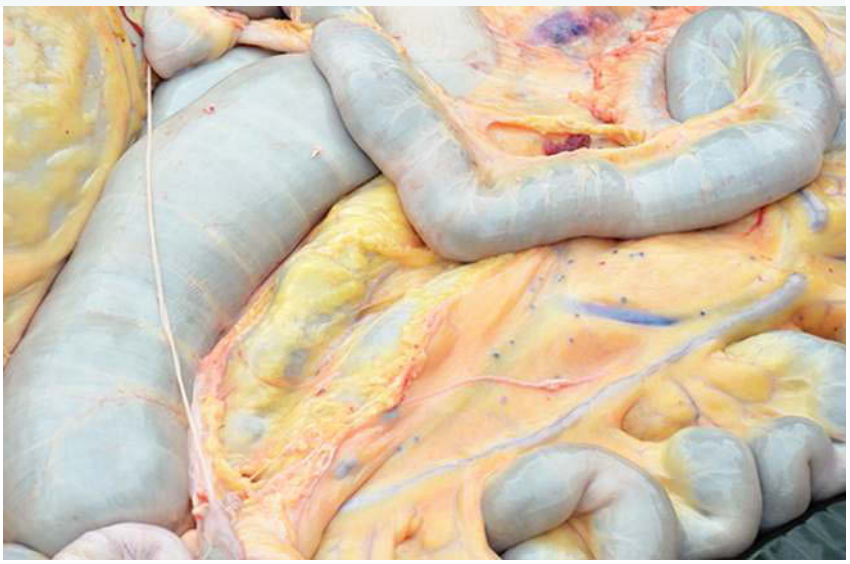
Health promotion activities funded by the government can enable improvements in youth diets. The Australian Dietary Guidelines and Australian Guide to Healthy Eating are two publications recommended by governments to be used in nutrition education within schools and other community settings. The Australian Dietary Guidelines have recently been updated to reflect Australians' behaviour in relation to food. The guidelines specifically state that sports drinks, energy drinks and high-sugar drinks should be limited, as consumption of these products has increased in recent years, particularly in young people.

The guidelines also outline the daily portion sizes for each food; however, it can be quite complicated for the everyday shopper to follow, and therefore may act as a barrier to them following the guidelines correctly.

The Victorian and Western Australian state governments' LiveLighter campaign provides comprehensive, easy-to-use online resources and tools, such as a 12-week meal and activity planner, healthy recipes and an 'Am I at risk?' tool. This program caught the attention of many through the shock advertisements showing the effects of toxic fat on the body when they first aired for six weeks in Victoria in 2015 (see figure 4.62). The focus of this campaign was on sugary drinks, when at the time the average soft drink consumer was drinking the equivalent of one can a day. A study conducted on the effectiveness of this campaign found that the proportion of Victorians who consumed four or more cups of sugary drinks per week declined from 31 per cent prior to the campaign to 22 per cent at the end of the campaign and they had an increased knowledge of the link between toxic fat and sugary drinks.

FIGURE 4.62 Images like these were used in a state government campaign highlighting the effects of overconsumption to show that an unhealthy lifestyle (leading to a 'grabbable' gut) means the likely presence of toxic fat inside the body.





on Resources

Digital document LiveLighter worksheet (doc-32159)

Weblinks LiveLighter

LiveLighter Toxic Fat

4.9 Activities

1. Use the **LiveLighter Toxic Fat** weblink in the Resources tab to view the advertisement on toxic fat. Use the R.E.A.L. strategy to test the validity of this website.
2. Access the **LiveLighter** weblink and worksheet in the Resources tab, then complete the worksheet.
3. Conduct some further research on Ramadan. What does it involve and what types of food are consumed during this time?

4.9 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Outline, using an example, how role modelling in the home can act as either an enabler or barrier to healthy eating among youth.
2. According to research, how does peer pressure influence the amounts of food consumed within a friendship group? Is this true of you and your friendship group? Explain.
3. Socioeconomic status reflects income, education and occupation. Choose two of these and explain how they may act as a barrier to healthy eating for young people.
4. How might nutrition information from the internet be both an enabler and barrier to healthy eating?
5. How can the religion of a person have an impact on their food choices?
6. (a) Identify three food products that are usually marketed to females and three food products that are often marketed to males.
   (b) From the foods you have selected, choose one from each group and explain your reasons why you believe this to be true.
   (c) How might these types of food have an impact on the health and wellbeing of men and women?

7. Outline four different pieces of information that must be included on food labels. How might this information enable healthy food choices?

4.9 Exercise 2 APPLY your knowledge

1. Describe how the influences of family and food selection and the behaviour of young people change over time? (From childhood through youth and into early adulthood.)
2. What would be the advantages and disadvantages of introducing a sugar tax in Australia?
3. What nutrients do people usually compare when reading nutrition panels and why?

studyON

4.8 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

4.10 Topic 4 review

4.10.1 Key skills

KEY SKILL Explain the functions of major nutrients for general health and wellbeing

This key skill requires knowledge of the functions of the nutrients and how they can have impact on general health and wellbeing, including a number of food sources for each nutrient.

When addressing how the nutrients affect general health and wellbeing, points to consider should be which nutrients are protective nutrients, which nutrients are considered risk nutrients and which nutrients will have a negative impact if consumed in excess. For example, carbohydrates are the body's preferred energy source; however, if consumed in excess can lead to overweight and obesity.

You also need to be familiar with a range of food sources and to be able to identify food sources of particular nutrients from a range of food groups. You may be asked to list a non-dairy source of calcium, for example. If a food source has the nutrient added artificially, state that it is a fortified food source (such as fortified breakfast cereal being a source of vitamin D).

An example of a typical examination question testing this knowledge is shown below:

Complete the table, identifying the major nutrient and function of the food source.

Food source	Major nutrient	Function (including health and wellbeing impact)
Breads and cereals[1]	Carbohydrates[2]	**Body's preferred source of energy;** if consumed in excess, however, can lead to **weight gain.**[3]

1 In this example you are provided with the food source and are asked to complete the table.	2 Make sure you choose the major nutrient this type of food contains.	3 Note in this example the main function is provided first, followed by a health and wellbeing implication of excess consumption, which is weight gain.

When practising this key skill, a summary table (similar to the following one) may be useful.

Note: The nutrient function is highlighted in blue and the link to the health and wellbeing impact is highlighted in green in the table below. In this example there are two health and wellbeing links provided;

however, you will only need to include one of these in your answer. In the given example, fibre is considered a protective nutrient, as it has a positive effect on the health and wellbeing outcomes of the body.

Nutrient	Function and the impact on health and wellbeing	Food sources
Fibre	Fibre acts to slow down amount of glucose that is absorbed by the digestive system, reducing the amount of energy provided by the foods consumed. Fibre also provides a feeling of fullness, and therefore decreases the amount of surplus energy consumed from unnecessary extra foods, thus assisting with weight management. Fibre absorbs water, which adds bulk to faeces. This assists in regular bowel movements, decreasing the likelihood of constipation.	Bran Wholemeal breads Apples

Another way to assist in developing this skill is to devise your own set of flash cards. On one side, place the nutrient and food source and on the other side include the function and its link to health and wellbeing.

Practise the key skill

1. Apart from red meat, identify another excellent source of iron. Briefly discuss iron's function and impact on physical health and wellbeing.
2. There are four different types of fat. Explain, by filling in the table below, how consumption of monounsaturated fat can have a positive impact on the body. Include one major food source in your answer.

Nutrient	Function of nutrient and impact on health and wellbeing	Food source
Monounsaturated fat		

KEY SKILL Describe the possible consequences of nutritional imbalance in youths' diet on short- and long-term health and wellbeing

Each nutrient has a role to play in the body, but both under- and over-consumption of nutrients can contribute to a range of short- and long-term consequences for youth. It is important to understand the effect that too little or too much of each nutrient can have on the body. By understanding the role of nutrients, predictions can be made about the likely consequences on health and wellbeing.

Most of the short-term effects will be on physical health and wellbeing; it will then be possible to predict the potential impact of these effects on the other aspects of health and wellbeing. For example, insufficient carbohydrates (which are fuel for energy) could make an individual feel tired (physical health and wellbeing). Feeling tired can have other implications for health and wellbeing, such as not wanting to participate in sports, which could also have an impact on social health and wellbeing.

Long-term consequences as a result of nutritional imbalance over an extended period of time can occur in all dimensions of health and wellbeing. The role the nutrients play in these consequences must be understood. A summary table can be useful for brainstorming the possible short- and long-term consequences of nutrient imbalance.

Nutrient	Possible short- and long-term consequences of under-consumption	Possible short- and long-term consequences of over-consumption

Consider the following example, which discusses the possible short- and long-term consequences on the health and wellbeing of youth who consume a diet high in fibre.

Fibre assists in the removal of waste products in the digestive tract and promotes regular bowel movements. In the short term, this can prevent constipation (physical health and wellbeing). Fibre has also been shown to decrease the risk of colorectal cancer in the long term (physical health and wellbeing).[4]

4 Function and impact is explained — with link to short-term and long-term health and wellbeing.

Fibre is made up of the indigestible parts of plant matter. As a result, fibre provides feelings of fullness without adding excess kilojoules. In the short term, this can prevent overeating. In the long term, this can assist with weight management and prevent the risk of overweight and obesity. Decreased risk of obesity can enhance self-esteem (mental health and wellbeing). Individuals of optimal body weight may be more able to exercise and promote fitness (physical health and wellbeing).[5]

5 In this example, two functions of fibre are explained along with two different impacts on short- and long-term health and wellbeing.

Practise the key skill

The following table displays information from the Australian Dietary Guidelines (which provides recommended serving sizes for individuals to consume to maintain health and wellbeing). Although this information is not required, it is a very good way of looking at diet deficiencies and nutrients. The following table shows the typical food intake of Jackie (a 17-year-old female) compared with the recommended number of serves for someone her age:

	Vegetables and legume/beans	Fruit	Grain (cereal) foods	Lean meats, poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans	Milk, yoghurt, cheese and/or alternatives	Unsaturated spreads and oils
Recommended number of serves from Dietary Guidelines	5	2	7	2½	3½	2
Jackie's typical intake	5	1	7	1	1	4

3. Identify the food groups that Jackie is consuming in insufficient amounts.
4. Discuss two possible short- and/or long-term consequences on Jackie's health and wellbeing if she continues to consume insufficient amounts of two of the food groups identified in question 3.
5. Identify the food groups that Jackie is consuming in excess amounts.
6. Discuss two possible short- and/or long-term consequences on Jackie's health and wellbeing if she continues to consume excess amounts of the food groups identified in question 5.

KEY SKILL Evaluate the effectiveness of food-selection models and other tools in the promotion of healthy eating among youth

In order to become proficient in this skill, knowledge of different food-selection models is necessary. The Australian Guide to Healthy Eating and the Healthy Eating Pyramid are two food-selection models that can be used by youth as tools to promote health and wellbeing. Understanding how they can be used is an important aspect of this skill. Using these tools to analyse and plan food intake can assist in developing a deeper understanding of each model.

If a question asks you to address the effectiveness of the food-selection models/tools, you will need to provide examples of strengths and weaknesses in your answer. This can also include the limitations of using this particular model. It may be a good idea to complete a table of advantages/disadvantages or strengths/weaknesses of each model and then apply these examples to different situations.

Food-selection model/tool	Advantages/strengths	Disadvantages/weaknesses
Australian Guide to Healthy Eating		
Healthy Eating Pyramid		
Health Star Rating Program		

A typical scenario in which food-selection models could be used to assist in promoting the health and wellbeing of youth is explored in the following case study.

Simon is 16 years old and enjoys playing football. He recently made the representative side for his region and is now committed to training three nights a week and playing every Sunday. He also trains in the gym at school twice a week. He has been purchasing his lunch from the school canteen most days of the week and also buys food from takeaway outlets on his way home from football training. Simon is unsure whether he is consuming all the foods he should be to provide the nutrients he needs to maintain optimal health and wellbeing.

To discuss a possible solution to Simon's eating challenges, one approach might be to identify a food-selection model, describe it, and then discuss how it could be used to assist Simon to consume healthy foods. An initiative established to promote healthy eating is the Australian Guide to Healthy Eating.

The Australian Guide to Healthy Eating is a food-selection model devised by the federal government.[6] It is comprised of a poster that breaks the five food groups into the proportions in which they should be consumed on a daily basis. The largest section of the pie graph, and therefore the food group that should be consumed in the greatest proportion, is the grain group. This includes food items such as cereals, breads and rice. Around a third of all foods should come from this group.

6 The food-selection model is identified.
7 The food-selection model is explained in greater detail.

The next section is the vegetables and legumes/beans group. Around a third of all foods should come from this group. The third group is the lean meats and poultry, fish and eggs. Around one-seventh of all foods should come from this group.
The fruit group and dairy products such as milk, yoghurt and cheese are the final two food groups. Each of these should account for around one-eighth of all foods consumed.
The guide recommends drinking plenty of water, using only small amounts of healthy fats such as canola and olive oils, and limiting discretionary foods such as those containing alcohol or high levels of saturated fat, salt and/or sugar.[7]
The Australian Guide to Healthy Eating can assist Simon in adopting a healthy diet, but some of his circumstances may reduce his ability to follow it closely. The guide is in graphical form, which might make it easier for Simon to understand it and make changes to his diet.[8] The Australian Guide to Healthy Eating does not include serving sizes, which might make it hard for Simon to consume adequate amounts from each food group.[9] As Simon purchases a lot of his foods, he will have to learn to break composite foods down into their parts so he can classify them into one of the five food groups. He may be able to do this by keeping a food diary of all the food and drink he consumes. He can then take some time to practise breaking these items down to their primary components. If Simon gains an understanding of the components of different items available from the canteen and takeaway outlets, he may be able to choose foods that more closely reflect the proportions outlined in the guide.[10]

8 Key aspects of the Australian Guide to Healthy Eating are included. It is important to avoid being too general and to provide examples specific to Simon where possible.

9 Aspects of the model that may limit Simon's ability to follow it are also discussed.

10 Ways of increasing Simon's understanding of the model and so improve his diet are listed.

Practise the key skill

7. Leonie is 14 and has just become a vegetarian.
   a. Identify one food-selection model and explain how it could assist Leonie in consuming foods that will provide her with the nutrients she needs to maintain optimal health and wellbeing.
   b. Evaluate the effectiveness of the model selected to assist Leonie with her food selection. In your response, include one strength and one weakness of the model chosen.

KEY SKILL Evaluate the validity of food and nutrition information from a variety of sources

This key skill is focused on the word *evaluate*. When evaluating a variety of information sources, you are determining the quality of the information that is provided. The R.E.A.L. strategy will enable you to be able to do this effectively.

Nutrition information is now sourced from a variety of different resources. No longer do people solely rely on health professionals for advice; instead they turn to resources such as the internet for their information. When using these other resources, it is important that the consumer is able to validate this information.

When referring to nutrition information presented in a magazine, the following questions should be asked: What are the author's credentials? Are there any other references? Have they written other relevant material? How big was the study group (if applicable)?

If the information is being sourced from a website, then the R.E.A.L. strategy should be adopted to validate the information.

- **R**ead the URL.
- **E**xamine the site's contents.
- **A**sk about the author's name.
- **L**ook at the links.

Below is an example of using the R.E.A.L. strategy when looking at the Better Health Channel.

1. **Read the URL** — https://www.betterhealth.vic.gov.au/
   The web address ends in .gov.au, which is an indication that it is a reliable source. It is fully funded by the Victorian government and does not receive additional support or sponsorship.[11]

   11 The URL has been identified.
2. **Examine and look at the authors, publishers and organisation who funds the site**.
   The authors of the site are from the digital strategy services team, which are part of the Victorian government Department of Health and Human Services.[12]

   12 The authors of the site and the government department have been identified.
3. **Ask for authors' names and contact details.**
   There are clear contact details provided on the site, on their contact page.[13]

   13 The authors' contact details have been found.
4. **Links — what types of links does the page lead you to?**
   Associated links are other government agencies such as Nurse on Call. Links do not lead to private organisations.[14]

   14 The links are evaluated as being to other government sites not private organisations.

Practise the key skill

8. To practise the key skill of evaluating the validity of nutrition information, use the R.E.A.L. strategy on the following websites:
   a. Nutrition Australia
   b. Live Lighter
   c. Lite n' Easy.

on Resources

Weblinks Nutrition Australia
LiveLighter
Lite n' Easy

KEY SKILL Analyse the interaction between a range of factors that act as enablers or barriers to healthy eating among youth

This skill requires an understanding of a range of different factors that can have an impact on a young person's ability to consume healthy foods. These factors are grouped into three categories: social, cultural and political factors. Factors can act as either enablers or barriers to healthy eating. An example of a social factor — income — is discussed in the following example.

Explain how household income can act as an enabler or barrier to healthy eating for youth.

Income affects people's ability to consume healthy foods. Young people who come from a household that has a relatively high income can easily afford fresh nutritious foods; however, others who are brought up in a low-income household may be more inclined to purchase energy-dense, processed foods, which are cheaper in comparison.[15] In this example, income can affect people differently, and is therefore both a barrier and an enabler to healthy eating.

15 In this example one factor is analysed and reasons provided for how it can be a barrier to one person while being an enabler for another.

Social, cultural and political factors all have an impact on a person's ability to consume healthy foods. Many of these factors are interrelated, and can act as either enablers or barriers to healthy eating. The example below looks at how two different factors can interact to affect healthy eating for youth.

Briefly explain how a social factor can interact with a political factor when making decisions about food selection.

Health promotion (a political factor) has been shown to be more effective with people who have experienced a higher level of education (a social factor) than others. They are more likely to read health promotion information and take action, such as in relation to the importance of healthy eating. They are also more likely to pay attention to food labelling when it comes to food selection (political factor)[16] as they have an increased understanding of how to read the labels correctly.

16 In this example the political factors of health promotion and labelling are identified and linked to level of education, which is a social factor.

Explain how a cultural factor can interact with a social factor to have an impact on the ability of a person to consume healthy food.

Gender, a cultural factor, can also affect a person's ability to eat healthy foods, as research has shown that males consume fewer fruits and vegetables and are also more likely to consume more energy-dense processed foods than females. This behaviour can be enhanced when the friendship (social)[17] group also shares similar views on food selection. The work environment (social) can also impact on food behaviours. Young people can be influenced by what foods others are consuming around them, as well as what food outlets are near their work. Building sites, which are often largely populated with males, often have visiting food trucks, which sell energy-dense, processed foods, often with a limited selection of healthy food available.

17 In this example, a cultural factor of gender has been linked with the social factor of the influence of friends and work, and the impact on healthy food choice has been discussed.

Practise the key skill

Tom is an apprentice carpenter who lives at home with his parents and older sister who is studying dietetics. He is also an aspiring footballer who is playing in the VFL for Sandringham. He recently completed his VCE; however, he decided that he wasn't keen on university, instead taking on an apprenticeship. Tom eats at home approximately three times a week and other times consumes his meals at either at the football club or out with friends on the weekend. His meals are generally nutritious in nature, as he is well aware of the correct foods required to enable him to peak on the weekends for his matches. When at trade school once a month, he often falls into the trap of going out for lunch with his friends and McDonald's is the obvious choice as it is across the road from his TAFE. Tom is earning a good wage considering he is not paying any rent and so could afford to spend more on a healthy lunch, however he is often easily influenced by those around him.

9. Discuss the range of different factors that have interacted to have an impact on the food intake of Tom and his friends.

4.10.2 Topic summary

Introduction to the nutrients required during youth

- There are six categories of nutrients required for optimal health and wellbeing: carbohydrates, protein, fats, water, vitamins and minerals.
- Youth require a balance of the six categories of nutrients in order to maintain optimal health and wellbeing.
- The main function of carbohydrates is as the preferred energy source.
- Fibre is a type of carbohydrate that is indigestible. Fibre has numerous health benefits, such as reducing hunger, and decreasing cholesterol and glucose absorption. Fibre also acts to assist in moving food and waste products through the digestive system and reduce the chance of colorectal cancer later in life.
- Protein is required for the growth, maintenance and repair of body cells and structures. It can also be used as a secondary energy source.
- The main function of fats is as a fuel for energy production. They are also a key component of cell membranes.
- There are four types of fat. Monounsaturated and polyunsaturated fats are a better choice than saturated and trans fats because the latter increase the risk of cardiovascular disease and type 2 diabetes. However, all fats are a concentrated source of energy.
- Water is required for many body processes, including functioning as a medium for all chemical reactions in the body and forming an important part of blood and soft tissues.
- Calcium is an important component of hard tissues and is required to achieve optimal peak bone mass.
- Iron is required for haemoglobin in blood and a deficiency can lead to anaemia.
- Vitamin D is required in order for calcium to be absorbed in the small intestine and therefore assists in building hard tissue.
- The B-group vitamins are required to release energy from carbohydrates, protein and fat.
- Folate and vitamin B12 play a role in the development of red blood cells, which enable oxygen to be transported around the body correctly.
- Folate is also required for cells to duplicate and is particularly important in times of rapid growth, such as pregnancy and in youth.

Food-selection models and other tools to promote healthy eating among youth

- Food-selection models can be used as tools to assist youth in preventing nutritional imbalance.
- The Australian Guide to Healthy Eating presents the five food groups in a pie chart, which represents a ‘plate model’.
- The Healthy Eating Pyramid contains four layers relating to the proportions of different foods that should be consumed.
- The Health Star Rating System is a food-selection tool that assists consumers to purchase food products that are healthier than similar products, as they have been ranked according to their content of sugar, saturated fat, sodium, fibre and energy contributions.

Consequences of nutritional imbalance

- If energy intake and expenditure are not roughly the same, weight gain or loss will result.
- Nutrient imbalance can result in a range of short- and long-term consequences for youth.
- Short-term consequences include a lack of energy, a spike in blood glucose levels, overeating and constipation.
- Long-term consequences include dental caries, periodontitis, overweight and obesity, type 2 diabetes, cardiovascular disease, sleep apnoea, arthritis, osteoporosis, colorectal cancer, and anaemia
- The short- and long-term consequences of nutrient imbalance can have an impact on all aspects of the health and wellbeing of youth.

Sources of nutrition information and strategies to evaluate their validity

- Nutrition information can be sourced from a range of different places, dieticians, nutritionists, television, print media and digital media sources including nutrition apps.
- Nutritionists generally work more commonly with health promotion programs and larger community groups, compared with dietitians, who can give individual and more specific information regarding particular dietary deficiencies or health conditions.
- When sourcing nutrition information from the internet you can employ the R.E.A.L. strategy to ensure that the website or blog is a valid source of information.

Food trends and food marketing tactics and their impact on youth health and wellbeing

- There are a number of different strategies used in the marketing of food to young people, often centered on digital marketing: immersive marketing, location-based marketing, product placement, celebrity endorsement and social influencers.
- These strategies are all focused on connecting consumers to brands, while at the same time collecting as much information about consumers as possible to continue relationships in the future.
- The 'clean eating' food trend has been strongly influenced by social media and can have both positive and negative impacts on health and wellbeing.
- Uber Eats and other food delivery service providers are becoming increasing popular among young people, with positive and negative impacts on health and wellbeing.

Enablers and barriers to healthy eating

- Social, cultural and political factors can all affect the ability of young people to consume nutritious foods. They can act as enablers or barriers to healthy eating.
- Social factors include family, friends, socioeconomic status (income, education, occupation) and access to nutrition information through social media.
- Cultural factors include gender, ethnicity and religion.
- Political factors include food policies and laws, food labelling and health promotion.

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0018).

4.10 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

The federal government's Health Star Rating Program places stars on food products based on the nutrition contribution of the product. They market the program by saying 'the more stars, the better' on individual products (a product can reach a maximum of 5 stars). The products are given star ratings on individual nutrients and not whole foods, and most fruits and vegetables do not come in a packet.

Explain a limitation of the statement 'the more stars, the better'. **(2 marks)**

Question 2

Noah is an active 16-year-old boy. Below is a typical breakdown of the amount of foods he consumes daily, in comparison to the recommended amounts from the Australian Dietary Guidelines.

	Vegetables and legumes/ beans	Fruit	Grain (cereal) foods	Lean meats, poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans	Milk, yoghurt, cheese and/or alternatives	Unsaturated spreads and oils
Recommended number of serves from Australian Dietary Guidelines	5	2	7	2½	3½	2
Noah's typical intake	3	1	8	1	1	4

a. Which food groups is Noah over-consuming? **(2 marks)**
b. Which food groups is Noah under-consuming? **(4 marks)**
c. Explain two short-term consequences for Noah's health and wellbeing if he continues this diet. **(2 marks)**
d. Explain two long-term consequences for Noah's health and wellbeing if he continues this diet. **(2 marks)**
e. Identify two ways that Noah could use the Australian Guide to Healthy Eating to assist him to consume a more balanced diet. **(2 marks)**
f. Identify two limitations Noah may find in using this guide to assist him with his food selection. **(2 marks)**

Question 3

Sharni is a 12-year-old new migrant to Australia and is only just learning to understand English. Which of the food selection models/tools would you recommend to help teach Sharni some basic nutrition information, and why would you suggest this model/tool over the other two options? **(3 marks)**

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4.10 Exercise 2 studyON: Topic test online only

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Interactivities Crossword (int-6852)
Definitions (int-6853)

School-Assessed Coursework Unit 1 AOS 2 Outcome 2

Area of Study 2 Health and nutrition

Outcome 2

Apply nutrition knowledge and tools to the selection of food and the evaluation of nutrition information.

School-Assessed Coursework 2 online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Or, to download the assessment as a Word document, go to your eBook at www.jacplus.com.au, and go to the Resources tab.

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Digital document School-Assessed Coursework 2 (doc-30073)

5 Promoting youth health and wellbeing

5.1 Overview

Key knowledge

- Aspects of youth health and wellbeing requiring health action, as indicated by health data on burden of disease and health inequalities, and research on the concerns of young people
- Government and non-government programs relating to youth health and wellbeing
- Community values and expectations that influence the development and implementation of programs for youth

Key skills

- Use research and data to identify social inequality and priority areas for action and improvement in youth health and wellbeing
- Describe and analyse factors that contribute to inequalities in the health status of Australia's youth
- Analyse the role and influence of community values and expectations in the development and implementation of health and wellbeing programs for youth

FIGURE 5.1 How would we rate the health and wellbeing of Australia's youth?

KEY TERMS

Binge drinking consuming seven or more standard drinks for males or five or more standard drinks for females in one sitting
Body image how you see your body, the way you feel about your body, the way you think about your body and the behaviours in which you engage as a result
Community expectations behaviours or actions that can be anticipated
Community values judgements about what is important to or good for a community
Depression extreme feelings of hopelessness, sadness, isolation, worry, withdrawal and worthlessness that last for a prolonged period and interfere with normal activities
Discrimination when a person or group of people is treated differently from other people, often as a result of factors such as race, religion, sex, sexual orientation or gender identity
Health action behaviour change where health-compromising behaviours are replaced by health-enhancing behaviours
Health inequalities differences in health status or in the distribution of health risk and protective factors
Health literacy the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate decisions about their health and wellbeing
Illicit use of drugs use of an illegal drug, which is prohibited from manufacture, sale or possession, or the misuse of a legally available drug
LGBTIQ acronym for commonly used definitions of people who are not heterosexual: lesbian, gay, bisexual, transgender, intersex, questioning
Protective factor something that enhances the likelihood of a positive health and wellbeing outcome and lessens the likelihood of negative health and wellbeing outcomes from exposure to risk
Risk factor something that increases the likelihood of developing disease or injury
Sexual health a state of physical, mental and social wellbeing linked to sexuality
Social connections the relationships you have with the people around you
Social exclusion when an individual is unable to participate fully in social and economic life, such as not having a job, not receiving an adequate income, not getting a good education or not being connected to family, friends and the community
Social inequality unequal distributions of resources, wealth and opportunities within a group or society based on characteristics such as religion, ethnicity, gender, age and class
STI sexually transmitted infection
Stress a response to pressure or a threat
Values judgements about what is important in life

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0019).

5.2 What areas of youth health and wellbeing need action?

KEY CONCEPT Aspects of youth health and wellbeing requiring health action

The World Health Organization has identified the transition to responsibility for their own health and wellbeing as important for all young people. VicHealth consider that as young people move from youth to adulthood they interact with the people and places that can provide them with the elements of a healthy life: positive family relationships, a sound education, strong social connections, respectful intimate relationships, meaningful work, enjoyable leisure activities and a healthy lifestyle.

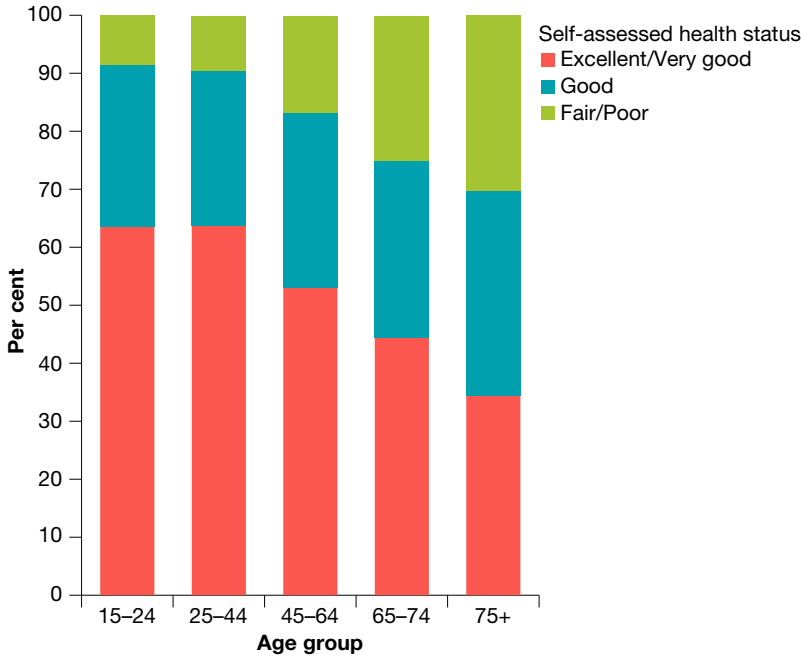
FIGURE 5.2 VicHealth believes that the period of transition from youth to adulthood offers opportunities for better health and wellbeing, and healthy patterns for the future.

So how does the health and wellbeing of Australia's youth rate? Figure 5.3 indicates that over 90 per cent of Australian youth rate their health as either good, very good or excellent. However, data on rates of illness and death or self-assessed health status indicate that there are still areas for improvement. Even though 63.4 per cent of young Australians aged 15 to 24 rated their health as excellent/very good in figure 5.3, 9.1 per cent rated their health as only fair/poor.

These fair/poor areas often involve **risk factors** that commonly emerge or increase in the youth stage, but which can affect current and future health and wellbeing.

Health inequalities exist among young people in Australia as a cohort and between young people and other age groups. Health inequalities may result from sociocultural factors, such as income, education, **community expectations** or gender, that are avoidable or unfair. These are called **social inequalities**.

FIGURE 5.3 In 2014–15, 63.4 per cent of young Australians aged 15 to 24 rated their health as excellent/very good, but 9.1 per cent rated their health as fair/poor.



The Dropping Off The Edge research program uses indicators to identify the most disadvantaged suburbs and local government areas in each state and territory in Australia. Disadvantaged suburbs are characterised by more lone parent households and social inequalities such as low rates of education and employment, and high rates of rental stress, disability, criminal convictions and poverty. Young people growing up in these disadvantaged communities experience higher rates of **social exclusion** and enjoy few opportunities for improving their circumstances when compared with peers in more affluent suburbs. Young people in these areas also experience higher rates of low birth weight, childhood injuries and domestic violence and lower rates of immunisation.

Young people in disadvantaged communities are not only more likely to live in poverty, but are also less likely to have access to sports clubs, libraries and other recreational and arts facilities, which those in more affluent suburbs may appear to take for granted. Their schools are also less likely to offer extracurricular activities that enable young people to engage with others who live in different areas and have different life experiences.

For young people in low-income families, access to these activities is made difficult by not being able to afford registration fees, uniforms and other equipment, or even the petrol for transport to the activities.

Affluent suburbs tend to have good opportunity structures — a combination of physical facilities and social networks that provide access to education, jobs and other opportunities. Poor suburbs often lack these opportunity structures.

Health inequalities in youth can also be a result of risk taking and inexperience.

Health inequalities can be addressed by empowering youth to change behaviour, through government action or by early intervention to promote **protective factors** through health promotion programs. Risk and protective factors are summarised in figure 5.4.

Your task in topic 6 (the next topic) will be to explore a youth health and wellbeing focus and produce a detailed report. Some of the concerns that youth have about their health and wellbeing or aspects of youth health and wellbeing requiring **health action** that you can research will be outlined in this topic. These outlines are not intended to provide you with a detailed explanation, but rather, just enough information for you to decide which aspect of health and wellbeing you want to investigate. The Australian Bureau

of Statistics (ABS) *Australia's Health 2018* report and the Mission Australia Youth Survey are sources of data that will be used to gain an understanding of the health inequalities and concerns relating to Australian youth.

FIGURE 5.4 Youth health inequalities arise from variations in exposure to risk and protective factors.

Each year Mission Australia, a non-government community service organisation, seeks feedback from young Australians aged 15 to 19 about the issues that concern them. The information gained from this survey is used to inform government action and policy as well as the work of community organisations.

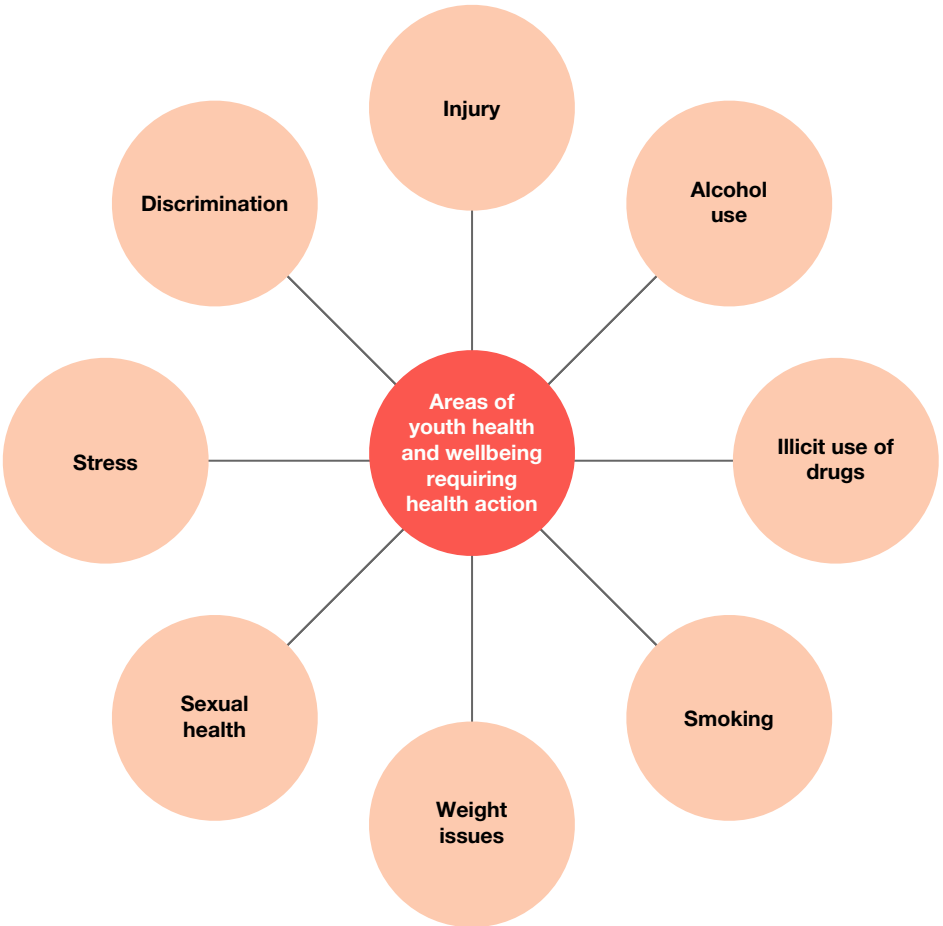
According to Drug and Alcohol Research and Training Australia (DARTA), the youth stage has always posed risk factors for health and wellbeing — but most young people get through it successfully. However, DARTA suggests that youth today are exposed to social issues and risk factors much earlier and are now

specifically targeted by advertisers in a relentless manner. Communication of information is immediate, with no 'wait-time', and worldwide trends and fads spread quickly.

In the youth stage, males usually develop later than females. Adults rely on reasoning and judgement when making decisions, whereas young people can tend to use emotions to process information rather than think through possible consequences of their choices. This means that they can feel as though they will live forever; take risks without fear of consequences; don't believe it could happen to them; have limited attention spans and a different concept of time; and will understate risks and overstate the gains of undertaking health-compromising behaviours.

The next sections will set out the main aspects of youth health and wellbeing requiring health action. These are summarised in figure 5.5.

FIGURE 5.5 Areas of youth health and wellbeing requiring health action



5.2.1 Injury

'Injury' is an umbrella term that refers to a range of causes of mortality and morbidity, including traffic accidents, suicide and poisoning, falls, violence and drowning. According to the Australian Institute of Health and Welfare (AIHW), although death rates from injury have decreased significantly over the past 20 years, injury — which includes suicide — is still the leading cause of death for youth in Australia.

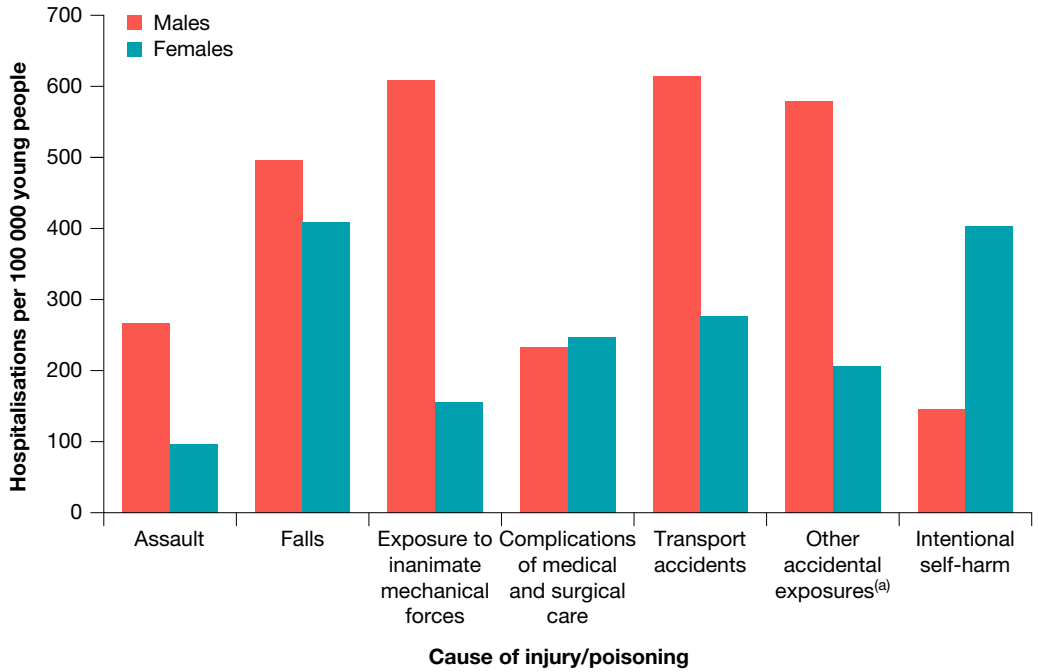
Serious outcomes from injury (more common in road crashes) are spinal cord and traumatic brain injury and death. Outcomes that contribute to morbidity without being life threatening (more common in sport) include soft tissue sprains and strains, bone fractures, cuts, eye wounds and dislocations.

FIGURE 5.6 All injuries are considered to be preventable, which can add to the impact that they have on individuals.

Burden of disease, inequalities and concerns of young people

Young people are over-represented in injury statistics compared with any other age group. According to the AIHW in their report *Australia's Health 2018*, the leading causes of death for young people aged 15–24 years were suicide (34.3 per cent), land transport accidents (21.3 per cent), accidental poisoning (5 per cent) and assault (2.6 per cent). Land transport accidents (largely motor vehicle accidents) are the main reason for the hospitalisation of youth. The most common type of sporting injury sustained was a fracture (knee/lower leg; elbow/forearm; wrist/hand or head), followed by soft tissue injury.

FIGURE 5.7 Causes of injury/poisoning and hospitalisation for young people aged 15–24



(a) This category comprises accidental drowning and submersion; accidental threats to breathing; overexertion; travel and privation; and accidental exposure to other and unspecified factors.

Source: AIHW, *Australia's Health 2016*, Australia's health series no. 15. Cat. no. AUS 199. Canberra: AIHW.

The following statistics from various agencies point to injury inequalities or concerns among youth.

- The highest age-specific rate for being hospitalised as the result of a road crash was for males aged 15–24 (321 cases per 100 000 population). Males are 1.9 times more likely to be hospitalised for injury/poisoning than females.

- Females aged 15–24 are 2.8 times more likely to be hospitalised for self-harm than males aged 15–24.
- Males are 2.2 times more likely to be hospitalised for transport accidents than females.
- The rates of hospitalisation for assault for young males in 2013–14 were twice those of females.
- 15- to 24-year-olds have the highest age specific rate of spinal cord injury. The ratio of male to female injury in this age group is 9 to 1.
- Over the past 15 years, the rate of ACL sporting injuries and reconstructions in Australians under 25 years of age has risen more than 70 per cent, with the greatest increase among children under 14.
- The annual incidence of ACL injuries increased by 43 per cent, and by 74 per cent among those under 25 years of age. In males, the peak incidence in 2014–15 was for 20- to 24-year-olds; for females, it was for 15- to 19-year-olds.
- 15- to 19-year-old males are most at risk of suffering traumatic brain injury — 399 per 100 000 population compared to 189 per 100 000 population for the community as a whole.
- Orygen found in 2016 that 24.4 per cent of young women and 18.1 per cent of young men aged 20–24 have self-injured in their lifetime.
- Youthsafe found that every four minutes and 24 seconds, on average, a young person is injured in an Australian workplace.
- Rural youth are more likely to engage in dangerous behaviours that result in accidental injury than youth in urban areas.
- According to the AIHW, Indigenous children and young people are over one and a half times more likely to have injuries that require hospitalisation when compared to other Australians in the same age-range.
- Indigenous youth are six times more likely to die from assault and four times more likely to die from suicide than non-Indigenous youth.
- Mission Australia's 2018 survey found that 13.5 per cent of young people indicated that crime, safety and violence were a national concern, an increase from 12.8 per cent in 2016.

Contributing factors

Young people can be injured on the roads, while socialising, while participating in sport and recreation and in the workplace. The youth stage of the lifespan has specific relationships with both the type and rate of injuries experienced. Developing independence in the transition to adulthood increases the opportunity young people have for decision making, which can increase risk-taking behaviour.

FIGURE 5.8 Young drivers are at greatest risk of being involved in a crash in their first year of driving unsupervised when they are on their P-plates.

During the youth stage, the areas of the brain that control decision making and self-control are still developing, along with the reward-processing and pleasure-seeking areas. This can lead to youth engaging in more risk-taking behaviour.

Increased independence means that young people generally start being more mobile and have less adult supervision. New situations may require the development of new skills, such as employment or driving, and inexperience can have serious implications for injury.

For youth, peer acceptance may be a motivating factor in risk taking rather than longer-term concerns of health and wellbeing. Risk-taking behaviours, including alcohol or drug consumption, are particularly significant during youth and have a strong relationship with injury and death.

The over-representation of young people in transport-related accidents can be linked to risky behaviours including speeding, driving when fatigued, and driving under the influence of alcohol or other drugs. Inexperienced drivers have lowered hazard perception, and the still-developing brain, combined with other factors, such as driving at night and the presence of other young passengers, contribute to an increased risk of crash for young drivers.

Increased incidence of sporting injuries is thought to be the result of earlier specialisation at a younger age, longer sporting seasons, more intense training, a higher level of competition and a lack of free play.

When young people start their first job, they may be required to perform duties for which they have not received training. Young workers with little supervision in the workplace may have to make decisions for which they are ill-equipped. The likelihood of injuries or illness increases when dangerous equipment is being used. Many young workers have casual and temporary jobs and they may not stay long enough in a job to receive appropriate training. They may also be concerned that they will lose their job if they complain.

In rural areas, the roads may be of poor quality, young people may need to travel longer distances, and in less safe vehicles. The increased likelihood of injury in rural areas may be related to lower **health literacy** about accident prevention, such as the importance of compliance with safety regulations, speed limits, use of seat belts and vehicle roadworthiness.

CASE STUDY

Let's stop blaming young drivers for their deadly road crashes

Too often in Australia we hear tragic stories of another young life cut short in a car accident, and yet any attempts to dramatically reduce the death toll are not working.

Young male drivers are our hardest hit, with male drivers aged 17 to 24 making up just 12.7 per cent of all licence holders in Queensland but accounting for 20.3 per cent of driver fatalities.

Across Australia around 45 per cent of all deaths of young people can be attributed to a road accident, with a 17-year-old P-plate driver four times more likely be involved in a fatal road accident than a 26-year-old driver.

There has been some reduction in the number of fatal accidents involving young people over the years, but the focus is mostly placed on young drivers, with calls for more driver training and education.

Clearly this is not enough. We need to do something else to reduce the death — and injury — toll.

The Australian experience is not unique. This global reality has prompted me to look at young driver road safety in a different way.

Rather than attempting to fix only the drivers, we need to know more about their behaviours and their environment before we can intervene effectively.

What are the risks?

Recent research shows young drivers are placing themselves at greater risk of harm by:

- what they drive — young drivers who share mum and dad's car are less risky on the road
- when they drive — driving in circumstances that are risky for all drivers, but especially new drivers (such as at night or when they are tired)
- how they drive — that they, like drivers of all ages, may choose to speed, they may not wear their seatbelts if it is just for a short trip and they are likely to still make driving errors even after they passed their driving test
- why they drive — changing the way they drive depending on how they feel emotionally.

We often forget that young drivers are also mostly teenagers, and that being a teen can be tricky. Sensation seeking and impulsivity are normal parts of figuring out who we are.

We know teens are likely to struggle with depression and anxiety, so it makes sense these emotions will influence how they drive. We have also learnt that young drivers are influenced by the behaviours and attitudes of others, including parents, peers and police.

What may not be well known is that these important groups start to influence young driver behaviour long before the teen gets behind the wheel of a car, and their influence lasts long through independent driving. So we have this essential foreground information — what we can easily see — about behaviour, environment and the young driver.

But what about the background information, what we may not even suspect is there?

A different approach to safety

Let's think big! Let's improve young driver road safety by targeting the 'young driver road safety system'. A young driver's approach to road safety is a result of a dynamic and interactive system which emerges from actions and interactions between social, organisational and technical factors. It is not simply a product of the driver and their immediate environment.

We can understand the system across six levels of influence, from 1 at the top down to 6:

1. the government (where policies are made)
2. regulatory bodies (who inform policies)
3. local government (including parents)
4. other important organisations (such as schools, driving instructors and vehicle manufacturers)
5. the young drivers themselves, and others with whom they share the vehicle/road
6. the road and their vehicle.

So who is responsible for road safety?

Systems thinking is a radical approach in young driver road safety. Rather than laying the blame for most crashes on the young driver, crashes can be understood as a failure in the system which should actually protect young drivers.

For example, a crash leading to a young person's death can be related to factors at every level of the system, such as:

- driving an older vehicle (which has fewer crash-avoidance and crash-protection features) on poorly maintained roads
- driving after drinking alcohol when the designated driver decided to drink even more (and then encourages the young driver to go even faster)
- driving at night (which is more risky for everyone)
- driving when parents are unaware of how they behave on the road now they have their own car and are licensed to drive independently
- was there no public transport available?

Taking into account such factors, coupled with youthful exuberance and a complex web of physical, psychological and social development, perhaps we should be asking why young drivers do not crash more often?

Source: Scott-Parker, B 2018 'Let's stop blaming young drivers for their deadly road crashes', 2 January, www.abc.net.au//2018-01-01/road-toll-young-people-driver-behaviour-texting-drugs/9291678.

Case study review

1. What health inequalities do young people experience on our roads?
2. What are the risks that contribute to these health inequalities?
3. How can accidents be seen as a failure by the system that is meant to protect young drivers?

5.2.2 Alcohol use

Youth is a stage during which many people experiment with alcohol. Youth under the age of 18 are recommended not to consume any alcohol as their bodies and brains are experiencing rapid development, in particular the hippocampus, which is the part of the brain involved in memory and learning, and the prefrontal cortex, which controls planning, judgement, decision making and impulse control. The brain continues to develop through young adulthood up until the age of 25.

Although it is illegal to sell alcohol to people under 18 years of age, many young people have access to alcohol before they turn 18. The Drug Strategy Household Survey is conducted every three years. In 2016 it showed that the average age at which people aged 15–24 years said they first consumed alcohol was around 16.3 years. Research published in 2018 indicates that young people who drink weekly before the of age 17 are two to three times more likely to binge drink, drink drive, and be dependent on alcohol in adulthood compared with peers who don't drink. For youth aged 18, to reduce the risk associated with alcohol consumption, the Department of Health and Ageing recommends not consuming more than:

- two standard drinks on any day (to reduce lifetime risk)
- four standard drinks on any day (to reduce short-term risks).

Alcohol can reduce alertness and concentration, reduce coordination skills and problem-solving ability, promote risk-taking behaviours, including self-harm, and increase aggression. Young people under the influence of alcohol are less able to accurately assess risks to their own safety and that of others. This can lead to unsafe sex, physically dangerous behaviour, and driving or getting in a car with someone who is drunk. They will have lower levels of self-control and are less able to identify hazards and dangers. This means they can't assess the consequences of their own (or others') actions as effectively as someone who hasn't been drinking.

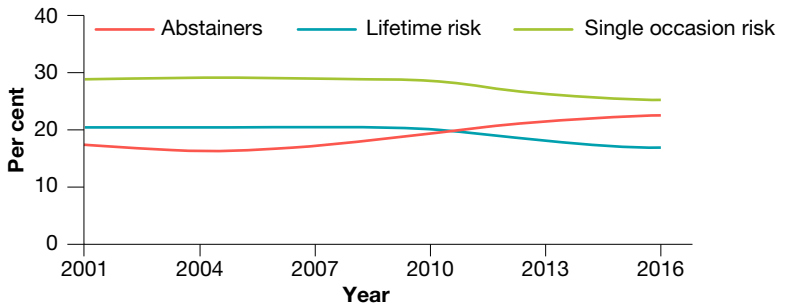
FIGURE 5.9 Youth is a stage when many people experiment with alcohol consumption.

Excessive alcohol intake — such as **binge drinking** — during youth is associated with higher rates of injury, death and violence-related trauma, cuts and concussions. Binge drinking can also affect brain development, such as memory, the ability to learn and verbal skills, and can increase the risk of alcohol-related problems later in life, such as alcohol dependence. Alcohol also increases mental health problems including depression, self-harm and suicide.

Burden of disease, inequalities and concerns of young people

The statistics show worrying levels of alcohol use among some young people and the level of damage it can cause. However, there are some encouraging statistics showing that young people are starting drinking later and some don't drink at all.

FIGURE 5.10 People aged 14 years or older, drinking alcohol at risky levels or abstaining, 2001 to 2016 (per cent)



Note: Lifetime risky drinkers are defined as people who consume more than two standard drinks per day (on average over a 12-month period). Single occasion risky drinkers are defined as people consuming five or more standard drinks on a single drinking occasion.

Source: AIHW 2017, *National Drug Strategy Household Survey 2016*.

EXAM TIP

When describing a trend shown in data, such as figure 5.10, ensure that you describe the movement shown in the graph as either an increase or a decrease — for example, the percentage of people 14 years and older drinking at risky levels that indicate lifetime risk has shown a small decrease from 2001 (21%) to 2016 (18%). It is useful to use the title of the graph in your response and it is useful to indicate the data in brackets.

- The AIHW found that, in 2017, 77.8 per cent of 12- to 17-year-olds and 15.2 per cent of 18- to 24-year-olds had never had a full serve of alcohol. In 2013, in the 18–24 age group, 17.2 per cent abstained and in 2016, 18.5 per cent abstained.
- The AIHW found that younger people are continuing to delay starting drinking, with the average age among those aged 14–24 trying alcohol for the first time increasing from 14.7 in 1998 to 16.2 in 2016.
- Twenty-one per cent of young men (33 per cent of male students who drank alcohol) and 11 per cent of young women (19 per cent of female students who drank alcohol) reported consuming 'seven or more drinks' on a day when they drank.
- According to the 2016 National Drug Strategy Household Survey, 15 per cent of young people aged 18–24 drank alcohol at levels that put them at very high risk of harm.
- Alcohol accounts for 13 per cent of all deaths among 14- to 17-year-old Australians. The National Health and Medical Research Council has estimated that one Australian teenager dies and more than 60 are hospitalised each week from alcohol-related causes.
- Alcohol contributes to the three major causes of teen death: injury, homicide and suicide. Five per cent of 12- to 17-year-olds reported drinking five or more drinks on at least one of the past seven days, with 9 per cent of 16-year-olds and 17 per cent of 17-year-olds drinking at this level.
- Australian Drug Foundation data suggest that young people (including underage drinkers) living in regional Victoria routinely drink at levels that put them at a high risk of harm compared with those in metropolitan areas.
- Mission Australia found in 2018 that 32.2 per cent of Aboriginal and Torres Strait Islander young people identified alcohol and drugs as an important issue in Australia today, compared with 28.5 per cent of non-Aboriginal or Torres Strait Islander young people.

Contributing factors

As most youth are not of legal drinking age, the environment in which they drink can promote or discourage excessive alcohol consumption. The places where young people consume alcohol are shown in table 5.1.

TABLE 5.1 Usual place of alcohol consumption by age group, 2016

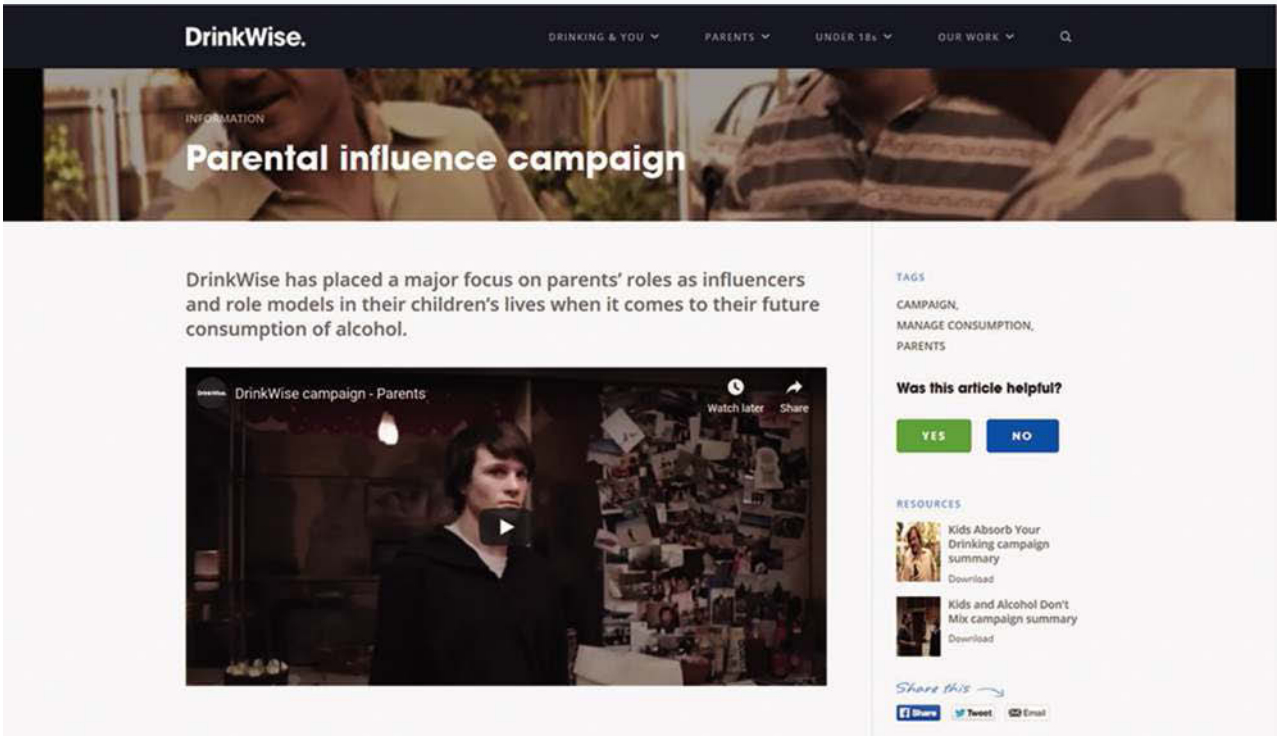
Place	12–17	18–24	25–29
In my own home	39.2	59.3	71.5
At a friend's house	38.3	54.8	48.5
At private parties	60.6	55.3	39.7
At raves/dance parties	10.2	21.3	8.4
At restaurants/cafés	*3.9	34.8	45.7
At licensed premises	*5.7	57.9	53.7
At school/TAFE/university, etc.	**1.1	4.4	*1.1
At the workplace	—	2.8	5.7
In public places	5.0	4.7	4.3
In a car	*1.5	2.5	2.6
Somewhere else	*7.3	3.8	2.8

*Estimate should be used with caution.
**Estimate is considered unreliable.

Many parents believe that serving alcohol at home teaches children to drink responsibly, but research indicates that children whose families refused to serve them alcohol at home were less likely to drink in other situations. Young people from families in which there is less supervision or alternatively excessive control, or conflict, are more likely to drink than young people who believe that their parents care about and are supportive of them. Youth who are exposed to a close family member drinking or getting drunk are also more likely to use alcohol.

The belief that all young people drink (despite research indicating that they don't) may cause them to drink. Many young people believe that drinking helps them fit in, or that without alcohol they won't have the confidence to take part in social situations. Australia has a strong drinking culture, and alcohol is present in many social situations, such as at sporting events. Seeing celebrities or role models drinking can create the assumption that it's a socially desirable thing to do. Current research also supports the idea that public health messages could be refocused to reflect the importance of drinking frequency. Instead of public health messages focusing on the amount consumed, there should be more messages recommending less frequent drinking.

FIGURE 5.11 DrinkWise was designed to address youth binge drinking and create awareness of the role of parents in youth attitudes to drinking.



Some young people in rural Australia associate drinking with **values** such as 'self-reliance', 'hardiness' and 'mateship'. Rural young people experience disproportionately high levels of alcohol misuse and its associated burden of disease and injury. This may be due to lack of venues for recreation, attitudes about help-seeking, economic and employment disadvantage, and less access to healthcare professionals and alcohol treatment services.

A limited range of venues for recreation and socialising could be a contributing factor to excessive drinking among rural youth, as local sports clubs (and the bars within) are among the few leisure and social venues in many rural areas. It has also been suggested that rural youth (especially males) experience high levels of boredom in leisure hours, which causes higher levels of alcohol use. Studies show that the increased misuse of alcohol in rural areas is a result of a lack of knowledge of alcohol guidelines and alcohol-related harm, easier access to alcohol and a low level of community awareness of alcohol as a problem.

on Resources

Weblink Alcohol damage video

5.2.3 Illicit use of drugs

Many people experiment with drugs and other substances during youth. **Illicit use of drugs** can lead to a range of short- and long-term effects on health and wellbeing, such as internal organ damage (including brain damage) and depression. Those who experiment with substances during youth are more likely to develop substance abuse issues later in life, which further increases the risk of health conditions. Although the impacts will depend on the type of drug, how it is taken and the duration of use, some common consequences include social isolation, mental disorders, poor academic performance, unemployment, increased rate of criminal behaviour and family breakdown.

Young people may also experience health concerns caused by others' harmful drug-taking behaviour. This includes drug-related violence at home or in public places, parental and peer substance use, and others' risk-taking behaviours, including driving under the influence of drugs. Some of the common substances used during youth include marijuana, amphetamines (including ecstasy and crystal meth), cocaine and heroin.

Burden of disease, inequalities and concerns of young people

The statistics show that cannabis is the most commonly used illicit drug, but the rates of use have decreased from 24.6 per cent of 14–19-year-olds in 2001 to 12.2 per cent in 2016.

- In 2016, 17 per cent of young people aged 14–19 had used illicit drugs in the previous 12 months — significantly less than in 2013 (20.6 per cent).
- Cannabis was the most commonly used illicit substance, with 16 per cent of students aged between 12 and 17 having ever used cannabis, and 7 per cent using it in the month before the survey.
- The proportion of 14-19-year-olds who misused pharmaceuticals was 3.7 per cent.
- Mission Australia found in 2018 that 28.7 per cent of young people nominated alcohol and drugs as a key issue facing Australia today.

Contributing factors

The reasons for youth trying drugs are complex. Like most risk-taking behaviours, drug use arises from a combination of factors that include risk taking and peer group pressure. Young people may use drugs because of the fear of not being accepted into a social circle that they believe includes drug-using peers. They also often use drugs because drugs interact with the chemistry of the brain to produce feelings of pleasure and to lessen the feelings of distress that may arise from depression, social anxiety and stress-related disorders. Young people may also be motivated to seek new experiences. The reasons for trying illicit drugs are shown in table 5.2.

TABLE 5.2 Factors influencing first use of any illicit drug, lifetime users aged 14 years or older, 2013 and 2016

Factor	14–19		20–29	
	2013	2016	2013	2016
Friends or family member were using it/offered by friend or family member	44.4	47.9	51.3	48.4
Thought it would improve mood/to stop feeling unhappy	19.2	14.3	8.7	12.7
To do something exciting	32.4	24.5	23.2	24.9

To see what it was like/curiosity	72.2	69.7	69.1	70.2
To enhance an experience	16.3	18	16.8	19.8
Other	2.5	3.2	1.4	4.1

Source: Australian Institute of Health and Welfare 2017. *National Drug Strategy Household Survey 2016: detailed findings*. Drug statistics series no. 28. Cat. no. PHE 214. Canberra: AIHW.

5.2.4 Smoking

Youth is a critical time in the development of tobacco addiction, and those who do not smoke during youth are less likely to smoke later in life. Nicotine is the addictive drug in tobacco smoke. Research has shown that the symptoms of addiction (craving and withdrawal) can begin when youth are smoking as few as two cigarettes a week. Evidence shows that young people can develop nicotine addiction — on average within two months of starting to smoke, with some reporting symptoms of dependence even before they start smoking on a daily basis.

E-cigarettes are battery-powered devices that heat a liquid to deliver vapour that can contain nicotine or flavours. People who use these are said to be 'vaping' and inhale the vapour in the same way as smoking a regular cigarette. In Australia, commercial sale by retail outlets of nicotine e-cigarettes or liquid nicotine for vaping (e-liquid) is illegal.

Smoking increases the chances of premature death and a range of conditions including cancer, cardiovascular disease and respiratory illness. Even though QUIT figures show that smoking rates steadily declined between 1991 and 2014, tobacco use is the single most preventable cause of ill-health and death in Australia, contributing an estimated 7.8 per cent of the total burden of disease. This equates to more drug-related hospitalisations and deaths than alcohol and illicit use of drugs combined.

Burden of disease, inequalities and concerns of young people

Rates of smoking among young people are extremely low. According to the AIHW's 2016 National Drug Strategy Household Survey, the average age at which 14- to 24-year-olds smoked their first full cigarette increased from 15.4 years of age in 2010 to 15.9 years of age in 2013 and to 16.3 in 2016.

The Australian Secondary School Students' Use of Tobacco, Alcohol, Over-the-counter Drugs and Illicit Substances survey is conducted by Cancer Council Victoria every three years. The 2017 report indicates that:

- in 2017, 83 per cent of all secondary students in Australia had never smoked. Levels of experimental and regular smoking increased with age, but by age 17 most students (65 per cent) had still never smoked.
- ABS data indicates that in 2017–18, 1.9 per cent of 15–17-year-olds were daily smokers. A further 0.7 per cent smoked less often than daily, while 1.7 per cent were ex-smokers and 95.3 per cent reported that they had never smoked.
- of those who have tried e-cigarettes, younger students were more likely to have used them recently. Around 34 per cent of 12- to 15-year-old users and 27 per cent of 16- and 17-year-old users reported vaping at least once during the past month.
- the Australian Bureau of Statistics (ABS) found that Indigenous youth are two to three times as likely to be daily smokers. In 2002, 51 per cent of Aboriginal and Torres Strait Islander males aged 15 years and over were daily smokers; the daily rate declined to 46 per cent in 2008 and to 34.4 per cent of males and 31 per cent of females in 2014–15.
- the ABS found that in 2002, 47 per cent of Aboriginal and Torres Strait Islander females aged 15 years and over were daily smokers; the daily rate declined to 43 per cent in 2008 and to 36 per cent in 2014–15.
- the ABS data indicates that the majority of the change in daily smoking rates has occurred in non-remote areas, with 47 per cent of people aged 15 years and over in remote areas smoking daily in 2014–15 (down from 50 per cent in 2002) compared with 37 per cent in non-remote locations (down from 48 per cent in 2002).

Contributing factors

The decline in young people smoking may be the result of public awareness campaigns, tighter restrictions around smoking in public spaces, greater regulations around legal purchasing age and increased costs of cigarettes. Despite the vast amount of information available about the health consequences of smoking, some young people continue to smoke. This could be because they don't perceive themselves as personally at risk or may underestimate the risk of conditions caused by smoking relative to other behaviours they undertake or witness. Other influences on smoking behaviour include the number of close friends who smoke and whether parents smoke. Exposure to tobacco advertising and product placements is strongly associated with smoking initiation.

FIGURE 5.12 Tighter restrictions now exist around smoking in public spaces, including the banning of smoking in playgrounds and public transport stations.

CASE STUDY

The 'sober generation': Australian teens snubbing alcohol and cigarettes thanks to parents, researchers say

Teenagers are turning away from alcohol and other substances — so much so that researchers studying the change in attitude have labelled this the 'sober generation'. A study conducted by Deakin University researchers and published on Friday in the journal *Drug and Alcohol Review* has found parent attitudes are significantly influencing attitudes of school-age children to alcohol. The researchers surveyed more than 41 000 teenagers in Victoria, Western Australia and Queensland between 1999 and 2015. They asked them questions like 'how easy would it be for you if you wanted to get some alcohol or cigarettes?' and 'how wrong do your parents feel it would be for you to drink beer?'. In 2000, almost 70 per cent of surveyed teenagers had already drunk a full glass of alcohol. By 2015, that figure had dropped to 45 per cent, meaning high school students abstaining from alcohol had become the majority.

Researchers found that not only were parents better educated about the harmful effects of alcohol, but they were also limiting supply. 'It ends up that parents' attitudes are a big thing that young people are reporting has been a major change,' the author of the study, John Toumbourou, said. He said the majority of teenagers were reporting that their parents did not think young people still in school should be drinking at all. Professor Toumbourou said a lot of the change had to do with the type of messages directed at parents from around 2004 and onwards. 'Lots of media [have been] looking at the harmful effects of alcohol on the brain and advising parents increasingly not to provide it,' he said.

Ella Whinfield, 14, from Canberra, said she has never drunk alcohol and she does not plan on starting any time soon. 'Maybe when I am older, but to be honest I think looks disgusting,' she said. 'I see drunk people on the streets, I know it can ruin your liver and really mess you up. I know some older kids do it... but my friends don't think it's cool.'

In addition to changing parental attitudes, the study also found that alcohol was harder to access. 'We asked young people about how easy it is to obtain alcohol within their community, and they're really telling us that it's become harder to obtain it,' Professor Toumbourou said. 'So we think there's a couple of things going on there. One is that with the change in parents' attitudes, adults are less likely to provide alcohol at a party, so that it means that setting that might have been occurring in 1999 has stopped. Also we think there is a tightening up such that the adults who are serving alcohol in bottle shops are less likely to hand it over when a young person asks for it.'

It was not only alcohol that teens were turning up their noses to. 'There's evidence that as the alcohol is coming down, there hasn't been a rise in other drugs,' Professor Toumbourou said. 'Tobacco has come down

even more steeply, and cannabis use is also reducing. So really what we're looking at here is a much more sober generation.'

However, Professor Toumbourou said it was not all about access. Teenagers were becoming generally more health conscious, which was leading to changes in peer group influences — drinking was no longer as cool as it once was. 'One thing leads to another, as more and more young people and their parents are taking on the message that alcohol is something risky, then the peer culture is influenced,' he said. 'So you look at the conversations young people will have with one another, it's more likely the issue of the risks will be brought up.'

Professor Toumbourou said another change they were seeing was a social economic gradient for youth drinking, which was not present when they first started surveying young people in 1999. 'And now that the public health messages are being taken onboard by the majority, what we are finding is that those in the more disadvantaged groups are the ones slowest to take on the message,' he said.

Source: Williams L, 2018 'The 'sober generation': Australian teens snubbing alcohol and cigarettes thanks to parents, researchers say', 13 January, www.abc.net.au/news/2018-01-12/australian-teenagers-turning-away-from-alcohol-research-says/9323858

Case study review

1. What does the article identify as the contributing factors for a reduction in youth drinking and smoking rates? Are there any other factors identified in this topic that would have contributed?
2. How are the attitudes of young people affecting their behaviour?
3. How is **social inequality** affecting behaviour change in young people in the case study?

5.2.5 Weight issues

To maintain a stable weight, young people need an energy (kilojoule) intake that equals their energy use. If they use more energy than they consume, they will lose weight. If, on the other hand, they consume more kilojoules than they need for growth and activity, they will gain weight.

Being underweight can lead to a weakened immune system and an increased risk of infection and disease. An inability to concentrate at school due to low energy levels can create stress and problems with schoolwork that affect mental and emotional health and wellbeing. Low body weight can also contribute to delayed puberty and the required increases in bone and muscle mass may not be achieved.

Obesity in youth can have lifelong implications and contribute to many leading causes of death among adults, such as cardiovascular disease, some cancers and type 2 diabetes. If the youth carries the extra weight into adulthood, the risk of developing these conditions continues to increase. In the short term, youth can suffer from psychological distress, sleeping problems and low levels of energy. Long-term risks of overweight and obesity include cardiovascular disease, type 2 diabetes, arthritis and some cancers. The increased prevalence of overweight and obesity among youth is due to the combination of changes to food intake and the development of sedentary lifestyles.

In addition to the effects on physical health and wellbeing, early obesity influences social and mental health and wellbeing. Overweight and obese youth are often bullied because of their weight. They may also face negative stereotypes, **discrimination** and social marginalisation. These social problems contribute to reduced mental health and wellbeing in the form of low self-esteem, low self-confidence and a negative **body image**, and can cause youth to be excluded from competitive activities that require physical activity.

Burden of disease, inequalities and concerns of young people

The statistics show that overweight and obesity has become a major health and wellbeing concern for Australian youth, particularly for those who live outside major cities.

- Just over one in five (22.6 per cent) children aged 2 to 17 years in Victoria were overweight or obese in 2017–18, down from 28.6 per cent in 2014–15. (ABS)
- In 2017–18, the Australian Bureau of Statistics' National Health Survey showed that almost one quarter (24.9 per cent) of young people aged 5 to 17 years were overweight or obese (17 per cent overweight and 8.1 per cent obese). The survey also found that just under half (46 per cent) of people aged 18 to 24 were overweight or obese.

- The percentage of overweight and obese children and youth has more than doubled over the past two decades and continues to rise. VicHealth states it is projected that, by 2025, one-third of 5- to 19-year-olds will be overweight or obese.
- VicHealth states it is projected that, by 2025, one-third of 5- to 19-year-olds will be overweight or obese.
- According to the Australian National Preventive Health Agency (ANPHA), compared with non-Indigenous Australians, Indigenous males and females were slightly less likely to be overweight, but 1.6 (males) and 2.2 (females) times as likely to be obese.
- In general, people who live outside major cities are more likely to be above a healthy weight. Much of this difference is due to the higher concentration of people of a lower socioeconomic status and of Aboriginal and Torres Strait Islander ethnicity, as well as a lower concentration of migrants, who as a group weigh less than Australian-born people.
- Three in ten Indigenous respondents to the Mission Australia survey indicated they were concerned about body image. Four in ten non-Indigenous females and one in six males were concerned about body image.

Contributing factors

An increase in obesity results from an imbalance between energy intake and expenditure, resulting in positive energy balance. While genetics can play a role in the development of obesity, it is not the cause of the recent increases in early obesity. Contributing factors are poor diet and snack choices, sugary beverages and increased portion sizes. The increased prevalence of overweight and obesity among youth is also due to the development of sedentary lifestyles and increased electronic and small screen recreation.

A report by the Cancer Council and National Heart Foundation revealed teens were spending too much time in front of the television, with 58 per cent of students having at least three televisions in their home and 40 per cent with video games in their bedrooms. In addition, more than three-quarters of teenagers were spending more than two hours in front of computers, laptops, tablets, video games and televisions every school day.

FIGURE 5.13 Overweight and obesity are increasing among young Australians.

5.2.6 Sexual health

Sexual health is not only about sexually transmitted infections but also about sexual relationships, safety and respect. Youth is often a time of sexual exploration, and this can have both short- and long-term effects on the health and wellbeing of young people.

If youth participate in unsafe sex, they may expose themselves to a range of sexually transmissible infections (**STI**s). STIs pass from one person to another through sexual contact. This includes oral, genital and anal sex. Chlamydia is by far the most common treatable sexually transmitted infection and

notifications continue to increase each year. The risk is highest in people aged 15 to 24 and 80 per cent of cases occur in this age group. Many STIs, such as chlamydia and syphilis, can have short- and long-term effects on health and wellbeing if not treated. These include infections and chronic pain in the cervix, pelvis and uterus. For males, STIs can affect the testes, urethra and prostate. Treatment is often not sought, as the condition may not have obvious symptoms. Other STIs, such as herpes and human immunodeficiency virus (HIV), are incurable and can affect the individual's health and wellbeing for the rest of their life.

According to the World Health Organization (WHO), sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of safe sexual experiences, free of coercion, discrimination and violence. The sexual rights of all young people must be respected and protected. Cyberbullying or sexting involves the use of technology or social media to harass, intimidate or threaten someone. Respectful relationships do not involve someone forcing or pressuring a young person to engage in sexual activity, including posing for sexually explicit photos.

Burden of disease, inequalities and concerns of young people

As the data show, the rate of certain STIs has increased since 2005, but the rate of teenage births has decreased since 2004. Whether a young person contracts an STI often depends on where they live.

- There were 11.9 births per 100 000 births to teenage mothers in 2015, which has decreased from 16 births per 100 000 in 2004.
- In 2018, chlamydia notification rates were highest in the age groups 20–24 (1978 per 100 000), 15–19 (1185 per 100 000) and 25–29 (1180 per 100 000). Over the past five years, there has been a decline in the annual chlamydia notification rate among people aged 15–19 years.
- The annual rate of notification of chlamydia in the Aboriginal and Torres Strait Islander population in the Northern Territory, Queensland, South Australia and Western Australia was 2.8 times that in the non-Indigenous population in 2016 (1193 per 100 000, compared to 427 per 100 000).
- Higher rates of STIs are recorded in remote areas, where 81 per cent of reported cases are 15- to 24-year-olds.
- Aboriginal and Torres Strait Islander young people are ten times as likely to have notifications for sexually transmissible infections as non-Indigenous young people.
- Aboriginal and Torres Strait Islander young people are four times more likely to be teenage mothers than are non-Indigenous young people.
- In an Australian Research Centre in Sex, Health and Society survey of year 10, 11 and 12 students who were sexually active, 28 per cent of young women and 20 per cent of young men reported having had sex at some time when they did not want to. Of these, 49 per cent gave being too drunk as a reason, more than 50 per cent reported being influenced by their partners, and nearly 30 per cent reported being frightened.
- The fifth National Survey of Australian Secondary Students and Sexual Health, conducted by LaTrobe University, found that 54 per cent of surveyed students reported receiving a sexually explicit text message and 26 per cent reported sending a sexually explicit photo of themselves.

Contributing factors

According to the AIHW, youth may be at an increased risk of STIs due to a lack of knowledge, inconsistency with condom use, and lack of communication and negotiation skills, which can make using condoms difficult. As many young people have not decided on a long-term partner, there is potential for STIs to spread at high rates in this age group.

The prevention of STIs is important to promote the health and wellbeing of youth in Australia. Avoiding sexual contact is the safest way to prevent contracting an STI. Studies by the AIHW have found that for those who are sexually active, using a condom during sexual contact can reduce the risk of contracting an STI. In 2013, 43 per cent of sexually active young people (in years 10–12) reported 'always' using condoms when they had sex in the previous year. A further 39 per cent used condoms only 'sometimes' and 13 per cent 'never' used condoms.

In rural areas, access to condoms is reduced for reasons such as supermarkets not stocking condoms or keeping them under the counter, very limited availability of free condoms, and a reluctance to install or maintain condom vending machines due to vandalism. Many young people use condoms and/or contraception inconsistently. Rural young people's risk of infection is therefore higher than average.

Rural youth face barriers to getting help with sexual health concerns, including physical isolation, lack of public transport, lack of specialised services, fears about confidentiality and, sometimes, conservative local attitudes. However, the National Survey of Australian Secondary Students and Sexual Health found that the internet can give youth access to reliable and confidential information in areas where questions may be too hard to ask. Results indicate that the use of social media is almost universal and plays a large role in the negotiation and development of sexual relationships. This may involve sending explicit messages and images, most of which appear to occur within relationships.

FIGURE 5.14 Using a condom during sexual contact can reduce the risk of contracting an STI; however, there are barriers to young people accessing them.

5.2.7 Stress

Under **stress** a person may feel tense, nervous or on edge. The stress response is a physical one: a surge of a hormone called adrenaline temporarily affects the nervous system. Stress is characterised by feelings of tension, frustration, worry, sadness and withdrawal that is of short duration. The body uses energy to cope during frequent bouts of stress. Although the link is still unclear, and research is ongoing, there is evidence to suggest that stress may contribute to poor physical health and wellbeing, such as cardiovascular disease, high blood pressure, increased risk of infection and chronic fatigue. Extended periods of stress can lead to more serious psychological disorders such as **depression** and anxiety. Depression is both severe and long lasting. Depression is characterised by extreme feelings of hopelessness, sadness, isolation, worry, withdrawal and worthlessness that last for a prolonged period and interfere with normal activities.

Burden of disease, inequalities and concerns of young people

The data below show that anxiety was the most common mental disorder among young people. The data also show that stress caused by schoolwork is rated highly among survey respondents.

- Nearly one in three young Australians (32 per cent) aged between 12 and 25 reports high or very high levels of psychological distress — more than treble the rate in 2007 (9 per cent).
- Fourteen per cent of young people aged 12–17 had a mental disorder in the last 12 months — anxiety was most common (7 per cent), followed by Attention Deficit Hyperactivity Disorder (6.3 per cent) and major depressive disorders (5 per cent).
- One in four young people are living with a mental disorder and 9 per cent of young people (aged 16–24 years old) experience high to very high levels of psychological distress.
- One third of Aboriginal and Torres Strait Islander young people have reported high levels of psychological distress; more than twice the rate of young non-Aboriginal or Torres Strait Islander people.
- In the Mission Australia 2018 survey, coping with stress was a major concern for around six in ten (56 per cent) females (extremely concerned: 25.4 per cent; very concerned: 30.6 per cent), compared with around one quarter (26.2 per cent) of males (extremely concerned: 9.5 per cent; very concerned: 16.7 per cent).

- In the Mission Australia 2018 survey, coping with stress was the top issue of concern, with 37 per cent of Aboriginal and Torres Strait Islander respondents indicating that they were either extremely concerned (18.2 per cent) or very concerned (18.8 per cent) about this issue.

Contributing factors

Growing up and finding a balance between independence and reliance on others can create stress and lead to serious depression for young people who are ill-equipped to cope, communicate and solve problems. Primary sources of stress for youth include relationships with friends and family; schoolwork, such as homework and assessment; expectations from others such as teachers and sports coaches; and problems in the lives of family and friends.

Feeling pressured or stressed by schoolwork may influence health and wellbeing and health behaviours. Stressed students can engage in more health-compromising behaviours such as smoking and drinking alcohol. They can also have more frequent health concerns such as headache and abdominal pain, and experience psychological problems such as feeling sad, tense and nervous.

Heavy use of social media can also create stress. The average 14- to 24-year-old Australian female spends almost 14 hours on social media every week: nearly two hours every day. Males aged 14 to 24 spend an average of just under 9 hours on social media every week. Fifty-six per cent of Australian youth are heavy social media users, with 25 per cent reporting being connected to social media constantly.

FIGURE 5.15 When young people use social media, unhelpful thoughts may arise through unrealistic comparisons, adding to the stress many young people feel.

The youth surveyed indicated that stress arose when they went on holidays or missed a social opportunity and didn't know what their friends were doing. Recent research has shown that using social networking sites can increase stress levels, produce anxiety and negatively affect a person's sense of self. Fear of missing out — known as 'FOMO' — is characterised as feeling anxious that something exciting or interesting is happening elsewhere. Social media can make anxiety worse when a young person sees posts and pictures about the wonderful time friends are having without them. An Australian Psychological Society stress and wellbeing in Australia survey found that 50 per cent of teens experience FOMO and that just under half (approximately 45 per cent) feel that their peers are having more rewarding experiences than them.

Creating a profile allows a person to decide exactly what image to present to others. Social media provides constant updates, which motivates many young people to continually check their status on mobile devices. Despite these negative impacts, social media can help psychologists monitor the mental health and wellbeing of patients, help to spread awareness about issues including mental disorders, and connect people with one another.

5.2.8 Discrimination

Discrimination is when a person or group of people is treated differently based on one of their characteristics such as their sex, culture or sexual orientation. Ethnic and race-based discrimination, for example, refers to discrimination based on perceived 'racial' differences, culture, religion or language. Gender identity discrimination happens when a person is treated less favourably than another person in a similar situation because of that person's gender-related identity, appearance, mannerisms or other gender-related characteristics of the person.

Around one in four young people aged 15 to 19 years report that they have experienced unfair treatment or discrimination, and the three main reasons for this were reported as gender, race/cultural background and age. Discrimination can have potentially negative impacts on mental health and wellbeing, such as creating stress and fear, and on physical health and wellbeing through the effects of stress on the immune, endocrine and cardiovascular systems. Affected individuals may attempt to manage their stress by engaging in behaviours that aredamaging to health and wellbeing, such as smoking and alcohol or illicit drug use. Discrimination may result in violence, which is associated with poor physical and mental health and wellbeing. Discrimination can, in turn, lead to social isolation and exclusion. Young people who feel that they are being treated unfairly may have their trust in others undermined, and hence experience a reduced capacity to form the **social connections** that are important for good mental health and wellbeing.

FIGURE 5.16 Young people can often experience discrimination based on their sexual preference.

Burden of disease, inequalities and concerns of young people

The statistics show that discrimination is a major issue for young people in Australia, particularly among Indigenous Australians.

- The Multicultural Youth Australian Census Status Report 2017/18 showed that almost half of multicultural young people had experienced some form of discrimination or unfair treatment in the last 12 months (48.7 per cent). Almost two thirds had witnessed someone else being unfairly treated or discriminated against (63.5 per cent).
- Around one quarter of Aboriginal and Torres Strait Islander and non-Aboriginal or Torres Strait Islander young people identified equity and discrimination as an important issue.
- Aboriginal and Torres Strait Islander young people were almost twice as likely to report having experienced racial discrimination than their non-Indigenous peers.
- For non-Aboriginal or Torres Strait Islander young people, the leading causes of discrimination were gender (39.1 per cent) and race/cultural background (30.8 per cent), with almost half of females who reported discrimination indicating that this was on the basis of gender.
- Female students are more likely than males to have decreased health and wellbeing because of racism.
- **LGBTIQ** young people report experiencing verbal homophobic abuse (61 per cent), physical homophobic abuse (18 per cent) and other types of homophobia (9 per cent), including cyberbullying, graffiti, social exclusion and humiliation.
- In the Mission Australia 2018 survey, equity and discrimination was listed as a concern by 23.6 per cent of non-Indigenous and 20.6 per cent of Indigenous respondents, making it the third most important issue to young Australians.

FIGURE 5.17 Discrimination, bullying and emotional abuse are issues of concern to Indigenous young people, 2018.

MISSION AUSTRALIA

National Aboriginal and Torres Strait Islander Youth Report: Youth Survey 2018

Issues of concern

Both Indigenous and non-Indigenous young people rated coping with stress, school or study problems and body image as their top 3 personal concerns.

Indigenous young people were more likely than non-Indigenous young people to be extremely/very concerned about:

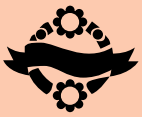
Drugs
15.3% concerned compared to 17%

Personal safety
24.9 % concerned compared to 24%

Alcohol
11% concerned compared to 14%

Bullying/ emotional abuse
21.9% concerned compared to 25%

Discrimination
19.2 concerned compared to 20%



Suicide
23.8 concerned compared to 20%

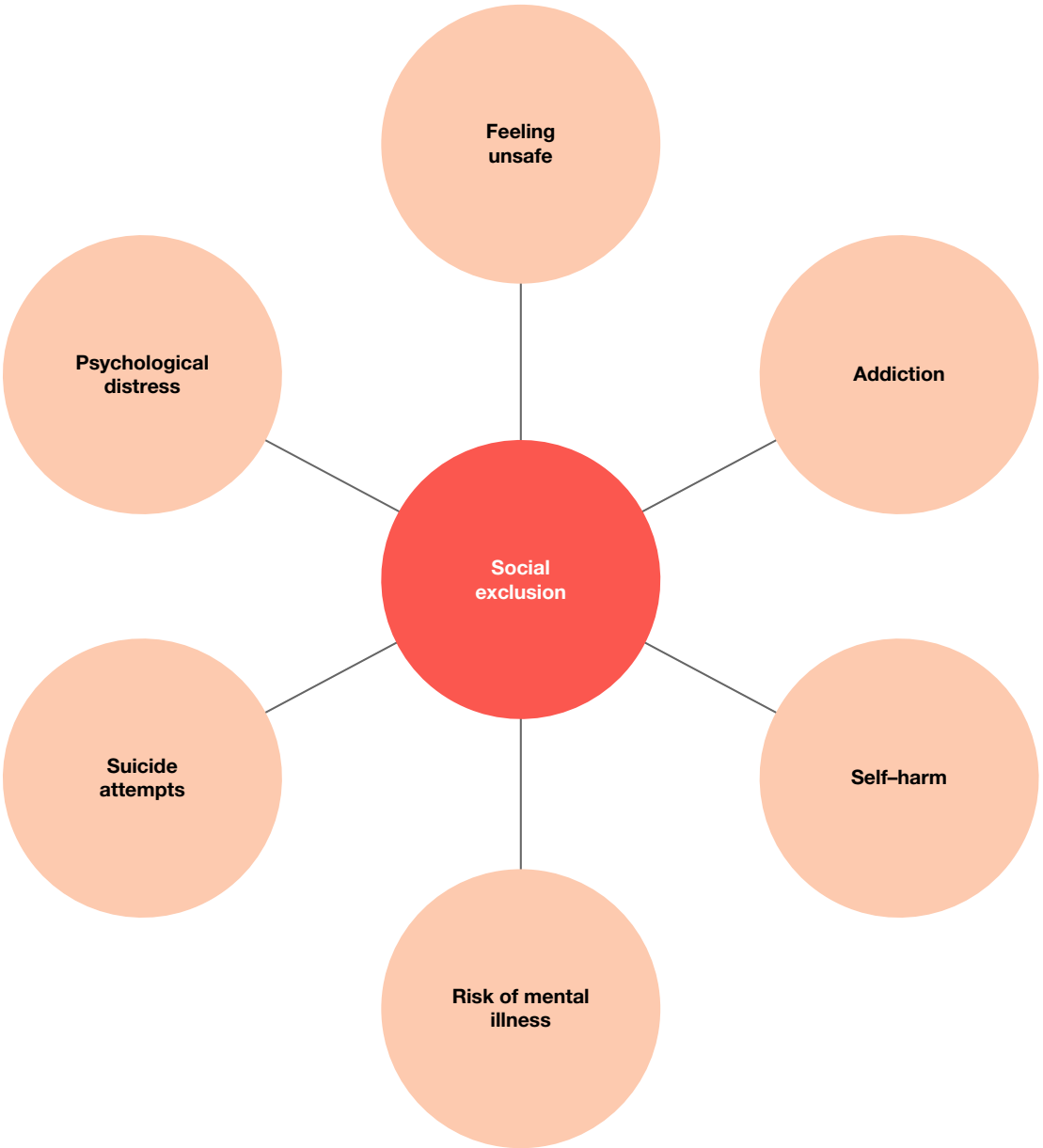
Contributing factors

Nationally, the top three reasons indicated by young people for their reported experience of unfair treatment or discrimination were gender (39.1 per cent), race/cultural background (30.8 per cent) and age (22.1 per cent). More than twice the proportion of female than male respondents reported that gender was a reason they had experienced unfair treatment or discrimination (48.4 per cent compared with 19.5 per cent).

A much greater proportion of male than female respondents reported that race/cultural background was a reason for the unfair treatment or discrimination they had experienced (40.7 per cent compared with 25.1 per cent). The Scanlon Foundation reports that a 2018 survey of social cohesion found that just under 25 per cent of young people aged 18 to 24 reported discrimination because of their 'skin colour, ethnic origin or religion'. They reported that the most frequent impact of discrimination was anger and frustration and a sense of not belonging to their local community.

Whether they are born in Australia or overseas, young people from different ethnic backgrounds can feel caught between two sets of cultural standards and values. Parents may feel that to adopt Australian values and customs would risk losing their traditional culture. They therefore may use strict discipline with their children to address the permissiveness they perceive in Australian society.

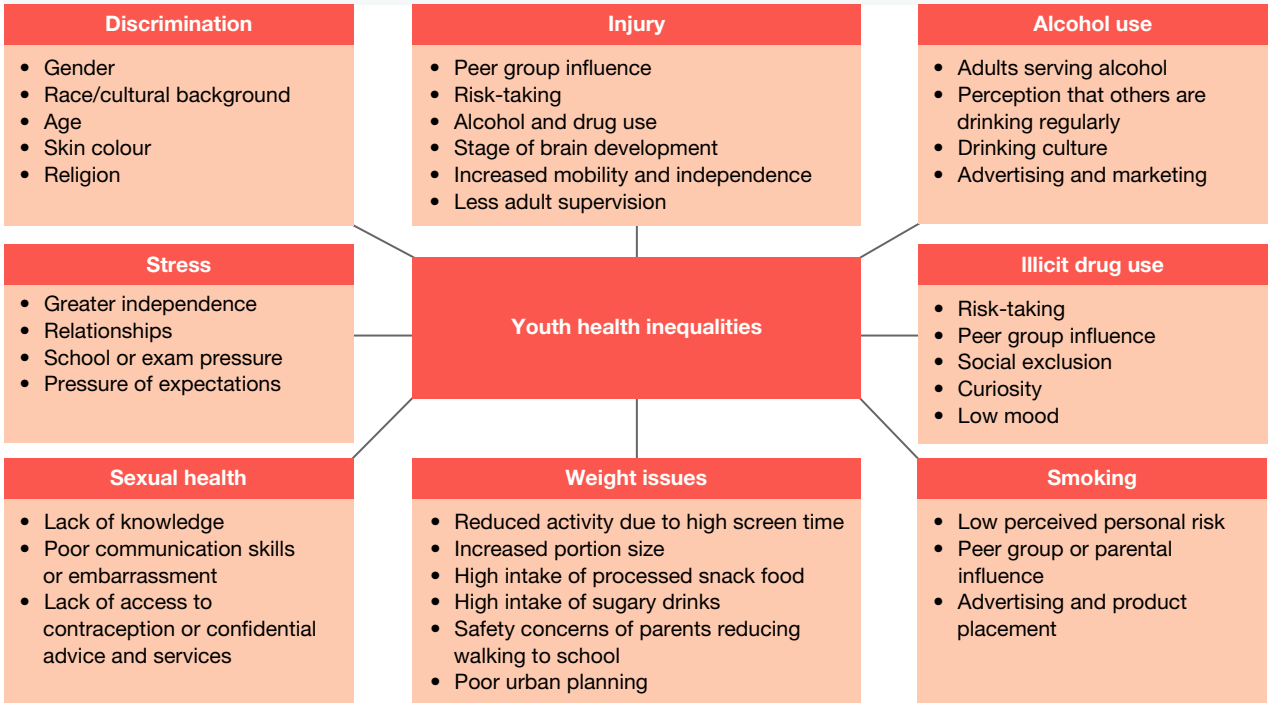
FIGURE 5.18 Potential health and wellbeing outcomes of social exclusion due to discrimination based on sexual orientation, religion, culture, race or language



A Kids Helpline survey revealed that feeling restricted in choice of friends, dating and socialising were major sources of family conflict identified by young people from non-English speaking backgrounds. Social isolation can be a problem for young people from non-English speaking backgrounds, as making and maintaining friendships can be difficult due to language and cultural differences and because of bullying. Poorer outcomes for young people from diverse backgrounds include increased risk of suicide, risk-taking behaviours, increased vulnerability to drug or alcohol problems, anxiety, depression and poor self-esteem (see figure 5.18).

Another issue that may affect the mental health and wellbeing of many Australians is racism. Racism places less value on an individual's identity and sense of self, which can lower their self-esteem and confidence. Racist behaviour may result in people withdrawing from social contact or being afraid of going to school or work. It may increase the risk of mental disorders such as depression, anxiety and substance use.

FIGURE 5.19 Contributing factors to youth health inequalities



Resources

Digital document Mission Australia Youth Survey worksheet (doc-31674)
Weblink Mission Australia Youth Survey

EXAM TIP

When discussing the risk and protective factors affecting health and wellbeing, remember the description of each term.

A protective factor is something that enhances the likelihood of a positive health and wellbeing outcome and lessens the likelihood of negative health and wellbeing outcomes from exposure to risk. A risk factor is something that increases the likelihood of developing disease or injury.

For example, the peer group can be either a risk or protective factor. If a peer group has an inclusive culture, they will be protective for health and wellbeing through open group membership and non-discrimination based on sexual orientation or disability. However, the peer group could be a risk factor if it is characterised by violence, racism or antisocial behaviour.

5.2 Activities

1. Access the **Mission Australia Youth Survey** weblink and worksheet in the Resources tab then complete the worksheet.
2. Use an online polling tool to investigate the health and wellbeing concerns of a small group of your peers and the factors contributing to these health and wellbeing concerns.
   With the results, create a podcast, Padlet wall, infographic or visual presentation to create awareness of the health inequalities and their contributing factors faced by youth.

5.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Briefly describe 'health inequalities'.
   (b) Briefly describe 'social inequalities'.
2. Explain how youth living in a disadvantaged suburb experience social inequality.
3. What is meant by 'health action'? Give an example of taking health action for one of the issues listed in figure 5.19.
4. What reasons do DARTA give for youth today being more at risk?
5. What characteristics of the youth stage are likely to create health inequalities?
6. Explain what is meant by the statement 'The youth stage of the lifespan has specific relationships with both the type and rate of injuries experienced'.
7. Discuss the joint roles that dietary intake and physical activity levels play in youth overweight and obesity.
8. Explain why discrimination and stress in young Australians are priority areas for action.
9. With the use of figure 5.19, explain how youth can be affected by multiple health inequalities.

5.2 Exercise 2 APPLY your knowledge

1. Explain how a school could be a setting that acts as either a risk or a protective factor for the health and wellbeing of young Australians.
2. Using information in topic 2 as a reference, identify the health status indicators that would be affected by one of the factors of youth health and wellbeing identified in figure 5.19.

studyON

5.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

5.3 Government and non-government programs relating to youth health and wellbeing

KEY CONCEPT Programs to improve youth health and wellbeing

Health and wellbeing is dynamic and can vary according to where we learn or work, live and play. Health and wellbeing is created when we can make health-promoting choices, to have control over our life circumstances and to be connected to a society in which conditions support health and wellbeing. Social inequalities can exist for youth through variations in socioeconomic status, the quality of family relationships, access to education or access to resources and opportunities.

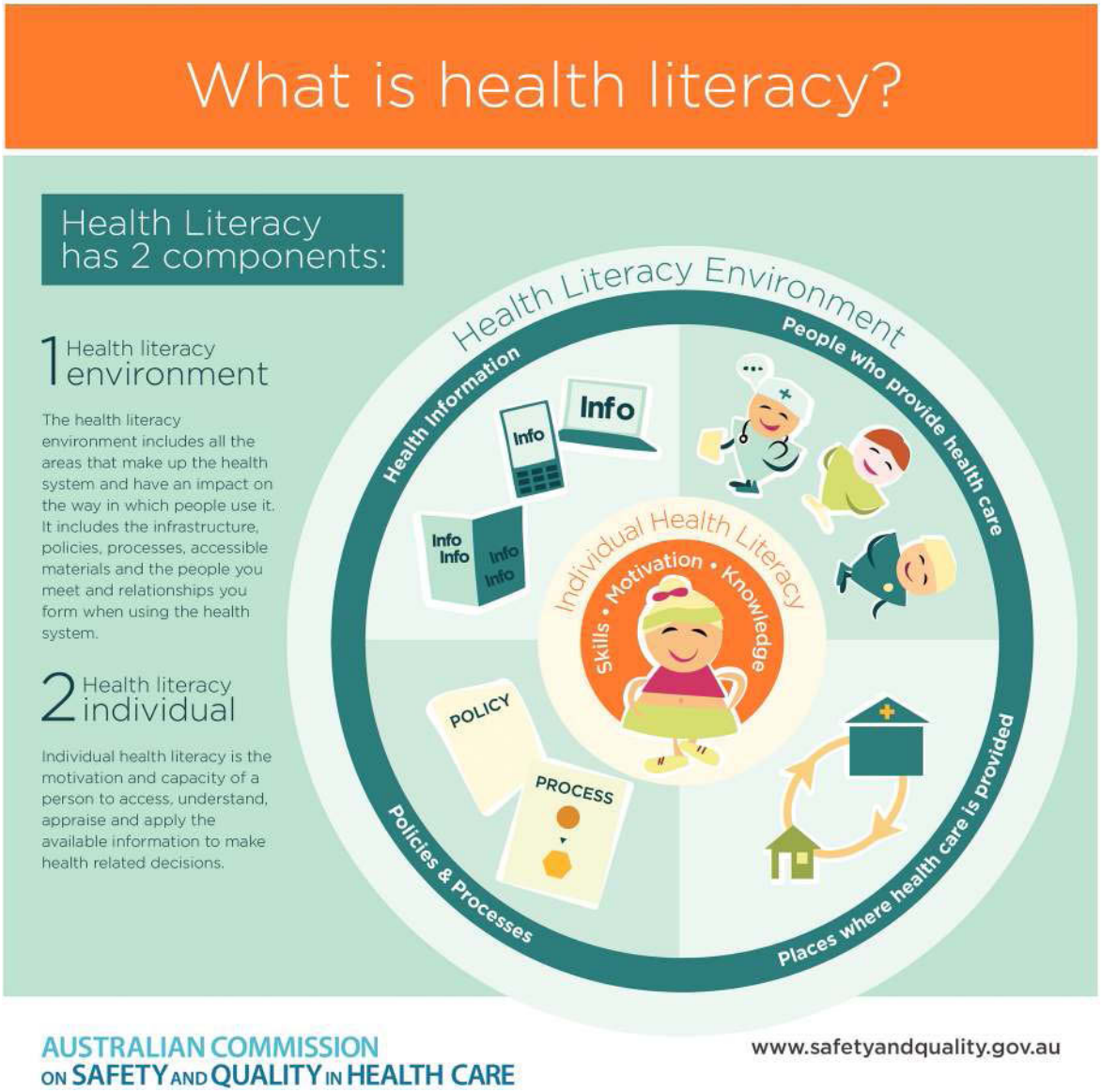
Improving their access to health information and their capacity to use it effectively, known as health literacy, is critical to young people managing their own health and wellbeing.

The Australian Commission on Safety and Quality in Health Care refers to two different parts of health literacy:

- Individual health literacy — for example, how much you already know about health and wellbeing issues and risks; the way your personal characteristics might shape your decisions; how confident you are at asking questions; and how well you can manage options when decisions need to be made.

- The health literacy environment — for example, the way information about the choices you can make about your health and wellbeing is provided to you; information about health and wellbeing and healthcare in the media; the way health systems are set up; and the way people such as healthcare providers and other staff talk to you about your health and wellbeing and healthcare.

FIGURE 5.20 Health literacy affects people's ability to navigate the healthcare system, share personal information and engage in self-care.



5.3.1 Federal government

If young people are to take health action or make health-promoting choices, and have control of their health and wellbeing, they need to be aware of risk factors, be motivated to pursue protective factors, and have access to information and support. Provision of culturally safe education as well as health services that are confidential, affordable and free of racism and other forms of discrimination will also increase health literacy and ensure positive youth health and wellbeing outcomes.

Government and non-government agencies provide resources and programs to assist youth in taking health action. Topic 10 outlines in detail the Australian health services, such as doctors, specialists and hospitals, that the federal government provides to young Australians. The federal government also funds national youth health promotion strategies, which are outlined below.

National Alcohol Strategy

A National Alcohol Strategy for 2018–2026 is currently being developed. This draft strategy provides a framework for directing national and local action to prevent and minimise the increased risk of alcohol-related disease, street and family violence, sexual assault and road accidents.

It identifies four priority areas of focus to prevent and minimise alcohol-related harm in Australia:

- Goal 1: Improve safety and community amenity by working to better protect the health, safety and social wellbeing of those consuming alcohol and those around them.
- Goal 2: Reducing opportunities for availability, promotion and pricing contributing to risky alcohol consumption.
- Goal 3: Facilitating access to appropriate treatment, information and support services.
- Goal 4: Improving the understanding and awareness of alcohol-related harms in the Australian community, particularly to those experiencing disproportionate risks and harms.

Good Sports

In 2018, the federal government committed another $10 million over two years to the Australian Drug Foundation to continue the Good Sports program that aims to change behaviour and attitudes relating to alcohol consumption through partnerships with more than 8000 sporting clubs. Good Sports works with sporting clubs across the country, teaching club leaders and administrators how to structure their club activities to encourage healthier behaviour and create a positive club culture, and plans to reduce and prevent underage and problem drinking. Good Sports works with junior clubs to influence behaviours within the club environment and decrease the visibility of alcohol at junior sport.

Stop the Coward's Punch Campaign

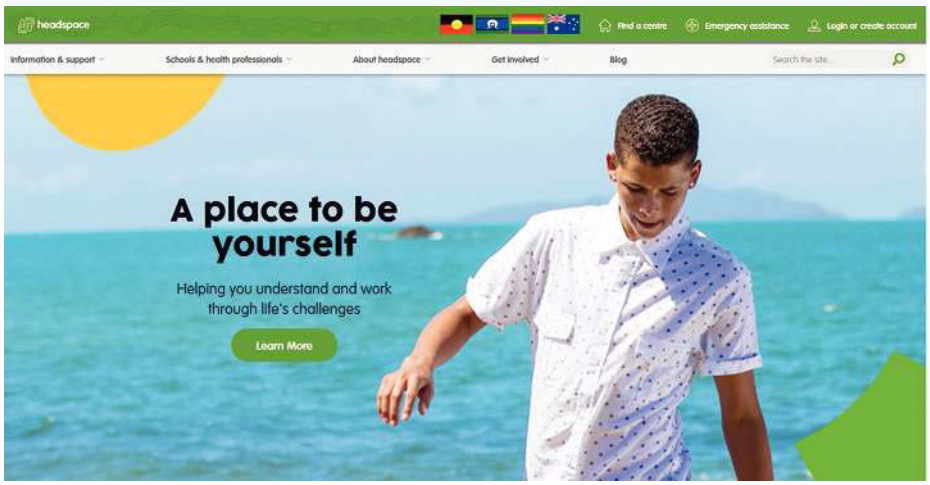
FIGURE 5.21 Federal government funding is supporting the Stop the Coward's Punch Campaign to reduce alcohol-related violence.

In 2016, the federal government provided funding to the Stop the Coward's Punch Campaign that went towards the production of two television advertisements featuring the former boxing champion Danny Green. The campaign raised awareness of the serious consequences that a single act of alcohol-related violence could have for both the victim and the attacker. Because of the success of this campaign, in 2018 the federal government committed a further three years of funding which will go towards Danny Green taking the message directly to Australia's youth via Australian high schools. The Stop the Coward's Punch Campaign plans to develop materials that give young people strategies to avoid violent situations and de-escalation techniques if caught in such a situation.

Mental health and wellbeing: headspace

The federal government funds headspace, the National Youth Mental Health Foundation, which provides early intervention mental health and wellbeing services to 12- to 25-year-olds, along with assistance in promoting young people's health and wellbeing. headspace was developed as a health and wellbeing one-stop shop that offers support for mental and general health and wellbeing, drug and alcohol services, as well as work and study support. Information and services for young people, their families and friends as well as health professionals can be accessed through the headspace website and headspace centres.

FIGURE 5.22 headspace was developed as a health and wellbeing one-stop shop.



The Line

The Line is a primary prevention behaviour change campaign for young people aged 12 to 20 years. The Line encourages healthy and respectful relationships by challenging and changing attitudes and behaviours that support violence or intimidation. The Line is an initiative under the National Plan to Reduce Violence against Women and their Children 2010–2022 and is funded by the Australian government's Department of Social Services. It is delivered by Our Watch.

The research that informed the development of The Line revealed that young people are struggling to work out what healthy, respectful relationships look like.

- One in three young people don't think that exerting control over someone else is a form of violence.
- One in four young people don't think it's serious when males insult or verbally harass females in the street.
- One in four young people think it's pretty normal for males to pressure females into sex.
- Fifteen per cent of young people think it's ok for a male to pressure a female for sex if they're both drunk.
- One in four young people don't think it's serious if a male who's normally gentle, sometimes slaps his girlfriend when he's drunk and they're arguing.
- More than one quarter of young people think it's important for men to be tough and strong.
- Sixteen per cent of young people think that women should know their place.

Research also indicated that parents aren't talking to their children about the issues, it's not being adequately covered in the education system, and community leaders are not addressing it. This has meant that social media is playing a central role in young people's relationships. Actions are being played out publicly, and behaviours that were previously unacceptable offline become easier to do online, giving young people even less opportunity to learn to understand and negotiate respectful, healthy and equal relationships. The Line research indicates that young people are left to figure it all out for themselves from other sources such as friends, their 'heroes', the media's portrayal of women, pornography, and porn-inspired popular culture.

CASE STUDY

New domestic violence campaign to focus on 'boys being boys' attitude in society

A new Federal Government campaign aimed at preventing violence against women and children will target the 'boys being boys' attitude that still permeates society at a grassroots level.

Phase two of the $30 million Stop it at the Start campaign has been launched today at the Council of Australian Governments (COAG) National Summit on Reducing Violence Against Women and Children, which is currently being held in Adelaide.

As part of the campaign, advertising on television, radio, in print, online, in cinemas and on social media will be rolled out from Sunday.

'While not all disrespect ends with violence, the cycle of violence certainly starts with disrespect,' Minister for Women Kelly O'Dwyer said. 'It's good to remember that our behaviour is a powerful influence on others, particularly the young.

'Throwaway comments like "it's just boys being boys" or "he did it because he likes you" can make young people think disrespect is a normal part of growing up. We need to ask ourselves — is that what we meant?'

The Stop it at the Start campaign was launched in 2016, and the Federal Government said a previous series of ads rolled out two years ago were 'viewed over 43 million times online, with hundreds of thousands of shares on social media'.

The Government said after the first phase of the campaign in 2016, its research had found that more than two-thirds of adults who saw the ads took some form of action.

Minister says women need to feel safe

Ms O'Dwyer said the advertisements and the new campaign would challenge the way people act and show the link between disrespect and violence against women.

'As a community we need to have zero tolerance for violence against women,' she told the ABC. 'Women need to be able to be safe in their homes, in their communities, online and also in their work places.

'It's very squarely focused on having adults ask the question, are we teaching our children disrespect?

'Young people take so much from the adults around them, from the statements they make and the behaviours they display.

'This will prompt people to have conversations. Changing attitudes and behaviours takes time but we know that with a concerted effort it can have a huge impact.'

She said the statistics on the issue showed that one in six women had experienced physical or sexual violence by a current or former partner since the age of 15.

Those figures increased to nearly one in four women when violence by boyfriends, girlfriends and dates were included.

'It's also concerning that one in four young people are prepared to excuse violence from a partner,' she said.

Talking about respectful relationships important

Minister for Families and Social Services Paul Fletcher said the first phase had been highly effective and the second phase was aimed at making a change within the community.

He said the second phase would also look into and showcase how words and actions could be misinterpreted by young people. 'Violence against women and their children takes a huge toll, and the human cost is incalculable,' he said.

'The Australian Institute of Health and Welfare reported that, on average, almost eight women were hospitalised each day in 2014–15 from assaults by current or former spouses or domestic partners.

'It's important to know that we can help stop it at the start. Each of us can play a role by intervening when we see disrespectful behaviour or talking to our kids about respectful relationships.'

The campaign is an initiative under the National Plan to Reduce Violence Against Women and their Children 2010–2022.

It is jointly funded by national and state governments and will be supported by online tools that can be found at www.respect.gov.au.

Source: Keane D and Slessor C, 2018, 'New domestic violence campaign to focus on 'boys being boys' attitude in society', 3 October, www.abc.net.au/news/2018-10-03/prevention-campaign-for-violence-against-women-to-launch/10330696.

Case study review

1. Justify the new phase of the Stop it at the Start campaign.
2. What will the new advertisements and the new campaign show?
3. How does the second phase of the campaign differ from the first?
4. Explain the meaning of the title of the campaign.

5.3.2 Victorian government

The state and territory governments in Australia have primary responsibility for public hospitals and community and public health, ambulance, public dental services and mental health and wellbeing programs. In 2018, the Premier Daniel Andrews announced that his government intends to fund dental care vans which will travel to Victorian state primary and secondary schools to deliver free check-ups and procedures.

FIGURE 5.23 Young drivers are 30 times more likely to crash when they first start driving because they are inexperienced and are more likely to take risks on the road.

Safer P-Platers

The Transport Accident Commission's (TAC) 'Safer P-Platers' campaign is designed to inform parents of the unique risks young drivers face and provide them with a range of strategies to improve their children's safety. The website includes sections on night driving, drink driving, peer pressure and bad weather that cover an explanation of the risk and suggestions about how parents can support young drivers. The program also offers mobile apps, including the Road Mode app, which prevents young drivers from being distracted by a mobile phone while driving. Road Mode silences incoming calls and text messages. Those calling, or texting will receive an automated text to let them know the person is driving and can't answer.

FIGURE 5.24 The TAC website contains a message to parents: 'Everything you need to get through the red together'.

Doctors in Schools

In 2017, the Victorian government began the Doctors in Secondary Schools initiative. Funding has allowed adolescent-trained general practitioners (GPs) to attend 100 Victorian government secondary schools up to one day a week to provide medical advice and healthcare to those students most in need. This program seeks to address the issue that teenagers are the least likely of all age groups to seek health care despite the fact that many health and wellbeing problems that can have consequences into adulthood start at this time of life. The objectives of the program are:

- to make primary healthcare more accessible
- to provide assistance to young people to identify and address any issues or concerns early.

The GP provides students with the same services as the kind normally provided by GPs in the community, including seeing students about their physical and mental health and wellbeing, and sexual and reproductive health issues. GPs may also make referrals to other health services as required.

There are no out-of-pocket expenses for this service for the participating Victorian government secondary schools, students and their parents, guardians or carers.

Youth Central

Youth Central provides articles and information on topics such as health and wellbeing, alcohol, smoking, drugs and sexual relationships. It also has links to ways to get involved and active in the community, or to develop new skills and make new friends.

Victorian youth can interact with Youth Central by:

- publishing articles, interviews, videos and podcasts
- commenting on or sharing posts from Facebook or checking out their YouTube channel
- retweeting or replying to their tweets or sending them an email with suggestions
- entering one of their competitions.

FIGURE 5.25 Youth Central is the Victorian government's website for young people aged 12–25.

WayOut

FIGURE 5.26 WayOut is a state-wide suicide prevention program.

WayOut is a state-wide suicide prevention program that targets same-sex attracted, bisexual and transgender young people in rural Victoria. It aims to raise awareness about the needs of same-sex attracted and gender diverse young people and the nature and effects of discrimination in regional, remote and rural communities. WayOut is funded by the Victorian government Department of Health to support young individuals, and their families and friends. It provides information sessions for teachers, healthcare professionals, youth services and community organisations that work with young people. It also provides Youth Mental Health First Aid Training in partnership with Live4Life — a mental health and wellbeing initiative in secondary schools across the Macedon Ranges Shire.

on Resources

Digital document TAC young drivers worksheet (doc-32160)
Weblink TAC young drivers

5.3.3 Local government

Local government activities can have a primary impact on young people through urban planning, public spaces, parks and gardens, human services, libraries and infrastructure. With its proximity to local youth, local government could be a potentially powerful advocate on youth issues to state and federal governments. This could involve leading debates and engaging people in shared decisions about both local

and global issues. One example of local government responding to issues in youth health and wellbeing is the Live4Life programs.

Live4Life

The Live4Life initiative was developed as a community-wide response to a reported increase in depression, anxiety, self-harm and suicide in the Macedon Ranges Shire, particularly in 13- to 14-year-olds. The initiative adopts a whole-of-community approach to increase knowledge, reduce stigma and improve mental health and wellbeing service pathways appropriate for youth. Live4Life involves training local community members to become Accredited Youth and Teen Mental Health First Aid (MHFA) Instructors to deliver the Youth MHFA course to teachers, parents, carers, first-responders and community leaders. There is also the delivery of two age-appropriate Teen MHFA courses to all year 8 and year 11 students in the local areas.

5.3.4 Non-government organisations

Rethink Sugary Drink

Rethink Sugary Drink is a partnership between 13 health and community organisations, including the Australian Dental Association, the Cancer Council, Diabetes Australia and Nutrition Australia, that are concerned about the amount of sugar in soft drinks and sugary drink overconsumption. They are concerned because the consumption of sugar-sweetened beverages, such as soft drink and sports drinks, is associated with increased energy intake. This can create weight gain and obesity if physical activity levels are low. By highlighting the amount of sugar in sweetened beverages, the program is hoping to encourage Australians to rethink their sugary drink consumption and switch to either water, reduced-fat milk or unsweetened options. In 2018, a new television campaign 'Our Stories', featuring Victorian Aboriginal community members sharing how cutting back on sugary drinks has helped their health and wellbeing was launched. Michelle Crilly, a young Yorta Yorta woman features in one of the three advertisements where she shares her experience in making the choice to switch from sugary drinks to water. Michelle states that at 20 she had chest pain which caused her to worry. "I used to be addicted to Slurpees. I'd also drink about 4–5 cans of soft drink every day ... [Now] I exercise every day and I don't have as much anxiety and I don't feel depressed anymore." In the advertisement, Michelle urges others in the Aboriginal community to follow her lead.

Youthbeyondblue

Youthbeyondblue aims to empower young people aged 12 to 25, their friends and those who care for them to respond to anxiety and depression. Youthbeyondblue supports and promote environments and settings that build on the strengths of young people. It is an arm of the beyondblue organisation that commits to work across the lifespan — supporting those who are well to stay well, while assisting those who have depression and anxiety to recover and manage their condition.

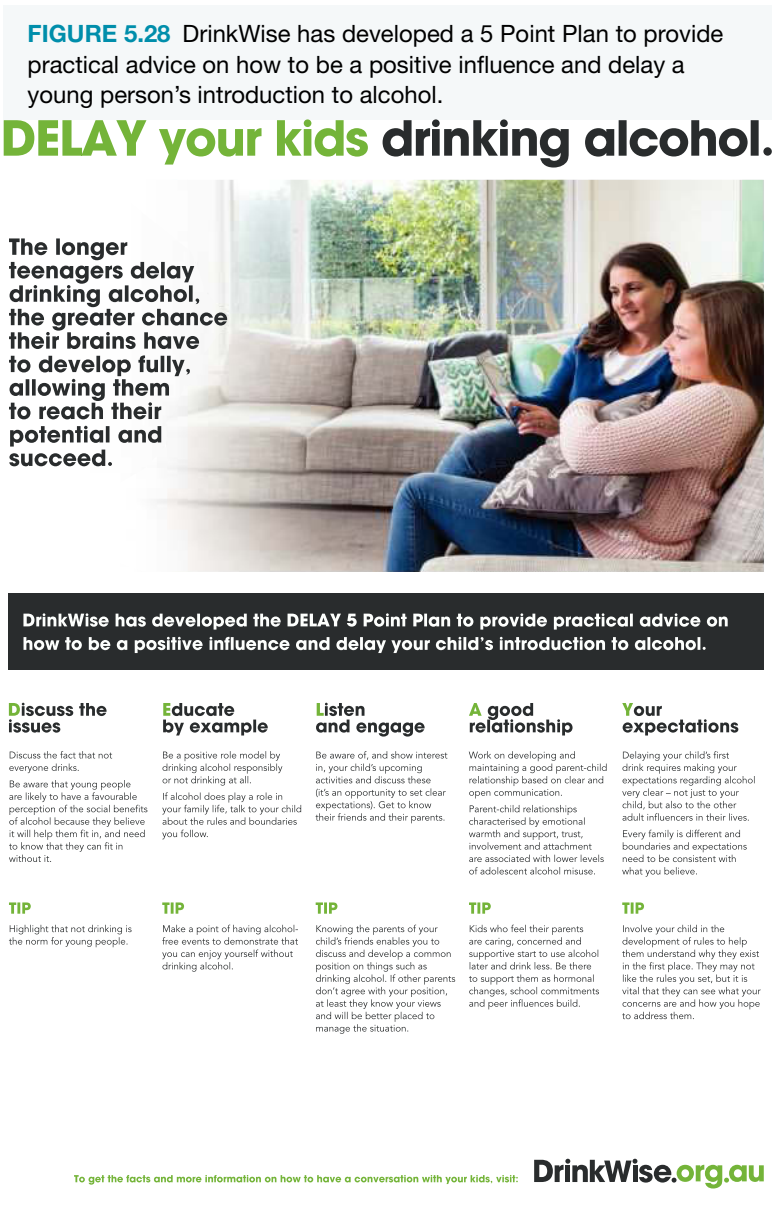
FIGURE 5.27 Youthbeyondblue has resources to help reduce tension from stress and school pressure and an app to check in on friends.

Resources promoted by Youthbeyondblue include fact sheets on anxiety, low self-esteem, body image, depression, bullying and family breakup. They also offer a chat line, personal stories and an online forum. Social connection with other people supports good mental health and wellbeing and makes us more resilient to life's challenges.

DrinkWise

Established by the alcohol industry, DrinkWise Australia is an independent, not-for-profit organisation. The primary focus is to help bring about a healthier and safer drinking culture in Australia. The initiative includes a website with an interactive tool that demonstrates the impact of alcohol on the body of a young person. It also includes fact sheets and videos on first alcohol experiences.

FIGURE 5.28 DrinkWise has developed a 5 Point Plan to provide practical advice on how to be a positive influence and delay a young person's introduction to alcohol.



Dove Self-Esteem Project

The Dove Self-Esteem Project was created with the vision of beauty as a source of confidence, not anxiety. The mission of the project is to ensure that young people grow up enjoying a positive relationship with the way they look – helping young people to raise their self-esteem and realise their full potential.

The project is a programme of evidence-based resources including parenting advice to help young people form healthy friendships, overcome body image issues and be their best selves. The Dove Self-Esteem Project offers confidence-building workshops for classrooms and educational activities for mentors and youth leaders. The guides (for teachers, called Confident Me; for parents, Uniquely Me; and youth leaders, True to Me) work to get young people to talk about body image and build their self-confidence.

FIGURE 5.29 The Dove Self-Esteem Project aims to help young people overcome issues surrounding body image.

5.3 Activities

1. With a partner, trial the Smiling Mind or Check In apps and write an evaluation of their likely effectiveness in improving youth health and wellbeing.
2. Debate the decision of the Victorian government to introduce the Doctors in Schools program.
3. (a) Research a government or non-government strategy that addresses a health inequality for youth.
   (b) Produce a summary on the strategy and include the following information:
   i. Name of the organisation/level of government
   ii. Aims/goals of the organisation/strategy
   iii. A description of how they attempt to achieve their goals.

5.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question go to your learnON title at www.jacplus.com.au.

1. What conditions are required for youth to take health action?
2. Using figure 5.20, explain the environmental and individual components of health literacy.
3. Justify the government support for the Good Sports program as a means of supporting youth health and wellbeing.
4. (a) Describe the headspace program.
   (b) How could headspace promote the health and wellbeing of young Australians?
5. Justify the focus on youth and parents in the Safer P Platers program.
6. What advantages does the Doctors in Schools program offer for improving the health and wellbeing of young people?
7. (a) Why are local governments well placed to improve youth health and wellbeing?
   (b) What aspects of youth health and wellbeing are being addressed in the Dove project?
   (c) What data in this topic would justify the Dove project?
8. How could the DrinkWise program have an impact on youth health inequalities?

5.3 Exercise 2 APPLY your knowledge

1. The Australian Commission on Safety and Quality in Health Care refers to two parts of health literacy. Use these to explain how the Rethink Sugary Drink campaign could improve youth health literacy about soft drink intake.
2. Create a 'to do' list of actions that could be taken by the community to address violence against women.

studyON

5.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

5.4 The influence of community values and expectations on programs for youth

KEY CONCEPT Understanding community values and expectations in programs for youth

The Australian Medical Association states that the provision of services promoting the health and wellbeing of young people is an investment, not a cost. This is because the health and wellbeing of young people shapes the future health and wellbeing of adults. Promoting optimal youth health and wellbeing, or at least tackling health and wellbeing issues in the youth stage, is socially and economically more effective than dealing with chronic problems in adulthood. To achieve this, the community expects that programs will be developed that allow youth to take action in a variety of settings based on accessible and appropriate information and resources.

5.4.1 Community values and expectations

When young people experience good health and wellbeing they are more likely to:

- achieve better educational outcomes
- make a successful transition to full-time work
- develop healthy adult lifestyles
- experience fewer challenges forming families and parenting their own children
- be more actively engaged in their community.

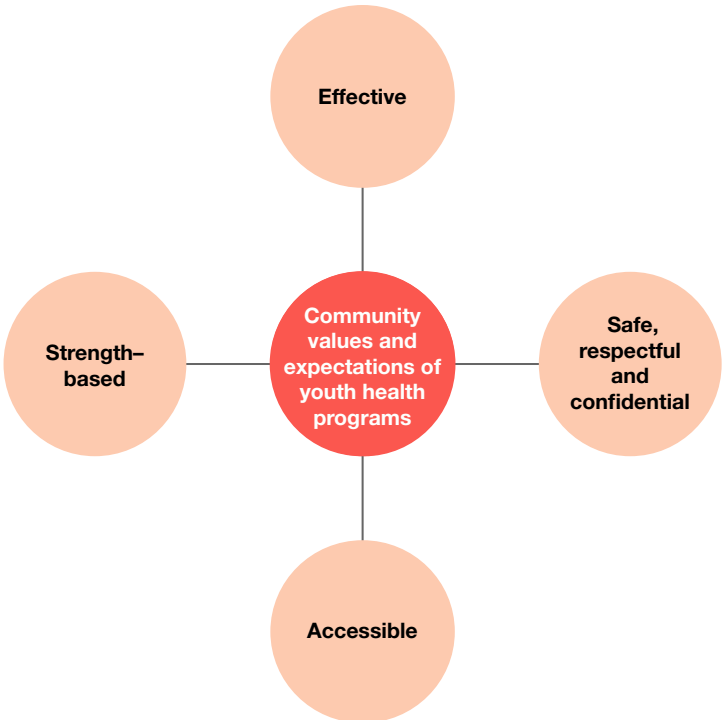
As adults of the future, children and youth are an essential part of our communities. Other members of the community, such as parents, business owners and government representatives therefore all have a stake in youth health and wellbeing.

FIGURE 5.30 Promoting the health and wellbeing of youth is an investment, not a cost.

Values and expectations of youth health promotion programs

The values people have can be seen in the choices they make and the expectations they have about their daily lives, government and society. The community expects that health and wellbeing programs will enhance the capability of young people to take control of their lives and improve their health and wellbeing through the provision of environments that develop health literacy and empowerment, and promote protective factors.

FIGURE 5.31 Community values that create expectations about youth health and wellbeing services and health promotion programs



Community values about youth health and wellbeing can been seen in its expectations about youth health promotion programs, including the following:

- Programs should be developed and delivered to provide treatment, services, resources and information that produce a benefit and achieve desired outcomes for health and wellbeing. They should also increase skills and risk management according to youth needs and concerns; they should be **effective**.
- Programs should put young people at the centre of the service or program and enable resilience, help-seeking behaviour, control over and improvements to health and wellbeing. They should also advocate for positive outcomes, communication skills, increased self-esteem and self-acceptance; they should be **strength-based**.

- Programs should be non-judgmental and discreet, which is critical to ensuring a feeling of security and being cared for is created. Healthcare providers should consult with young people regularly about the adequacy, design and standard of services to ensure that their information is comprehensible by youth; they should be **safe, respectful and confidential**.
- Programs should be accessible without discrimination based on country of birth, cultural heritage, language, gender, religious belief, age or socioeconomic, educational or family background. There is an expectation that waiting times, hours and information will be appropriate; they should be **accessible**.

It is common for the community to call for a health and wellbeing concern to be included in the school curriculum. Reducing the incidence of childhood obesity, implementing first aid courses, sex education, driver education and preventing youth pregnancy have all been included or suggested as mandatory parts of the national school curriculum. Health promotion programs assist young people to develop and maintain healthy attitudes, lifestyles and behaviours. Health promotion programs in schools and in the community improve health literacy.

These programs are developed to support young people to:

- develop good relationships with their family, their peers and the community
- forge their own identity and make their own decisions
- adopt healthy lifestyles
- learn how to seek help
- identify and manage risks to their health and wellbeing.

Many young people suffering from health conditions do not seek or receive help. Barriers can exist for youth which limit their opportunities to access appropriate resources, know and exercise their rights, and fully participate in decisions about their health and wellbeing.

Barriers include:

- stigma and embarrassment
- poor health literacy
- desire for self-management
- issues with confidentiality and trust
- feelings of hopelessness
- previous negative experiences when seeking help.

Investing in an understanding of youth health and wellbeing will allow for better targeted programs to achieve change in the health status of young people. For example, using condoms and lubricant consistently and correctly significantly reduces the transmission of chlamydia; however, 24-hour access to condoms for young people is unreliable. In rural areas, issues of privacy, lack of service provider choice, transport and cost are extra barriers that prevent rural young people from accessing condoms.

CASE STUDY

Condom vending machine pilot project underway

Baw Baw Shire Council, in partnership with Gippsland Women's Health, is taking steps to better protect the community's sexual and reproductive health by installing six condom vending machines in accessible toilets across the Shire.

The decision to go ahead with implementing this project was made by Council in August 2016, following a round of close community consultation which yielded supportive and positive feedback from a diverse range of community members.

Mayor of Baw Baw Shire Councillor Joe Gauci said the installation of easily accessible condom vending machines will provide the community, particularly young people, with better support and more options to access a product that helps protect sexual and reproductive health.

'Young people in Baw Baw are at risk of poor health outcomes in relation to sexual and reproductive health, and this pilot project is taking steps towards supporting a healthier community,' said the Mayor.

Alarming statistics from the Victorian Child and Adolescent Monitoring System identify the rate of sexually transmissible infections (STIs) amongst young people in Baw Baw Shire is nearly double the Victorian average.

Additional research from the Centre for Excellence in Rural Sexual Health shows that encouraging safer sexual practices, including the use of condoms, is the most successful public health strategy in Australia to prevent transmission of STIs.

'People in regional areas face a number of major barriers to accessing condoms; including limited public transport; low density and limited operating hours of retail outlets; lower access to health services and particularly the stigma associated with purchasing condoms where "everyone knows everyone",' said the Mayor.

'By supporting this project we hope to improve the state of sexual and reproductive health in our Shire, especially in young people, and reduce the spread STIs and the number of unplanned and teenage pregnancies.'

Condoms will cost $2 for a pack of two, with all revenue from condom sales used to stock the machines.

Roll out of condom vending machine installation will take place throughout May 2017 and is being funded by Gippsland Women's Health through grants received by the Department of Health and Human Services.

Following the 12-month trial, Council and Gippsland Women's Health will collate usage data and undergo a feasibility assessment of the project.

Source: Baw Baw Shire Council, 2017, 'Condom vending machine pilot project underway', 1 May, www.bawbawshire.vic.gov.au.

Case study review

1. What prompted the trial of the condom vending machine pilot project program?
2. What are the barriers to youth health and wellbeing Baw Baw Shire Council hope to address?
3. Why might this program create debate among some members of the community?
4. Does this program uphold community values and expectations as shown in figure 5.31? Explain.

CASE STUDY

Schools back students helping students with mental health issues

A Tasmanian not-for-profit program run by young people for young people is challenging traditional approaches to youth mental health education. And Tasmanian schools are backing the Little HELP Project (LHP), a project that was also designed by students for students.

Founded in 2014, LHP runs programs to target mental health issues, aiming to empower youth to reach their goals. The program ranges from a physical aspect, including one which trains girls aged 12 to 16 in the sport of Brazilian jiujitsu, to full-day school programs focused on unity and resilience building. LHP has already worked with more than 8000 young Tasmanians, and run 40 full-day programs.

Now 22-year-old founder Olivia Fleming was just 17 years old when she came up with the idea for LHP. As a student in Year 11, she felt she saw a gap that existed within the education and promotion of good mental health for young people. Ms Fleming spent a lot of time in peer-to-peer mentoring camps when she was growing up. 'When someone new comes into the school, there's ... capacity to have open and earnest conversations about so many different things,' she said. 'We're young people and we're doing our work because we care about it. That's what's powerful about peer-to-peer mentoring.' The full-day programs are broken up into three stages, and include interactive challenges, activities and speeches that are designed to build resilience, break down barriers around mental health, and focus on the idea that you are not alone.

Adults can't provide this kind of help: teacher

Simone McManus, director of ministry at Guilford Young College, said she remembered when Ms Fleming came up with the idea for LHP. 'At schools we [teachers] can kind of patch problems up, we tend to do that, come in triaging when there are mental health problems, but this is sort of purposively developing some skills,' she said. 'So it's got a lot of really good integrity about it. And it's young people helping other young people, which is a fantastic model.' Ms McManus's Year 11 students recently participated in LHP's new 'pay-it-forward program' Over several weeks, LHP volunteers worked with the students to create their own 90-minute program for grade sixers at Sacred Heart and St Virgil's. Ms McManus said she saw the change in her students. 'I've seen great personal growth in confidence in my own students,' she said.

Breaking down barriers

Jenna Stacey is in Year 9 at Mt Carmel College; she first encountered LHP two years ago when they ran a full-day program at her school. 'At the time, I feel the year group was quite divided in a way, with different social groups

and girls both new and old, and this was a great way to break down those barriers,' she said. Ms Stacey said what made the organisation different was it didn't simply lecture students. 'They have such a hands-on way of dealing with these major issues, which I think has a real positive effect especially on people my age,' she said. 'I think the fact they are so young makes a big difference.' Ms Stacey has participated in three full-day programs, she said it was amazing to see how many of her peers were going through the same issues as her. 'I have learnt by doing this that no-one is perfect [and] to not be afraid to be me,' she said. 'What surprises me is the number of people who feel the same as me and I feel each time I participate in a program, I become just that little bit more confident in who I am, and what others think about me." Her experiences inspired her to volunteer for LHP and she is now one of their youngest members. Four and a half years after its launch, LHP now has a team of around 20 and continues to develop and expand the programs offered, including a recent collaboration with Launceston Clinical on mental health for medical students.

Source: McDonald, L 2018, 'Schools back students helping students with mental health issues', 10 October, www.abc.net.au/news/2018-10-10/schools-back-students-helping-students-with-mental-health-issues/10358658.

Case study review

1. How is this program challenging traditional approaches to youth health and wellbeing?
2. Why do you think this program operates in schools?
3. Do you believe this program is a good investment?
4. How does this program uphold community values and expectations as shown in figure 5.31?

Community concerns

Sometimes there is reluctance in the community to fund programs related to sexual health or harm minimisation in relation to drug use because of the fear that it is seen as approving of and promoting this type of behaviour. The principle of harm minimisation acknowledges that some people will use alcohol and other drugs. Harm minimisation policies aim to prevent or reduce drug-related harms. The three aspects used when addressing alcohol and other drug use are reducing the supply of drugs, reducing the demand for drugs and reducing the harm from drugs. An example of a harm-minimisation strategy that has generated community debate involves harm reduction from recreational drug use through drug checking (pill testing) in clubs and at music festivals. Other approaches that generate community debate include safe injecting rooms, condom vending machines and general approaches to promoting health and wellbeing, such as a sugar tax on soft drinks.

5.4 Activity

As a class, create a selection of anti-drinking television commercials and vote for your favourites, including the one most likely to prevent you from drinking or encourage you to stop.

5.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Why is it important to invest in youth health and wellbeing?
2. Select one expectation that the community has of a health and wellbeing program delivery for youth and identify one value that it upholds.
3. (a) What barriers can young people face when trying to access health services?
   (b) How are these barriers influenced by youth values?
4. Select one expectation that the community holds of schools in relation to youth health and wellbeing and explain how upholding this expectation would increase health literacy and improve youth health and wellbeing.

5.4 Exercise 2 APPLY your knowledge

1. A youth centre planned a sexual health campaign to coincide with Valentine's Day. The local sexual health team were able to support the event by handing out free condoms, chlamydia-testing kits and sexual health information. How would this enable youth to take action to improve their health and wellbeing?

2. (a) Select one area of youth health and wellbeing that requires action.
   (b) Choose one strategy from the list below:
   - helping schools to set up peer-support programs
   - providing information stalls in shopping centres to inform young people about health problems and how they can take action to reduce risks to their health and wellbeing
   - introducing programs in community settings such as sporting clubs
   - asking young people to design a campaign to promote a protective behaviour.

   Describe how the chosen strategy could meet the expectations of the community and young Australians.

studyON

5.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

5.5 Topic 5 review

5.5.1 Key skills

KEY SKILL Use research and data to identify social inequality and priority areas for action and improvement in youth health and wellbeing

This key skill requires an understanding of the concepts of health inequality and social inequality and how they relate to youth. For example, you need to be able to identify and discuss differences in health status or distribution of health risk and protective factors that arise from differences in access to resources or opportunities, ethnicity or location. Additionally, you need to be able to identify and discuss areas of concern that arise from risk-taking or non-health promoting behaviours, common among youth.

This key skill also requires the ability to use information presented (e. g. in the form of tables, graphs or case studies) and combine it with your existing knowledge about health and wellbeing in order to draw conclusions about health issues facing Australia's youth. Whenever you are using data, take the time to understand the information presented. If it is presented in graphical form, follow the steps presented in the skills section at the end of topic 2. If it is in written form, always re-read the information carefully. It is easy to miss key information on a first reading.

In the following example, data on risk and protective factors linked to body weight, such as activity and food intake patterns, are analysed and conclusions are drawn about why they are priority areas for health action and improvement.

According to *Australia's Health 2018*:

- More than 1 in 4 children and young people (28 per cent) aged 5–17 were overweight or obese — 20 per cent were overweight but not obese, and 7.4 per cent were obese.
- There is a significantly higher rate of overweight and obesity in low SES areas.
- Ninety-two per cent of students spent two hours or more using electronic media on a school day.
- Eighty-nine per cent of students spent two hours or more using electronic media on the weekend, and don't engage in sufficient activity to provide a health and wellbeing benefit.
- Eight per cent of students aged 13–17 years did 60 minutes of physical activity per day.
- Ninety-nine per cent of students did not meet the daily recommended intake of four vegetable servings daily.
- Fifty-four per cent of students did not meet the daily recommended intake of three servings of fruit daily.
- Fourteen per cent of students aged 12–17 drink at least a litre of soft drink a week.

The data indicates that body weight is an issue for 28 per cent of young Australians.[1] The rates of overweight and obesity are higher in youth in low SES areas.[2] Overweight or obesity indicates that an individual consumes more kilojoules than they need for growth and activity. The excess energy is stored as body fat, which causes an increase in weight. Over time this can result in overweight.[3] Risk factors for overweight and obesity are low levels of physical activity, which could be caused by the percentage of students (92 per cent) who spent two or more hours using technology during the week, while only 8 per cent did 60 minutes of physical activity per day. Increased energy intake would also occur for the 14 per cent of students who drink at least a litre of soft drink a week. Low intake of fruit and vegetables (54 and 99 per cent respectively) could also encourage higher energy intake.[4] This is a priority area for action because in the short term, youth may suffer from psychological distress, sleeping problems and low energy levels. This also may increase the risk of cardiovascular disease and type 2 diabetes in adulthood. Overweight and obesity can also affect social and mental health and wellbeing if bullying and discrimination occur, affecting self-esteem, confidence and social contact.[5]

1 A health inequality relating to youth burden of disease is included.

2 A social inequality relating to youth burden of disease is included.

3 The characterising features of overweight are identified.

4 Inequalities in risk factors that increase obesity are identified for focus.

5 The reasons why body weight is considered an aspect of health and wellbeing requiring action is identified. In this case, it is due to the high rates of morbidity and the potential impact on adult health and wellbeing.

Practise the key skill

TABLE 5.3 Most important issues in Australia today, according to young people

	National 2018%	Female %	Male %	National 2017%	National 2016%
Mental health	**43.0**	**49.2**	**35.9**	**33.7**	**20.6**
Alcohol and drugs	**28.7**	**26.4**	**32.2**	**32.0**	**28.7**
Equity and discrimination	**23.4**	**25.0**	**21.2**	**27.3**	**27.0**
Bullying	17.4	20.3	14.1	10.6	10.1
Crime, safety and violence	13.5	14.2	12.7	11.3	12.8
The economy and financial matters	11.6	10.0	13.8	12.7	14.7
Health	11.4	11.0	11.9	8.3	10.3
The environment	9.2	9.1	9.3	10.9	11.5
Homelessness / housing	9.2	9.8	8.6	8.2	7.5
Education	8.2	8.4	8.0	13.0	11.6

Note: Items are listed in order of national frequency.
Source: *Mission Australia Youth Survey Report 2018*, p. 30.

1. Analyse the data to identify two priority areas for action in youth health and wellbeing which relate to social inequality.
2. Identify any health inequalities arising from risk-taking or non-health promoting behaviours, that might also require action to improve youth health and wellbeing.
3. Justify your choices based on the impact on youth health and wellbeing of these inequalities.

KEY SKILL Describe and analyse factors that contribute to inequalities in the health status of Australia's youth

You are required to demonstrate knowledge of the contributing factors related to youth health inequalities. Remember that the focus of this key skill is on youth, and any discussion should be about this age group. To do this you need to explain why the health and wellbeing of young people may differ from that of other age groups or why groups of young people within the same country have differing health status or opportunities for optimal health and wellbeing. To demonstrate this key skill, you need to be able to explain contributing factors and predict the likely consequences for youth health status.

EXAM TIP

Remember that this key skill relates to youth. When describing a contributing factor, make sure that you provide a specific example that relates to youth. For example, when looking at the contributing factors to injury in youth, it is important to discuss the lack of driving experience and the decision-making areas of the brain that are developing at this time that make youth more vulnerable on the roads than older adults.

Consider the following example related to overweight and obesity:

Weight gain is an outcome of kilojoule intake exceeding energy expenditure. If this occurs over a prolonged period, obesity can result, increasing the associated impacts on morbidity and mortality.[6] Research by the Cancer Council and the National Heart Foundation shows Australian teenagers are spending increased time using electronic devices such as computers, laptops, tablets, video games and TV. Ninety-two per cent of Australian youth spent more than two hours using electronic devices for entertainment on school days according to the Australian Institute of Health and Welfare.[7] There was an increase in the proportion of teenagers exceeding the recommended two hours of screen time per day on weekends from 83 to 89 per cent.

6 An inequality is identified.

7 A contributing factor is analysed.

An increase in physical activity and healthier eating are needed for weight balance. There has been a small improvement in levels of exercise since 2010. However, over 90 per cent of young Australians are still not getting the recommended minimum of one hour's physical activity each day. Research indicates that over 50 per cent of students have at least three televisions at home and approximately 40 per cent have one in their bedroom. In addition, they may also have video games in the bedroom as well. This combination is one factor that could be contributing to 22 per cent of young people being classified as overweight and 17 per cent as obese.[8]

8 Further information about the inequality is provided.

The short-term health and wellbeing outcomes for Australian youth include psychological distress, sleeping problems and low levels of energy. This could result in youth identifying their self-assessed health status as only fair or poor. In addition, early obesity influences social and mental health and wellbeing because young people can be bullied about their weight or face negative stereotypes and discrimination. This could result in higher levels of psychological distress measured on the Kessler scale. Possible long-term risks include greater likelihood of incidence of type 2 diabetes.[9]

9 Discussion is included about likely consequences for health status.

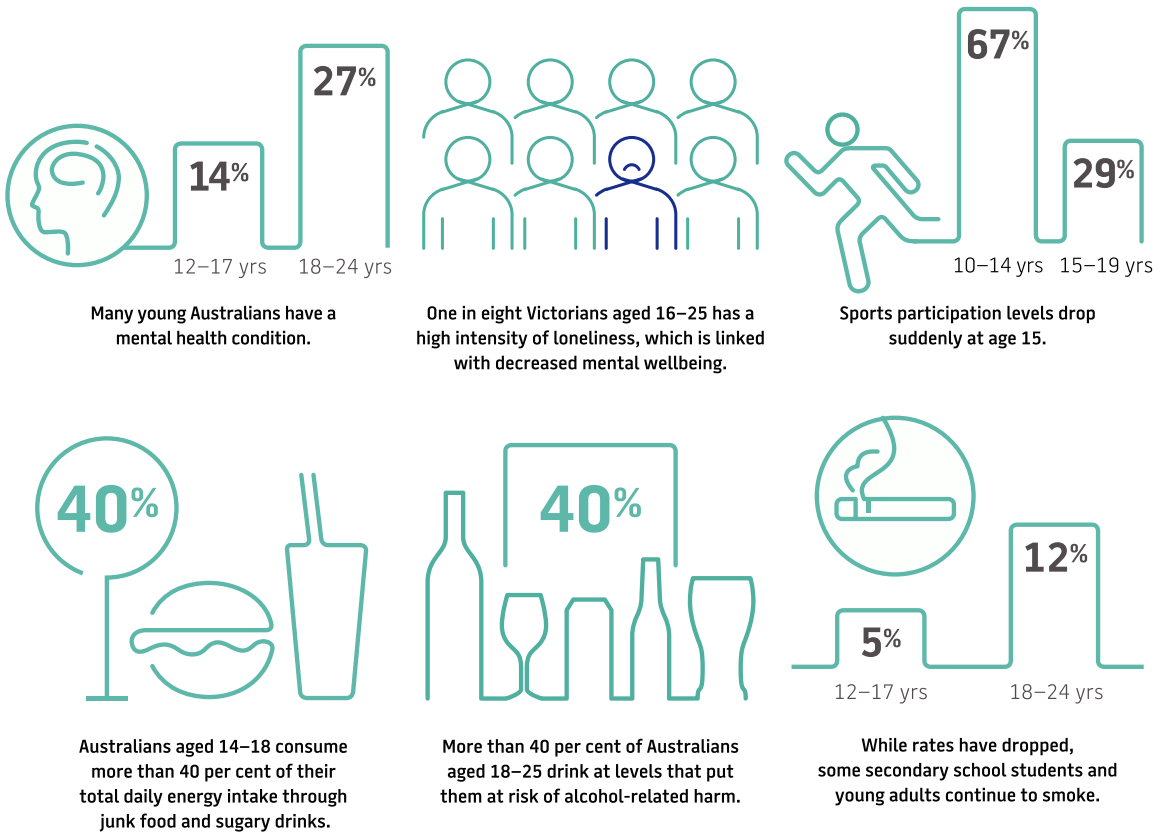
EXAM TIP

When predicting the consequences of a factor on the health status of youth remember to use specific indicators from topic 2. For example, injury from road accidents will possibly increase the years of life lost to injury or disability while recovering or living with a spinal injury or increase a core activity limitation through lack of mobility.

Practise the key skill

4. Describe one of the health and wellbeing problems for young Australians shown in figure 5.32.
5. Explain the contributing factors to your chosen health and wellbeing problem.
6. Discuss the impact on specific health status indicators for youth.

FIGURE 5.32 Key statistics from the VicHealth Young people, health and wellbeing strategy



KEY SKILL Analyse the role and influence of community values and expectations in the development and implementation of health and wellbeing programs for youth

This skill requires an analysis of the role of community values and expectations in the development of health promotion programs to improve youth health and wellbeing. To conduct an analysis you need to:

1. recognise a youth health and wellbeing concern
2. select a program designed to address this health and wellbeing concern
3. briefly describe the program
4. show how the program links to community expectations and values.

In the following example, the Smiling Mind program is analysed.

Stress and school or study problems are the top two personal concerns for Australian youth. Coping with stress was listed as the biggest concern for Australian youth, with 18.7 per cent indicating they were extremely concerned and 24.4 per cent very concerned. Around 33.8 per cent were either extremely concerned or very concerned about school or study problems.[10] The Smiling Mind program exists to help build individual mental health and wellbeing through positive, preventative tools based on mindfulness meditation, irrespective of geographic location or socioeconomic status. The Smiling Mind app aims to reduce worries, anxiety and distress. Health and wellbeing outcomes are a sense of calm, greater capacity to relax and regulate emotions, improved concentration and productivity, a sense of empathy and connectedness, and better sleep.[11]

10 Statements relating to the concern are made.

11 A program is identified, and elements of the program are described.

The Smiling Mind program meets community expectations that health services will be accessible to youth. The program is free and readily available. It addresses the concerns related to stress effectively and in a format young people can understand. It is also responsive and strength-based and puts youth at the centre of the health action as it gives them the tools to control their own stress.[12]

12 Links are made between community expectations and implementation of the program.

Practise the key skill

7. Analyse the community values and expectations you think might be related to the development of the Youthbeyondblue 'Check in' app.

5.5.2 Topic summary

What areas of youth health and wellbeing need action?

- The health and wellbeing of Australia's youth is excellent, but there are still health inequalities that need to be addressed.
- Health action involves behaviour change where health-compromising behaviours are replaced by health-enhancing behaviours.
- Injuries (including suicide) are the leading cause of death for youth and are higher for males.
- Developing independence, intellectual and emotional development, peers and the media influence risk-taking behaviour in youth.
- Youth is a stage of experimentation, but alcohol and drug use can have far-reaching implications for adult health.
- Binge drinking increases the risks associated with alcohol consumption.
- Smoking and alcohol intake rates among youth have steadily declined.
- Overweight and obesity rates have increased in recent decades and this is a risk factor for a range of other concerns such as psychological distress, cardiovascular disease and type 2 diabetes. Increased consumption of energy-dense foods and a decrease in physical activity levels have contributed to this issue.
- Rates of STIs have increased over time, especially chlamydia infections.
- Coping with stress, school or study problems and body image are young people's top three self-reported concerns.
- Discrimination or being treated differently based on sex, culture or sexual preference is a major concern for young people

Government and non-government programs relating to youth health and wellbeing

- Young people can experience social inequality based on diversity of cultural background and identity, socioeconomic status or location.
- Making health promoting choices and having control so that we can take health action involves awareness of risks, motivation to change, information and resources for support.
- Health literacy is the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate decisions about their health and wellbeing.
- Several programs have been implemented to address youth health and wellbeing in Australian society, including Youthbeyondblue.

The influence of community values and expectations on programs for youth

- When young people experience good health and wellbeing they are more likely to achieve better educational outcomes, make a successful transition to full-time work, develop healthy adult lifestyles, and be more actively engaged in their community.
- Health and wellbeing services and programs for youth can be affected by community values and expectations.

on Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0019).

5.5 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

The Koorie Youth Council (KYC) is an advocacy council led by an executive of 15 young Indigenous people from across Victoria and a state-wide network. It values diversity and aims to give Indigenous young people more opportunities to have a say, to support skills and leadership development, and increase their sense of wellbeing and pride.

KYC uses social media as a tool in much of its work. KYC's Facebook page informs a broader number of young people about issues of interest, as well as news about activities and opportunities to get involved. KYC uses Instagram and Twitter to connect with state and national organisations in the youth sector, build relationships, and promote its work at an organisational level. KYC also has a YouTube account, on which the profiles of two KYC members have been posted.

The KYC also partners with the Korin Gamadji Institute (KGI) a unique educational and training facility. The KGI, which was launched in 2011, sits at the heart of the Richmond Football Club. As well as being home to the Melbourne Indigenous Transition School and Wirrpanda Foundation, the Institute delivers a range of programs that help affirm identity and culture while creating opportunities for Aboriginal and Torres Strait Islander youth aged between 14 and 21 years. The program connects participants to their culture and community, and provides opportunities that will empower them to help close the unacceptable economic and health gaps that exist between Indigenous and non-Indigenous Australians. Richmond become the first sporting Club to present at the United Nations Permanent Forum on Indigenous Issues when a delegation went to New York in 2018.

The KYC hold an annual Koorie Youth Summit, as well as smaller-scale regional summits called 'Blackout' where they travel to regional communities.

Question 1

Explain one health inequality affecting Australian Indigenous youth. **(2 marks)**

Question 2

Explain two contributing factors to this inequality. **(4 marks)**

Question 3

What community expectations would be met by this program? **(2 marks)**

Question 4

Describe how the program addresses the health inequality identified in question 1. **(3 marks)**

studyON

5.5 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

on Resources

Interactivities Crossword (int-6854)
Definitions (int-6855)

6 Exploring mental disorders as a youth health and wellbeing issue

6.1 Overview

Key knowledge

Key features of one health and wellbeing focus relating to Australia's youth including:

- impact on different dimensions of health and wellbeing
- data on incidence, prevalence and trends
- risk and protective factors
- community values and expectations
- healthcare services and support
- government and community programs and personal strategies to reduce negative impact
- direct, indirect and intangible costs to individuals and/or communities
- opportunities for youth advocacy and action to improve outcomes in terms of health and equity.

Key skills

- Research and collect data on one particular health and wellbeing focus relating to youth, with critical analysis of its impact, management and costs
- Plan advocacy and/or action based on identification and evaluation of opportunities for promoting youth health and wellbeing

FIGURE 6.1 The health and wellbeing of Australia's youth is excellent, but there are a number of issues that require attention.

KEY TERMS

Advocacy promoting the interests or cause of an individual or a group of people
Anxiety uneasy emotional state that may be brought on by an actual or perceived threat to the safety and wellbeing of the individual
Depression extreme feelings of hopelessness, sadness, isolation, worry, withdrawal and worthlessness that last for a prolonged period and interfere with normal activities
Direct costs costs associated with preventing the disease or condition and providing health and wellbeing services to people suffering from it. Direct costs include all those associated with developing and implementing health promotion strategies as well as the diagnosis, management and treatment of the condition.
Indirect costs costs not directly related to the diagnosis or treatment of the disease, but that occur as a result of the person having the disease
Intangible costs costs on which it is difficult to place a monetary value. They often involve emotions or feelings for both the individual and community.
LGBTIQ acronym for commonly used definitions of people who are not heterosexual: lesbian, gay, bisexual, transgender, intersex, questioning
Lobbying trying to influence or persuade an organisation or government to take action
Mental disorders an umbrella term that encompasses a wide range of mental health conditions that affect how we feel, think and behave with greater severity and for prolonged periods, such as anxiety or depression
Mental health conditions refer to both mental health problems and mental disorders
Mental health plan care plan to help decide what services are needed, to set goals and decide on the best treatment options
Mental health problems a negative impact on a person's thoughts, feelings and social abilities that is often temporary and disappears with time. Examples of mental health problems include anger, changed eating patterns, loneliness, self-esteem issues, sleep problems and increased stress levels.
Protective factor something that enhances the likelihood of a positive health and wellbeing outcome and lessens the likelihood of negative health and wellbeing outcomes from exposure to risk
Psychological distress relates to unpleasant feelings and emotions that affect an individual's level of functioning
Resilience the ability to manage adversity and stress effectively and in a way that increases the ability to respond to future adversity
Risk factor something that increases the likelihood of developing disease or injury

on Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0020).

6.2 Mental disorders part 1

KEY CONCEPT Understanding the key features of one health and wellbeing focus relating to Australia's youth — impact on different dimensions of health and wellbeing and the incidence, prevalence and trends

In topic 5 you saw some of the aspects of youth health and wellbeing that require action. According to the Australian Institute of Health and Welfare (AIHW) report *Australia's Health 2018*, too many young people are overweight or obese; not meeting physical activity or fruit and vegetable consumption guidelines; drinking at risky levels; victims of alcohol- or drug-related violence; participating in unprotected sexual activity; or experiencing discrimination, stress, anxiety or depression. You will be required to investigate one of these issues in depth and critically analyse it to meet the requirements of Area of Study 3 — Outcome 3. This topic will provide a scaffold on how to approach this critical analysis task.

Critical analysis can involve:

- identifying why something is of significance or its timing is important
- evaluating strengths, limitations and opportunities
- making reasoned judgements, drawing conclusions and giving reasons for the option selected
- arguing a case according to the evidence or data
- showing why something is relevant or suitable and why it will work best
- showing the relevance of links between pieces of information.

In this topic, a comprehensive look at mental disorders, with a specific focus on anxiety and depression, is included as a guide to the depth required in your research and report.

FIGURE 6.2 Requirements of the critical analysis report

	Your report should include:
	• Description of your health and wellbeing focus
	• Impact on different dimensions of health and wellbeing
	• Data on incidence, prevalence and trends
	• Risk and protective factors
	• Community values and expectations
	• Healthcare services and support
	• Government and community programs and personal strategies to reduce negative impact
	• Direct, indirect and intangible costs to individuals and/or communities
	• Opportunities for youth advocacy and action to improve outcomes in terms of health and equity.

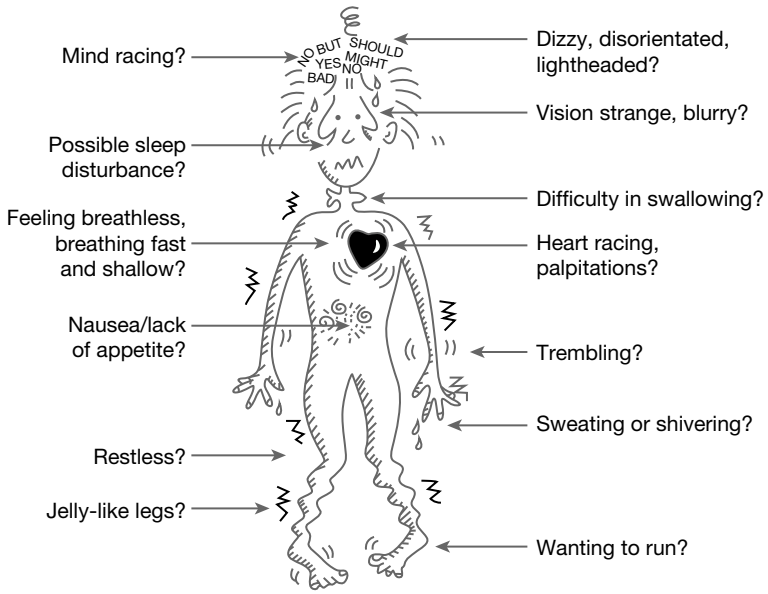
6.2.1 Focus on mental disorders

The first key feature that you need to include in your report is a description of the youth health and wellbeing focus you are researching. This should include any aspects of the health and wellbeing focus that separate it from others, that stand out or are common in each case. It should also include common signs and symptoms.

Mental health conditions include both **mental health problems** and **mental disorders**. The youth stage is often characterised by mood swings created by hormonal changes and changes to the structure of the brain. Extremes of mood, from anxious and irritable to joyous and excited, are common. However, many adults with mental health conditions have the first onset of mental health problems in childhood or youth, and prevention and early intervention are important in reducing the burden of mental health problems throughout the lifespan. Mental disorders contribute more to the burden of disease for youth than any other condition and will be the focus of this topic.

Some signs and symptoms that a mental health problem is becoming a mental disorder in a young person are included in figure 6.3.

FIGURE 6.3 Signs and symptoms of a mental health disorder



Mental health problems

Mental health problems have a negative impact on a person's thoughts, feelings and social abilities, but are often temporary and disappear with time. Examples of mental health problems include anger, loneliness, self-esteem issues, sleep problems and increased stress levels.

Mental disorders

Most mental disorders are often first experienced in the late teens or early twenties, but may only fully emerge later in life. They have a greater severity of impact and longer duration than mental health problems. There are different types of mental disorder, including **anxiety**, **depression**, psychosis and substance use disorder. These different disorders may all occur with different degrees of severity. Of the conditions included under the 'mental disorders' umbrella, anxiety and depression are the two most common among both male and female Australian youth and will therefore form the focus of this topic.

Anxiety

Anxiety disorders cover a range of conditions including phobias, panic disorder and generalised anxiety. Everyone experiences anxiety at one time or another. It comes from a concern over having a lack of control over circumstances. Anxiety is characterised by an uneasy mental state that may be brought on by an actual or perceived threat to the safety and wellbeing of the individual.

FIGURE 6.4 Stressful experiences such as bullying can be a risk factor for anxiety.

Anxiety incorporates both the emotions and the physical sensations we might experience when we are worried or nervous about something. When anxiety is excessive, persists for many weeks without relief, or interferes with everyday life, an anxiety disorder may be diagnosed.

Social anxiety may cause a young person to avoid social situations because they are concerned about how others see them or about communicating in an unfamiliar group. Panic disorder occurs through a fear that something bad is going to happen and it creates a racing heart, shaking and difficulty in breathing.

Depression

Everyone feels sad from time to time, but depression is more than feeling sad. Depression is a debilitating condition in which the feelings of sadness or worthlessness continue for an extended period. Depression is a feeling of low mood that lasts for a long time and affects your everyday life rather than just 'feeling down'. It is a medical disorder with a biological and chemical basis.

FIGURE 6.5 Individuals suffering from anxiety and depression may isolate themselves from others.

on Resources

Teacher-led video Understanding anxiety and depression (tlvd-0273)

Weblinks Get to know anxiety: snowballing worries

Personal story of depression: Kate DeAraugo

6.2.2 The impact of anxiety and depression on different dimensions of health and wellbeing

Your report should include a critical analysis of the impact of your health and wellbeing focus on specific characteristics of the dimensions of health and wellbeing of young people. This means identifying why the health and wellbeing focus is a concern specifically at this stage of the lifespan.

Anxiety causes the heart and breathing rates to increase, muscles to tense, and blood flow to be diverted from the abdominal organs to the brain. In the short term, anxiety prepares us to confront a crisis by putting the body on alert, but these physical effects can also cause light-headedness, nausea, diarrhoea and frequent

urination, sleep problems, panic attacks, an increased heartbeat, shortness of breath, a tight chest, an upset stomach, muscle tension or shakiness.

Emotionally, young people with an anxiety disorder may experience fear in inappropriate situations. They may constantly experience negative emotions relating to things that are a regular part of everyday life at school or home, or about things that aren't likely to happen in relation to their social group or family.

In its mildest form, depression doesn't stop a young person from leading a normal life, but it can make everything harder to do and seem less worthwhile. At its most severe, depression can make an individual feel suicidal, and can be life-threatening.

Depression causes chemical changes in the brain that affect hormone levels, resulting in appetite loss and disturbed sleep patterns due to changed serotonin levels. As a result, a young person's body may not be adequately rested, causing constant fatigue and the inability to cope with day-to-day requirements at school. Increased aches and pains may also result because changes to serotonin can alter sensitivity to pain, especially back pain.

Depression also increases the risk of several diseases or conditions. This is because increasing levels of stress hormones such as cortisol or adrenaline influence the immune system, making it harder for the body to fight infection.

Mentally and emotionally, a young person suffering from depression may withdraw from their normal activities, find attending school or family occasions difficult, have lowered self-esteem and an inability to control emotions that include pessimism, anger, irritability and anxiety. They may feel a reduced capacity to experience pleasure, an inability to enjoy usual activities with friends or family, and poor concentration and memory.

Anxiety and depression can have an impact on all dimensions of health and wellbeing (see table 6.1).

TABLE 6.1 Anxiety and depression can affect all dimensions of health and wellbeing.

Physical	Mental	Emotional	Social	Spiritual
Increased heart rate, shortness of breath Nausea Difficulty falling or staying asleep, or restless sleep Self-harm Low energy and exhaustion Overeating to improve mood or loss of appetite Increased aches and pains	Feeling stressed and anxious Having negative thought patterns Having low levels of confidence Experiencing low self-esteem	Being unable to gain control of anxiety or worry Being unable to control sadness or pessimism Being unable to settle into activities or feel worthy of attention Being unable to feel adequate or happy when undertaking social activities Being unable to feel satisfaction or hope	Social isolation through withdrawing from social interactions Not wanting contact with others, weaker social connections, altered friendship network	Reduced motivation to achieve or see meaning in life Less hope and inner peace in life

6.2.3 The incidence, prevalence and trends of mental disorders among youth

Your report should show the impact of your health and wellbeing focus on youth health status. It needs to include data on incidence, prevalence, trends and levels of concern that young people hold. This means identifying why the health and wellbeing focus is a concern specifically at this stage of the lifespan.

Incidence

Research into mental health diagnoses in Victorian Emergency Departments found the number of young people presenting to hospital had increased for both physical and mental disorders, but that mental disorders have increased at a higher rate (46 per cent) compared to physical disorders (13 per cent). Orygen, the National Centre for Excellence in Youth Mental Health states that 'youth is the peak period for the emergence of mental ill-health, with the onset of most mental disorders falling from the early teens to the mid-20s, reaching a peak in the early 20s.'

Prevalence

The rates of mental disorders are high among youth and contribute significantly to the overall burden of disease in this age group. According to Youthbeyondblue, about 26 per cent or one in four 16- to 24-year-olds had symptoms of a diagnosed mental disorder in the previous 12 months. Anxiety disorders are the most common mental health problem experienced by young Australians. Australian Bureau of Statistics data from the National Survey of Mental Health and Wellbeing suggests that one in six young Australians is currently experiencing an anxiety condition and that 15.4 per cent of Australians aged 16 to 24 have experienced an anxiety disorder in the last 12 months.

2018 research by headspace has revealed the following data on the levels of **psychological distress** among young Australians.

- Nearly one in three young Australians aged 12 to 25 (32 per cent) are reporting high or very high levels of psychological distress.
- Rates of distress are significantly higher among young women (38 per cent compared to 26 per cent of young men).
- Young people aged 18 to 21 are reporting the highest levels at 38 per cent compared to 20 per cent in those aged 12 to 14.
- Victoria has the highest percentage of young people reporting high or very high levels of psychological distress — 35 per cent compared to 33 per cent in WA and SA, 31 per cent in NSW and 29 per cent in Queensland.

Mission Australia's *Young People's Mental Health Over the Years* (2016) report found that 7.7 per cent of 11- to 17-year-olds met the criteria for a major depressive disorder (depression). This means they experienced at least five symptoms of depression for a minimum of a two-week period. The symptoms caused significant distress and interfered with normal functioning at school, at home or in social settings. The prevalence of major depressive disorder was higher in females than males (11 per cent compared with 4.5 per cent). Of males aged 16–17 years, 8.2 per cent met criteria for major depressive disorder, compared with 19.6 per cent of 16- to 17-year-old females.

Trends

The 2017 Young Minds Matter report suggests that the overall rates of mental conditions have remained constant, but there has been an increase in the proportion of youth experiencing a major depressive disorder (2.9 per cent in 1998 to 5 per cent in 2013–14).

Mission Australia's 2018 report found:

- over four in ten young people identified mental health as an important issue facing Australia today (43 per cent)

- between 2016 and 2018, the proportion of those indicating mental health as an important national issue has more than doubled: from 20.6 per cent in 2016 to 43 per cent in 2018
- a greater proportion of female than male respondents identified mental health as a concern (49.2 per cent compared with 35.9 per cent).

Burden of disease

The Australian Institute of Health and Welfare (AIHW) *Australian Burden of Disease Study 2016* shows that from the ages of 15 to 24, a variety of mental and substance use disorders accounted for a large proportion of the non-fatal burden of disease (see figures 6.6 and 6.7).

FIGURE 6.6 Leading causes of total disease burden for females aged 15–24

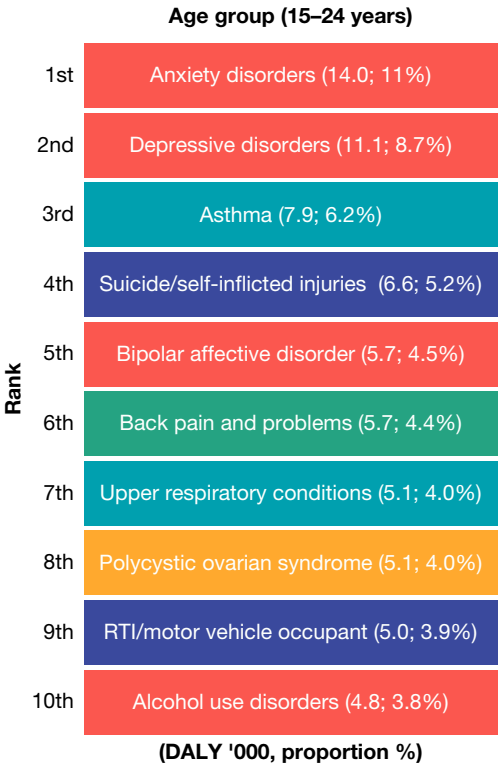
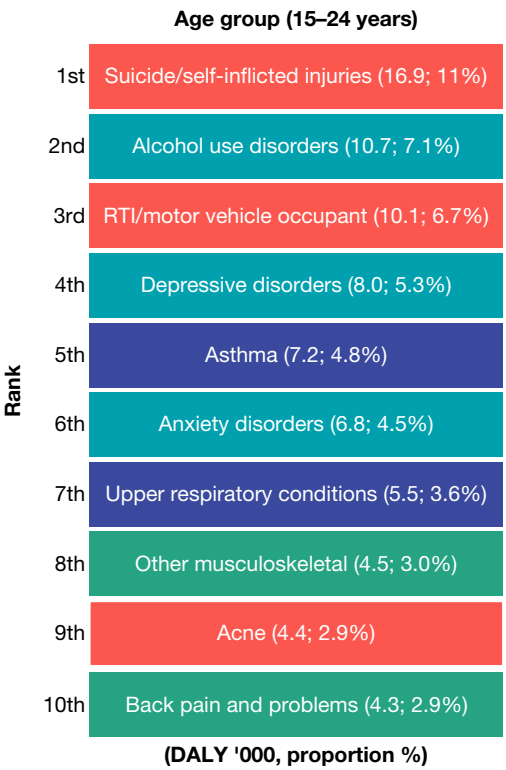


FIGURE 6.7 Leading causes of total disease burden for males aged 15–24



Suicide is the biggest killer of young Australians, and accounts for the deaths of more young people than car accidents. Of these, 77 per cent were male deaths. The rate of suicide is slowly declining in Australia but many more males than females continue to commit suicide. Aboriginal and Torres Strait Islander young people and **LGBTIQ** young people are also at higher risk. The majority of those who attempt suicide have had a previous diagnosis of a mental disorder.

EXAM TIP

You are required to know the key features of one health and wellbeing focus that is specific to youth. This should include a detailed description of the health and wellbeing focus and a critical analysis of how it can affect each of the five dimensions of health and wellbeing. Your response needs to include specific examples that link the health and wellbeing focus you have chosen to the changes in the characteristics of each of the dimensions of health and wellbeing. The health focus and data must relate to youth.

on Resources

Weblinks WHO video: Depression
Black Dog Institute

6.2 Activities

1. (a) Use the **WHO video: Depression** weblink in the Resources tab to watch the video 'I had a black dog, his name was depression'.
   (b) Use the **Black Dog Institute** weblink in the Resources tab to respond to the following questions.
      i. What is the significance of the Black Dog Institute logo?
      ii. How does the Black Dog Institute support young people in understanding the impact of mental disorders?
2. Research a health and wellbeing focus relating to Australian youth outlined in topic 5. Present your research as an infographic, fact sheet or presentation that includes:
   (a) a description of the health and wellbeing focus
   (b) the possible impacts of this health and wellbeing focus on all dimensions of health and wellbeing
   (c) incidence, prevalence and trend data relating to this health and wellbeing focus. Make sure your data relate to Australian youth.

6.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. With the use of examples, explain the difference between mental health problems and mental disorders.
2. Create a mind map with a description of both anxiety and depression in the centre. Add a dot point list of the impact that anxiety and depression can have on each of the dimensions of health and wellbeing.
3. (a) What evidence is there that the incidence of mental disorders is increasing in youth?
   (b) What proportion of young Australians have an anxiety disorder?
   (c) What are the criteria that Mission Australia use to identify a depressive disorder?
   (d) What percentage of young Australians self-report as having a depressive disorder?
   (e) What evidence exists that young people see mental health as a concern?
4. Examine figures 6.6 and 6.7 and answer the following questions:
   (a) What is the leading cause of disease burden in young Australians?
   (b) What percentage of DALYs are attributable to anxiety and depression for males and females aged 15–24 respectively in terms of total burden?
   (c) Which other causes of disease burden shown have a relationship with a mental disorder?

6.2 Exercise 2 APPLY your knowledge

1. In 2017 the Young Minds Matter survey identified that two-thirds of young people with a mental disorder said that their parents or carers knew only 'a little' or 'not at all' about how they were feeling. Australian research by headspace.com.au shows that up to 70 per cent of young women and 80 per cent of young men who experience a mental disorder receive no help at all.
   What do these statistics suggest about the true prevalence of youth mental disorders?
2. The Australian government funded the largest national survey examining the mental health and wellbeing of Australian children and adolescents. The title of the survey was Young Minds Matter 2017. Justify the title of this survey by writing a paragraph discussing the importance of improving youth mental health and wellbeing.

studyON

6.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

6.3 Mental disorders part 2

KEY CONCEPT Understanding the key features of one health and wellbeing focus relating to Australia's youth — the risk and protective factors

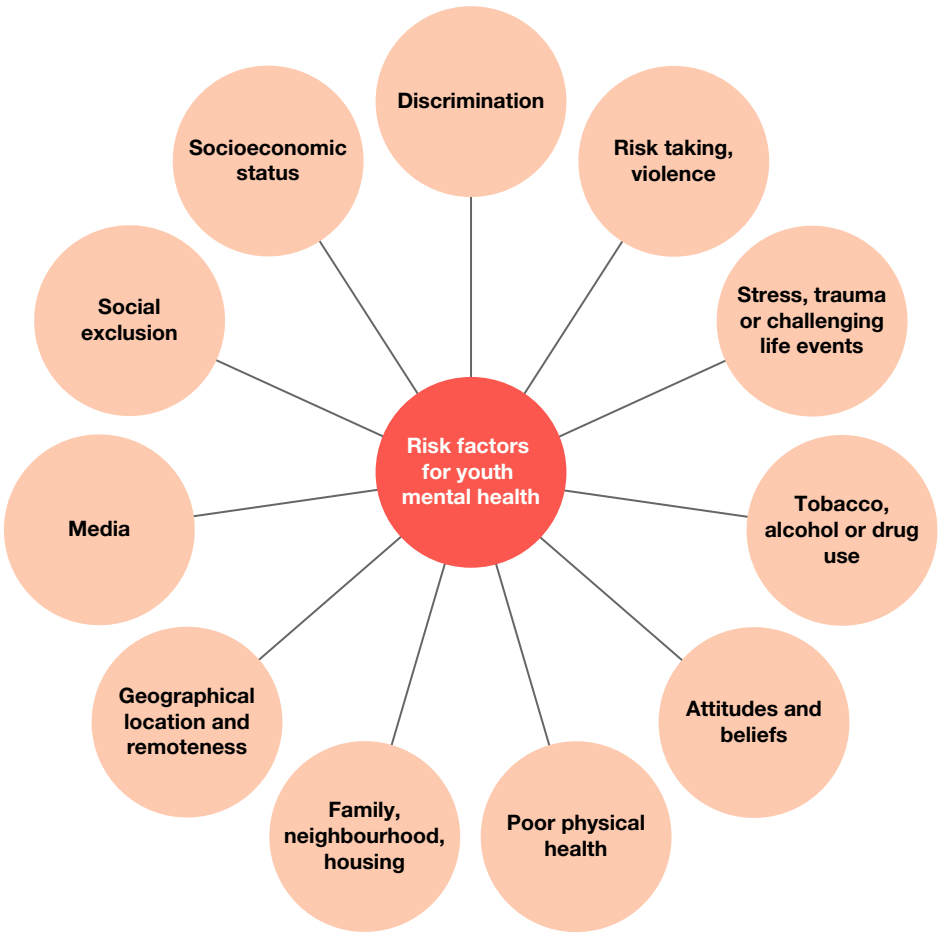
6.3.1 Risk factors and protective factors

Your report should include a critical analysis of the risk and protective factors that can relate to your chosen youth health and wellbeing focus. This means identifying relevant influences at the youth stage and why the timing of their influence is significant.

Risk factors

Like many physical illnesses, mental disorders are thought to arise from the interaction of genetic, sociocultural and environmental factors, including stressors in life. All of us have varying degrees of genetic vulnerability (predisposition) to developing mental disorders, but whether they are triggered depends on the level of stress we experience from **risk factors**. The stress may only need to be slight to trigger a mental disorder, but for others who are less susceptible, it may need to be a more traumatic event.

FIGURE 6.8 Risk factors for mental disorders in youth



Research by headspace suggests that 75 per cent of mental health disorders begin before the age of 25 years. As shown in figure 6.8, there are many factors that can contribute to anxiety and depression in the youth stage, and it is most likely that these conditions arise from a combination of factors. The presence of one or more risk factors does not mean an individual will develop a mental disorder; however, as the number of risk factors increases, so does the likelihood of developing a mental disorder.

Early studies of twins showed that genes were part of the cause of depression because identical twins had a much higher risk of disease than non-identical twins. New evidence from the world's largest investigation into the impact of DNA on depression identified 44 gene variations that raise the risk of depression. No-one 'inherits' depression from their mother or father. Each person inherits a unique combination of genes and certain combinations can predispose to an illness. Many of the genes reported in the new study have a role in how neurons grow, operate and send signals around the brain. Some of the gene variations are linked to neurotransmitters such as serotonin, which existing antidepressants target.

Research suggests many other possible causes interact to bring on depression. These include problems with mood regulation by the brain, stressful life events, medications and medical problems. Anxiety and depression in the youth stage can increase the chances of risky health behaviours such as self-harm, social withdrawal and substance abuse. These in turn can intensify the cycle of mental ill-health.

Protective factors

Knowing what kinds of factors put young people at risk of mental disorders helps health experts plan and develop the kinds of support and resources needed to be able to intervene early. It also helps to guide efforts to prevent mental health problems developing in the first place. Knowledge of **protective factors** can reduce exposure to risk. For example, a young person with good social and emotional skills can make friends easily and is consequently less likely to experience social isolation (risk factor).

Positive connections with family or school support academic achievement. For example, a caring relationship with a parent, carer and/or teacher provides young people with a source of support to help them cope with difficulties. Similarly, a strong sense of cultural identity can help to protect against the negative effects of discrimination and increase **resilience**.

Schools promote mental health and wellbeing for youth through access to education, a sense of belonging and connectedness and the development of social and emotional skills. A school that promotes mental health and wellbeing has strategies in place to provide safe, inclusive and empowering environments, social and emotional learning, family and community partnerships and mental health promotion programs.

FIGURE 6.9 Protective factors for mental health in youth

Doing regular physical activity at school or on weekends is also a good way for a young person to help prevent or manage mild depression. A new Black Dog Institute-led study found that 12 per cent of cases of depression could have been prevented by one hour of physical activity a week.

FIGURE 6.10 A supportive group of friends is a protective factor for anxiety and depression.

FIGURE 6.11 Physical activity is a protective factor for anxiety and depression.

The brain benefits of exercise

- Increases production of neurochemicals that promote brain cell repair
- Improves memory
- Lengthens attention span
- Boosts decision-making skills
- Prompts growth of new nerve cells and blood vessels
- Improves multitasking and planning
- Triggers serotonin, which causes feelings of happiness and security, and regulates mood, appetite and sleep patterns
- Triggers endorphins that help alleviate depression and anxiety
- Helps give purpose and structure to the day

Resources

Digital document Mental health and wellbeing case studies worksheet (doc-32161)

Weblink Mental health and wellbeing case studies

6.3 Activity

Access the **Mental health and wellbeing case studies** weblink and worksheet in the Resources tab, then complete the worksheet.

6.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain how a young person's family could be either a risk or protective factor for mental disorders.
2. Explain how physical activity is a protective factor for mental disorders.
3. What role can peers play as either a risk or protective factor for mental disorders in youth?
4. Why are schools often a setting for youth mental health and wellbeing programs?
5. Why would it nearly always be a combination of factors that leads to anxiety or depression in youth?

6.3 Exercise 2 APPLY your knowledge

1. Ruby is 17 and in the past few months has been feeling depressed and has lost her usual enthusiasm for life. She is doing poorly in some of her subjects at school and her parents argue a lot about money at home. As a result, she has begun to miss quite a lot of school and quit her part-time job. Ruby avoids her friends and has also stopped playing soccer. Now she spends most of her days sleeping and lies awake restlessly in her room at night.
   (a) Identify the risk factors that may be affecting Ruby.
   (b) Is it possible that Ruby has a mental disorder? Discuss.
   (c) Explain how Ruby's current situation may affect her health and wellbeing.
   (d) Suggest two protective factors that Ruby could introduce into her lifestyle to manage her mental health and wellbeing.
2. On your own or with a partner, select a health and wellbeing focus relating to Australia's youth. Use a concept map or summary table to brainstorm the risk and protective factors that may contribute to the selected health and wellbeing focus.

studyON

6.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

6.4 Mental disorders part 3

KEY CONCEPT Understanding the key features of one health and wellbeing issue relevant to Australia's youth — community values and expectations, healthcare services and support, government and community programs, and personal strategies to reduce impact of direct, indirect and intangible costs

Your report should include a critical analysis of community values and expectations that are linked to healthcare services and government and community programs designed to be part of the management of the health and wellbeing focus.

As you saw in topic 5, as a community we value and protect our youth from harm where possible. We have an expectation that youth will experience optimal health and wellbeing and be resilient enough to meet life's challenges as they make a successful transition into adulthood and reach their potential. We also expect that there will be government and community services to support this and to address any health and wellbeing concerns should they arise.

6.4.1 Community values and expectations

Mental disorders in young Australians are of concern. Based on community expectations, Australia's health system provides opportunities for youth to seek care relating to their mental health and wellbeing. In addition, both anxiety and depression have been the subject of numerous government and non-government strategies that aim to reduce risk factors and increase protective factors to improve the health and wellbeing of those experiencing these conditions.

Moreover, mental health and wellbeing programs are expected to develop resilience, and reduce risk factors such as anxiety, stress, helplessness, violence and social exclusion.

Enhancing resilience includes:

- increasing coping skills
- improving quality of life, enhancing self-esteem, wellbeing and belonging
- strengthening social supports
- strengthening all dimensions of health and wellbeing.

According to the Young Minds Matter survey, the most common reasons given by young people aged 13–17 with a major depressive disorder for not seeking help or receiving more help were related to stigma or poor mental health literacy. The following common reasons were given: 62.9 per cent worried what other people might think or didn't want to talk to a stranger; 61.7 per cent thought the problem would get better by itself; and 57.1 per cent wanted to work out the problem on their own or with help from family or friends. This indicates that young people value inclusion and self-reliance. As a result, they have an expectation that they will be listened to when receiving advice and education about health topics,

including body image as well as safe sex and respectful relationships and drugs and that the information is relevant, current and free of value judgements. They state that they are often frustrated with the perceived stereotyping of their concerns by adults.

Studies by ReachOut.com show that young people prefer internet services for accessing information, advice or support. The anonymity it provides make them more willing to engage with online interventions.

These data indicate that young people value privacy and confidentiality. As a result, they often have an expectation that health and wellbeing programs will be available online or through digital applications.

FIGURE 6.12 A range of community values and the associated expectations that they create for mental health and wellbeing programs for youth

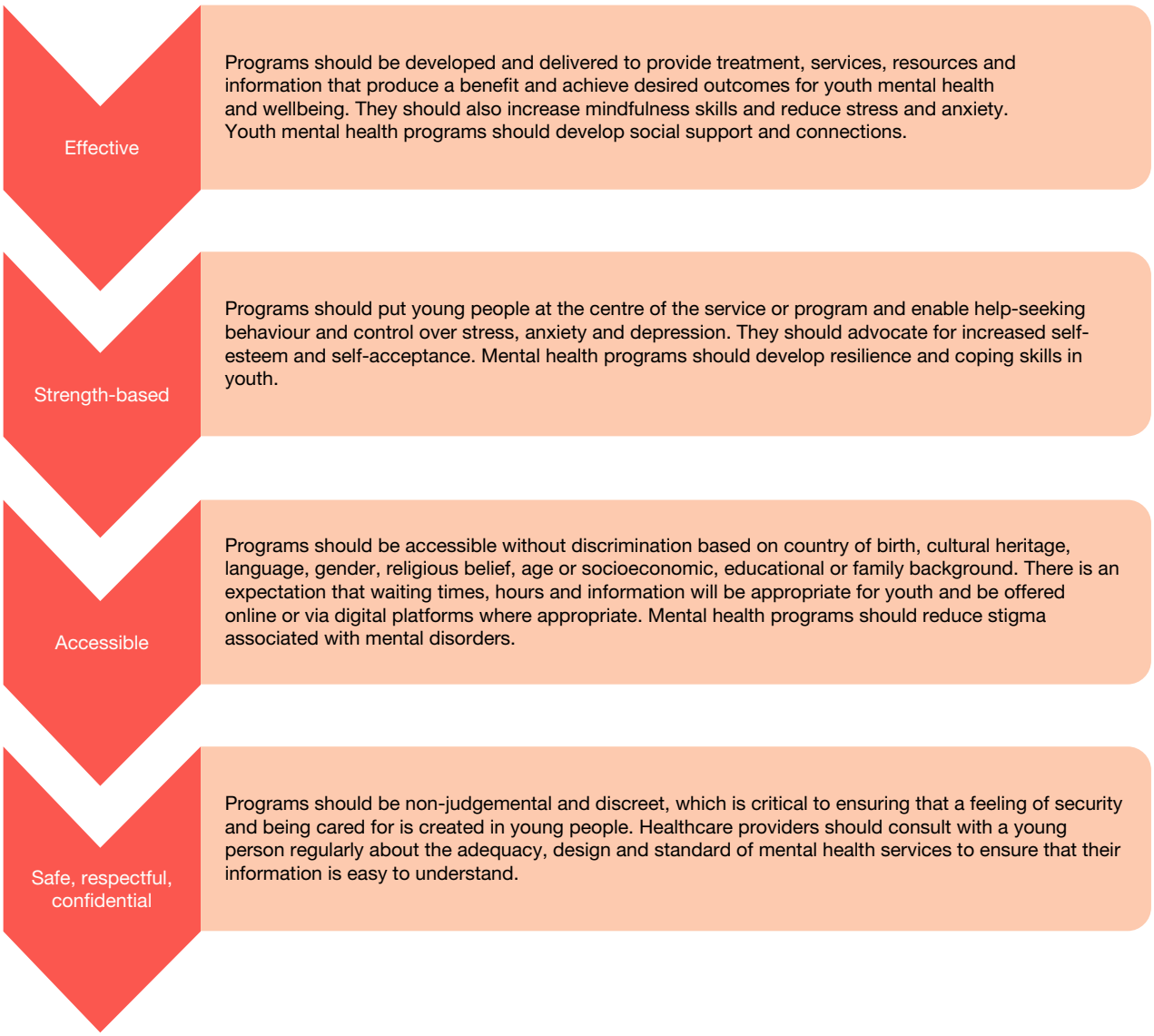


FIGURE 6.13 How young people use the internet to access mental health services

6.4.2 Mental healthcare services available to young people

Your report should include information on healthcare services designed to address your chosen health and wellbeing focus.

In Australia, mental healthcare services are provided in several ways, including general practitioners, specialists, such as psychologists and psychiatrists, and hospital care. Many of these services are either fully or partially funded through Medicare. As well as curative mental healthcare services, youth can access a range of government, community and personal programs and preventative strategies. *Mental health services in Australia: in brief 2018* indicates that the number of patients receiving Medicare-subsidised mental health-specific services has increased, from 1.2 million (or 5.7 per cent of the population) in 2008–09 to 2.4 million (9.8 per cent) in 2016–17.

Medicare

Medicare provides young people with a range of health services including:

- subsidised doctors' consultations
- treatment by a psychiatrist
- free treatment and accommodation as a public patient in a public hospital
- seventy-five per cent of the Medicare Schedule fee for services as a private patient in a public or private hospital.

Medicare rebates are available for up to ten individual and ten group allied mental health services per calendar year to patients with an assessed mental disorder who are referred by a General Practitioner (GP) under a GP Mental Health Treatment Plan, or under a referred psychiatrist assessment and management plan, or a psychiatrist or paediatrician.

General practitioners and specialist services

General practitioners (GPs) are often the first contact youth have with the health system. In 2015–16, 12.4 per cent of all GP encounters were mental health-related (17.1 million GP encounters nationally). Depression, anxiety and sleep disturbance were the three mental health-related problems most frequently managed by GPs. The *General Practice: Health of the Nation 2018* report data indicates that, in addition to being the most common reason patients visit their GP, mental health was also identified as the health issue causing GPs the most concern for the future. GPs provide a range of services including preparing a **mental health plan**, referring the individual to the right health professional (including specialists), and prescribing appropriate medicines and associated treatments (free if the doctor bulk bills). The most common management of mental health-related problems was for the GP to prescribe, supply or recommend medication (61.6 per 100 mental health-related problems managed).

FIGURE 6.14 Individuals can and should be involved in devising treatment plans.

Young Australians have access to more medical information than ever before, enabling them to self-diagnose and research providers and treatment options. Their expectation of the doctor–patient relationship is no longer one of dependence, but one where they have more to say, and their opinion is valued. Young people have the right to assist in the development of a treatment plan that suits them.

Mental health specialists include psychologists, psychiatrists, mental health nurses, occupational therapists, social workers and Indigenous health workers. If an individual sees a psychiatrist as a public patient at a community health centre or a public hospital, the service is likely to be free. If they see a psychiatrist in private practice, Medicare will refund part of the psychiatrist's fee. Some psychiatrists may bulk bill some patients, which means the patient does not have to pay anything for the consultation. These services are provided in a range of settings; for example, in hospital, consulting rooms, home visits and over the phone.

Hospital care

Hospital emergency departments also play a significant role in treating mental disorders and, in addition to GP consultations, can be the initial point of contact with the health system for youth. Emergency departments can often be an initial point of care for those seeking mental health-related services for the first time, as well as an alternative point of care for people seeking after-hours mental healthcare.

6.4.3 Government and community strategies/programs

Your report should include information on government and community strategies for your chosen health and wellbeing focus.

headspace

headspace is the National Youth Mental Health Foundation funded by the Australian government. It provides early intervention mental health services to 12- to 25-year-olds in four areas: mental health and wellbeing, physical health and wellbeing, work and study support, and alcohol and other drug services. headspace offers information and services for young people, and their families and friends, as well as health professionals. These are provided through their website, headspace centres and an online counselling service eheadspace. headspace centres are located across metropolitan, regional and rural areas of Australia. The centres are built and designed with input from young people so they are youth-friendly and don't have the same look or feel as other clinical services. At these centres, young people can be assisted to access a GP, psychologist, social worker, alcohol and drug worker, counsellor, vocational worker or youth worker.

FIGURE 6.15 headspace provides inclusive online and telephone support and counselling to people aged 12 to 25 and their families and friends.

CASE STUDY

$100m funding boost for school mental health programs and headspace centres

Young Australians seeking help for depression and anxiety will get further assistance with an injection of more than $100 million into school mental health programs and a range of new headspace centres.

Key points:

- Major funding boost for kids' mental health
- $75 million for new headspace centres and student mental health programs
- More funds for digital mental health services

Health Minister Greg Hunt said the initiatives would help schools and communities to support the wellbeing and mental health of Australian kids and respond to personal and community challenges.

'We know that around 4 million Australians experience a mental health condition every year,' he said.

'People of all ages can be affected, either directly themselves or because someone close to them might be suffering and even young children can be deeply affected.

'Programs for beyondblue, headspace, Orygen and Kids Helpline and Reach Out and others are all about ensuring that we provide assistance before the problems emerge and when they do emerge there are avenues for treatment and avenues for people to seek emergency help.'

More than $45 million of the funding injection will go to beyondblue for its integrated school-based Mental Health in Education initiative.

It is a new national program to encourage good mental health and wellbeing practices for Australian children from early learning centres to the end of secondary school.

It will give school principals, parents and carers across the education spectrum access to a range of face-to-face or online mental health programs ...

The aim of the mental health in education program is to give parents and educators the tools to recognise the signs of mental health challenges and deal with them before the symptoms become acute.

Teachers will be trained to identify early warning signs and where to access help.

New early intervention centres

More headspace centres will be set up across Australia, with a funding boost of $30 million.

These centres, developed by psychiatrist Professor Patrick McGorry, provide early intervention mental health services for people aged 12–25, as well as work and study support, and alcohol and drug services.

One in four young people have experienced a mental health issue in the past 12 months — a higher prevalence than all other age groups.

Kids Helpline, ReachOut, Suicide Callback Service and QLife will receive almost $2 million over two years for telephone, webchat and online mental health help.

'The extension of funding announced for these key child and youth mental health initiatives will provide a stable funding base for the great work done by these organisations,' Mr Hunt said.

Source: Scott, S & Kearney, J 2018, '$100m funding boost for school mental health programs and headspace centres', abc.net.au, 8 January, https://www.abc.net.au/news/2018-01-08/more-dollars-for-kids-mental-health/9310172.

Case study review

1. What is the main aim of the additional funding for mental health and wellbeing of youth?
2. How is the funding to schools aiming to improve mental health and wellbeing of youth?
3. Why is the number of headspace centres being increased?

Youthbeyondblue

Youthbeyondblue is the youth arm of beyondblue and focuses on young people aged 12 to 25 years. Youthbeyondblue aims to raise awareness of depression and anxiety by reassuring young people that it's okay to talk about depression and anxiety, and to get help when it's needed.

Youthbeyondblue.com provides a website with information for young people about depression and anxiety, and where to get help. Youthbeyondblue also provides young people with an opportunity to share their experiences of depression and anxiety, and their ideas and thoughts. Through this forum, young people can also respond to other people's stories.

'Stop. Think. Respect.' is another beyondblue national program that has been developed in collaboration with LGBTIQ communities and the Movember Foundation. It is aimed at improving understanding about discriminatory behaviour and the impact it can have on the mental health and wellbeing of LGBTIQ communities. This campaign presents a cinema commercial and real-life stories that have been designed to prompt people to stop discrimination, think about how comments could cause real distress and harm, and to respect people who are different.

on Resources

Weblink Left handed

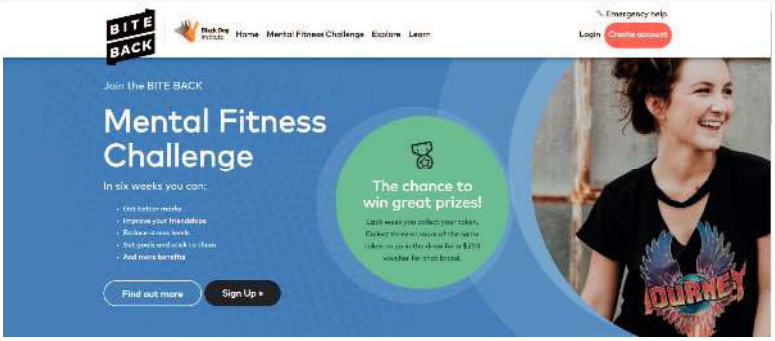
FIGURE 6.16 Youthbeyondblue provides young people with an opportunity to understand depression and anxiety, and gain general information about getting help and getting better.

e-Mental Health

e-Mental Health (eMH) is the delivery of services targeting common mental health problems through online and mobile phone interactive websites, apps, sensor-based monitoring devices and computers for people with mild to moderate depression or anxiety. e-Mental Health can provide services where face-to face therapy is not available or accessible and can be used with face-to-face therapy by providing an extra level of support. The programs can be accessed at any time of the day providing information and skills when required. They may also be a good starting point for young people who are not quite ready to speak to someone face-to-face.

The benefits of eMH are that patients can easily access an app or a website through their phone and take it with them wherever they go, apps can be accessed at any time of the day for immediate support, and apps can use social media and gaming to encourage the patient to stick to treatment. However, questions remain about how eMH treatments compare to traditional treatment in terms of effectiveness. Also, with many apps available to download or online programs to access, it is hard to know which ones are most beneficial for young people.

FIGURE 6.17 BITE BACK is an e-Mental Health program that aims to improve the wellbeing and mental fitness of young people aged 12–18 years, based on the principles of positive psychology.



6.4.4 Personal strategies that promote mental health and wellbeing

Your report should include information on personal strategies for your chosen health and wellbeing focus.

As well as government and community strategies and programs to combat anxiety and depression, there are several things listed in figure 6.19 that individuals can do to promote their own mental health and wellbeing.

6.4.5 Costs associated with mental disorders

Part of the critical analysis of your report needs to include the associated costs of your chosen health and wellbeing focus to individuals and the community that require managing.

Direct costs

Direct costs are those associated with preventing the disease or condition and providing health services to people suffering from it. These costs include all those associated with developing and implementing health promotion strategies as well as the diagnosis, management and treatment of the condition. It is relatively easy to put a dollar value on direct costs.

FIGURE 6.18 Talking to friends and family can improve mental health and wellbeing

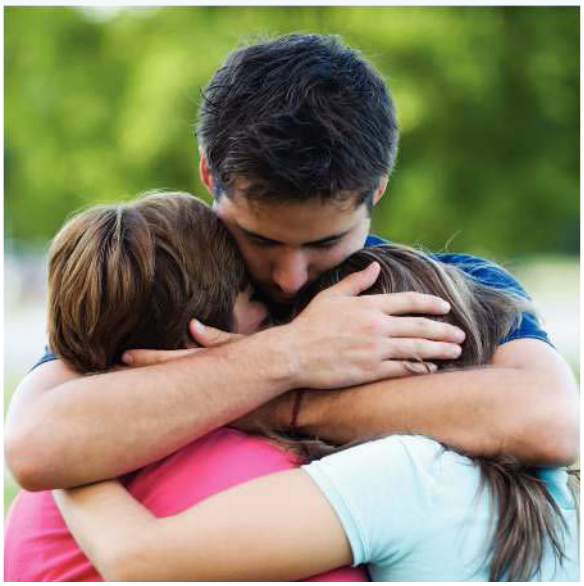


FIGURE 6.19 Personal strategies and why they should be effective in improving youth mental health and wellbeing

Communicate with family and friends	Individuals can discuss problems and solve issues before they seem unmanageable.
Seek help from medical professionals	Mental health disorders can be professionally identified before they develop into clinical anxiety or depression.
Take time to relax	Strategies such as engaging in hobbies, exercise and meditation can give a sense of accomplishment and purpose, boost confidence and help to connect with others.
Talk to a counsellor	Individuals can discuss problems and solve issues before they seem unmanageable.
Get enough sleep	Getting sufficient rest helps you feel energised and stay focused.
Eat well	Eating a healthy diet helps you feel energised and stay focused.
Cut back on alcohol and drugs	Reducing or eliminating drug intake will help you sleep better and feel better.

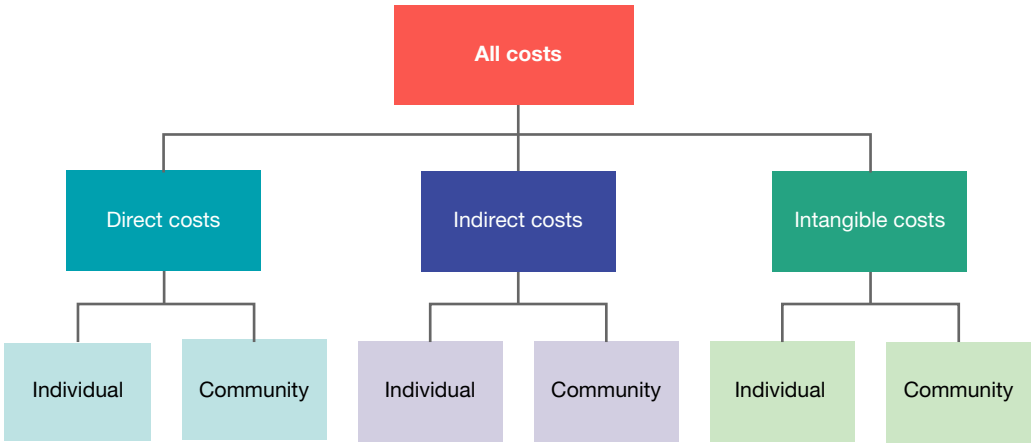
Direct costs to the individual are those paid for by the ill person or their family. Examples include fees for ambulance transport, doctor and specialist fees not covered by Medicare, surgery or hospital fees not covered by Medicare or private health insurance, and pharmaceuticals.

Mental disorders affect not only the young person, but also their family, carers, friends and the wider community. Poor mental health and wellbeing leads to economic impacts for the individual, the economy and society more broadly.

The economic burden related to mental disorders includes costs related to premature death and disability, provision of treatment and support services, reduced productivity and loss of income both from sufferers and their carers. 2019 AIHW data indicate that $1.2 billion, or $49 per person, was spent by the Australian Government on benefits for Medicare-subsidised mental health-specific services in 2017–18. 11.7 million

Medicare-subsidised mental health-specific services were provided by psychiatrists, GPs, psychologists and other allied health professionals in 2017–18. 13.4 per cent of young people aged 15 to 24 years received Medicare-subsidised mental health-specific services. 11.8 per cent of young people aged 15 to 24 received mental health-related prescriptions (subsidised and under co-payment) in 2017–18. There were 518.5 estimated GP encounters per 1000 population for people aged 15–24 years in 2015–16. 70 per cent of all mental health-related prescriptions were antidepressant medications in 2017–18.

FIGURE 6.20 The costs that can be incurred by individuals and the community



Direct costs can be the responsibility of the individual with the condition, or the responsibility of the community (see table 6.2).

TABLE 6.2 Examples of direct costs associated with mental health and wellbeing issues

Direct costs to the individual	Direct costs to the community
• Fee associated with cognitive behavioural therapy to understand the link between thoughts, feelings and behaviour • Fees associated with treatment of anxiety disorders or depression including medication such as antidepressants and therapy	• Costs associated with implementing health promotion strategies such as Youthbeyondblue • Costs associated with scheduled fees for a GP visit to discuss low mood, diagnose and treat the condition (paid for by Medicare and/or private health insurance) • Costs associated with providing the PBS to subsidise antidepressant medication • Costs associated with the operation of public and private hospitals for treatment for self-harm

In addition to the financial costs associated with preventing, diagnosing and treating mental health conditions, there is a wide range of hidden costs. Many of these are financial, but it is difficult to put a dollar value on many other costs. These costs can be classified as direct or intangible and, like direct costs, can lie with the individual or community.

Indirect costs

Indirect costs are not directly related to the diagnosis or treatment of the disease, but occur as a result of the person having the disease. An example of an indirect cost to the community is lost productivity. Businesses may lose employees, which decreases the volume of products or services they are able to produce. They may also be paying sick leave while employees are ill. There are also losses in government taxation revenue when people are not working, as well as welfare payment costs if disability payments are required.

TABLE 6.3 Examples of indirect costs associated with mental health and wellbeing issues

Indirect costs to the individual	Indirect costs to the community
• When a young person is unwell due to depression, they may need to have regular consultations requiring ongoing transport costs.	• Greater funding for family members who require welfare payments to care for a young person with depression

The costs associated with mental health and wellbeing issues in Australia are significant. A report commissioned by ReachOut Australia found that poor mental health and wellbeing in young people costs Australia at least $6.29 billion per annum, including $1.3 billion in direct health costs and $1.2 billion in unemployment and disability payments.

Intangible costs

Costs can also be intangible, which means it is very difficult to put a monetary value on them. **Intangible costs** to the individual could include pain and suffering, stress about the impact and outcome of their condition, loss of self-esteem and feelings of worthlessness if the person is unable to complete activities they could in the past.

TABLE 6.4 Examples of intangible costs associated with mental health and wellbeing issues

Intangible costs to the individual	Intangible costs to the community
• Depression may reduce participation in social activities, such as playing in the school football team or participating in social events with family and friends.	• Family and friends experience grief in the case of the death of a young person due to suicide.

EXAM TIP

When writing about the costs associated with a health and wellbeing focus, you need to make it clear if you are indicating costs to the individual or costs to the community. You also need to make the costs specific to the age group for youth and to your health and wellbeing focus.

on Resources

Digital document ReachOut WorryTime worksheet (doc-32162)
Weblink ReachOut WorryTime app

6.4 Activities

1. Access the **ReachOut WorryTime** weblink and worksheet in the Resources tab, then complete the worksheet.
2. (a) Research government and/or non-government strategies that are employed to address a health and wellbeing focus relating to Australian youth.
   (b) Produce a summary on the strategy and include the following information:
   i. name of the organisation/level of government
   ii. aims/goals of the organisation/strategy
   iii. a description of how they attempt to achieve their goals
   iv. direct, indirect and intangible costs that would be reduced by your chosen strategy.

6.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Identify community values and explain the associated expectations that relate to mental health and wellbeing programs.
   (b) Discuss factors that may prevent young people from accessing professional support for their mental health and wellbeing.
2. How does Medicare support the mental health and wellbeing of young people?
3. (a) What is Youthbeyondblue?
   (b) How does it promote the health and wellbeing of Australian youth suffering from mental disorders?
4. What personal strategies can be undertaken as protective factors for youth mental health and wellbeing?
5. Develop a mind map of the direct, indirect and intangible costs linked to youth mental health problems.

6.4 Exercise 2 APPLY your knowledge

1. Why would it be beneficial for an individual to assist in devising their mental health plan?
2. Discuss the opportunities and limitations of e-health resources, social media and apps with regard to youth mental health and wellbeing.

studyON

6.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

6.5 Opportunities for youth advocacy and action to improve outcomes in terms of health and equity

KEY CONCEPT Planning advocacy and/or action and identifying and evaluating opportunities to promote youth health and wellbeing

Young people can experience barriers that limit their opportunities to receive appropriate resources, know and exercise their rights, and fully utilise healthcare services. Your report needs to include a critical analysis of the actions that young people can take to have a say about the health and wellbeing focus you are researching.

Healthcare decisions are sometimes made by professionals without the view of the young person being considered, making them the passive recipients of decisions. Therefore, young people have often had adults speak on their behalf and protect their rights.

It is important for young people to be able to advocate for their healthcare rights and to take health action. Effective youth participation is about creating opportunities for young people to be involved in influencing, shaping, designing and contributing to policy and the development of services and programs. It is based on the principles of young people being informed, influencing outcomes or being involved in decision-making and evaluation.

Advocacy can:

- encourage participation
- address inequalities
- improve services
- change attitudes and values.

6.5.1 Advocacy and action

The World Health Organization describes advocacy for health as a 'combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programme'.

Two main goals underpin health advocacy:

- protecting people who are vulnerable or discriminated against
- empowering people who need a stronger voice by enabling them to express their needs and make their own decisions.

Advocacy for mental health disorders seeks to reduce discrimination and stigma associated with the anxiety and depression.

Advocacy work can occur in a range of settings.

Policy advocacy

Policy advocacy aims to gain political commitment by directly influencing government policy, legislation or regulations. Organised groups such as Youthbeyondblue and VicHealth focus their efforts on influencing legislators through **lobbying** members of parliament, making submissions to government inquiries, conducting research and coordinating action. For example, beyondblue has a stated aim to positively influence national, state and territory policies to ensure that they consider the needs of people with depression and anxiety and improve mental health and wellbeing. An example of policy advocacy is its 2018 submission Improving Aboriginal and Torres Strait Islander Social and Emotional Wellbeing to the Council of Australian Governments and a 2018 submission to the Senate Standing Committees on Community Affairs about the Accessibility And Quality Of Mental Health Services In Rural And Remote Australia.

Public advocacy

Public advocacy aims to gain social acceptance by influencing behaviour, opinion and practices of the public, to mobilise groups and institutions that are involved in affecting change. SANE is an organisation that conducts public campaigns designed to influence the media to report mental disorders in a responsible and positive manner.

FIGURE 6.21 SANE Australia is a national charity supporting the four million Australians affected by complex mental health issues.

An example of public advocacy is StigmaWatch operated by SANE, which monitors and responds to inaccurate or inappropriate stigmatising portrayal of mental disorders or suicide in the media. StigmaWatch acts on concerns of individuals who are distressed and offended by news stories, advertisements and other media representations that stigmatise people with mental disorders or promote self-harm or suicide. Advocating on their behalf, StigmaWatch holds the mass media to account for its portrayal of mental disorders and suicide. StigmaWatch has moved to a positive focus, with incentives for media professionals to portray mental disorders and suicide responsibly.

The Australian Mental Health Prize was established in 2016 by UNSW. The prize recognises Australians who have made outstanding contributions to advocacy for mental health, or the promotion, prevention or treatment of mental illness. Matthew Johnstone, a finalist for the prize in 2018, is a mental health and wellbeing advocate who

develops and delivers illustrated programs, videos and talks on mental health, resilience and wellbeing. Matthew has created eight books, six of which have been local and international best sellers. *I Had a Black Dog* is his first book. It details his journey with depression and has been published in more than 15 countries. The video version created for the World Health Organization (WHO) is the most viewed video in the history of WHO, with 30 million views on their combined media platforms.

Source: Adapted from www.australianmentalhealthprize.org.au.

Community advocacy

Community advocacy aims to gain support of social systems and effect change by working with affected communities to influence behaviour and practices. An example of community advocacy is the City of Monash, which is trying to encourage development of resources and education for mental health and wellbeing for individuals living in the local area.

Young people offer valuable and diverse perspectives and opinions. It is important to listen to these perspectives and opinions and to provide them with a voice. This contributes significantly to the community, and the individuals themselves are empowered when they participate. Young people can strengthen health and wellbeing programs in areas that may be considered sensitive by the community or stigmatised, such as youth sexuality and reproductive health, drug and alcohol abuse, homelessness or gender-based violence. Peer to peer youth programs involve young people providing informal support to other young people. Programs assume that young people are more likely to discuss personal issues with their peers rather than with parents or adults, and that peers are often regarded as a more credible and non-judgemental source of information.

CASE STUDY

Youth advocacy for a local headspace program

Data indicate that it can currently take a young person in Monash 63 minutes on average to access a headspace centre, which creates a barrier to them seeking help for mental health issues.

In 2017, the Youth Resilience Survey was conducted in schools across Monash by Resilient Youth Australia. The survey of young people revealed:

- 44 per cent do not feel optimistic about their future
- 41 per cent are losing sleep through worry
- 46 per cent do not feel in control of their lives
- 72 per cent text between 10 pm and 6 am.

So, in 2018, young people in Monash coproduced a video with the Monash Council to advocate for a headspace facility in their area. They called their advocacy effort Raise Your Hand for Monash Youth, with social media hash tags of #RaiseYourHand4MonashYouth and #Headspace4Monash campaign.

Monash Council collaborated with the young people in speaking out about how the issues they face impact on them every day. The Council saw it as important that the community listen to its young people and act collectively to help them manage their own health and wellbeing.

The campaign also included gathering more than 4000 postcards signed by the community in support of a headspace facility, meetings between Mayors, young people and federal politicians, and a trip to Canberra to meet with the ministerial advisor for the Minister for Health.

Both the federal government and the federal Labor opposition have now committed to fund a headspace service in Monash. Cr McCluskey, the Mayor of Monash, said in a media release, 'We are in awe of the young people in this community who have fought so hard to have this facility in Monash'.

Case study review

1. What is the City of Monash lobbying for?
2. What community expectations are reflected in this advocacy?

3. How is this an example of community advocacy?
4. Why does the City of Monash see a need for this?
5. What is the desired outcome of the advocacy?

There are a number of youth-led organisations operating in Australia. Here are three examples that advocate for youth mental health and wellbeing:

- *WYPIN*. The Western Young People's Independent Network (WYPIN) is an organisation based in the western region of Melbourne. It is led by young people from diverse backgrounds and it works to achieve a vision of an inclusive, multicultural society.
- *SYN*. SYN is a media organisation run by a community of young people. It provides training and radio, TV and internet broadcast opportunities for young Australians.
- *batyr*. batyr focuses on preventative education in the area of youth mental health and wellbeing. batyr provides programs that train young people to speak about their personal experience with mental ill health and start a conversation in their community. batyr takes these speakers into schools, universities and corporate arenas to continue this conversation around mental health and wellbeing. The programs engage, educate and empower the audience to learn from the experiences of others and to reach out to the great services around them.

FIGURE 6.22 batyr@school programs aim to remove the stigma around mental health and wellbeing and engage, educate and empower young people to reach out for help when they need it.

Anyone can be an advocate. You do not need to have any formal qualifications, but to advocate on behalf of a group or community you need the consent and support of the community or group that you are representing. Australian youth, Indigenous Australians and people from migrant and refugee backgrounds have often had others advocate on their behalf. This has led to good health and wellbeing outcomes. However, enabling them to advocate for themselves means they are involved in decisions affecting their lives. An advocacy process that could involve or be used by youth is outlined in table 6.5.

TABLE 6.5 Steps in planning advocacy

1. What health and wellbeing focus or inequity needs promoting?	Identify a health and wellbeing focus or inequity related to Australia's youth. Sources of information include: • government reports such as *Australia's Health 2018* • Mission Australia Youth Survey • survey results • media items • personal experience.
2. What needs to be done or changed?	Decide which of the following is needed: • increased awareness about the issue • changed policy • increased youth participation • improved access to resources.

(Continued)

TABLE 6.5 Steps in planning advocacy *(Continued)*

3. What is known about the health and wellbeing focus or inequity?	Collect information. This could include: • a literature or media review • identification of the cause of the health and wellbeing focus and who it affects • expert opinion • a focus group with targeted groups of young people • vox pops • an online survey with a broad cross-section of young people.
4. What opportunities for action are there?	Undertake any of the following actions: • work with a group or expert • arrange a face-to-face meeting with decision-makers • write and deliver a position paper, research and policy document • do a public presentation • start a program • create a school activity • organise a public meeting • write a letter or an email, make phone calls • develop a social media campaign that includes a petition, blog or website • participate in a committee or forum • use the mainstream media through an opinion piece or letter to the editor.

on Resources

Digital document headspace worksheet (doc-32163)
Weblink headspace

6.5 Activity

Access the **headspace** weblink and worksheet in the Resources tab, then complete the worksheet.

6.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. How does the WHO describe 'advocacy'?
2. Explain the term 'advocacy' in your own words.
3. What are the two goals of advocacy?
4. Explain the three types of advocacy about mental health and wellbeing. Include their aim and examples.
5. (a) Briefly describe the public advocacy of beyondblue.
   (b) Explain how it could be effective in promoting youth mental health and wellbeing.

6.5 Exercise 2 APPLY your knowledge

1. An example of an advocacy campaign that aims to raise awareness of suicide and to inspire and empower individuals to connect with people around them and support anyone struggling with life is R U OK? Day.

Research this campaign and explain how it is an example of community advocacy and how it could be effective in improving youth mental health and wellbeing.

2. Save the Children conducted research to better understand the day-to-day experiences of young Aboriginal people in Perth. To gain a deeper understanding, they used a research technique called Photovoice which involved providing the participants with cameras and asking them to take photos reflecting their daily experiences. This demonstrated the issues they faced and provided results that were used in a targeted approach to develop a health promotion program for Aboriginal youth in Perth. Explain what type of advocacy this is and why it might be effective in improving youth mental health and wellbeing.
3. Use table 6.5 to plan advocacy to improve outcomes for a youth health and wellbeing focus.

studyON

6.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

EXAM TIP

When responding to questions about advocacy, you need to provide examples of what the advocacy is trying to address and what it is trying to promote for young people. You should also try to include an explanation of how young people can be involved in the advocacy themselves.

6.6 Topic 6 review

6.6.1 Key skills

KEY SKILL Research and collect data on one particular health and wellbeing focus relating to youth, with critical analysis of its impact, management and costs

As the issue of mental disorders is explored in detail in this topic already, it may be useful to explore another issue; in this case, injury. To demonstrate this skill, you must describe in detail one health and wellbeing focus that relates to Australian youth. You are then required to do a critical analysis of the following:

- how it affects health status — morbidity (prevalence and incidence where appropriate), mortality, burden of disease, and other indicators outlined in topic 2
- how it impacts on the dimensions of health and wellbeing of the sufferer
- the risk and protective factors linked to it
- the direct, indirect and intangible costs associated with it
- personal strategies and/or community and government programs, as well as a health promotion program designed to address it.

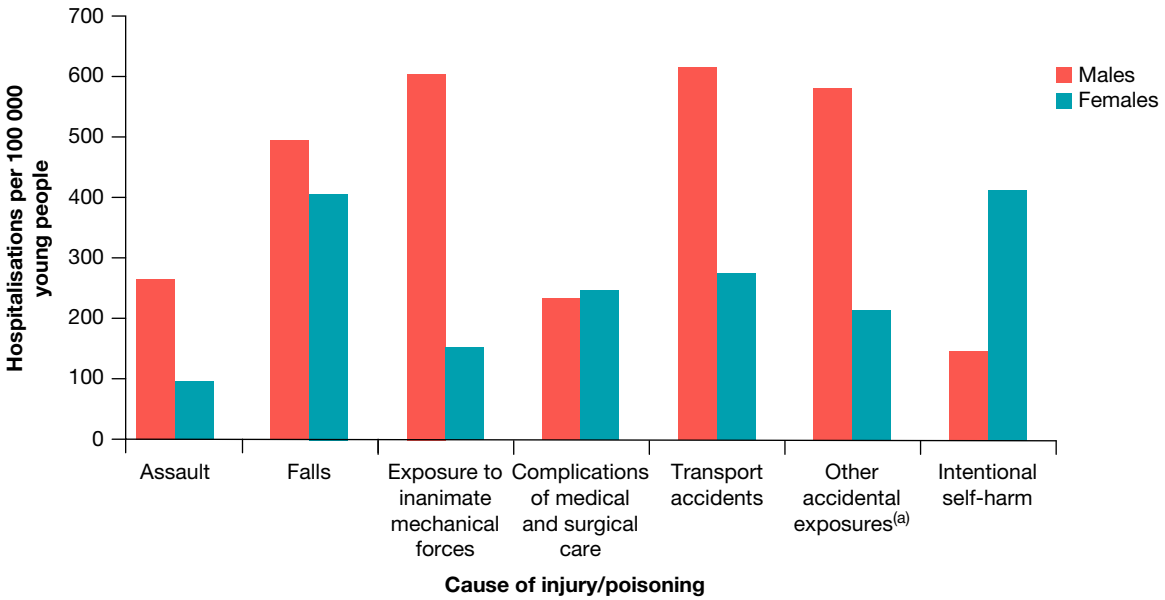
It is important to remember that critical analysis requires you to think more deeply about your chosen health and wellbeing concern rather than merely describing it. Remember that the youth stage is your focus and when you discuss how it affects health status, you need to ensure that data relate to youth and the risk and protective factors are also relevant to young people. Similarly, programs and personal strategies designed to address your health and wellbeing focus need to be youth related. You also need to comment on their actual or possible effectiveness. For instance, you need to analyse the program's ability to reduce costs, whether it has any financial constraints or if it is consistent with community values. These may prevent the program from being as effective as it could be. It is not expected that all comments

about a program will be positive. There will no doubt be room for improvement in at least some of the programs/strategies investigated.

It is important to use information (e.g. in the form of tables, graphs or case studies) to draw conclusions about the impact of the health and wellbeing focus relating to Australia's youth.

The following example explores injuries as a health and wellbeing issue facing Australia's youth. This example will be used in all the key skills in this topic.

FIGURE 6.23 Hospitalisations for injury among young people aged 15–24 years, by external cause and sex per 100 000



(a) This category is made up of accidental drowning and submersion; accidental threats to breathing; overexertion; travel and privation; and accidental exposure to other and unspecified factors.

Source: AIHW, *Australia's Health 2016.*

'Injury' is a term that refers to the intentional or unintentional physical damage that can occur to the body as a result of trauma.[1] Examples of injuries affecting youth include drowning, car crashes, suicide and poisoning.[2] Injuries are the second greatest contributor to mortality in youth in Australia, with land transport accidents the single greatest cause of injuries, followed by suicide. As shown in figure 6.23, males experience more hospitalisations from injury than females.

1 A description of the characterising features of injuries is provided.

2 Examples specifically related to youth are identified.

As well as mortality, injuries can result in lifelong disability and contribute significantly to morbidity. When not fatal, injuries can require hospitalisation and ongoing treatment, including rehabilitation. *Australia's Health 2016* found that there were 19 531 cases of children aged 15 to 17 years hospitalised as a result of an injury, representing 15 per cent of all hospitalised injury cases in youth.[3] The incidence rate of injury was 2244 cases per 100 000 population (AIHW, Injury Research and Statistics series, 2014).[4] Males are more likely to be hospitalised than females.[5]

3 Critical analysis of why injury is considered a health and wellbeing issue is identified. In this case, it is due to the high rates of mortality and morbidity.

4 When relevant, the data source is explained.

5 Further information is provided that identifies differences between injuries in males and females at the youth stage.

Injury as a result of road trauma or sport can have a wide range of effects on the physical health and wellbeing of a young person including broken bones, cuts, bruising or concussion that prevent them from performing their daily tasks such as attending school or socialising with friends without physical restriction. Injury can also have an impact on social health and wellbeing through reduced access to social networks at school or in sporting clubs during recovery. Serious injury resulting in reduced physical function such as spinal injury could also affect mental health and wellbeing by creating low mood, low self-esteem and poor self-image. Physical limitations to movement may make it difficult for a young person to have the ability to recover from the misfortune of a road accident which could affect their ability to respond to and manage their emotions when visited by friends.[6]

6 Critical analysis of the impacts on dimensions of health and wellbeing in the youth stage are discussed.

Factors such as alcohol and drug use, risk-taking behaviours and the influence of the peer group increase the risk of sustaining injuries. Protective factors that can reduce the risk of injury include wearing a seatbelt, obeying the speed limit, wearing a helmet, and ensuring long road trips are broken up into manageable chunks so that fatigue does not become a risk factor.[7]

7 Risk and protective factors that can increase or decrease the risk of injuries are identified.

The Australian government currently identifies the annual economic cost of road crashes in Australia as $27 billion per annum. Thirty people are hospitalised for every one death on Australian roads, meaning that direct costs of medical treatment, rehabilitation and medication are high. Indirect costs include carers and welfare payments to assist the injured youth living at home. Intangible costs are considerable for family members who feel anxiety and grief when a young person is injured in an accident, and the sense of loss and frustration for a young person with a spinal injury can be considerable.[8]

8 Costs are identified.

Healthcare services available to youth relating to injuries issues include:

- ambulance services for transport to hospital following injury
- general practitioners to treat cuts, breaks and injuries
- emergency departments at public hospitals following injury
- rehabilitation services to regain physical and mental health and wellbeing
- allied health professionals such as physiotherapists to regain full flexibility and movement.[9]

9 A range of services available to youth are identified.

The TAC produce a range of initiatives including advertising campaigns, with the aim of reducing the incidence and severity of injuries occurring as a result of road accidents. The Towards Zero campaign is an example of this (see figure 6.24). This campaign is produced in partnership with other organisations, such as VicRoads, Victoria Police and the Victorian Government.

The Towards Zero campaign is an advertising strategy aimed at encouraging people to reduce their speed and therefore their risk of sustaining injuries on Victorian roads. Towards Zero utilises social media such as Facebook to personalise road safety messages. It also provides a website that contains clips of all the different people who are affected by road trauma.

FIGURE 6.24 At the heart of the TAC Towards Zero program is the belief that health is more important than anything else and when mistakes happen on our roads they can cost us our lives or cause serious injury.

The Towards Zero campaign utilises media (including social media) to reach its audience. Young people are often engaged in social media so may be more likely to be exposed to its message. Towards Zero aims to educate people by accessing their social media profiles and making personalised messages relating to the impact of injuries sustained on roads.[10]

10 Elements of the Towards Zero campaign are discussed.

Not all young people at risk of road injuries access social media and not all will be exposed to the Towards Zero message. Youth is a time of risk taking for some individuals, and even if they are exposed to the Towards Zero campaign, they may not respond its message.[11]

11 Critical analysis is shown through identification of possible limitations of the campaign.

Overall, the Towards Zero campaign is effective, as it targets speed, which is a major cause of land transport accidents — the major cause of injury death among young people. The campaign acts to reach young people via media that they engage in, particularly social media.[12] This may encourage youth to think twice about risk taking on the road and may decrease the rate of injury death among this group. This will reduce the direct costs of GP and hospital fees due to injury. It will reduce direct costs related to government subsidy of Medicare and PBS for the schedule part of GP and pain medication. It will also reduce the intangible costs of injury such as pain, suffering and frustration linked to reduced mobility.[13]

12 A conclusion is drawn, and points made to support the conclusion.

13 The likely impact of the campaign is outlined.

Practise the key skill

1. Identify and describe one health and wellbeing focus for Australia's youth that has become increasingly significant in the past ten years. Make sure you include:
   a. the name of the health and wellbeing focus
   b. a description of the health and wellbeing focus
   c. morbidity (including incidence and prevalence where appropriate), mortality and burden of disease data, trends and other indicators outlined in topic 2
   d. specific risk and protective factors at the youth stage
   e. impact on all dimensions of health and wellbeing
   f. the costs associated with addressing the issue.
2. Identify personal strategies that a young person could use to prevent or manage the health and wellbeing focus.
3. Explain a government or community program designed to address the health and wellbeing focus.
4. Discuss the likely effectiveness of the program in promoting youth health and wellbeing.

KEY SKILL Plan advocacy and/or action based on identification and evaluation of opportunities for promoting youth health and wellbeing

This key skill requires you to identify a health and wellbeing focus or inequity related to Australia's youth and to plan advocacy and/or action to address it.

You will need to include:

a. what needs to be promoted
b. what needs to be done or changed
c. what is known about it
d. what opportunities for action exist.

In addition, you need to comment on the possible effectiveness of your advocacy plan. For this, a critical approach is required. For instance, there may be constraints that could prevent the action from being more effective than it could be. You will need to consider the values and expectations discussed in this topic. It is not expected that all comments about your advocacy plan will be positive.

The health and wellbeing focus that affects young Australians that I am promoting is road trauma.[14] I plan to raise awareness of the impact it has on the health and wellbeing of young people because land transport accidents are the single greatest cause of injuries for youth. I believe that attitudes to safe driving need to be changed and awareness of resources that could be used to assist this needs to be increased in my peers.[15]

14 A relevant health and wellbeing focus that needs promoting is identified.

15 What needs to be changed is identified.

TAC statistics indicate that young drivers are 30 times more likely to crash when they begin driving on their P-Plates. I think young people need to be made more aware of the risks associated with speeding and being distracted by things such as mobile phones while driving. According to the TAC, a driver taking their eyes off the road for two seconds at 50km/h is the equivalent of driving effectively blind for 27 metres. In 2018, 14 per cent of drivers who lost their lives in Victoria were aged between 18 and 25 years; however, this age group only represented 10 per cent of Victorian licence holders.[16]

16 What is known about the health and wellbeing focus is presented.

I plan to organise a forum at school assembly with a member of the Victorian Police Road Accident Branch, a road trauma victim, a paramedic and a young driver. I will present videos from the TAC 'Distractions' campaign such as the video 'Blind', which will demonstrate the consequences of driver inattention.[17]

17 Opportunities to promote youth health and wellbeing and a plan of action are included.

My advocacy plan could be quite successful because it discusses the issue of mobile phone use and distraction, which are relevant to young people my age. It also uses personal stories that make the message memorable for youth. It also uses experts who have firsthand experience of road trauma involving young people. It will have the potential to change the attitudes and behaviour of youth in relation to driving and speeding or driving while using a mobile phone, which will reduce the risk of injury. It will also clarify the laws related to mobile phone use while driving.

My advocacy may face barriers if there is a poor relationship between the police and youth in my area. It may also be dismissed by some young people who have an 'it won't happen to me' attitude. Research suggests that even though young people can be aware of potential risks, they can believe that they are less likely to experience these than their peers. At this stage of their development, they may have an unrealistic idea that they are invincible, which leads them to think that this only happens to other people.[18]

18 Critical evaluation of the advocacy plan is made.

Practise the key skill

5. Identify a health and wellbeing focus or inequity related to Australia's youth that requires improvement.
6. Plan advocacy or action to address it. Make sure you include:
   a. what needs to be promoted
   b. what needs to be done or changed
   c. what is known about it
   d. what opportunities for action exist
   e. how effective you predict you could be.

6.6.2 Topic summary

Mental disorders part 1

- You will be required to research a health and wellbeing focus of your choice. This topic uses mental health conditions to illustrate the level of detail required.
- The term 'mental health condition' refers to both mental health problems and mental disorders.
- Mental health problems have a negative impact on a person's thoughts, feelings and social abilities but are often temporary and disappear with time.
- Examples of mental health problems include anger, loneliness, self-esteem issues, sleep problems and increased stress levels. Mental disorders are more severe and last for longer periods than mental health problems.
- Mental disorders such as anxiety and depression cause the largest burden of disease among Australian youth.
- Anxiety disorders cover a range of conditions including phobias, panic disorder and generalised anxiety.
- Depression is a debilitating condition in which the feelings of sadness or worthlessness continue for an extended period. Mental health problems can affect physical, mental, social, emotional and spiritual health and wellbeing.
- One in six young Australians is currently experiencing an anxiety disorder and 7.7 per cent of 11- to 17-year-olds met the criteria for a major depressive disorder.
- The rates of mental disorders have been fairly stable over the past ten years to 2015.

Mental disorders part 2

- Factors can either protect a person against, or put them at risk of, developing a mental disorder.
- Knowing what kinds of factors put young people at risk of mental disorders helps health experts plan and develop the kinds of support and resources needed to be able to intervene early.
- Risk and protective factors for youth can be individual or relate to family, peers, school or the community.

Mental disorders part 3

- The community has values and expectations that relate to the provision of mental health services and programs.
- Mental health services are based on community values and expectations that they will be safe, respectful and confidential as well as strength-based, effective and accessible.

- Up to 70 per cent of youth with a mental disorder do not seek help.
- A range of healthcare services are available to youth, many of which are fully or partially funded by Medicare.
- A number of strategies have been implemented to address the issue of mental disorders in Australian society, including headspace and Youthbeyondblue.
- Personal strategies such as relaxation and communication can protect individuals from mental disorders.
- Costs associated with mental health problems can be direct, indirect or intangible for an individual or the community.

Opportunities for youth advocacy and action to improve outcomes in terms of health and equity

- Advocacy involves promoting the interests or cause of an individual or a group of people.
- Advocacy can occur in policy, public or community settings.
- Youth advocacy aims to protect vulnerable young people and empower them with a stronger voice.
- Health advocacy involves identifying a health focus, deciding what to do about it, researching it and planning action.

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6.6 Exercise 1 Exam preparation

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Question 1

There are many issues facing Australia's youth. If continual improvements to health status are to be made, these issues must be addressed. Individuals, communities and governments can implement a range of strategies and programs to optimise health and wellbeing.

a. List three focus areas of youth health and wellbeing that require improvement. **(3 marks)**
b. Select one of these focus areas and describe it briefly. **(4 marks)**
c. Describe one program or strategy that has been designed to address this health and wellbeing focus. **(3 marks)**
d. Explain how it would reduce costs associated with the health and wellbeing focus. **(3 marks)**
e. Explain how it meets community expectations. **(4 marks)**
f. Describe one example of action or advocacy that could be taken in the area of the health and wellbeing focus. **(3 marks)**

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6.6 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

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Interactivities Crossword (int-6866)
Definitions (int-6857)

School-Assessed Coursework Unit 1 AOS 3 Outcome 3

Area of Study 3 Youth health and wellbeing

Outcome 3

Interpret data to identify key areas for improving youth health and wellbeing, and plan for action by analysing one particular area in detail.

School-Assessed Coursework 3 online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

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Digital document School-Assessed Coursework 3 (doc-30074)

UNIT 2
MANAGING HEALTH AND DEVELOPMENT

AREA OF STUDY 1

Developmental transitions

OUTCOME 1

Explain developmental changes in the transition from youth to adulthood, analyse factors that contribute to healthy development during prenatal and early childhood stages of the lifespan and explain health and wellbeing as an intergenerational concept

AREA OF STUDY 2

Healthcare in Australia

OUTCOME 2

Describe how to access Australia's health system, explain how it promotes health and wellbeing in their local community, and analyse a range of issues associated with the use of new and emerging health procedures and health technologies

7 The human lifespan

7.1 Overview

Key knowledge

- Overview of the human lifespan
- Perceptions of youth and adulthood as stages of the lifespan
- Definitions and characteristics of development, including physical, social, emotional and intellectual
- Developmental transitions from youth to adulthood

Key skills

- Collect and analyse information to draw conclusions on perceptions of youth and adulthood
- Describe the developmental changes that characterise the transition from youth to adulthood

FIGURE 7.1 Development often becomes more obvious as people get older.

KEY TERMS

Abstract thought a complex thought process where ideas are the focus rather than tangible objects
Bilingual being able to speak two languages fluently
Concrete thought a simple thought process that centres on objects and the physical environment
Development the series of orderly, predictable changes that occur from fertilisation until death. Development can be physical, social, emotional or intellectual.
Developmental milestone a significant skill or event occurring in a person's life (e.g. learning to walk, getting a job or having children)
Ejaculation the process whereby semen is ejected from a male's penis
Emotional development relates to experiencing the full range of emotions, and increasing complexity relating to the expression of emotions, the development of a self-concept and resilience
Epiphyseal plates a cartilage section at each end of long bones that allows the bone to lengthen, resulting in growth
Fertilisation the fusing of a sperm and an egg cell. Marks the beginning of pregnancy. Also known as conception.
Fine motor skills the manipulation and coordination of small muscle groups such as those in the hands
Generation gap the difference in attitudes and opinions experienced by people of different generations
Gross motor skills the manipulation and coordination of large muscle groups such as those in the arms and legs
Intellectual development the increase in complexity of processes in the brain such as thought, knowledge and memory
Menarche the first occurrence of menstruation in females
Menstruation the discharge of blood and other tissue from the uterus that marks the beginning of the menstrual cycle
Narcissistic having an over-inflated sense of self-importance
Period *see* menstruation
Physical development changes to the body and its systems. These can be changes in size (i.e. growth), complexity (e.g. the increase in complexity of the nervous system) and motor skills (e.g. learning to walk).
Primary sex characteristics body parts that are directly involved in reproduction and form what are commonly referred to as 'genitals' and organs of reproduction
Puberty biological changes that occur during youth and prepare the individual for sexual reproduction
Secondary sex characteristics traits arising from changes in both males and females at puberty. They are neither directly related to reproduction nor present at birth.
Semen a substance containing sperm and fluids that is released from the penis during ejaculation
Social development the increasing complexity of behaviour patterns used in relationships with other people (VCAA)
Sperm a component of semen. Sperm are the male sex cells required for reproduction.
Spermarche relating to the first ejaculation in males
Youth people aged 12 to 18 years; however, it should be acknowledged that classifications for the stage of youth can differ across agencies (VCAA)
Zygote a full cell resulting from the fusion of a sperm and an ovum

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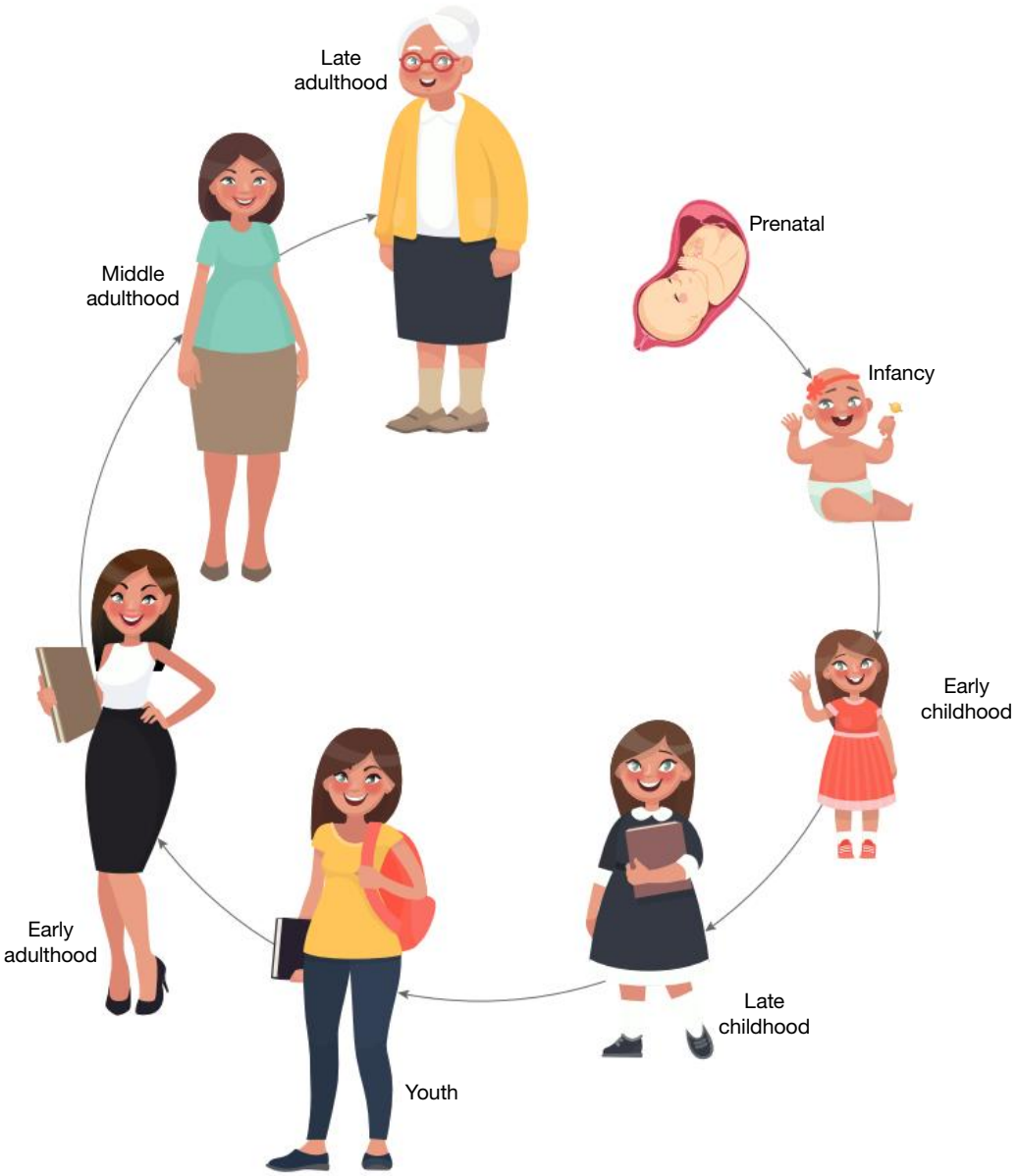
7.2 Overview of the human lifespan

KEY CONCEPT Understanding the stages of the human lifespan

An understanding of the human lifespan and the various stages within it allows analysis and discussion of health and wellbeing and **development** that occurs for people at different times throughout their lives.

The human lifespan can be broken into different stages (figure 7.2), although different cultures and societies have different ways of defining the stages. One thing that all groups agree on is that the human lifespan starts at fertilisation and ends at death. In Australian society, as in most Western societies, there are a number of stages that humans pass through as they age.

FIGURE 7.2 Stages of the human lifespan



7.2.1 Prenatal stage

The prenatal stage begins when a sperm penetrates an egg (figure 7.3) in a process known as **fertilisation** to form one complete cell, called a **zygote**. The prenatal stage continues until birth and is characterised by the development of the body's organs and structures, and substantial growth. The unborn baby goes from being a single cell (smaller than a quarter of a millimetre across) to consisting of more than 200 billion cells at birth and weighing around 3.5 kilograms on average. This process takes about 38 weeks to complete. In terms of rate of growth, the prenatal stage is by far the fastest growth period of all the human lifespan stages. It is also one of the most vulnerable stages of the lifespan in terms of making it all the way through the prenatal stage and the process of birth.

FIGURE 7.3 The prenatal stage begins when one sperm penetrates the egg.

7.2.2 Infancy

As with most lifespan stages, there is debate about when infancy finishes. Everyone accepts that it starts at birth, but when does the infant become a child? Historically, infancy was considered to continue until the onset of speech. However, because infants can vary greatly in the time at which they start speaking, many organisations and professionals in this field have adopted the view that this stage ends with the second birthday (approximately). Therefore, we will also use the second birthday as signifying the end of the infancy period.

Infancy is a period of rapid growth with many changes. A newborn baby is obviously very different from a two-year-old. By the time an infant turns two, they have developed their motor skills and can walk, use simple words, identify people who are familiar to them, play social games — and throw tantrums when they do not get what they want.

Many of the **developmental milestones** that the infant achieves will have some sort of bearing on how they develop in later years. This concept will be explored in more detail in topic 9.

7.2.3 Childhood

Like infancy, the start and end of the childhood stage is difficult to define. Most people say that it ends at the onset of **puberty**. As the age of the onset of puberty varies greatly, we will use the twelfth birthday to signify the end of childhood, which also coincides with the completion of primary school for many children. The development that occurs in childhood is substantial, so it is worthwhile considering this lifespan stage as being divided into early childhood and late childhood.

FIGURE 7.4 Learning to use cutlery and eat at the table is a milestone for most children in Australia.

Early childhood

Early childhood starts at the end of infancy and continues until the sixth birthday. This stage is characterised by slow and steady growth, and the accomplishment of many new skills. The child learns social skills that will allow them to interact with other people. During this stage they will make friends, be able to eat with adults at the table and become toilet trained. Characteristics within early childhood will be explored in more detail in topic 9.

Late childhood

Late childhood starts at the sixth birthday and ends at the twelfth birthday. Like early childhood, late childhood is characterised by slow and steady growth. There are many physical, social, emotional and intellectual changes that occur as the child moves

through this stage, many of which are influenced by primary schooling. These include refining reading and writing skills, developing long-term memory, understanding gender stereotypes and refining motor skills.

7.2.4 Youth

The **youth** stage of the lifespan has steadily lengthened over the past 100 years. This has occurred because puberty is starting earlier, and young people are taking longer to gain independence and reach maturity in other aspects of their lives. As a result, the youth stage of the lifespan is perhaps the hardest to define. We will assume that youth starts at 12 years of age and continues until 18, although this may vary depending on the research used. The secondary school years are a marker of this lifespan stage for many youth in Australia. The youth stage is characterised by rapid growth, increased independence and sexual maturity.

This stage of the lifespan is concerned with moving from childhood to adulthood. Youth must undergo vast physical changes in order to achieve sexual maturity, and therefore the ability to reproduce. Youth will also undergo significant social, emotional and intellectual changes as they become accustomed to greater independence, more complex relationships and the development of life goals. The end of youth is characterised by reaching a level of maturity across physical, social, emotional and intellectual aspects of development.

FIGURE 7.5 Friends play an influential role in development during youth.

The term 'adolescence' has generally come to mean the period between the onset of puberty and the cessation of growth (i.e. physical maturity). As society has changed over the years, the physical changes are seen as being only one aspect of the transition between childhood and adulthood. Young people now spend more time reaching maturity in other areas such as tertiary study, finding a career, living with their parents and gaining financial independence. As a result, the term 'youth' is now more commonly used to describe the stage between childhood and adulthood because it encompasses all the changes experienced during this transition, not simply the physical changes.

CASE STUDY

Early sleep marks the end of adolescence

'Lazy' teenagers undergo change in sleep patterns at age 20

We all know that teenagers hate to get up in the morning. But are they really just lazy, or is there a biological cause?

A European survey of the sleeping habits of 25 000 people now provides powerful evidence that biology is indeed to blame. Whereas children sleep later and later as they get older, we undergo an abrupt shift at age 20, after which we start sleeping earlier again.

The change is so sudden that researchers suggest it should be used to officially mark the end of adolescence.

We all go through phases of puberty and adolescence before we reach adulthood. Both periods begin when the reproductive system starts maturing.

Scientists agree that puberty ends when bone growth stops — at around 16 years in girls and 17.5 years in boys. But the end of adolescence — a concept that is part social, part psychological and part physiological — has always been less well defined.

Owls and larks

Our sleep and wake phases are regulated by an internal body clock. Each cycle runs at about 24 hours, but the exact timing varies from individual to individual. People with particularly early cycles, called 'larks', tend to go to bed early and wake up early, whereas those with a late cycle ('owls') tend to be more active at night and sleep later in the morning.

To investigate how this 'chronotype' varies throughout life, Till Roenneberg from the University of Munich, Germany, and his colleagues asked 25 000 people, aged between 8 and 90, a series of questions about what time they go to sleep and wake up.

From this, the researchers calculated the average 'mid-point' of each person's sleep — in other words, the time half way between when they go to sleep and when they wake up — on days when they had no work obligations.

When they plotted the mid-points against each person's age, the researchers found that children tend to sleep later and later as they get older until the age of about 20. At that age, there is an abrupt shift in sleeping habits, and the sleep mid-point starts getting earlier and earlier again.

Roenneberg says he can't prove that the shift is caused by behavioural or environmental factors. 'Do teenagers sleep late because they go to the disco, or do they go to the disco because they sleep late?' he asks.

But he believes that the abrupt timing of the shift suggests a biological cause. 'This is the first time that we have been able to trace the end of adolescence,' he says.

He points out that the timing of the shift also reflects the general trend of females to develop earlier than males. The women in the study that slept latest were 19.5 years of age, whereas the men's sleep got later and later until 20.9 years.

Disease clues

'An objective marker like this could be very helpful in a range of disease conditions,' says Russell Foster, a chronobiologist at Imperial College, London. Mental disorders such as schizophrenia and bipolar diseases are often accompanied by delayed sleep phases, he points out.

He suggests it could be worth investigating whether changes in the timing of this shift could be used to spot the development of such disorders early on.

Source: Schneider, A 2004, 'Early sleep marks the end of adolescence', *Nature*, 30 December, https://www.nature.com/news/2004/041229/full/041229-5.html.

Case study review

1. When does puberty end according to the article?
2. What aspect of sleeping patterns may signify the end of adolescence (youth) according to the study?
3. At what age does this change occur for females and males according to the study?
4. (a) Create a survey that could be used to find out about the sleeping patterns of youths and young adults. Some questions to consider are:
   - What time do you go to bed?
   - What time do you wake in the morning?
   - Do you sleep during the day as well? If so, for how many hours?
   - How many hours sleep do you normally get in a 24-hour period?
   - Do you get sleepy during the day?
   - How do your sleeping patterns change on the weekend compared to Monday to Friday? What about your holiday sleeping patterns?

   (b) Hand the surveys out to people you know in the youth stage (your class could be a good place to start) and to those in their 20s and 30s.

   (c) Collate and present the results (graphs and tables are useful for this). Be sure to include the total number of hours of sleep for each person and the average for each age group.

   (d) Did you find any patterns or trends in the results?

   (e) Did they support the findings of the study in Europe?

FIGURE 7.6 Sleep is important to most adolescents.

7.2.5 Adulthood

Adulthood begins on the 18th birthday and continues until death. This stage is generally the longest of all lifespan stages and is therefore broken down into three further groups; early, middle and late adulthood. Like many lifespan stages, the three stages of adulthood are often debated in relation to when each starts and finishes. Regardless of which start and end times are used, there are general development milestones associated with each.

Early adulthood

Early adulthood begins on the 18th birthday and ends on the 40th birthday. Physically, this stage is characterised by the body reaching its physical peak around 25–30, followed by a steady decline in body systems thereafter. Some growth may continue at the beginning of early adulthood, but all stages of adulthood are essentially periods of maintenance and repair as opposed to the periods of growth experienced in the earlier lifespan stages.

People in this age group often become focused on building a career. Young adults may also choose a life partner, get married and/or have children. These events lead to many physical, social, emotional and intellectual changes.

Middle adulthood

Middle adulthood begins at 40 and continues until the age of 65. The events that occur during this period vary from culture to culture and from individual to individual. Some of the more common characteristics of this lifespan stage include stability in work and relationships, the further development of identity, including the maturation of values and beliefs, financial security, physical signs of ageing and, for women, menopause. During this stage, children may gain independence and leave home, giving the parent a new sense of freedom. Sometimes this can also create a sense of loss or loneliness, often referred to as 'empty nest syndrome'. Many individuals in the middle adulthood stage will experience the joy of becoming grandparents for the first time, although this can occur in late adulthood as well.

Late adulthood

Late adulthood, the final stage of the lifespan, occurs from the age of 65 until death. This period is characterised by a change in lifestyle arising from retirement and financial security (for most). It can include greater participation in voluntary work and in leisure activities, such as golf. Many older people may also have to endure the grief associated with the death of friends or a spouse. Their living arrangements may also change, presenting challenges and opportunities for their health and wellbeing and development.

FIGURE 7.7 Late adulthood is often characterised by increased leisure time.

As health and wellbeing begins to decline significantly, older people tend to reflect on their lives and achievements. This may provide a sense of satisfaction or regret, depending on how they assess the choices they have made in their lives.

on Resources

Digital document Lifespan worksheet (doc-32164)
Weblink Lifespan

7.2 Activities

1. Design a concept map that summarises three aspects for each lifespan stage that you think help define the stage. Images from newspapers, magazines and/or the internet can be used for this activity.
2. Access the **Lifespan** weblink and worksheet in the Resources tab, then complete the worksheet.

7.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) When does the human lifespan start?
   (b) When does it finish?
2. Draw and complete the following table:

Lifespan stage	When the stage begins	When the stage ends	Examples of milestones associated with the stage

3. (a) i. Which lifespan stage is the longest?
      ii. Would this be the same for everyone? Explain.
   (b) Why are the starting and end points of some lifespan stages difficult to classify?
4. Outline the difference between youth and puberty.
5. Discuss reasons that can make it difficult to pinpoint the end of youth.
6. (a) Why has the period of youth been getting longer over the past 100 years?
   (b) How many of these reasons relate to the physical changes that occur during youth? What aspects of life do they relate to?
7. What developmental milestones are used to signify independence?

7.2 Exercise 2 APPLY your knowledge

1. (a) How might the experiences of youth in Australia differ from the experiences of youth in a country like Ethiopia in Africa?
   (b) Are there any experiences you think are common to youth across the world?
2. (a) Brainstorm factors that may affect the age at which a person reaches their physical peak.
   (b) How could someone maintain their peak physical condition?
3. Work individually or with a partner to identify key words you associate with each lifespan stage.
   (a) What sort of words did you come up with for each stage?
   (b) Were the words used for each lifespan stage positive or negative?
   (c) Where do you think these ideas come from?
   (d) Would they be the same if someone from another culture competed this activity? Why?

studyON

7.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

7.3 Perceptions of youth and adulthood as stages of the lifespan

KEY CONCEPT Understanding perceptions of youth and adulthood

Perceptions are beliefs or opinions based on how things seem. The perceptions of youth and adulthood therefore relate to the different ways that people view those in each of these lifespan stages. Perceptions can be influenced by personal experiences, including what people see and hear. Some people have positive perceptions; some people have negative perceptions; and many people have a mix of both.

In the past, the difference in opinions between people of different ages was known as a **generation gap**. The different attitudes between those in different lifespan stages can contribute to a lack of understanding and even conflict between those of different ages.

In order for all people to develop optimally, healthy relationships between generations is essential. Offering support, guidance and encouragement to those in other lifespan stages is an important consideration for people of all ages.

The perceptions that an individual has about people in different lifespan stages is often the result of a range of factors, as shown in figure 7.8.

In this subtopic, a range of perceptions of youth and adults will be considered.

FIGURE 7.8 A combination of factors influence people's perceptions of others.

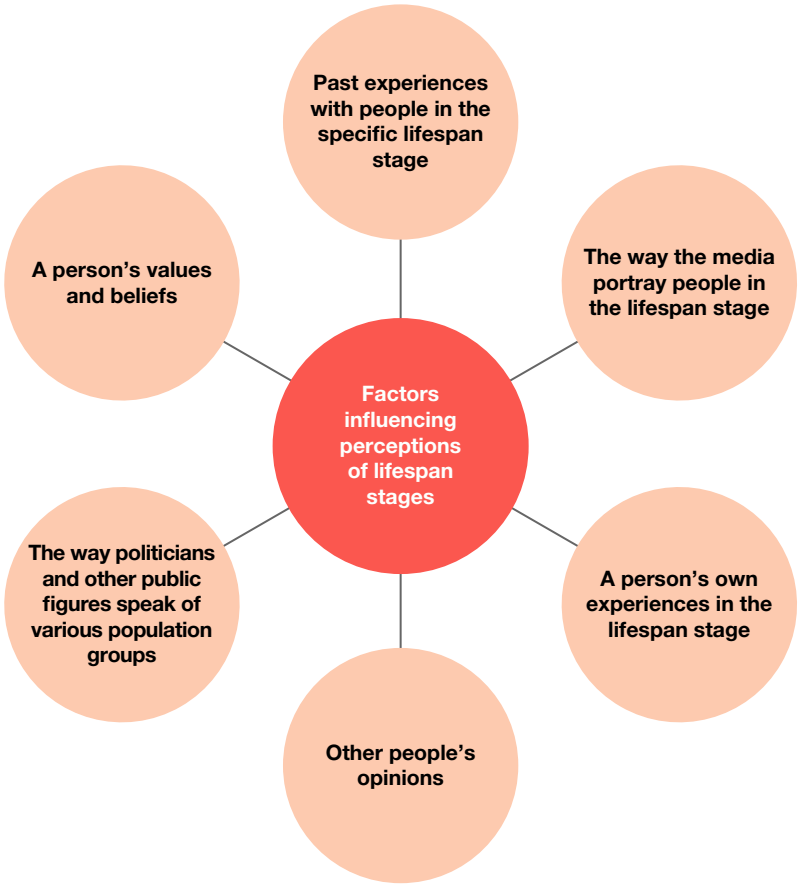


FIGURE 7.9 Building relationships with people in different lifespan stages can promote understanding and positive perceptions.

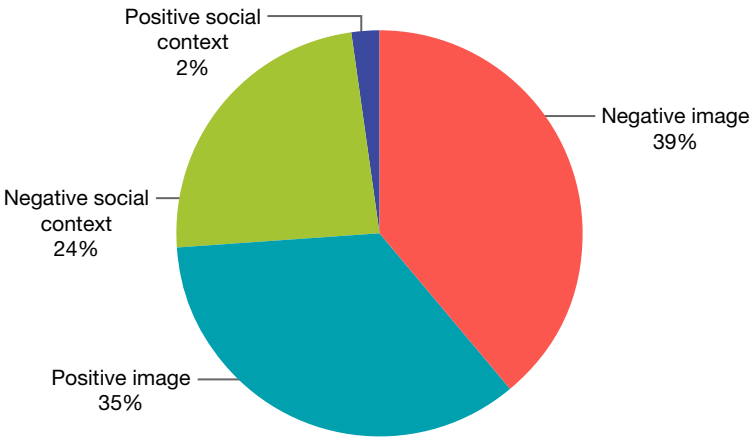
7.3.1 Perceptions of youth

Limited research has been carried out in Australia relating to the perceptions of youth. The most recent data are from 2003. Perceptions about youth vary but, according to the *Kids Are Like That!* study from 2003, fit into one of four categories:

- *positive image* — youth are positive, ambitious, hardworking and happy
- *negative image* — youth are frightening, lazy or selfish
- *positive social context* — youth have many opportunities and are fortunate to live at this time and in this society
- *negative social context* — youth are devalued, victimised or neglected.

In the report, participants' perceptions of young people were more likely to be negative than positive (figure 7.10).

FIGURE 7.10 How respondents perceived youth in Australia



Source: Bolzan, N 2003, *Kids are Like That! Community Attitudes to Young People*, National Youth Affairs Research Scheme, 2003, https://docs.education.gov.au/documents/kids-are-community-attitudes-young-people.

Negative perceptions of youth in the community have existed since the beginning of recorded history. For example:

- Hesiod (eighth century BC) wrote, 'I see no hope for the future of our people if they are dependent on frivolous youth of today, for certainly all youth are reckless beyond words. When I was young, we were taught to be discreet and respectful of elders, but the present youth are exceedingly disrespectful and impatient of restraint.'
- Socrates (fifth century BC) wrote, 'The children now love luxury. They have bad manners, contempt for authority; they show disrespect for elders and love to chatter in place of exercise.'
- Plato (fifth century BC) wrote, 'Our youth have an insatiable desire for wealth; they have bad manners and atrocious customs regarding dressing and their hair and what garments or shoes they wear.'
- Seneca (first century AD) wrote, 'Our young men have grown slothful. There is not a single honourable occupation for which they will toil night and day. They sing and dance and grow effeminate and curl their hair and learn womanish tricks of speech; they are as languid as women and deck themselves out with unbecoming ornaments. Without strength, without energy, they add nothing during life to the gifts with which they were born — then they complain of their lot.'
- Peter the Hermit (eleventh century) wrote, 'The young people of today think of nothing but themselves. They have no respect for their parents or old age. They are impatient of all restraint. They talk as if they alone know everything and what passes for wisdom in us foolishness in them. As for the girls, they are foolish and immodest and unwomanly in speech, behaviour, and dress.'

FIGURE 7.11 Youth are often perceived as being narcissistic.

In more recent times, perceptions of youth have continued to be influenced by stereotypes, including:

- Youth are lazy and **narcissistic**. They do whatever they want, whenever they want.
- They are slackers and are unable or unwilling to gain ongoing, meaningful employment.
- They are uneducated and incapable of making informed, rational decisions.
- They lack the maturity of past generations.
- They feel entitled to a decent life and want the world to provide it for them.
- They are more concerned with how many 'likes' they receive on social media than how they can positively contribute to society.

According to the *Kids Are Like That!* study, youth often believed that these negative perceptions were:

> based on the fact that they looked different, often because of the kind of clothing they wore, and judgments made on the basis of superficial evidence rather than on knowledge or understanding. They also blamed false and sensational accounts of young people in the media. (p. vii)

A number of studies of Australian media have shown that the majority of print media articles about youth are related to crime. The smaller proportion of positive articles often relate to high achievers and therefore do not portray the diversity that exists among youth in Australia. Programs such as *Young, Lazy and Driving Us Crazy* and *Summer Heights High* often reinforce the perception of youth as narcissistic, lazy and rude.

As well as the negative perceptions, youth are sometimes portrayed in a positive manner. For some people, youth are seen as vibrant, hard-working, happy individuals. Those who have positive personal experiences with young people, such as grandparents, teachers, sports coaches and neighbours, are more likely to hold these views.

Another positive perception of youth is the romanticised belief that these years are the best of a person's life. This perception is based on the belief that youth have no real worries or stressors and are free to pursue their dreams. This perception could be the result of two different scenarios. One is from a position of envy, where adults see the broad range of exciting opportunities available to youth in relation to education, relationships, socialising and freedom. The other can be from a position of regret — when adults wish they could go back and build a better life for themselves with the benefit of hindsight.

The following case study, which is about British youth but also applies to Australian youth, explores how media perceptions of youth are often not accurate.

CASE STUDY

Today's 13-year-olds are not as bad as we're led to believe

In 1982 I was toying with the idea of a career in teaching. That year a controversial film, *Made in Britain*, starring Tim Roth was released and I almost didn't become a teacher. The film's central character, Trevor, was a dysfunctional, violent, foul-mouthed youth — everything society hates and fears. My natural fear was how would I, as a young teacher, cope with a classroom full of such kids? Of course the film is fictional. It portrayed the 1980s accurately — but did it portray Britain's youth accurately?

With the way some of the media represents young people, you may be forgiven for thinking that Roth's character is alive and well and infesting our streets and schools. Different newspapers have their favourite terms for teenagers: the *Daily Mail* likes 'yobs' while the *Daily Express* goes with 'feral kids'.

Changing preoccupations of year 9s

But a new longitudinal study of 13- to 14-year-olds has painted a very different picture of the youth of today. They are drinking and smoking less and bullying is on the decrease — despite the inexorable rise of social media making bullying much easier than it was 30 years ago.

The media has briefly picked up on some of these elements, such as the decline in drinking and smoking and bullying. But they have also focused on how the youth of today communicate less with each other one-to-one and prefer computer games to actual contact with their peers. This cherry-picks the data to fit a stereotype of the lone child, shut off from society playing violent games — a potential outcast from society.

In my time as a teacher I saw the best and worst of year 9, the pupils at the focus of this longitudinal study. It was common 30 years ago to explain the behaviour of year 9 children as a consequence of puberty. Young girls were often more mature in their development and outlook than young boys.

Certainly there was the push against authority, the testing of boundaries and a feeling of invincibility that often led to risky behaviour — from drinking alcohol to trying drugs. In the inner-city schools where I worked, year 9 was often the 'dangerous year' where kids could easily go off the rails. We looked for the tell-tale signs of a hedonistic lifestyle, the aroma of strange cigarettes, the dark circles under the eyes or a pallor not usually seen in fresh-faced youth. It was easier to do this with the boys than the girls who covered up any blemish with make-up and any odd odour with perfume.

Not a 'dysfunctional' youth

But what of the youth of today? The report is encouraging to say the least. It found that 64 per cent of young people reported no risky behaviours and 68 per cent of their parents reported no indications of risky behaviour, such as contact with the police. Despite what the media says, the majority of young people are neither dysfunctional, violent nor affiliated with gangs.

Of course, there will always be some children who behave immorally, criminally or antisocially, but the indications are that the youth of today are less likely to be involved in risky, criminal behaviour. More than three quarters — 76 per cent — of those questioned had reported no instances of criminal behaviour and only 3 per cent of children reported that they were actively engaged with a street gang.

Attitudes towards schooling have also changed significantly over the past 30 years. When I started teaching in the mid-1980s, it was a struggle to keep children in education past the school-leaving age of 16. A Levels and post-16 education concentrated mainly on the minority who were going on to university. Vocational qualifications were around, but never really valued.

Ten years ago, when the first longitudinal study was undertaken, 79 per cent of children expected to stay on in post-16 education. This has now risen to just under 90 per cent. Admittedly, the school-leaving age has increased, but the proportion looking to enter university has increased significantly in the past ten years from 34 per cent to 41 per cent.

Parents happier

Parents were also asked for their views in this study. Their support is a vital aspect of education and supportive parents who work with and trust the school make a big difference when it comes to positive educational achievement. A staggering 90 per cent of the parents surveyed felt that their child's school was either good or very good (as compared to 78 per cent of schools similarly judged by schools regulator Ofsted in 2013).

A huge 93 per cent were fairly or very satisfied with their child's progress in school. Contrast this picture with the stream of negative rhetoric that comes from politicians of underperformance in our schools that needs to be tackled with some bright new initiative from the Department of Education.

Focus on the positive

So what can we learn from this new study? Well, it's easy to find negatives in our education system. The press delight in feeding people's fears — the stereotypes they create of badly behaved, criminal gangs of delinquent children, roaming the streets, drunk and drugged-up looking for a fight sells more newspapers.

But as any good teacher will tell you, a focus on the negative, always highlighting the bad behaviour, will not stop that behaviour. A focus on the positive that recognises good behaviour is a far better way to manage children and the classroom. This doesn't mean that there should be no consequences for the bad behaviour, but tackling the bad often requires a deeper understanding of why children behave the way that they do.

Source: Williams, J 2014, 'Today's 13-year-olds are not as bad as we're led to believe', 24 November, https://theconversation.com/todays-13-year-olds-are-not-as-bad-as-were-led-to-believe-34380.

Case study review

1. Identify the two terms commonly used to describe youth in the media. Are they positive or negative?
2. Discuss how attitudes to education have changed according to the article.
3. Does the author believe the perceptions of youth in the media are fair? Discuss.

Although there are a range of perceptions of youth, strong negative perceptions are more common than positive perceptions in Australian society. This is despite the fact that young people generally view themselves in a positive manner. Different factors influence people's attitudes, but those who have close contact with young people are more likely to report positive perceptions. Adults with little or no personal contact with young people are generally more likely to be influenced by the media, the opinions of others and general discussions about the problematic nature of youth.

7.3.2 Perceptions of adults

Adulthood is the longest stage of the lifespan for most people, and the perceptions that people have of adults vary according to which stage of adulthood is concerned. For early adults, especially those in their late teens and early twenties, perceptions are often similar to that of youth. As early adults reach their thirties, they are often seen by other adults as being at their peak physically, being responsible citizens and contributing to society by being productively employed. Youth may see adults of this age as being judgemental and lacking understanding. Again, variations of these perceptions occur as a result of a range of factors including personal experiences.

As adults reach their forties and fifties, they are often seen by young people as being out of touch. It is often the perceptions of youth by adults of this age that contribute to this negative perception.

As individuals enter the late stage of adulthood, they are often perceived as being wise and experienced. In this sense, older adults are seen as a source of information and expertise and are therefore able to assist in guiding younger people through the challenges they face in their lives.

Negative perceptions of older adults are common among youth and younger adults. Like youth, the negative perceptions of older adults are influenced heavily by the media and what other people say. In a 2013 Australian Human Rights Commission report, Australians were shown to have largely negative perceptions of older adults, including:

- fifty-nine per cent of Australians feel that older people are more likely to be lonely or isolated
- fifty-two per cent feel that older people are more likely to be victims of crime
- fifty-one per cent feel older people are more likely to be forgetful
- forty-three per cent feel older people don't like being told what to do by someone younger.

Other common negative perceptions of older adults include:

- they are resistant to change and have trouble learning complex tasks
- they are bad drivers
- they complain a lot
- they are a burden on the health system.

It is important to remember that perceptions vary from positive to negative and rarely occur in isolation. For example, a young person may believe that older adults are bad drivers, but also believe their life experiences make them a valuable source of advice.

FIGURE 7.12 Older adults are often perceived as forgetful and vulnerable.

CASE STUDY

Age discrimination: older Australian workers viewed as slow to learn

Despite an increasingly mature workforce, Australian companies aren't addressing the challenges or countering the stereotypes faced by older workers.

The trope of the older worker thrust back into the hurly-burly of working life made for great comedy in the 2015 film *The Intern*. But, in reality, this scenario isn't always such a laughing matter.

Older workers face unique hardships. Hampered by unfair stereotypes about their abilities, their role in society and their responsibilities, they are regularly overlooked for interviews, jobs, promotions and recognition.

The Australian Human Rights Commission's 2016 report *Willing to Work* found 27 per cent of people over the age of 50 reported experiencing age discrimination at work, a third of the most recent episodes occurring when applying for a job. One-third of those gave up looking for work.

Age discrimination was particularly acute among older women, who were more likely to be viewed as having outdated skills, being slow to learn, or as being likely to do an unsatisfactory job. Seniors with disabilities face an even steeper uphill battle for jobs and recognition.

The bias against age can be overt; four in 10 companies surveyed by the Australian Human Rights Commission said they avoided employing anyone over the age of 55. In some cases, older individuals applying for jobs are leaving their age off their CVs and editing their work history to make their age less obvious.

But age discrimination can also be more subtle: inadvertent exclusion from work-related social activities and circles, repeatedly being passed over for promotion or training opportunities in favour of younger workers, or being parodied by younger workers, says Prof Peter Gahan, director of the University of Melbourne's Centre for Workplace Leadership.

'Certain ways of expressing things, or throwaway lines, are ageist, and they have the effect of excluding people from the social context of work and we need to be conscious of those things,' Gahan says.

Yet the reality is our population is ageing; one-quarter of Australians are over the age of 55, with that predicted to increase to one-third in the next decade.

As a result, industry is taking a second look at older workers, and not a moment too soon, according to Dr Ruth Williams, research fellow at the Centre for Workplace Leadership.

'We hear all about the challenges and the doom and gloom, and the tsunami of [older] people but the mindset needs to be completely flipped,' Williams says.

'They are a huge untapped resource and they're an untapped market as well for businesses.'

Older workers bring a lifetime of experience, networks and tacit knowledge that can't simply be written down and left for their successors. They also have a lot to offer customers. Williams points to companies such as hardware retailer Bunnings, which is recognising the value of employees' past experience.

'You're actually talking to an ex-plumber or an ex-electrician who could know exactly — or better — what you might need to do your home renovation,' Williams says.

Another reason to employ older workers is to better reflect the demographics of your customer base, she says. The banking, retail and hospitality sectors particularly stand to benefit from taking on older workers for face-to-face roles, as the customers most likely to use these services (rather than going online) are themselves older individuals.

How can companies overcome the barriers that are making it harder for older workers to find and keep rewarding jobs?

One important step is to counter the perception among younger workers that the older generation are competition for increasingly scarce employment and advancement opportunities.

'It tends to intensify these negative attitudes, and particularly attitudes that suggest that perhaps by staying in the workforce longer, older people might be taking opportunities from younger people in society,' Gahan says.

But when this mindset is challenged, research has shown it has a positive impact on the attitudes of younger workers towards their older colleagues.

Younger workers also stand to benefit significantly from the experience, wisdom and insights of older colleagues, whose own professional focus might shift as they reach peak points in career development.

'They turn their attention to things [which] they perceive as legacy issues; how can they help others in the workplace, how might they be a mentor and help develop younger people in the workplace,' Gahan says.

There are lessons to be learned from efforts used to counter sex discrimination in the workplace. Williams says using quotas could be one way to at least kickstart better recruitment of older workers, as could having older staff involved in recruitment and hiring.

Williams argues we still have a long way to go to address the many challenges facing older Australians who want to stay in the workforce, and efforts to counter ageism in the workplace are still very much in their infancy.

'There's a growing demand but at the moment it is kind of like lip service really; there's not a great deal being done at this point in time,' she says. 'However, there's more of a groundswell for things to happen, so we're at a tipping point.'

Source: Nogrady, B 2017, 'Age discrimination: older Australian workers viewed as slow to learn', The Guardian, 20 April, https://www.theguardian.com/sustainable-business/2017/apr/20/age-discrimination-older-australian-workers-viewed-as-slow-to-learn.

Case study review

1. How common is age discrimination in the workplace according to the article?
2. Outline the perceptions of older people discussed in the article. Classify each as either positive or negative.
3. How can younger workers benefit from having older workers around?
4. Are there any perceptions in the article you agree with? Discuss.

Resources

Digital documents Youth in the media worksheet (doc-32165)
Perceptions of youth worksheet (doc-32166)

Weblinks Youth in the media
Perceptions of youth

7.3 Activities

1. Access the **Youth in the media** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Access the **Perceptions of youth** weblink and worksheet in the Resources tab, then complete the worksheet.
3. Conduct a research task that analyses the portrayal of youth in the media. You can review a range of media, including television, newspapers and online news agencies. For each piece relating to youth, record the nature of the story and whether it portrays youth in a positive or negative manner. Collate the results and present in a written report.
4. Create and conduct a survey that explores perspectives of youth and older adults in the community. Compile the results and present them to the class.
5. Conduct a *vox populi* (interviews with members of the public) around the school to gain perspectives of youth and adults in the school community. Ensure a range of age groups are interviewed. Record the interviews and present to the class.

7.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Briefly explain what is meant by:
   (a) perceptions
   (b) generation gap.
2. Outline factors that contribute to the perceptions that people have of other lifespan stages.
3. Using examples, briefly describe:
   (a) negative perceptions of youth
   (b) positive perceptions of youth
   (c) negative perceptions of adults
   (d) positive perceptions of adults.

7.3 Exercise 2 APPLY your knowledge

1. Irish playwright George Bernard Shaw wrote: 'Youth is wonderful. What a pity to waste it on children.' What do you think this quote is saying about youth?
2. Outline one similarity and one difference in relation to perceptions of adults and youth.
3. Discuss ways that society could assist in changing negative perceptions about youth and adults into positive perceptions.
4. 'Most perceptions of youth and adults cause harm to the people in those lifespan stages.' Write a response to this statement.

studyON

7.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

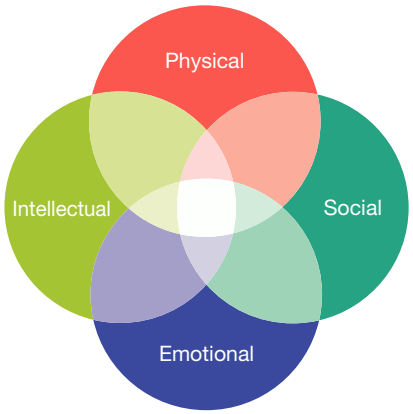
7.4 Physical developmental transitions from youth to adulthood

KEY CONCEPT Understanding the characteristics of physical development and the physical development that occurs during the transition to adulthood

In a lifespan context, development encompasses the changes that people experience from fertilisation until death. Development is often characterised by milestones that are predictable and occur in a sequential order. Going through puberty, learning to walk or learning the skills required to interact with others are examples of milestones associated with development.

In this course, we will examine four areas or types of development (figure 7.13). All four areas are interrelated and therefore affect each other. In the coming sections, we will explore each area of development and the common changes that occur in relation to each as individuals transition from youth to adulthood.

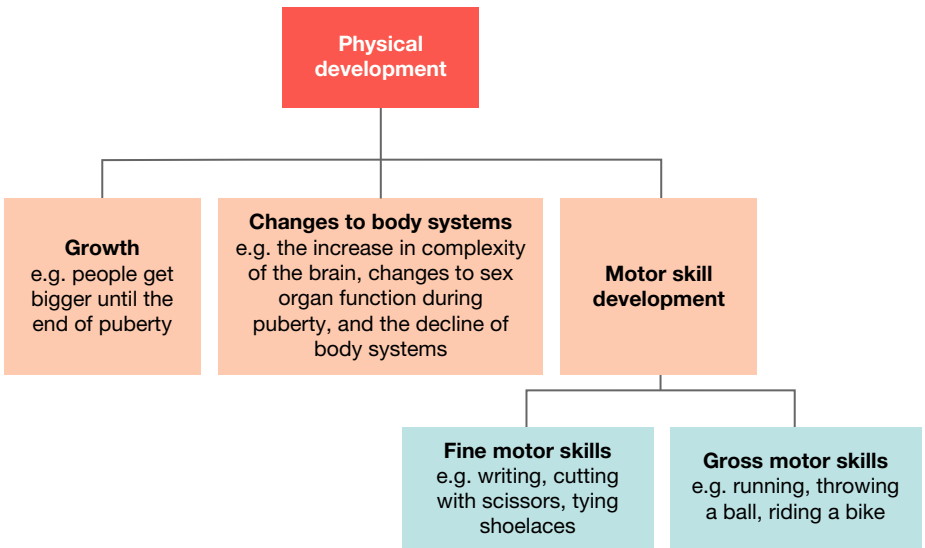
FIGURE 7.13 The four areas of development



7.4.1 Physical development

Physical development refers to the changes that occur to the body and its systems. It includes external changes that you can see, such as changes in height, and internal changes you cannot see, such as the increasing size of the heart. Physical development includes growth as well as motor skill development. Various aspects associated with physical development are summarised in figure 7.14.

FIGURE 7.14 Aspects of physical development

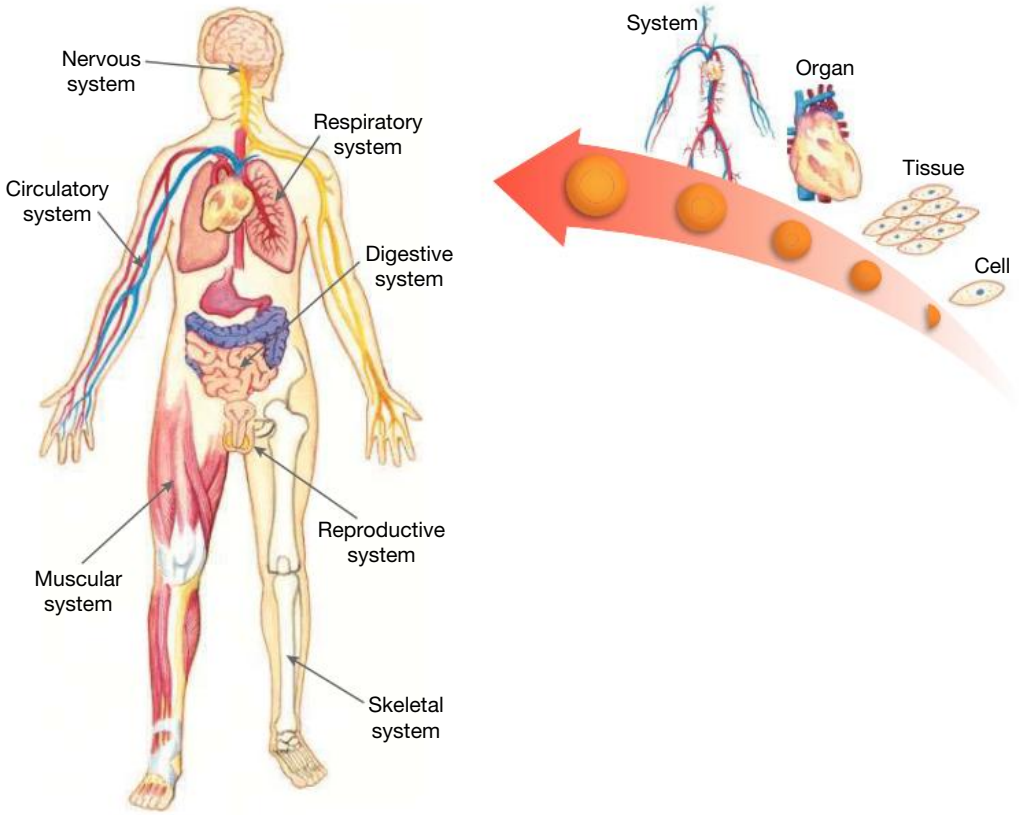


Growth

From early in the uterus, the embryo begins to develop the cells that will become the vital organs and systems required to sustain life in the outside world (figure 7.15). The changes in size that take place in

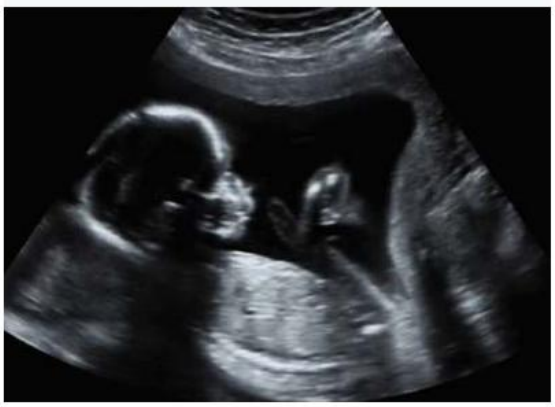
these organs and systems are important parts of physical development. Examples of systems in the body include the circulatory system and the immune system.

FIGURE 7.15 Physical development of the body, from a cell to the whole body



Growth refers to organs and systems getting bigger in size. It is an important aspect of physical development. Much growth occurs during puberty, which is why youth is considered a rapid growth period, along with the prenatal and infancy stages. Childhood is characterised by slow and steady growth, while the three adulthood stages are predominantly periods of maintenance. Even though growth stops at the end of puberty, individuals keep on developing physically for the rest of their lives. The decline in body systems that people experience in later lifespan stages is also part of physical development.

FIGURE 7.16 Humans experience their fastest rate of growth during the prenatal stage of the lifespan.



Changes to body systems

As well as increasing in size and mass, tissues and systems also change in structure and function. Examples of changes to body systems include:

- the replacement of baby teeth with permanent teeth during childhood
- the hardening of bones until early adulthood (in addition to the growth of bones)
- the change in the way sex organs function during youth
- the development of the immune system that occurs throughout life.

These changes are part of the processes that assist individuals in reaching their physical peak. This physical peak usually occurs in the early twenties to early thirties. After this point, most of the systems — such as the muscular system, the circulatory system and the skeletal system — generally decline at a rate of about 0.5 to 2 per cent per year. This decline is a normal part of physical development. Most of the decline takes place over a long period of time. In fact, people might not realise they have changed until they look back at old photographs of themselves. Changes associated with physical decline for most people include:

- the stiffening of the heart as muscle tissue is replaced by connective tissue
- the thickening of the walls of arteries
- the decrease in aerobic capacity (by up to 70 per cent at age 65)
- the gradual loss of bone density
- the decrease in muscular strength
- the decrease in elasticity of the skin, contributing to wrinkles
- the decline in sensory organs, contributing to a decrease in sight and hearing.

FIGURE 7.17 By the age of 70, many signs of ageing are evident.

Motor skill development

Motor skills refer to the control of the muscles in the body. Imagine a newborn baby. It has very underdeveloped motor skills (e.g. uncoordinated limbs). As the infant gets older, motor skills will develop and movements will gradually become more controlled and deliberate.

Motor skills can be classified as either fine or gross:

- **gross motor skills** refer to movements that involve large muscle groups such as walking, throwing, skipping and kicking
- **fine motor skills** involve control over the smaller muscle groups such as those used for writing, tying shoelaces, cutting with scissors and manipulating the mouth to speak.

7.4.2 Physical changes as youth transition to adulthood

Youth is a time of rapid development and the transition to adulthood is characterised by being sexually mature; being seen as an adult in the eyes of the law; finishing compulsory education; being legally allowed to drink alcohol, drive, vote and join the army; and making many other decisions independently. We will explore the development that occurs as youth transition to adulthood in each of the four areas of development, beginning with physical development.

The transition from youth to adulthood is characterised by a number of physical changes, including:

- growth plates (also known as **epiphyseal plates**) in bones fuse
- sexual maturity
- changes in body composition and structure.

Growth

The transition to adulthood is marked by significant growth. During youth, on average, a girl will gain 16 centimetres in height and 16 kilograms in weight, while boys will gain an extra 20 centimetres in height and 20 kilograms in weight. By the end of youth or during early adulthood, the epiphyseal plates in long bones fuse and no more growth is possible.

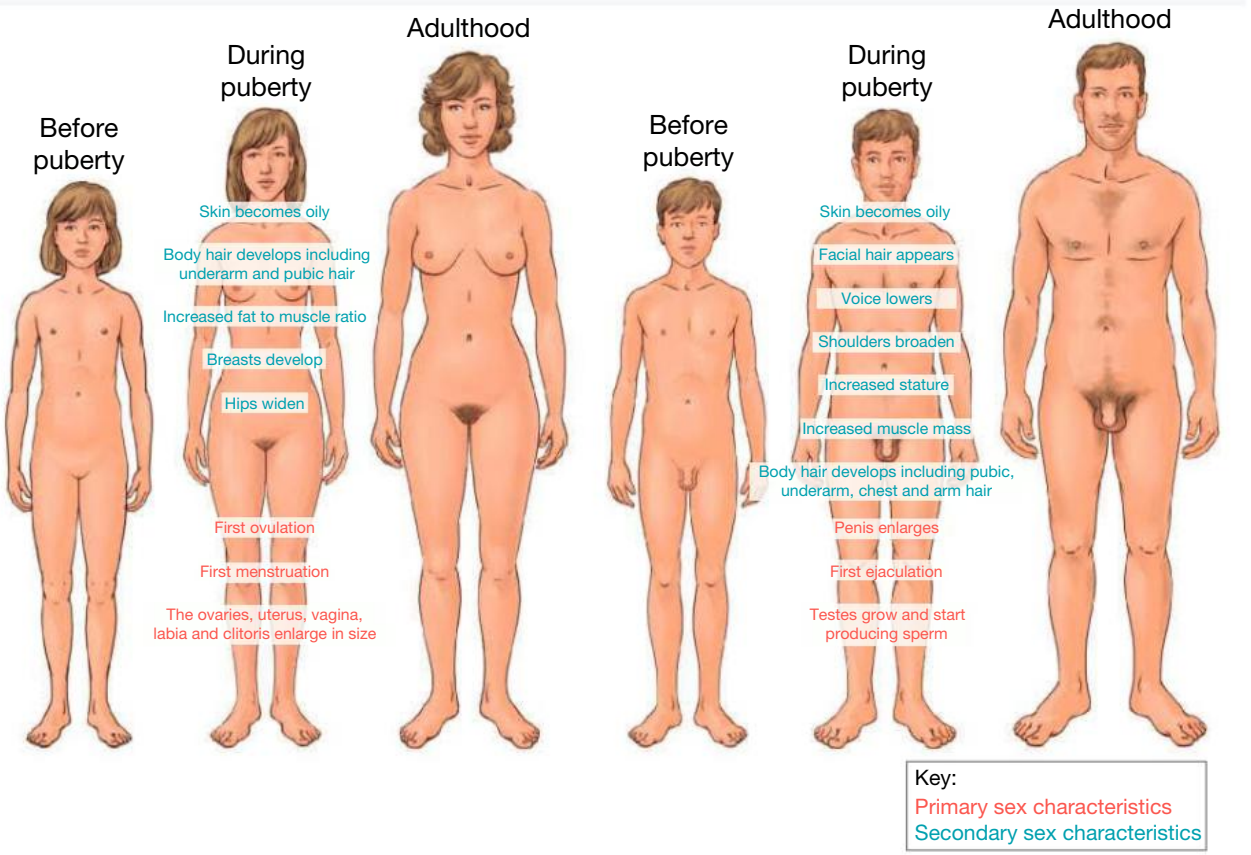
Changes to body systems

One of the most noticeable changes that occur to body systems as youth transition to adulthood are the changes to the reproductive system, which includes the sex organs and the way they function. These changes can be classified into two categories: primary and secondary sex characteristics.

Primary sex characteristics are those parts of the body that are directly involved in reproduction. During puberty, changes occur to the organs of reproduction commonly referred to as the 'genitals'. Although present at birth, these organs only start to develop during puberty. By early adulthood, these organs are usually fully developed and functioning (see the case study on sperm production and the menstrual cycle). **Secondary sex characteristics** arise from changes that occur to both males and females but are not directly related to reproduction and are not present at birth. By the start of adulthood, these characteristics are usually fully developed. Examples of primary and secondary sex characteristics that develop during the transition to adulthood for males and females are shown in figure 7.18.

Although bones have fused by now, it will be a number of years until they reach their maximum density or strength. Youth is an important time for building bone density and ensuring that bones are as strong as possible for adulthood.

FIGURE 7.18 Changes to body composition and the primary and secondary sex characteristics that develop for males and females as they transition from youth to adulthood.



As well as changes in height, the transition to adulthood is marked by changes in body composition. In males, increases in muscle mass and the broadening of the shoulders in relation to the waist result in a more triangular body shape. For females, the hips widen and the fat to muscle ratio increases. Most fat is deposited in the mid-section, including the thighs and hips, resulting in the hourglass figure seen in many adult females. The changes that occur in relation to body composition during the transition from childhood to youth and from youth to adulthood can be seen in figure 7.18.

Structures in the brain continue to increase in complexity throughout youth and into adulthood. New skills and experiences provide opportunities for different structures of the brain to change in complexity, and this impacts on brain function. The results of these changes relate to intellectual development and will be explored in more detail later.

Motor skill development

As the body matures during youth, the individual will gain more control over it. By the end of puberty, the arms and legs are proportionate to the rest of the body and coordination generally improves. The extra strength and endurance gained during puberty increase the ability to carry out many motor skills in adulthood, although due to differences in muscle mass, males generally experience a greater gain in skills requiring strength.

EXAM TIP

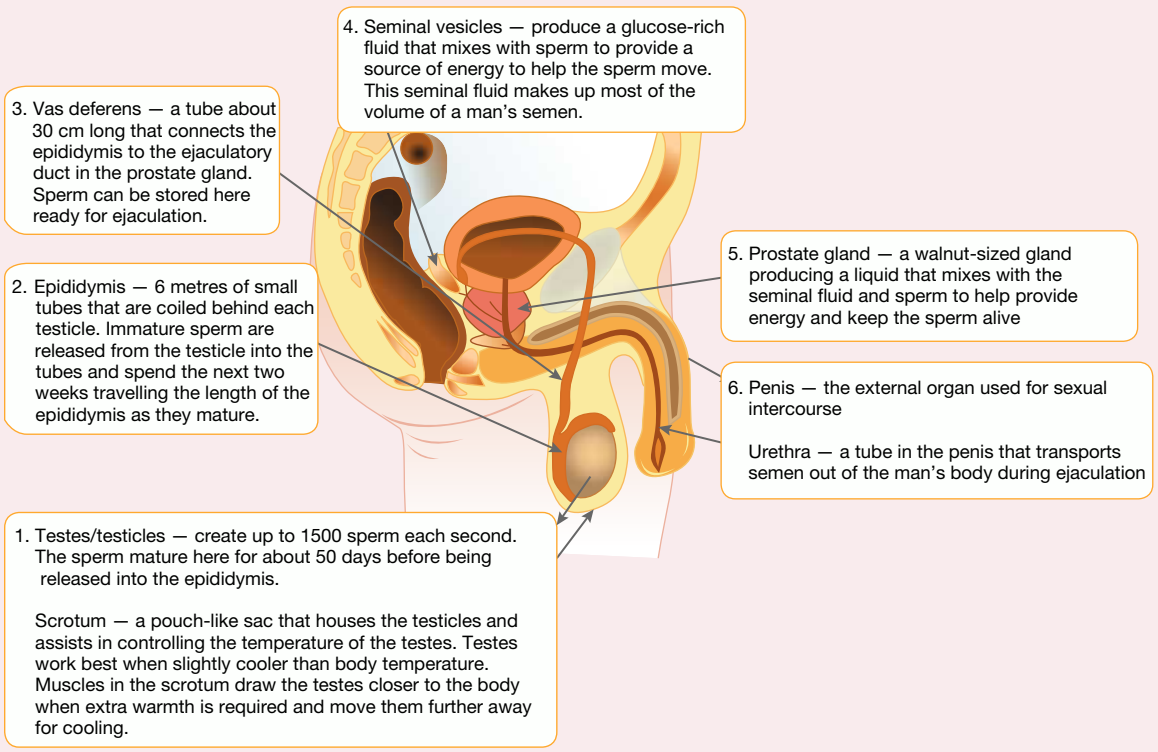
The changes that occur in relation to the four areas of development are usually common to most people, however there is variation in terms of when the changes occur and how long they take to complete. As a result, try to avoid making definite statements such as 'by the age of 18, youth have reached sexual maturity'. Although this is often the case, it is not always true and may not be awarded full marks. Instead, make statements that show consideration has been given to the variations that exist between individuals, such as 'by 18, youth will generally have reached sexual maturity'.

CASE STUDY

Sperm production and menstrual cycle

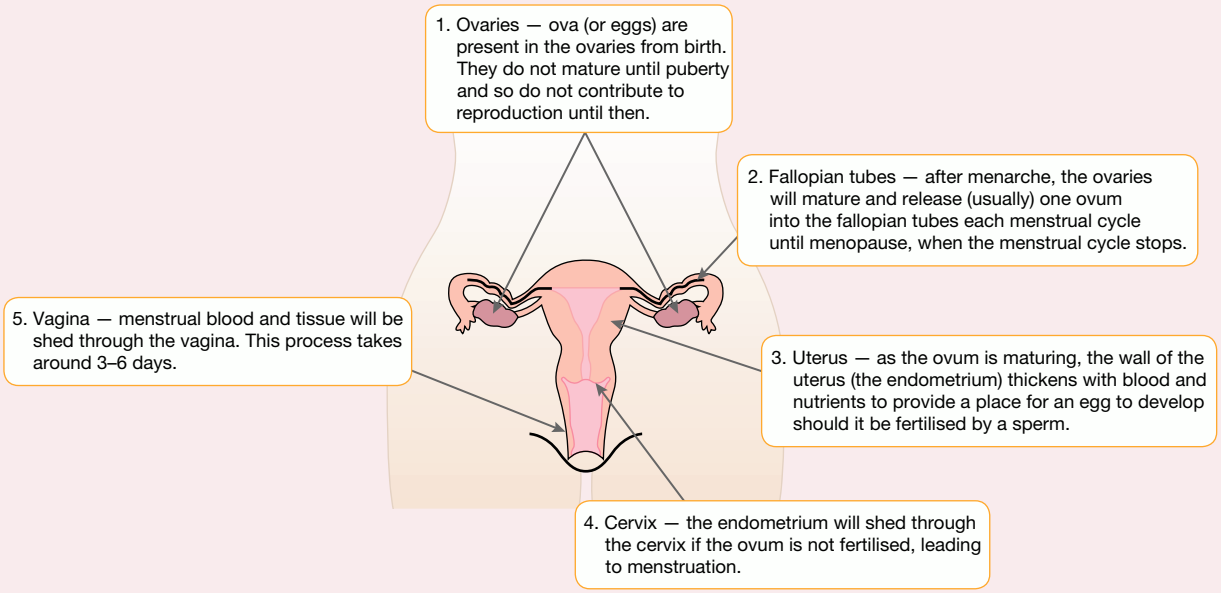
The male reproductive system consists of internal and external organs that are responsible for **semen** production and **ejaculation**. The internal reproductive organs are the testicles (or testes), epididymis, vas deferens, prostate and urethra; and the external reproductive organs are penis and scrotum (figure 7.19). During puberty, these organs grow and **sperm** is produced. The onset of sperm production is often marked by **spermarche** (or first ejaculation). This often occurs as a nocturnal emission (also referred to as a 'wet dream') or direct stimulation (most commonly as a result of masturbation). Sperm are the male sex cells that are required for reproduction. Once sperm are produced, males are capable of reproduction. If not ejaculated, sperm will eventually die and are absorbed back into the body so a build-up does not occur.

FIGURE 7.19 The male reproductive system begins to function during puberty.



The menstrual cycle refers to the process required to develop an ovum (or egg) and signals the ability to reproduce in females (figure 7.20). The first menstrual cycle begins with a process called **menarche** which relates to the first **menstruation** (or **period**) a female experiences. Most girls will experience erratic menstrual cycles for the first couple of years after menarche before the cycle settles and becomes more regular and predictable. Once this occurs, the menstrual cycle will usually last from 24 to 30 days.

FIGURE 7.20 The menstrual cycle generally signifies the ability of females to reproduce.



Case study review

1. Explain what is meant by:
   (a) spermarche
   (b) menstruation
   (c) menarche
   (d) menstrual cycle.
2. Draw a flow chart summarising the production of sperm.
3. Research the menstrual cycle and prepare a timeline showing when different events occur.

on Resources

Digital document Puberty worksheet (doc-32167)
Weblink Puberty

7.4 Activities

1. Access the **Puberty** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Using figure 7.18 as a guide, draw a Venn diagram summarising the similarities and differences that male and female youth experience as they transition to adulthood.
3. Draw a line graph showing the rate of growth across the lifespan. Place the lifespan stages on the horizontal axis and the rate of growth (no growth, slow, medium and fast) on the vertical axis.
4. Prepare an educational guide or poster for year 10 students outlining the physical changes that occur as youth transition to adulthood.

7.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain what is meant by 'development'.
2. Using examples, explain what is meant by 'physical development'.
3. (a) What does 'increase in complexity' mean?
   (b) List one example of a body part that increases in complexity.
4. Using examples, explain:
   (a) primary sex characteristics
   (b) secondary sex characteristics.

7.4 Exercise 2 APPLY your knowledge

1. Create a table using the following headings to summarise the key aspects of the physical development of youth.

Physical development	Examples relevant to youth
Growth	
Changes to body systems	
Motor skills	

2. All youth experience the same physical development. To what extent do you agree with this statement?

studyON

7.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

7.5 Social developmental transitions from youth to adulthood

KEY CONCEPT Understanding the characteristics of social development and the social development that occurs during the transition to adulthood

While the physical aspect of development is often the most easily recognisable, there are significant social changes that also occur as individuals transition from youth to adulthood.

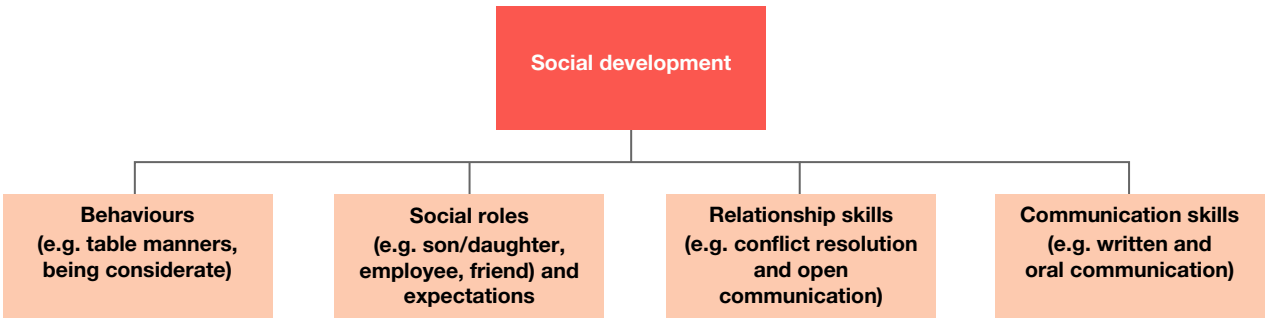
7.5.1 Social development

People from different cultures are raised with different values and skills relating to how they are expected to interact with others. A newborn child knows very little about how to interact with others; it must learn the appropriate social skills and behaviours. **Social development** refers to the increasing complexity of behaviour patterns used in relationships with other people (VCAA). Examples of social development are summarised in figure 7.21.

Behaviours

Behaviours relate to how individuals act around others. Learning what behaviours are appropriate in a range of situations is an important part of social development. Infants often have little understanding of appropriate behaviours, but generally learn socially acceptable ways to act such as saying please and thank you, becoming toilet trained and learning to use cutlery to eat.

FIGURE 7.21 Aspects of social development



Social roles and expectations

Humans spend a lot of their time in different groups and will often have distinct roles within those groups. Examples include the role of employee, friend, son/daughter, coach and teammate. Each role will generally have a set of behaviours, skills and expectations associated with it. Gender roles are another example of social roles and relate to behaviours that are culturally acceptable for males and females. Although many of these roles and expectations have broken down over the past decades, some cultures still have distinct roles for males and females. These roles are learned from a very young age and shape many aspects of the wider society. Examples of traditional social roles related to gender include:

- males working and females staying at home to look after the children
- men mowing lawns and women cooking
- girls playing with dolls while boys play with trucks
- men and women dressing differently (e.g. women wearing skirts and men wearing trousers).

Communication skills

Being able to communicate effectively with different groups of people is an important aspect of social development and continues to be built upon over the years. For example, talking to an elderly grandparent requires different skills from talking to a brother, sister or school friend. Communication occurs in a range of formats including verbal, written, body language and sign language. Communicating effectively in all required formats is important in ensuring that an individual is effectively understood.

FIGURE 7.22 Learning behaviours, such as using a toilet, are important aspects of social development in Australia.

Relationship skills

Relationship skills include knowing how to behave in a relationship and what is expected. This will be continually refined over time. It often requires establishing mutual respect and taking the time to listen to each other's point of view.

7.5.2 Social changes as youth transition to adulthood

Even though considerable physical changes occur as youth transition to adulthood, the social changes can be just as intense.

Behaviours

The peer group is extremely influential as youth transition to adulthood. Many of the social experiences that youth encounter are due to their peer group and this continues into adulthood. The peer group may influence their choice of clothing, style of music, the types of activities they participate in and the formation of their identity. As individuals strive for their own independence, they may spend a majority of their free time with their peers, possibly experimenting with different behaviours within the peer group. Some of these behaviours may be considered 'risky', such as smoking cigarettes and experimenting with alcohol.

Culture and family play a significant role in social development as individuals transition to adulthood. Culture and family may influence the social circle and relationships that people have, the career they choose to pursue, where they choose to live and how they spend their spare time.

Youth generally move from being essentially dependent on parents, to being largely independent as adults. They learn how to act among different groups, and change the way they behave according to the situation.

Social roles and expectations

Greater independence and a wider range of social experiences contribute to the development of more complex social roles. For example:

- many youth will gain paid employment for the first time as they transition to adulthood which develops the role of employee
- intimate relationships experienced during this stage may develop the role of boyfriend or girlfriend
- having greater responsibility for their own actions may promote an increase in the complexity of social roles already played, such as son, daughter and student.

Communication skills

The types of interactions that occur change as youth are given greater freedom and treated more like adults. As a result, their communication skills are further developed. Individuals often communicate in a number of different ways and the use of the internet, mobile phones and social media can significantly influence how youth communicate with friends and learn about the world. The nature of relationships changes during this time as many peer groups include members of the opposite sex. This can further develop communication skills and provide individuals with opportunities to experience new types of relationships. As youth transition to adulthood, they often experience a range of more intimate relationships.

Relationship skills

In gaining greater independence, youth often learn that they are responsible for their own actions, decisions and consequences. As a result, young people often question more things, and this can contribute to conflict with their parents or other caregivers. Up until this point, parents have often made most of the decisions for their child. During youth, relationships with parents are often reorganised in such a way that both the child and parent have a say in decision making. As a result of increasing independence, youth may disagree with parents more often, which can lead to escalating conflict. However, most people enter adulthood with a deeper understanding of their parents and vice versa.

FIGURE 7.23 Socialising helps youth learn vital social roles.

Many individuals will experience their first intimate relationship with another person as they transition to adulthood, and some will experience their first sexual relationship. New skills, such as conflict resolution and compromise, are learned and/or developed as a result of these relationships. Towards the end of the youth stage and into adulthood, the individual will usually have developed a clearer sexual identity and may be looking for a serious relationship.

7.5 Activity

In small groups, find or write lyrics to a song that depicts an aspect of social development during youth.

7.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Using examples that may occur as youth transition to adulthood, explain social development.
2. What is meant by 'social roles and expectations'? Provide three examples.
3. Explain why conflict with parents often occurs as youth form their own values and beliefs, and gain independence.
4. Make a list of the aspects of social development that can be influenced by the peer group.

7.5 Exercise 2 APPLY your knowledge

1. (a) Make a list of all the people or groups from which we learn social skills.
   (b) Which of these do you think has had the greatest influence on your own social development? Explain.
2. Make a list of social skills that are generally learned from the family.
3. Would learning to use a knife and fork be a part of social development in all cultures? Explain.
4. Create a table using the following headings to summarise the key aspects of social development of youth.

Social development	Examples relevant to youth
Behaviours	
Social roles and expectations	
Communication skills	
Relationship skills	

studyON

7.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

7.6 Emotional developmental transitions from youth to adulthood

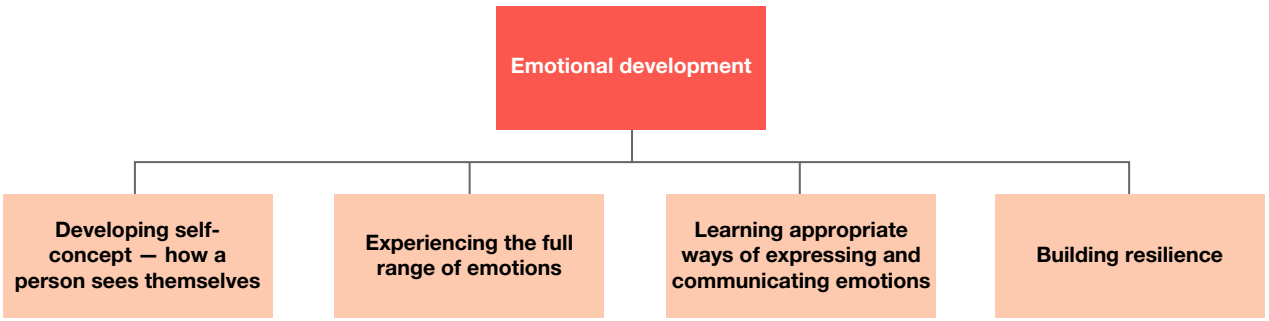
KEY CONCEPT Understanding the characteristics of emotional development and the emotional development that occurs during the transition to adulthood

7.6.1 Emotional development

Emotional development occurs as individuals experience the full range of emotions and learn ways to appropriately express emotions. Resilience develops as individuals experience the range of emotions, and is a key component of emotional development. Self-concept is also a part of emotional development and relates to how an individual sees themselves. Although related to emotional health and wellbeing, emotional development involves the skills that individuals develop over time as they experience different situations and emotional states.

Some specific examples of emotional development are summarised in figure 7.24 and are explained in more detail in the following text.

FIGURE 7.24 Aspects of emotional development



Self-concept

Self-concept relates to how individuals see themselves, and develops over time as they experience various aspects of life. Initially, infants may not see themselves as distinct from other people, but this changes as they develop a sense of self. As the self-concept develops, the individual may have different views about different aspects of themselves, such as their academic ability, social skills and physical capabilities. Self-concept also influences the formation of an individual's identity (see case study) and once an individual has a sense of who they are as a person, their self-concept is strengthened.

CASE STUDY

Identity

Identity is the establishment of a unique personality and encompasses aspects of both social and emotional development. It refers to how an individual defines themselves, and is based on the values and beliefs of that individual. There are various aspects of identity — including physical, sexual, political, religious and ethnic identity — and the different aspects may develop at different times. Although an identity will generally be firmly formed by the later stages of youth, aspects of it will be modified throughout life.

In early youth, identity is often based on parental expectations and occurs without exploring alternatives. As youths develop, they may begin to question this identity and actively experiment with alternatives in an attempt to find an identity that suits them. During this process, the individual may change hobbies quickly, explore various possibilities for future careers, and sample different clothing and hair styles, musical genres and friendship groups.

As abstract thought develops, many youths will explore their spirituality. Spirituality is an aspect of identity that means different things to different people. Some of the more common associations include:

- searching for meaning in life
- finding one's place in the world, where the greater good of the universe and those in it is important
- seeing oneself as a small part of a bigger universe
- acknowledging forces that are separate from the physical and mental functioning of living things.

Religion is an organised form of spirituality that is based on culturally and historically based guidelines (or doctrine). As part of their search for spirituality, some people will explore religions — or turn away from the religion in which they were raised.

Many factors contribute to identity formation. They include:

- culture/ethnicity
- parents
- siblings
- friends
- school
- society.

Once an identity has been committed to, people feel more comfortable about themselves. This can contribute to increased self-esteem and also help to guide their moral decisions.

Case study review

1. What is meant by the term 'identity'?
2. What factors could cause someone to change aspects of their identity later in life?

3. Explain the difference between spirituality and religion.
4. (a) Write down 10 words that assist in defining you as an individual.
   (b) i. Rank your answers for part (a) according to how well they define who you are, where '1' is the answer that best defines you and '10' is the answer that least defines you.
   ii. For what reason/s did you choose the answer you ranked as '1'?
   (c) Next to each answer for part (a), write down who you think influenced this aspect of yourself the most.
   (d) i. Which influence featured the most times?
   ii. Do you think this influence is the biggest determinant of identity? Explain.
5. Explain how the formation of identity assists in the development of self-concept.

Experiencing the full range of emotions

As individuals develop, they experience a greater range of emotions. The first emotions that can be recognised by infants include joy, anger, sadness and fear. As children begin to develop a sense of self, they experience more complex emotions, such as shyness, surprise, embarrassment, shame, guilt and pride. Young children often experience basic emotions such as happiness and anger, and often only experience one emotion at a time. As they develop emotionally, children realise that they can experience multiple emotions at once. For example, feeling both happy and sad when school holidays come to an end. Older children also begin to identify different emotions and learn appropriate ways of responding to them. This is a process that continues through youth and into adulthood.

Learning appropriate ways of expressing emotions

As individuals develop emotionally, they become more equipped at expressing emotions in an appropriate manner. Those who are more emotionally developed are better able to control the way in which they express their feelings. This is why toddlers, rather than adults, are more likely to throw temper tantrums when they do not get their own way.

FIGURE 7.25 Throwing tantrums is a characteristic that most children overcome as they learn appropriate ways of expressing and communicating emotions.

Desire, guilt and jealousy are common emotions that people express in various ways. Learning to accept the things they cannot change and focusing energy on the things they can change is a significant achievement in this area, as it influences the manner in which people express the emotions they experience. For example, instead of crying at not being selected for the soccer team, a person can direct this energy into training harder in order to have a better chance of selection next time. It takes time to develop appropriate ways of responding to emotions.

Building resilience

Resilience relates to the ability to effectively deal with adverse or negative events that occur throughout life. Such events include the death of a loved one, relationship breakdown, financial stress, conflict with family and friends, job loss and job insecurity.

Individuals will use a variety of coping strategies to deal with challenging events and these will vary depending on the type and extent of the situation/s they are exposed to.

Developing coping strategies assists in building resilience. Some coping strategies include:

- *taking time out for relaxation.* Leisure activities such as exercise, socialising and resting are important as they assist in providing clarity, energy and focus when issues require attention.
- *meditation.* Meditation works to calm the mind and assists with refocusing thoughts. It can also assist in reducing stress, which allows energy to be applied to important issues.

- *setting goals.* Setting manageable goals allows an individual to achieve success and work towards dealing with aspects of life that may sometimes seem overwhelming.
- *talking to others.* Other people are a great resource for putting issues in perspective and providing alternative ways of viewing life events. Talking to others also allows individuals to express how they are feeling.
- *maintaining positive self-talk.* Self-talk relates to the inner voice in a person's mind that says things they don't necessarily say out loud. Self-talk can be positive or negative. Positive self-talk has been shown to promote resilience.

Learning the skills necessary to become resilient is a key component of emotional development and people who have good levels of resilience experience better emotional health and wellbeing.

WHAT IS THE DIFFERENCE BETWEEN EMOTIONAL HEALTH AND WELLBEING AND EMOTIONAL DEVELOPEMENT?

Emotional health and wellbeing and emotional development are closely related concepts but there are specific differences between them.

Emotional development includes experiencing the full range of emotions, the acquisition of knowledge and skills that assist in expressing emotions effectively, the development of self-concept and building resilience. All these characteristics develop over time and increase in complexity. As an individual develops emotionally, they learn ways of expressing their emotions in a more mature manner. For example, an infant usually experiences basic emotions and does not have the ability to express them as appropriately as an adult. As an individual develops emotionally, they learn ways of expressing their emotions in a more mature manner. For example, if an adult doesn't get a promotion at work, although they may experience disappointment, they use the skills they have learnt to use this as opportunity to improve future outcomes by modifying their behaviour — for example, by working harder in the future.

Emotional health and wellbeing, on the other hand, relates to how an individual is using these skills and abilities at a given point in time. Emotional health and wellbeing includes recognising and understanding emotions, experiencing appropriate emotions in a given scenario, being able to effectively respond to and manage emotions, and the level of resilience experienced.

Emotional health and wellbeing and emotional development are interrelated and therefore affect one another. For example, an infant may not manage their emotions effectively and throw a tantrum (emotional health and wellbeing) as they do not have the skills to express their emotions in a more appropriate way (emotional development). As a result, this behaviour is considered normal for most infants. Adults generally do not throw tantrums (emotional health and wellbeing) as they usually have the skills to express these emotions in a more positive way (emotional development).

A range of factors such as stress, illness and various life events (such as relationship breakdown, changing schools, experiencing conflict with loved ones or moving out of home) can influence the ability of an individual to use their emotional skills and abilities in every scenario. Consider the following:

- A person may have experienced the full range of emotions (emotional development) but this doesn't mean they will always accurately recognise emotions in every situation (emotional health and wellbeing).
- A person who has acquired the skills to express emotions effectively (emotional development) may feel overwhelmed in a particular scenario and may struggle to appropriately respond to the emotions they feel (emotional health and wellbeing). For example, a heated argument with a work colleague may overcome them and they may not respond to their emotions in their usual calm and mature manner.

on Resources

Video eLesson Clarifying self-identity and self-worth (eles-1043)

7.6.2 Emotional changes as youth transition to adulthood

As with social and physical development, the emotional changes that occur during youth are significant. Because of all changes young people go through as they transition to adulthood, the way they view themselves and how they deal with these feelings may also change.

Self-concept

As young people transition to adulthood and explore different values and beliefs, they may a have deeper understanding of who they are as people. This influences their emotional development and sense of identity. If they are satisfied with the person they have become, they may enter adulthood with a great sense of pride and achievement not experienced previously. As self-concept develops, individuals often become more comfortable with themselves. As a result, they generally become less concerned with what others think and more concerned with who they are as a person.

FIGURE 7.26 As self-concept develops, youth often become more comfortable with themselves.

Experiencing the full range of emotions

As the body matures so does the mind, and youth might seek emotional independence. For example, they might try to solve their own problems instead of consulting their parents. This may lead to feelings of satisfaction if they succeed or despair if they fail. Experiencing these emotions can encourage the individual to take more responsibility for their actions and provide ways to accept emotions — both positive and negative — that occur as a result of this responsibility (e.g. guilt, remorse, happiness, fulfilment).

As the nature of relationships changes, young people may also seek intimacy and affection within those relationships. They might experience emotions such as love and lust and learn ways to express them appropriately (figure 7.27).

FIGURE 7.27 Some young people will experience the emotions associated with a relationship for the first time.

Learning appropriate ways of expressing emotions

Towards the end of the youth stage, the individual will have been exposed to a range of emotions and will generally be able to recognise them accurately when they arise. Most older youth will also have an understanding of appropriate ways of expressing those emotions and be able to adequately express their feelings in words, which helps to regulate their emotions. For example, when experiencing anger, youth

have a greater ability to deal with this emotion in a calm manner and discuss why they are feeling this way with others.

Building resilience

As life experiences and knowledge develop, the transition to adulthood is often marked by greater resilience. The coping strategies that are first developed early in life are built upon, contributing to the greater level of resilience experienced by most adults compared with children. For example, a young person may be able to use positive self-talk to help them overcome their disappointment at not getting the first part-time job they have applied for. The level of resilience will usually continue to develop throughout adulthood.

Resources

Digital document Emotions worksheet (doc-32168)
Weblink Emotions

7.6 Activity

Access the **Emotions** weblink and worksheet in the Resources tab, then complete the worksheet.

7.6 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Using examples, explain emotional development.
2. Explain what is meant by 'self-concept'.
3. Explain what is meant by 'resilience' and discuss ways that individuals can build their resilience.

7.6 Exercise 2 APPLY your knowledge

1. Brainstorm emotions that may be experienced for the first time as youth transition to adulthood.
2. Explain how developing emotionally can impact on relationships with others.
3. Discuss ways in which youth may express or respond to the following emotions compared to a child:
   (a) happiness
   (b) anger
   (c) jealousy
   (d) disappointment.
4. Discuss the difference between social development and emotional development.
5. Explain how social development and emotional development may have an impact on each other.
6. Create a table using the following headings to summarise the key aspects of the emotional development of youth.

Emotional development	Examples relevant to youth
Self-concept	
Experiencing the full range of emotions	
Learning appropriate ways of expressing emotions	
Building resilience	

7.6 Exercise 3 studyON: Practice exam questions

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

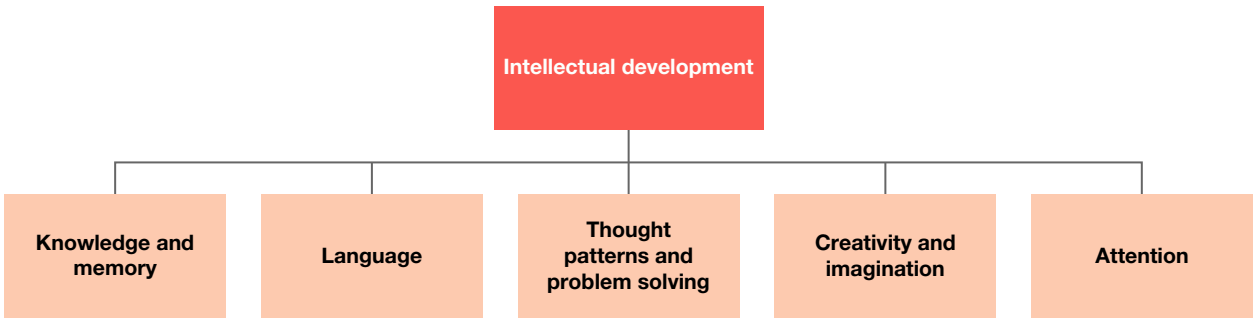
7.7 Intellectual developmental transitions from youth to adulthood

KEY CONCEPT Understanding the characteristics of intellectual development and the intellectual development that occurs during the transition to adulthood

7.7.1 Intellectual development

Intellectual development refers to the increase in complexity of processes in the brain, such as thought, knowledge and memory. Intellectual development occurs as a result of the changing processes that occur within the brain and the increasing complexity of the brain. Although many aspects of intellectual development occur in the younger years, intellectual development continues throughout the lifespan as people learn skills associated with pursuing careers, raising children, becoming grandparents or taking up hobbies. Aspects of intellectual development are summarised in figure 7.28 and are explained in more detail below.

FIGURE 7.28 Aspects of intellectual development



Knowledge and memory

Knowledge relates to the range of information and concepts an individual is familiar with and understands. Knowledge becomes more complex as people develop intellectually. The longer a person has been developing intellectually, the more opportunities they have to gain knowledge.

Memory relates to the ability to retain and recall information. Memory abilities change throughout the lifespan and can decline in the latter part of adulthood. Using the parts of the brain responsible for memory can help to promote a good memory in late adulthood.

Language

Knowledge of language and the way it can be used develops continually over the human lifespan. When a baby is born, they do not understand speech or language. Within months, they can distinguish between sounds and begin to understand what is being said to them. In time, they will learn to speak themselves and their use of words and sentences will continue to develop into adulthood. Some people are **bilingual**, which can further develop the parts of the brain responsible for the production of speech and knowledge of language.

Thought patterns and problem solving

The way an individual thinks changes as they develop, from **concrete thought** to **abstract thought**. Abstract thought relates to the ability to think about concepts and ideas rather than just the physical objects you can see (concrete thought). In the early stages of the lifespan, individuals can think only in concrete ways. As they develop intellectually, they can consider concepts and situations not encountered before. For example, children often learn to count by memorising the numbers. As abstract thought develops, they will begin to notice the patterns that exist in the formation of numbers.

FIGURE 7.29 Intellectual development is rapid during the early years, but it continues throughout the lifespan.

Problem solving relates to finding a way from the current state to the desired goal when no clear path exists. Problem solving is one of the most complex of all thinking processes. Examples include trying to fit a number of commitments into a given timeframe, figuring out what has caused a computer to crash or calculating how much weight a new (as yet unbuilt) bridge can hold. Trial and error is an important part of problem solving. As experience and knowledge develops, problem solving abilities increase.

Creativity and imagination

Creativity and imagination relate to thinking in new ways. Both creativity and imagination can be developed by exposure to many different experiences including books, music and other people. Imagination is essential for optimal development during childhood. Children often engage in imaginative play, such as pretending and making up stories. Imaginative play assists all four areas of development. As individuals develop, imagination becomes more related to artistic pursuits, problem solving and forming life dreams and desires.

Attention

Attention relates to focusing on one aspect of the environment while ignoring others. Attention is an important aspect of intellectual development as it assists in learning new material. Young children can focus their attention for shorter periods than older children. Attention can be developed by attaching an intrinsic (or internal) reward, such as attaching satisfaction to completing a task. The more a person enjoys the matter requiring attention, the longer they can focus their attention on it.

7.7.2 Intellectual changes as youth transition to adulthood

During youth, physiological changes occur in the brain and in the way that the young person perceives problems. These changes result in significant advances in intellectual development.

Knowledge and memory

During the transition to adulthood, youth often focus more on the future. This may guide the development of knowledge — for example, students wanting to study science might develop an interest in learning about scientific principles and choose science courses in their final years at school.

More complex concepts are learned in the final years of school and in employment or tertiary education. As a result, youth and early adults may develop an understanding of how they learn best (e.g. visual versus aural learners) which can further promote the acquisition of knowledge.

As the brain continues to develop during youth and early adulthood, so does the capacity to remember past events and concepts. Individuals in these stages may also implement strategies to assist in recalling information such as the use of acrostics and association.

Language

As knowledge and memory develop, so can the ability to remember words and what they mean. As a result, the transition to adulthood is often accompanied by an increase in skills relating to vocabulary, grammar and the use of language. For example, the use of figurative speech such as metaphors, similes and puns may develop as youth transition to adulthood.

Language is developed through many experiences, including through reading, communicating with others and exposure to media such as newspapers, magazines, music, television and the internet. Young people who have an interest in language and reading may develop a greater understanding of language than others.

Thought patterns and problem solving

As they transition to adulthood, youth begin to see 'grey' areas in problems when they would have seen only 'black and white' in the past. During this stage, the brain structures mature and abstract thought develops, as opposed to the concrete thought relied upon during childhood. Information can be processed more efficiently, and groups of concepts that were viewed individually might now be linked together and viewed as an interrelated whole.

FIGURE 7.30 Towards the end of youth, individuals generally start to shift their attention to learning things associated with their interests and possible career paths.

The ability to create hypothetical solutions and evaluate the best options develops. This comes from previous experiences and from applying old knowledge to new situations. In contrast, most children can see only concrete solutions. Reasoning skills continue to be refined into adulthood with the challenges presented by employment or further study. Older youths can often distinguish between fact and opinion and may challenge views put to them by others, including adults. This critical thinking continues into adulthood and for the remainder of life.

Some research suggests that the frontal lobe (a part of the brain) is not fully developed until a young person is in their twenties. The state of the brain during these years may influence thought patterns and make youths and early adults favour immediate rewards and disregard long-term consequences. It is thought that this aspect of brain development may account for why these groups are more likely to take risks than children or older adults.

Creativity and imagination

The increase in knowledge and thought patterns can work to promote creativity and imagination as youth transition to adulthood. Creativity and imagination can contribute to the development of new ideas and innovations in their areas of interest such as career or hobbies.

Young people who have an interest in creative pursuits, such as music, painting or poetry, may develop skills through practice that can facilitate further creativity and imagination. For example, a youth who regularly practises and plays guitar may have more opportunities to express their imagination and creativity as a result of being capable of using this instrument. Although the transition to adulthood can be accompanied by greater levels of creativity and imagination, some research suggests that these skills can decrease if individuals do not promote their development.

Attention

Like creativity and imagination, attention can develop as youth transition to adulthood. If individuals develop a deep interest in a career or hobby, they may be able to focus their attention on a related task for hours at a time. Conversely, as youth transition to adulthood, they may lose interest in activities that they see as pointless or meaningless. In this respect, attention can become more targeted and focused during adulthood.

EXAM TIP

When discussing an impact on development, make sure you clearly state the type of development and use specific examples linked to the chosen type of development. For example, if you are making links to intellectual development, provide examples that link to either knowledge and memory, attention, language, thought patterns and problem solving or creativity and imagination.

7.7 Activities

1. Draw pictures and/or collect magazine photos and create a collage representing examples of the type of development that might occur as youth transition to adulthood. Ensure that the four areas of development are addressed.
2. (a) Find lyrics to a song that focuses on an area of development.
   (b) Print the lyrics and share them in small groups.
   (c) Discuss what the lyrics are saying about development.
3. Create a concept map that identifies three changes for each area of development that occur as youth transition to adulthood.

7.7 Exercise1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

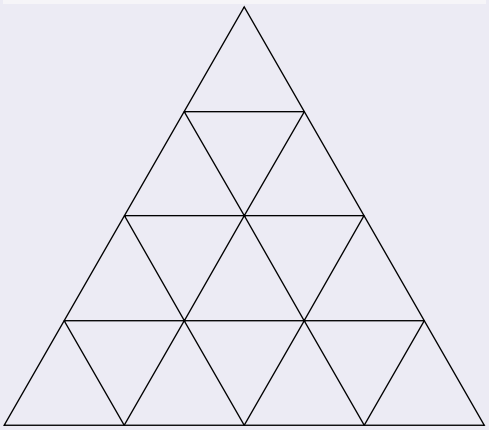
1. Using examples, explain what is meant by intellectual development.
2. Outline three aspects of intellectual development that may occur as youth transition to adulthood.
3. Using examples relevant to each, discuss the difference between concrete and abstract thought.
4. Classify the following as examples of physical, social, emotional or intellectual development:
   (a) the changes to sex organs that occur during puberty
   (b) learning to use a graphing calculator
   (c) deciding to join a religious group
   (d) pattern baldness that occurs in many males
   (e) a musician writing a song for the first time
   (f) finding a way to fix a banging door
   (g) a person perceiving themselves as intelligent
   (h) a person deciding that they value honesty more than not hurting someone else's feelings
   (i) developing the skills required to discuss issues with parents
   (j) increase in the complexity of the skeletal system in a developing foetus
   (k) using words to express emotions
   (l) developing beliefs relating to ethical issues such as abortion
   (m) changes in height that occur during childhood
   (n) moving in with a partner
   (o) learning skills associated with a career.

7.7 Exercise 2 APPLY your knowledge

1. 'When I was a boy of 14, my father was so ignorant I could hardly stand to have the old man around. But when I got to be 21, I was astonished at how much he had learnt in seven years.' What do you think this quote (by American author Mark Twain) is trying to say?

2. (a) How many triangles are shown in figure 7.31?
   (b) Compare your answers with those of other students.
   (c) Do you think a child would be able to answer this problem? Why?
   (d) Think of another example of a brain teaser/problem that children and youth might answer differently.

FIGURE 7.31 Triangle problem



3. Create a table using the following headings to summarise the key aspects of the intellectual development of youth.

Intellectual development	Examples relevant to youth
Knowledge and memory	
Language	
Thought patterns and problem solving	
Creativity and imagination	
Attention	

studyON

7.7 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

7.8 Topic 7 review

7.8.1 Key skills

KEY SKILL Collect and analyse information to draw conclusions on perceptions of youth and adulthood

This key skill requires information to be collected relating to the perceptions of youth and adulthood as stages of the lifespan. Information should be gathered from a range of sources including primary and secondary sources.

Information from primary sources can be collected through surveys (either face-to-face or online) and interviews. A range of people from different backgrounds and lifespan stages should be used as participants so a variety of perceptions are identified. Secondary sources include newspapers, magazines, books, television and the internet. It is important to record where the information comes from, so a source can be presented for each piece of information and can also be recorded in a bibliography.

Information relating to perceptions of youth and adulthood should be collated and presented in a variety of ways including discussions, tables and graphs. When analysing information, look for trends, similarities and differences between perceptions and the participants who hold them. This will allow relationships to be established and conclusions to be drawn relating to the perceptions that people have.

In the following example, information from a survey relating to perceptions of youth is collated and conclusions about the proportion of people with negative perceptions are drawn:

TABLE 7.1 Perceptions of youth

	Female				Male			
Age group	Negative perceptions (%)	Positive perceptions (%)	Mixed perceptions/ Neutral (%)	Total (%)	Negative perceptions (%)	Positive perceptions (%)	Mixed perceptions/ Neutral (%)	Total (%)
18–40	22	65	13	100	18	68	14	100
41–60	42	30	28	100	38	42	20	100
61–80	68	21	11	100	56	36	8	100
81+	57	32	11	100	44	46	10	100

In this survey, females were more likely to have negative perceptions of youth than males in all age groups.[1] For example, in the 18–40 age group, 22 per cent of females held negative perceptions compared to 18 per cent of males in the same age group.[2]

As age increased, the percentage of those with negative perceptions also increased. For example, for females the proportion of those with negative views increased from 22 per cent in the 18–40 age group to 68 per cent in the 61–80 age group. For males, it increased from 18 per cent in the 18–40 age group to 56 per cent in the 61–80 age group.[3]

1 A conclusion is drawn.

2 Data are used to substantiate the conclusion.

3 A second conclusion is drawn and data are used again to substantiate the conclusion.

Those in the 81+ age group were less likely to have negative perceptions than those aged 61–80 in both sexes.[4] For females, 57 per cent of those aged 81+ had negative perceptions compared to 68 per cent in the 61–80 age group. For males, the proportions were 44 per cent and 56 per cent for those in the 81+ and 61–80 age groups respectively.

4 A third conclusion is drawn, maintaining the focus on those with negative perceptions.

Practise the key skill

1. a. Monitor news sources (either online or television) for one week and record the nature of stories relating to youth and adults.
   b. Classify the stories according to the nature of the article. Possible categories include:
      - positive — achievement, good behaviour / deeds
      - negative — crime, victims, bad behaviour, needing help.
   c. Analyse the results and draw conclusions about the representation of youth and adults in the media.
2. a. Conduct a survey to collect information relating to the perceptions of youth and adults among community members. Ensure a range of age groups are surveyed so relationships between perceptions and lifespan stages can be identified.
   b. Collate and analyse the results and draw conclusions about community perceptions of youth and adulthood as stages of the lifespan.

KEY SKILL Describe the developmental changes that characterise the transition from youth to adulthood

The transition to adulthood is a time of rapid development, and the common aspects of development should be known. In addition to the physical changes that occur, the social, emotional and intellectual changes are also significant. Some questions will focus on one area of development and others will be more open. Be sure to read the question carefully to determine the main focus or requirement.

In the following scenario or case study, Dallas is in year 11. The following response outlines the physical changes that Dallas will experience as she transitions from youth to adulthood.[5] As this example relates to physical development, links should be made to aspects such as changes to body systems, growth and/or motor skill development.

5 Keep your answer focused on the physical development of females.

Dallas can expect to experience a range of physical changes during this stage of development. Dallas's bones may still be growing, but this process will end soon and her height will be fixed, although her bones will continue to gain density.[6] Her body proportions may continue to change as her hips widen and more fat is deposited around the thighs and hips. Dallas may continue to gain strength and will refine her fine and gross motor skills.[7] Dallas's menstrual cycle may be erratic at this time, but will generally become more regular as she transitions to adulthood.

6 Remember that not all physical changes can be seen. Some occur inside the body, such as the changes in bone density.

7 Use key terms where appropriate.

A key requirement of this skill is to develop the ability to predict possible outcomes for an individual in all areas of development in a particular scenario or set of circumstances. Having a detailed knowledge of the four areas of development is the first step in achieving this.

In this scenario (or case study), Scott is 16 and has just left school to begin a plumbing apprenticeship. A discussion of how Scott's development might be affected by his leaving school and beginning full-time employment is presented below.

Scott's development might be affected in the four key areas: physical, social, emotional and intellectual.[8]

- *Physical:* He may miss out on playing sports at school, and this could affect his motor skill development as he experiences limited opportunities to practise them. He may learn new manual skills in the workplace that may enhance his motor development.
- *Social:* He will learn to communicate effectively with a range of people in a professional manner. He will develop his role of employee by taking responsibility for tasks assigned to him.
- *Emotional:* His self-concept may change as he begins to see himself differently as he gains more skills and responsibilities.
- *Intellectual:* Despite missing out on the traditional academic concepts learned at school, Scott will learn a new set of skills and knowledge associated with his trade.[9]

8 If the question does not specify, ensure that all areas of development are covered.

9 Not all outcomes will be entirely positive or entirely negative. Try to achieve a balance.

Practise the key skill

3. For each type of development, describe two characteristics that occur as youth transition to adulthood.
4. Beth is 18 years old and has just moved out of her parents' house with a friend. Explain three developmental changes that Beth may experience as a result of moving out.

7.8.2 Topic summary

Overview of the human lifespan

- The human lifespan begins at fertilisation and ends at death. Each stage has characteristics common to most people.
- The start and finish of some lifespan stages has been debated over the years, and different groups and organisations may define the lifespan stages differently. For the sake of this course, the lifespan stages, and the start and end of each stage, are:
  - prenatal: fertilisation until birth
  - infancy: birth to age 2
  - early childhood: age 2 to age 6
  - late childhood: age 6 to age 12
  - youth: age 12 to age 18
  - early adulthood: age 18 to age 40
  - middle adulthood: age 40 to age 65
  - late adulthood: 65 years of age until death.

Perceptions of youth and adulthood as stages of the lifespan

- Perceptions of youth and adulthood relate to the different ways that people view those in each of these stages.
- Perceptions can be positive, negative or a mix of both.
- Perceptions are formed as a result of a range of factors including personal experiences, media representations and opinions of others.
- Development refers to the orderly, predictable changes that occur in individuals from fertilisation to death. Development occurs in the physical, social, emotional and intellectual areas.

Physical developmental transitions from youth to adulthood

- Physical development involves internal aspects (development and growth of body systems and organs) and external aspects (motor skill development and growth). It includes the decline in body systems.
- Youth is considered a period of rapid growth, but the body enters a maintenance phase during early adulthood and growth stops.
- The physical changes that occur during puberty can be classified as either primary or secondary sex characteristics.

Social developmental transitions from youth to adulthood

- Social development refers to the increasing complexity of behaviour patterns used in relationships with other people (VCAA).
- The transition to adulthood is characterised by rapid social development. Individuals interact with a wider range of people, including increased interactions with those of the opposite sex, which develops social abilities and a range of relationship skills.
- The peer group is an important influence on social development as it contributes to the development of behaviours and communication skills.

Emotional developmental transitions from youth to adulthood

- Emotional development refers to experiencing the full range of emotions and increasing complexity relating to the expression of emotions, the development of self-concept and building resilience.
- Self-concept is an important aspect of emotional development and relates to the way that an individual sees themselves.
- Individuals experience a wider range of emotions as they transition to adulthood and learn to recognise and deal with them more appropriately.

Intellectual developmental transitions from youth to adulthood

- Intellectual development relates to the increase in complexity of processes in the brain such as thought, knowledge and memory. The brain continues to develop as youth transition to adulthood and contributes to more developed thinking and reasoning skills.
- Older youth often become more focused on knowledge related to possible career paths.

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0021).

7.8 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

a. Briefly explain what is meant by physical development and outline two changes that may occur in relation to physical development as youth transition to adulthood. **(3 marks)**
b. Outline two changes that may occur in relation to each of the following areas of development as youth transition to adulthood: social, emotional, intellectual.

Question 2

Outline two common perceptions in the community in relation to:

a. adults **(2 marks)**
b. youth. **(2 marks)**

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7.8 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

ON Resources

Interactivities Crossword (int-6874)
Definitions (int-6875)

8 Healthy and respectful relationships

8.1 Overview

Key knowledge

- Key characteristics of healthy and respectful relationships and the impact on health and wellbeing, and development

Key skill

- Analyse the role of healthy and respectful relationships in the achievement of optimal health and wellbeing

VCE Health and Human Development Study Design © VCAA; reproduced by permission.

FIGURE 8.1 Shared interests and having fun together are important aspects of healthy and respectful relationships.

KEY TERMS

Abuse physical, psychological or sexual ill treatment of a person
Authoritarian parenting a style of parenting that employs strict rules, and punishment if rules are broken
Authoritative parenting a style of parenting that uses positive reinforcement of good behaviours and flexibility in interpretation of rules
Belonging the feeling whereby a person feels they have a place and a role in society
Communication the passing or sharing of information between people
Connectedness relates to the quality, number and frequency of interactions with others in a social setting
Emotional abuse the use of verbal abuse, threats, rejection, put downs and other behaviour in order to have control over another person
Empathy the ability to understand and share the feelings of another
Equality the state of being equal, whereby all people involved in a relationship are valued and able to contribute to and take from the relationship. They have the same expectations of the relationship.
Honesty the quality of being honest — choosing not to lie, deceive or cheat
Intimate relationship an interpersonal relationship that involves physical and/or emotional closeness
Loyalty the quality of being faithful to others. It also means that people stick by each other and provide support and consistency even through challenging times.
Non-verbal communication the use of gestures, body language, mannerisms and facial expressions to express yourself
Permissive parenting a style of parenting that is low in discipline and whereby parents see themselves more as friends than parents
Physical abuse any physical act that hurts or scares an individual
Relationship a connection between two or more people or groups of people
Respect the consideration of others' feelings, opinions, rights and needs
Safety the state of being free from danger, either physically or emotionally
Social networking the use of dedicated websites and applications to interact with other users, or to find people with similar interests
Trust the feeling of having confidence in another person and feeling emotionally and physically safe around them
Uninvolved parenting a parenting style whereby parents show little interest in their children's lives
Verbal communication the use of sounds and words to express yourself

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0022).

8.2 Healthy and respectful relationships

KEY CONCEPT Understanding what makes a healthy and respectful relationship

Humans have evolved to be social beings, and feeling a sense of **belonging** and **connectedness** is essential to our health and wellbeing. A **relationship** is the connection between two or more people, or groups of people, and their involvement with one another over a period of time. We have relationships with all sorts of people associated with different aspects of our lives. Relationships are complex and dynamic; they can be developed and maintained in a range of ways. Relationships can be healthy or unhealthy, and both have an impact on the dimensions of health and wellbeing and the areas of development.

8.2.1 Types of relationship

There are many types of relationship: some can be quite simple while others are more complex. For example, we may have quite simple relationships with many people based on shared interests or lifespan stage. Other relationships, such as with an intimate partner, can be more complex where the competing needs of both people need to be met over a long period of time. This can be difficult sometimes; for example, if one person in the relationship gets a job in another city, the other partner might need to compromise on their career, friendships or interests. Many relationships will change over time depending on people's life experiences, interests and needs. The relationships that we experience throughout our lifespan shape our beliefs and our sense of self-worth, and give a feeling of belonging and connection.

FIGURE 8.2 There are many different types of relationship.

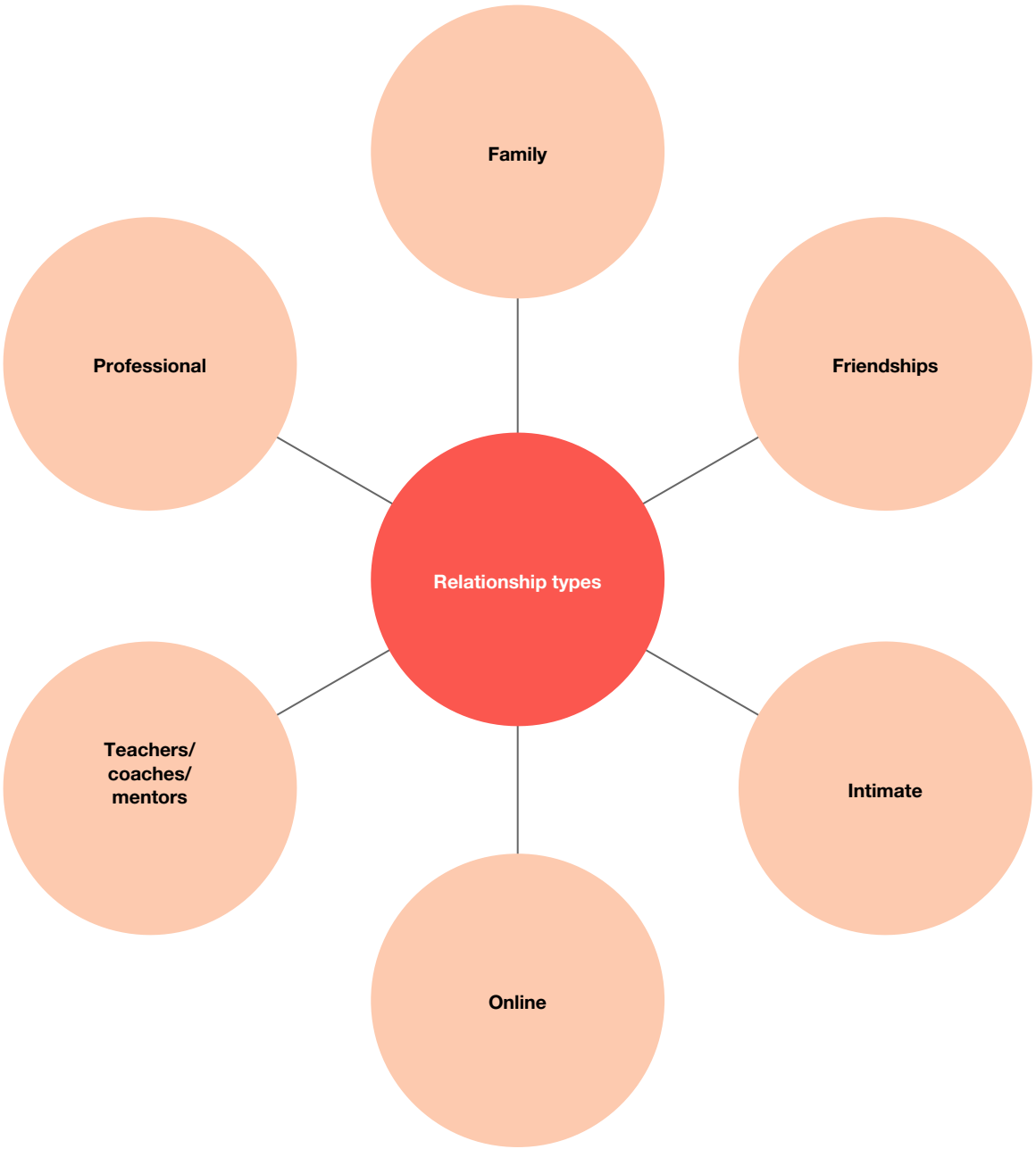


FIGURE 8.3 Relationships are formed with a wide range of people throughout the lifespan.

Family relationships

Families are diverse and unique. Regardless of their makeup, families usually provide love, security, care and support for their members. Family members are generally dependable and trustworthy, and support and guide us through milestones in life. Such times might include starting school, choosing which university to attend, moving out of home, and getting married or having children. In the past, typical families comprised parents and children. However, today there are a wide variety of different family structures. What is classified as their family is different for each individual depending on their circumstances. Families are better defined by what they do and the qualities they offer their members rather than how they are composed. Regardless of their makeup, all families should provide a supportive, caring and loving environment for their members.

FIGURE 8.4 Families come in many different forms.

In many family scenarios, the relationship between parents and children is a key factor in how well the family functions. There are four main recognised parenting styles, each of which has the potential to impact on health and wellbeing of parents and, especially, children. These parenting styles and their commonly accepted impacts on health and wellbeing and development of the children are discussed in table 8.1.

TABLE 8.1 The four styles of parenting

Type of parenting style	Impacts on health and wellbeing and development of the children
Authoritarian parents establish a set of rules and expect their children to follow them without question. This type of parenting relies on punishment and does not allow negotiation, and the children gain minimal skills in problem solving, impacting on intellectual development.	Children from these types of families often direct anger at their parents for the punishments they inflict, resulting in lower levels of emotional health and wellbeing and development. They also tend to have poor self-esteem, lowering their levels of mental health and wellbeing.
Authoritative parents have rules; however, they allow some exceptions based on their children's feelings and also explain the reasons for their rules or limits. These parents tend to use consequences rather than punishments, and often implement positive consequences or rewards to reinforce positive behaviours.	Children with these types of parents usually develop good decision-making skills as they have had many opportunities to develop intellectually and use their problem-solving skills. They usually become responsible adults with good social connections and have been able to develop negotiation skills, impacting positively on their social health and wellbeing. Their mental health and wellbeing is promoted through good levels of self-esteem.
Permissive parents don't really offer any discipline and may take on the role of friend more than parent. As such, although they may encourage their children to talk to them about their problems, they rarely discourage bad behaviour.	Children in these relationships often have issues with authority and rules, causing them difficulties at school and later in life. Their emotional health and wellbeing and development may suffer, as they may not learn appropriate management of their feelings. These children often report low self-esteem and sadness, which causes poor mental health and wellbeing. Social health and wellbeing, as well as social development, are compromised as there is an absence of a parental or adult role model due to the parents wanting more to be friends than adults.
Uninvolved parents show little interest in their children's lives, often do not meet their basic needs and offer little attention. These parents are often affected by mental health issues or substance abuse problems.	Children in these families tend to feel rejected and consequently have low levels of happiness and poor self-esteem. This reduces both emotional and mental health and wellbeing. These children may miss out on school, impacting negatively on their intellectual and social development. If children are injured or malnourished due to neglect, their physical health and wellbeing would decline.

CASE STUDY

From tiger to free-range parents

What's the best way to raise your child? It's a question that has provoked the publication of numerous books, and seen authors race to coin the next quirky name for a new style of parenting.

And it turns out there are many styles. To date, some of the best known include:

- **Tiger parents**, who are seen as pushing their children to succeed according to their parents' terms.
- **Helicopter parents**, who take over every aspect of the child's life.
- **Snowplough parents**, who remove obstacles to make life easier for their child.
- **Free-range parents**, who allow children a great deal of freedom.
- **Attachment or gentle parents**, who are relaxed but set limits in line with the child's needs and character.

Psychologists generally talk about parenting as fitting into typologies, based on the work of Diana Baumrind, a clinical and developmental psychologist known for her research on parenting styles.

There are generally understood to be four typologies:

- **Authoritarian parents** are the authority in their child's life. They set the rules and say 'jump' and their child responds 'how high?'. (Most similar to tiger parents.)
- **Permissive parents** are lax about their expectations, don't set standards and don't ask much of their children.
- **Neglectful parents** are uninterested in their children and unwilling to be an active part of their child's life.
- **Authoritative parents** are highly demanding while being highly responsive.

One of the major criticisms of these typologies is how culturally determined they are.

So what does research say about the pros and cons of each of these parenting styles?

Tiger parents

Type of parent: You expect first-time obedience, excellence in every endeavour and a child who never talks back.
Why parents choose this style: Tiger mothers are socialised to be this way by their cultural background. Thus, when they successfully demand an hour of piano practice it's part of their cultural background that the child complies. Western parents will have a hard time emulating the years of acculturation that leads to that moment.

Tiger parents may do so because they want their child to be successful. It may be these parents hold deep insecurities about the future. These parents are most likely authoritarian.
Pros: Raising a child in this way can lead to them being more productive, motivated and responsible.
Cons: Children can struggle to function in daily life or in new settings, which may lead to depression, anxiety and poor social skills. But again it's culturally dependent.

Helicopter parents

Type of parent: You step in to prevent your toddler's every struggle; you are over-involved in your child's education and frequently call their teacher; you can't stop watching over your teenager.
Why parents choose this style: These parents are likely to be scared for their child's future, perhaps like tiger parents. They may not trust their child's ability to navigate the world. By hovering around they may think children will be inoculated against failing.

These parents are probably a mix of authoritarian and permissive typologies, but there is scant research on the style.
Pros: Parents can be overprotective, which may save their child or adolescent from problems they would not foresee.
Cons: Children can lack emotional resilience and independence, which can affect them into adulthood. Being a child of a helicopter parent may lead to an inability to control behaviour.

There's even an AskReddit devoted to the worst aspects of growing up with helicopter parents. Stories include a contributor, 21 at the time, whose father followed them to jury duty, because he didn't trust they could do it properly. It's claimed dad had a tantrum when he was kicked out by the security guard.

Snowplough or bulldozer parents

Type of parent: You push all obstacles out of your child's way. Perhaps you've nagged the principal for a different teacher or bribed the coach to get your child a place on the team.
Why parents choose this style: Maybe you think your child is exceptional, or they're too great to fail, and that's why you've identified with this parenting style. In terms of typology, there are aspects of authoritarianism in the mix as they demand success (after all, they've bulldozed all obstacles from their children's path). However, they also score highly for permissiveness.

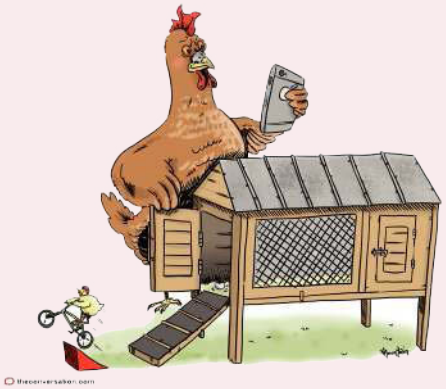
Free-range parents

Type of parent: You believe your role is to trust your child. You equip them with the skills to stay safe, and then back off.
Why parents choose this style: Psychologists and experts suggest this style is a backlash against anxiety-driven, risk-averse child rearing. It may be that we are worrying too much about everything from germs to other

people. While experts cite responses from parents (and lawmakers) who think the approach is neglectful, it is probably more aligned with the authoritative typology, where parents believe in teaching children to look after themselves.

Pros: Children learn to use their freedom, be autonomous and manage themselves. They may also be better able to handle mistakes, be more resilient and take responsibility for their actions. It's also said to lead to happier adults.

Cons: Problems with this style centre on the legal aspects of the approach. In Queensland, it is illegal to leave your child alone for an 'unreasonable' time while, in other states, parents must reasonably ensure their child is properly looked after. Queensland's law does not define 'unreasonable' time, but the parent will receive a misdemeanour (up to three years in jail) if they breach the code.



Attachment or gentle parents

Type of parent: You believe that a child's earliest attachment to caregivers informs all subsequent attachments a person experiences. The argument suggests strong emotional and safe physical attachments to at least one primary caregiver are essential to the child's personal development.

Why parents choose this style: Parents may choose this style because they want their children to be positive about themselves and their relationships with others as they mature. Attachment parenting is associated with the authoritative typology. These parents try to balance high expectations with empathy and this is associated with the best outcomes.

Pros: It provides a safe haven of love and respect in which to build the child's relationships and from which the child can safely experience the world.

Cons: It can be conflated with permissive parenting. It is also associated, somewhat contrarily, with over-parenting, as some suggest it is a name for mothers who can't let their child go. Some have accused this style of being anti-women or anti-feminist. These authors say the style conflates women's role with motherhood, undoing the work of feminism. However, others disagree.

Source: English, R 2016, 'From tiger to free-range parents — what research says about pros and cons of popular parenting styles', *The Conversation*, May 26, https://theconversation.com/from-tiger-to-free-range-parents-what-research-says-about-pros-and-cons-of-popular-parenting-styles-57986.

Case study review

1. Outline the key features of each of the parenting styles described in the article (tiger, helicopter etc.).
2. Make a table with the pros and cons of each of the five parenting styles.
3. Why do parents choose the following parenting styles:
   (a) helicopter
   (b) free-range?
4. Which of the four generally understood parenting types are reflected in:
   (a) tiger parenting
   (b) attachment parenting
   (c) snowplough or bulldozer parenting?
5. Select one of the parenting styles discussed in the article and explain how this style might impact on:
   (a) the health and wellbeing of children raised in this way
   (b) the development of children raised in this way.

Friendships

The friendships we establish are often based on common interests, such as sports and hobbies, or on life experiences. Like all relationships, friendships can change significantly. They can be close and intense or more relaxed and carefree. Friendships can be long lasting or short, but all can be meaningful and important to our health and wellbeing and development. Friends may drift apart for periods or forever. This may not necessarily be negative; it's just that their common interests may have changed.

Friends usually share good times and bad, and offer support in those times that are more difficult. Friends offer opportunities for understanding the world outside of the influence of our immediate family. Friends are critical during certain life stages, such as youth, when many young people strive to become independent from their families. Youth rely on their friends to help with decisions about dating, consuming alcohol and drugs, sports and school priorities. Friends can either be a good or bad influence, and their input in such decisions should be carefully evaluated.

FIGURE 8.5 Friends offer care and support and are important to health and wellbeing at all stages of the lifespan.

Online relationships

Since the development of **social networking** sites, many people of all ages have been able to develop and maintain relationships through online **communication**. There can be negative outcomes associated with online relationships; however, healthy and respectful relationships can also be developed through online forums and networking sites for people with shared interests. Large numbers of people use social networking sites such as Facebook to maintain contact with people they already know offline. Chatting and interacting online can be an effective way to stay in touch and keep up to date with friends easily and instantaneously.

FIGURE 8.6 Social networking sites such as Facebook help to develop and maintain relationships, especially over long distances.

Intimate relationships

Intimate relationships usually involve strong emotions. Love and infatuation are romantic feelings that are common in such relationships. Intimate relationships involve a desire to spend large amounts of time with, and a physical attraction to, another person; but they may not always be sexual in nature. Many intimate relationships do become sexual after a period of time. The characteristics of intimate relationships differ for everyone and depend on values, beliefs and expectations. For some people, intimacy is centred on physical closeness; for others it is more about a spiritual or emotional connection.

FIGURE 8.7 Intimate relationships involve a close connection with another person.

Relationships with teachers, coaches or other mentors

Healthy and respectful relationships can be formed with any people who play a significant role in our lives. Particularly for young people, teachers at school or sports coaches are important people in a young person's support network. Mentors of any type provide positive role models for people of all ages and can be very influential in the lives of youth.

FIGURE 8.8 Teachers and coaches are a major source of support and guidance for young people.

Professional relationships

Most adults spend large amounts of their day in some form of work environment. Their relationships with co-workers and managers can have a significant impact on health and wellbeing. In the workplace, relationships need to be open and supportive and are usually based on shared values and goals. Workplace relationships require good communication, trust and respect. Healthy and respectful workplace relationships generally allow workers to be more productive and result in better outcomes for everyone in the workplace.

8.2.2 Characteristics of healthy and respectful relationships

Healthy and respectful relationships have positive impacts on all aspects of health and wellbeing and development for people across the lifespan. Healthy and respectful relationships are important — they contribute to personal growth and self-confidence, promote self-expression and an awareness of others. They enable people to feel accepted, and give an important sense of belonging and connectedness. The key characteristics of healthy and respectful relationships are respect, trust, honesty, loyalty, empathy, safety and equality.

Respect is a pattern of behaviour that is found in healthy and respectful relationships whereby people have consideration for others' feelings, needs, thoughts and rights. Respect means that people in the relationship value each other's opinion and treat each other in a thoughtful way.

Trust in others means that you think they are reliable and dependable, you have confidence in them, and feel safe with them emotionally and physically. Trust is a key characteristic of healthy and respectful relationships.

Honesty in healthy and respectful relationships involves telling the truth and not keeping secrets. Being honest means choosing not to lie, cheat, steal or deceive in any way. Honesty and trust are characteristics that are closely linked, as being honest helps to build trust in any type of relationship.

Loyalty is a characteristic of healthy and respectful relationships whereby people stick by each other and provide support and consistency even through challenging times. Being loyal doesn't mean that the people involved in the relationship always agree and share exactly the same opinions, but they will always be there for each other and work to resolve their differences.

Empathy is the capacity to understand or feel what another person is experiencing by placing yourself in their position. Empathy helps to contribute to healthy and respectful relationships because it allows people to sense and understand other people's emotions and offer support when needed.

Safety is an essential characteristic of any healthy and respectful relationship. A relationship can't be considered healthy and respectful if the people involved do not feel physically and emotionally safe. Like honesty, safety and trust are intrinsically linked. Emotional safety means trusting other people with your feelings and knowing that they have your best interests in mind. Healthy and respectful relationships are those free from any sort of physical harm or abuse.

Equality means that the people involved in the relationship are valued and able to give and take from the relationship. They have the same expectations of the relationship. Relationships all involve different numbers of people — from intimate relationships of two people to larger family or friendship groups. Regardless of the number of people involved, each person needs to contribute to a healthy and respectful relationship. When a relationship is unequal, one person may try to hold power over the other.

FIGURE 8.9 The key characteristics of healthy and respectful relationships

Healthy and respectful relationships may involve disagreements or differences of opinion. In healthy and respectful relationships, when differences occur they are managed in ways that lead to understanding and resolution without damage to the relationship. Conflict within relationships can be uncomfortable; however, conflict that stems from a difference of opinion or ideas does not necessarily lead to an unhealthy relationship. It is normal for groups of people to hold different points of view. In a healthy and respectful relationship conflict is resolved, often by simply agreeing to disagree.

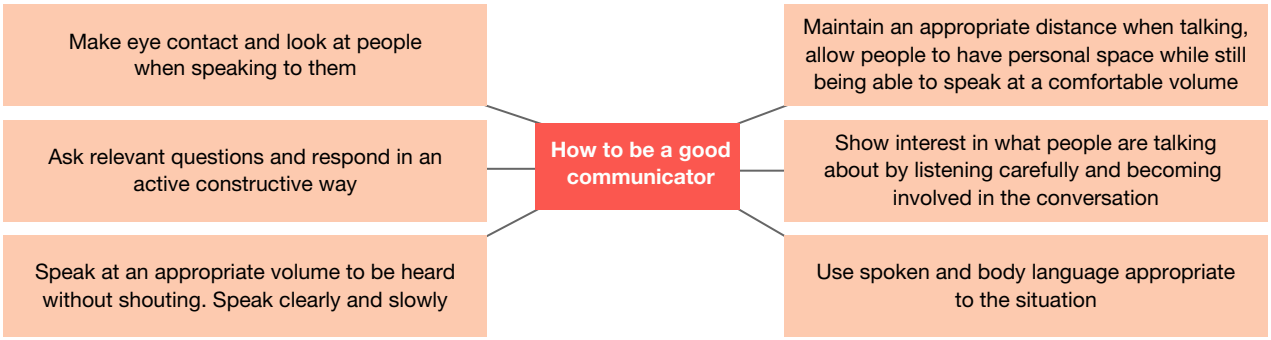
The importance of communication

For healthy and respectful relationships to be developed and maintained good communication is an essential characteristic. Clear communication in any relationship allows people to share their interests, aspirations, and concerns or worries. It helps them to discuss their expectations of the relationship and to support each other. Clear and supportive communication in healthy and respectful relationships can help people to make difficult decisions.

Communication involves verbal and non-verbal skills. **Verbal communication** is clearly conveying a message through talking and careful listening, while **non-verbal communication** is the use of body language, facial expressions and tone of voice. Good communication is an important feature of healthy relationships because it shows the people involved have respect for each other. Verbal communication allows facts, thoughts, feelings and opinions to be conveyed directly. Clear verbal communication is essential to building healthy and respectful relationships in order to avoid misunderstandings, hurt, anger or confusion. Non-verbal aspects of communication are easily lost when electronic communication is used. Facial expressions, body posture and tone of voice are not available as cues to understand the true context of a message. Misunderstandings and hurt feelings are common consequences of this type of communication and do not foster healthy and respectful relationships.

Developing good communication skills is a process that continues throughout a person's lifespan. Some characteristics of good communicators are outlined in figure 8.10.

FIGURE 8.10 Characteristics of good communicators



8.2.3 Unhealthy relationships

To determine how healthy and respectful a relationship is, you must first be able to recognise the signs of an unhealthy or negative relationship. Most people encounter unhealthy relationships at various times in their lives. These relationships are not always abusive in nature; however, they are unsatisfying to one or more of the people involved. An unhealthy relationship is usually one in which a person is prevented from challenging themselves, and is unable to be their best self. Other characteristics might include:

FIGURE 8.11 Shouting, anger and fear are common in unhealthy relationships.

- feeling uncomfortable around a person or group of people
- being put down by others
- not feeling appreciated, valued or cared for
- feeling that the relationship is unequal and one person is putting in greater effort than others to maintain the relationship
- low self-esteem and a lack of confidence around others
- being embarrassed, bullied or harassed
- feeling scared, vulnerable, constantly disappointed or angry.

Abuse in relationships

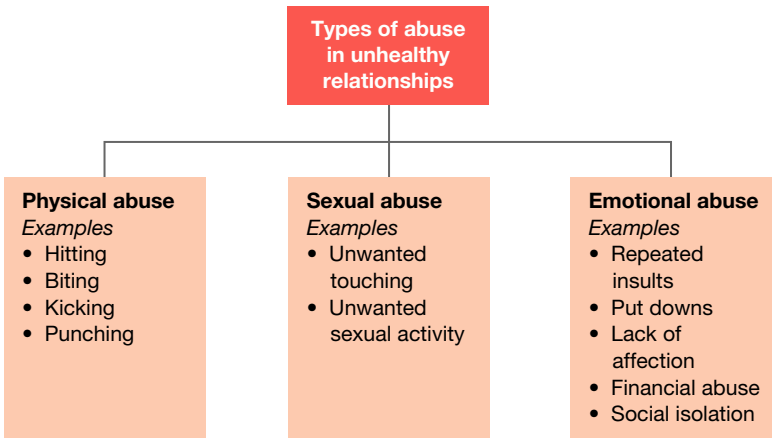
An extremely unhealthy relationship may become an abusive relationship. **Abuse** can be physical, emotional or sexual and endangers the person being abused.

Examples of each type of abuse are outlined in figure 8.13.

Unhealthy and abusive relationships can have extremely detrimental consequences for health and wellbeing and development in all lifespan stages. Being **physically abused** causes injuries and sometimes death; while sexual and **emotional abuse** can lead to poor self-esteem, depression, anxiety, withdrawal from social interactions and self-harm. All dimensions of health and wellbeing are negatively affected by any form of abuse in a relationship. Abusive relationships within families are known as family or domestic violence, and includes not only behaviour resulting in physical injury, but also direct or indirect threats, sexual assault, emotional and psychological torment, financial control, damage to property, social isolation and any behaviour that leads another family member to live in fear.

FIGURE 8.12 Physical violence and fear are common features of abusive relationships.

FIGURE 8.13 Types of abuse in unhealthy relationships



8.2 Activities

1. Complete the table below to identify and describe the characteristics of healthy and respectful relationships.

Characteristic	Description	Photo or picture that illustrates the characteristic

2. In a group of two or three, play a game of charades using only actions to describe an emotion or feeling.
   (a) How difficult was it to determine how the person was feeling only using non-verbal communication?
   (b) Apart from the feeling or emotion, was there any other information conveyed in the actions? Did you learn why the person was feeling the way they were?

8.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) Name the six different types of relationship.
   (b) Give a brief description of each type of relationship.
2. (a) Name the four parenting styles discussed.
   (b) Briefly outline the characteristics of each parenting style.
3. Explain the difference between verbal and non-verbal communication.
4. Provide an example where a misunderstanding in a relationship has occurred as a result of poor verbal and non-verbal communication.
5. Explain the characteristics of good communicators.
6. Explain why good communication skills are beneficial to healthy and respectful relationships.
7. (a) How do you know if a relationship is unhealthy or abusive?
   (b) List the three types of abuse in relationships with two examples for each one.

8.2 Exercise 2 APPLY your knowledge

1. (a) In the tables provided, identify the three most important characteristics of relationships with friends, an intimate partner, a teacher or coach.
   (b) Justify why you consider these characteristics the most important in each of the relationships.

Friend(s)

Characteristic	Justification

Intimate partner

Characteristic	Justification

Teacher or coach

Characteristic	Justification

2. Imagine that you and four others have been stranded in a boat in the middle of the ocean.
   (a) Identify and describe three ways the relationship between all five people might be tested.
   (b) Suggest a list of rules to maintain respectful relationships while stranded in this challenging environment.
   (c) Which characteristics of a healthy and respectful relationship do you think would be most needed in this scenario? Why?
3. (a) Identify the characteristics of an unhealthy relationship.
   (b) Discuss reasons why a person may stay in an unhealthy relationship, even when they know that it is not good for them.
   (c) Predict the ways in which an adolescent who has just begun dating may be impacted by their parents' unhealthy relationship.
4. Often messages communicated electronically are misinterpreted. Suggest reasons why misunderstandings often happen with this type of communication.

studyON

8.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

8.3 Healthy and respectful relationships and health and wellbeing

KEY CONCEPT Understanding the impact of healthy and respectful relationships on health and wellbeing

Healthy and respectful relationships in which there is good communication and all people feel supported, connected and cared for have a positive impact on all dimensions of health and wellbeing.

Physical health and wellbeing is enhanced as people in healthy and respectful relationships do not suffer physical injuries from abuse or violence. Healthy and respectful relationships also promote physical health and wellbeing in other ways. For example, people may play sport as part of a team or be encouraged to do physical activity with friends and family members, which improves cardiovascular health, helps to maintain a healthy body weight and enhances the functioning of the immune system.

FIGURE 8.14 Friends running together encourage each other to achieve optimal physical health and wellbeing.

Healthy and respectful relationships are at the core of good social health and wellbeing. Having healthy and respectful relationships contributes to the achievement of optimal social health and wellbeing, as people interact with others in a positive way and offer support to each other. The ability to manage and adapt to different social situations is helped when people are exposed to healthy and respectful relationships. For example, teenagers who have a good relationship with their parents often find it easier to interact appropriately with other adults. Those who don't communicate well with their parents may not have the necessary social skills and find it awkward to interact with adults who are less familiar to them such as an employer, teacher or doctor.

Emotional health and wellbeing is also closely associated with healthy and respectful relationships. When people are in positive, caring relationships they are easily able to recognise and manage their emotions. As discussed earlier, healthy and respectful relationships do sometimes involve conflict, which can lead to emotions such as sadness, disappointment, frustration and anger. However, in healthy and respectful relationships a positive outcome can be achieved with good communication. Through good communication within a caring and supportive relationship, optimal emotional health and wellbeing can be promoted.

FIGURE 8.15 Achieving goals and self-confidence are features of mental health and wellbeing that are promoted through healthy relationships.

Stress, anxiety and low self-esteem are characteristics of people involved in unhealthy, negative relationships in which mental health and wellbeing can be severely compromised. Healthy and respectful relationships can improve and promote optimal mental health and wellbeing because stress levels remain low. When anxiety is present, it can be reduced by sharing thoughts and being cared for by others. Being supported to achieve goals and accept challenges builds good self-esteem and self-confidence. In healthy and respectful relationships, even when people fail to fully achieve their goals, having love and support from others means they can try again and resilience is built along the way.

Being part of a healthy and respectful relationship means that big life decisions can be made together, which means the anxiety that usually accompanies them can be reduced. For example, a couple might be deciding when to start a family. In a healthy and respectful relationship with good communication, both parties will offer their thoughts and feelings to make the decision together. In an unhealthy relationship, both partners might feel anxious and stressed about the decision and withdraw from each other.

FIGURE 8.16 Volunteers at shelters for homeless people satisfy their spiritual health and wellbeing needs through helping others.

A sense of belonging is at the centre of good spiritual health and wellbeing. A strong feeling of connectedness is fostered through healthy and respectful relationships. People feel connected to each other through shared interests, values, beliefs and opinions, which are the foundations of positive relationships. Healthy and respectful relationships are inclusive of others and make people feel comfortable, promoting optimal spiritual health and wellbeing. Meaning and purpose in life are essential aspects of spiritual health and wellbeing, which can be achieved through having many different relationships. For example, a football coach can satisfy his or her spiritual needs by building a strong relationship with a team of young sports players. Helping young people to develop their skills and watching them grow as players can be very fulfilling for a coach. People who become involved in volunteering can achieve spiritual health and wellbeing through the relationships they make through giving their time and effort.

EXAM TIP

When discussing the impact of healthy and respectful relationships on the achievement of optimal health and wellbeing, the focus should be positive. Answers should discuss positive aspects of healthy and respectful relationships and how these help to achieve good health and wellbeing in any of the dimensions of health and wellbeing.

CASE STUDY

Are you part of a social group? Making sure you are will improve your health

It's well established that people who feel socially isolated, or as though they don't belong, have worse mental health than those who feel socially connected. But in a study recently published in the *Australian & New Zealand Journal of Psychiatry*, we've shown that increasing your level of social connection can protect your future mental health.

Previous research has found 'social connectedness' is at least as good for your health as quitting smoking or exercise. It aids recovery from physical and mental illness, and provides resilience for stressful life events and transitions. So what is social connectedness, and how can we get more of it?

What is social connectedness?

Social connectedness isn't about being popular, or having a lot of friends. Although it can come from the personal relationships you have with other individuals, research finds it's belonging to groups that's most important for your health.

When we feel we truly belong to a group — like being part of 'the Marsh family' or 'us Stanley Street residents' — we benefit from both the bonds we share with other group members, and how belonging to that group tells us something about who we are.

Social connectedness is crucial to physical and mental health. A 2010 review of 148 studies found that people who felt less socially connected had more risk of early death than those who smoked, drank or were obese.

Therapeutic programs that focus on building social connectedness are effective in treating depression, anxiety and schizophrenia. But improving someone's social connectedness can also support and protect the health of people in their everyday lives.

For example, people who make new social group connections are less likely to develop depression. And people who maintain and build their social group connections have greater wellbeing during the transition to retirement or university.

FIGURE 8.17 Belonging to a group tells us something about who we are.

Social connectedness has also been positively associated with mental health in large, population-based studies of Australian, British and American adults.

What our study means

Our latest study investigated the link between social connectedness and mental health in 25 000 New Zealand adults over four years. We asked people about their personal feelings of belonging with others in their community and found when a person's level of social connection goes down, they experience worse mental health a year later.

The relationship also went the other way: people with good mental health were more socially connected a year later. But, importantly, the influence of social connectedness on mental health over time was about three times stronger than the other way around.

Despite all this knowledge, there's been little change in healthcare, public policy or individual behaviour. Government health departments specifically recommend healthy eating, exercise and quitting smoking to improve health, yet tend to omit any mention of social connection. One reason might be that it's unclear how social connection works to promote health, compared to other factors like smoking.

The best way to understand this measure is to see it as a psychological resource. Just like money in the bank means you can absorb financial shocks, a broad network of social group memberships means you can better navigate the physical and mental stresses of life.

Social connectedness can act as a resource by providing a sense of shared meaning and purpose. Weeding a community garden each Saturday is about more than earning your share of zucchinis, for instance. It's also about recognising the garden cannot flourish without the efforts of many people, and taking part in something larger than yourself.

Having an important role to play in the garden's success means that the group's purpose becomes your purpose. Another way being socially connected is like a resource is it provides access to material and emotional support which helps during stressful events and difficult life transitions. If one member of a church group is in grief, others may step in to provide food, or help the grieving member speak about their feelings.

Such expression of other group members' commitment reinforces the feelings of belonging and security that the grieving person finds in their church group.

How to improve your social connectedness

How can we harness the power of social connection to improve our health and the health of our communities? Remember that social connectedness is more than mere contact with other people, or even merely being a

member of social groups. It is about feeling that you belong to that group; that you trust others and they trust you in a shared purpose, and that group members can rely on each other.

At a personal level, you could take stock of your existing relationships and group memberships, and make a change if these relationships are not trusting or mutually supportive, or do not have a shared meaning and purpose.

At a community level, you could join or lead initiatives that will build trust and psychological bonds between community members. Local fetes and festivals are popular, but one-off events are not by themselves sufficient to promote social connectedness. But these events could be a starting point for community members to discover and join ongoing, supportive social groups with their own shared purposes.

This might include finding a shared purpose for existing social groups, such as the 'men's sheds' movement, which sets up places for men to come together and work on meaningful projects in the company of other men. Or it could include joining new groups like the popular parkrun held weekly in public parks across Australia, which brings together the dual benefits of social connection and exercise.

Source: Saeri, A, Sibley, C, Barlow, F, Stronge, S & Cruwyz, T, 2017, 'Are you part of a social group? Making sure you are will improve your health', *The Conversation*, 6 September, https://theconversation.com/are-you-part-of-a-social-group-making-sure-you-are-will-improve-your-health-81996.

Case study review

1. According to the study, what factors is social connection as good as in terms of improving health and wellbeing?
2. How does social connection promote some of the dimensions of health, other than the social dimension?
3. (a) What is social connectedness?
   (b) Give examples of social connections.
4. Using the example of the community garden from the article, explain how social connectedness can improve spiritual health and wellbeing.
5. Give examples of how people can improve social connectedness in their community.

Resources

Digital document For the Birds worksheet (doc-32169)
Stop it at the Start worksheet (doc-31678)

Weblinks For the Birds
Stop it at the Start

8.3 Activities

1. Access the **For the Birds** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Access the **Stop it at the Start** weblink and worksheet in the Resources tab, then complete the worksheet on the Australian Government initiative to stop violence against women.
3. Complete a concept map with an example of how healthy and respectful relationships can have a positive impact on each of the dimensions of health and wellbeing.

8.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain the ways in which relationships could have:
   (a) a positive impact on the physical and mental dimensions of health and wellbeing
   (b) a negative impact on the social and spiritual dimensions of health and wellbeing.
2. (a) Why are relationships with frequent conflict damaging to health and wellbeing?
   (b) Conflict can be a part of a healthy and respectful relationship. Discuss the impact of conflict on the health and wellbeing of people in a healthy and respectful relationship.
3. A sense of belonging is a key feature of several dimensions of health and wellbeing. Explain how this is promoted through healthy and respectful relationships.

4. Explain how the different forms of abuse commonly seen in unhealthy relationships can impact on spiritual health and wellbeing.

8.3 Exercise 2 APPLY your knowledge

1. Family violence is a growing concern affecting the health and wellbeing of people of all ages.
   Predict the possible impacts of family violence on the dimensions of health and wellbeing for children in families affected by this type of unhealthy relationship.
2. As part of the Victorian Government's plan to tackle family violence, there is a focus on educating young boys and men on all aspects of respect for women and girls.
   Explain how focusing on young males could impact the health and wellbeing of females later in their lives.

studyON

8.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

8.4 Healthy and respectful relationships and development

KEY CONCEPT Understanding the impact of healthy and respectful relationships on development

8.4.1 Physical development and healthy and respectful relationships

Development of gross and fine motor skills are the areas of physical development that will benefit most from healthy and respectful relationships. Positive relationships with friends and sports coaches who encourage participation in recreational activities promote physical development. For example, a team of netballers who have a friendly relationship with their teammates and their coach will be motivated to attend training and weekly games, which improves aspects of physical development such as hand–eye coordination, running, jumping, throwing and catching. If the relationship with the coach is unhealthy because the coach has unrealistic expectations, or shouts or uses put-downs at training, players won't want to go to training and their motor skills will not continue to develop.

FIGURE 8.18 Motor skills such as throwing and catching are enhanced by positive relationships with coaches and teammates.

8.4.2 Social development and healthy and respectful relationships

Social development is fostered by healthy and respectful relationships and, like social health and wellbeing, social development is intrinsically linked with healthy and respectful relationships. Developing communication skills, conflict resolution skills and an understanding of values and beliefs are aspects of social development that

are enhanced through healthy and respectful relationships. In relationships where there is respect, honesty and loyalty, people can practise these skills without fear of being embarrassed or put down by others. Being yourself and feeling comfortable with who you are is key to the development of self-identity, and it is only possible when the people around you support and do not judge you. This only occurs in healthy and respectful relationships, not in relationships that are unhealthy.

8.4.3 Emotional development and healthy and respectful relationships

Healthy and respectful relationships allow for and promote the emotional development of people of all ages. When relationships are supportive and people can be honest with each other, emotions can be expressed without fear of rejection or ridicule. People who are in relationships where there are low levels of stress and little conflict are able to express their emotions and are able recognise and support others' emotions. In an unhealthy relationship, an emotion such as jealousy, for example, might be expressed as anger or frustration. In a healthy and respectful relationship, a jealous person would be more able to talk about their jealousy with their friend or partner, and come to a satisfactory resolution. Healthy and respectful family relationships foster emotional development. For example, if a young child is supported to understand why they are frustrated and throwing a tantrum, rather than simply told not to do it or ignored, they are better able to learn about their emotions and find ways to express them more effectively as they grow older.

8.4.4 Intellectual development and healthy and respectful relationships

Intellectual development involves mental processes such as building knowledge and problem-solving abilities, imaginative skills and language skills. All of these characteristics are enhanced through healthy and respectful relationships with supportive family and friends, and particularly with teachers in a formal school setting. For example, if a child is part of a friendship group that supports learning and intellectual development, the child will not hold back at school for fear of embarrassment or bullying by other students. This friendship group might work together and encourage each other with their homework, increasing their problem-solving skills and learning. Similarly, a teacher who develops good relationships with students through a safe, caring learning environment will encourage students to take risks with their learning to advance their creativity and problem-solving skills. In a classroom where the teacher shouts and embarrasses students, or where students put each other down or are bullied, intellectual development will not proceed as students become bored and lose interest and motivation, or they are scared to offer their thoughts in case they are wrong.

FIGURE 8.19 Students in a supportive learning environment will offer their thoughts without feeling embarrassed or worried that they might be incorrect.

8.4 Activities

1. (a) Find the lyrics to a song that focuses on relationships.
   (b) Print out the lyrics. Using examples from the song, justify whether you think the relationship is healthy or unhealthy.
   (c) In small groups, discuss what the song is saying about relationships and evaluate the possible impacts of the relationship on each of the areas of development.

8.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain why relationships can have:
   (a) a positive and
   (b) a negative
   impact on the development of an individual.
2. Complete the following table to explain, using an example for each, how healthy and respectful relationships promote physical, social, emotional and intellectual development. One dimension has been completed as an example.

Dimension of individual development	Example	Impact on dimensions of development
Physical	Attending football training with a supportive coach who builds good relationships with all players regardless of their skill level	Increased development of motor skills and hand–eye coordination
Social		
Emotional		
Intellectual		

3. Youth is a time of increased conflict between children and parents. Explain how in a healthy and respectful parent–child relationship, this conflict helps to promote:
   (a) social development
   (b) emotional development.
4. Explain using examples how healthy and respectful relationships promote the interrelationship of health and wellbeing and development.

8.4 Exercise 2 APPLY your knowledge

1. Read the following case study then answer the following questions.
   Louise and her girlfriend Hayley have been dating for a couple of months. Louise decided she wanted to move their relationship up to something more physical and intimate than just holding hands and kissing. Recently Louise's parents went away for the weekend and she asked Hayley to stay over. Hayley started to feel really uncomfortable when they started moving on from kissing to more sexual activities. She felt sort of sick and nervous. Louise noticed that Hayley didn't seem very comfortable as she wasn't really participating to the same degree as Louise. She asked Hayley if there was anything wrong. It was kind of hard for Hayley to explain, so she didn't say anything for a few seconds, then she just said she didn't feel well. Louise seemed a little annoyed, but she said that that was cool, and got her a glass of water. Hayley eventually told Louise that she didn't feel good because she wasn't ready to go that far yet. Louise listened and together they decided that they would wait until they both felt comfortable. Then Hayley and Louise watched a movie and went to sleep.

(a) Do you think this is a healthy and respectful relationship? Justify your answer.
(b) Using examples from the case study, suggest ways that this relationship might promote Louise and Hayley's emotional development.
(c) Using examples from the case study, suggest ways that this relationship might promote Louise's social development.
(d) Using examples from the case study, suggest ways that this relationship might promote Hayley's intellectual development.

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8.4 Exercise 3 studyON: Practice exam questions online only

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8.5 Topic 8 review

8.5.1 Key skills

KEY SKILL Analyse the role of healthy and respectful relationships in the achievement of optimal health and wellbeing

An understanding of what makes a healthy and respectful relationship and what is not healthy and respectful is the starting point for this key skill. It is necessary to be familiar with the characteristics of a healthy and respectful relationship before being able to analyse the impact these types of relationships may have on a person's ability to achieve optimal health and wellbeing. The main characteristics of healthy and respectful relationships are trust, honesty, respect, safety, empathy and loyalty.

To analyse means to examine something methodically and in detail. In this key skill, it is necessary to take the details of each healthy and respectful relationship characteristic and determine how it affects each dimension of health and wellbeing (physical, social, emotional, mental and spiritual).

EXAM TIP

Because this key skill is about the achievement of optimal health and wellbeing, discussions should focus on the positive impact on health and wellbeing and what happens in healthy and respectful relationships. Answers should not discuss the impact of unhealthy or abusive relationships and their negative outcomes.

For example, a question may ask for a discussion of a particular parenting style and the impact of this relationship on achieving optimal health and wellbeing.

The authoritative parenting style is characterised by the key features of a healthy and respectful relationship as it displays empathy, trust, respect, safety and honesty[1] when placing limits on behaviours. Although the parents set limits and boundaries, they respect the feelings and opinions of the children and explain to them the reasons behind their decisions. This type of relationship

1 Characteristics of healthy and respectful relationships are listed.

helps build an environment where optimal health and wellbeing is promoted. Physical health and wellbeing is achieved as parents make decisions that keep their children safe from physical harm, such as injuries.[2] Emotional health and wellbeing is fostered in this type of relationship because there is good communication and, although there are boundaries and limits which may cause frustration or disappointment in the children, they are free to express their feelings, and the parents manage these feelings by explaining why those limits are in place.[3] Mental health and wellbeing is promoted in this type of caring relationship as children's stress and anxiety levels are kept low through good communication and resolution of conflicts. Opinions are listened to and decisions are explained so that there is mutual understanding and children are able to be supported while they learn resilience skills.[4]

2 The impact of the relationship on an aspect of physical health and wellbeing is explained.

3 The ability to achieve good emotional health and wellbeing is explained.

4 The impact of the relationship on mental health and wellbeing is discussed.

It is not necessary to cover every dimension of health and wellbeing in this type of discussion.

Practise the key skill

1. List the characteristics of a healthy and respectful relationship.
2. Explain what is meant by each of the following terms in relation to healthy and respectful relationships:
   a. empathy
   b. trust
   c. honesty.
3. a. What are the characteristics of good communication?
   b. Explain why non-verbal communication is necessary for healthy and respectful relationships.
4. Explain how healthy and respectful relationships promote optimal health and wellbeing.
5. Explain how healthy and respectful relationships promote:
   a. a child's physical development
   b. a teenager's mental health and wellbeing.
6. Predict the possible impacts of each of the four parenting styles on the dimensions of health and wellbeing and areas of development. A table such as the one below could be used here. (Discuss as many of the dimensions of health and wellbeing and areas of development as possible.)

Parenting style	Impact on health and wellbeing	Impact on development

8.5.2 Topic summary

Healthy and respectful relationships

- Healthy and respectful relationships are essential to achieving optimal health and wellbeing.
- A relationship is a connection between two or more people.
- Types of relationship include family, friendships, intimate relationships, online relationships, relationships with teachers/coaches or others in mentoring roles, and professional relationships in workplaces; there may be many other examples of relationships.
- Some relationships are complex; others are simple and relatively straightforward.
- Meaningful relationships can be short or long lasting but both involve a connection.
- Families generally offer support and care in a loving environment, regardless of the makeup of the family.
- Friends offer opportunities and understanding outside the family context.
- Friendships are usually based on shared interests or experiences.
- Friends usually share good times and challenging times.
- Friendships can be critical to decision making, especially during youth.
- Online relationships offer ways to develop and maintain positive relationships, especially over long distances.
- Intimate relationships involve strong emotions and physical closeness with another person, but they are not always sexual relationships.
- Expectations of intimate relationships are different for each person.
- Relationships with teachers, coaches or other mentors can be very important, particularly for young people.
- Healthy and respectful relationships are characterised by respect, loyalty, empathy, equality, safety, trust and honesty.
- Good communication is the key to healthy and respectful relationships.
- Communication can be verbal or non-verbal.

Healthy and respectful relationships and health and wellbeing

- Unhealthy relationships prevent the achievement of optimal health and wellbeing.
- Unhealthy relationships are characterised by poor communication, being embarrassed, bullied, put down or harassed by others, and unequal power or control between people.
- Unhealthy relationships can cause fear, disappointment and sadness and result in low self-esteem.
- Abusive relationships can include physical, emotional or sexual abuse, and can lead to poor physical health and wellbeing as a result of injuries through violence as well as poor mental and emotional health and wellbeing.
- Healthy and respectful relationships promote all dimensions of health and wellbeing.
- Physical health and wellbeing is promoted through a sporting team or by exercising with friends and family.
- Mental health and wellbeing is promoted as healthy and respectful relationships reduce levels of stress and anxiety.
- Emotional health and wellbeing is promoted as people are easily able to recognise, understand and manage emotions when they are cared for and supported.
- Healthy and respectful relationships are central to good social health and wellbeing.
- Spiritual health and wellbeing needs are satisfied through relationships with others as they give meaning and purpose to people's lives.

Healthy and respectful relationships and development

- Healthy and respectful relationships have a positive impact on all areas of development.
- Physical development is promoted through the motivation to develop motor skills with a team or relationship with the coach.

- Social development is promoted through positive interactions with people in many different types of relationship.
- Emotional development is promoted through being able to express and manage emotions appropriately in relationships with others.
- Intellectual development is promoted through positive interactions with teachers and supportive friends who value learning,

Resources

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8.5 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

a. Identify two characteristics of healthy and respectful relationships. **(2 marks)**
b. Outline how each of the characteristics chosen in question 1a promote health and wellbeing. **(4 marks)**

Question 2

Identify one type of relationship and discuss how it could contribute to a person achieving optimal health and wellbeing. **(2 marks)**

Question 3

Read the following case study then answer the questions.

> Sienna and Gemma are in year 7 at school. They have been friends since they started together in prep and like many of the same things. At school, their favourite class is Science. Recently, Gemma has started playing more with Ruby at lunchtime and excluding Sienna completely. Sienna felt sad and angry at being left out, but some other girls have welcomed her into their group at lunchtime. Gemma has now become jealous that Sienna has new friends and she sends nasty texts to her every day on the bus home from school. Gemma and Ruby spread rumours about Sienna and her new group of friends. In class, Gemma intentionally disrupts Sienna's work by taking her pens and workbooks.

a. Is the relationship between Sienna and Gemma healthy and respectful? Justify your answer using examples from the case study. **(2 marks)**
b. How could this relationship have an impact on Sienna's health and wellbeing? **(2 marks)**
c. How could the relationship with the new group of friends or a supportive and caring teacher promote Sienna's optimal health and wellbeing? **(2 marks)**
d. Analyse the impact of the relationship between Gemma and Sienna on Sienna's intellectual development. **(1 mark)**
e. Analyse the impact of the relationship with the new group of friends on Sienna's emotional development. **(1 mark)**

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8.5 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

Resources

Interactivities Crossword (int-6858)
Definitions (int-6859)

9 Parenting and prenatal and early childhood development

9.1 Overview

Key knowledge

- Considerations in becoming a parent such as responsibilities, and the availability of social and emotional support and resources
- The role of parents, carers and/or the family environment in determining the optimal development of children through understanding of:
  - fertilisation and the stages of prenatal development
  - risk and protective factors related to prenatal development, such as maternal diet and the effects of smoking and alcohol during pregnancy
  - physical, social, emotional and intellectual development in infancy and early childhood
  - the impact of early life experiences on future health and development
- The intergenerational nature of health and wellbeing

Key skills

- Analyse factors to be considered and resources required for the transition to parenthood
- Explain factors that influence development during the prenatal and early childhood stages of the lifespan
- Explain health and wellbeing as an intergenerational concept

FIGURE 9.1 The prenatal stage is the first stage of the lifespan and early life experiences can have an intergenerational impact on health and wellbeing and development.

KEY TERMS

Amniotic fluid the fluid surrounding the embryo/foetus that protects the unborn baby
Antenatal relates to the medical care given to pregnant women before their babies are born
Blastocyst thin-walled hollow structure consisting of a cluster of cells making up an outer cell mass that becomes the placenta, and an inner cell mass which becomes the embryo
Cell differentiation when cells take on specialised roles
Cephalocaudal development development that occurs from the head downwards
Chromosomes strands of DNA that contain genetic information
Emotional needs the need to feel loved and wanted by caregivers
Emotional support the feeling that others understand your needs and will try to help you
Endometrium the nutrient-rich lining of the uterine wall in which the ovum (blastocyst) embeds or that is expelled every month if pregnancy does not occur
Fertilisation the fusing of a sperm and an egg cell. Marks the beginning of pregnancy. Also known as conception.
Fertility is the natural capability to produce offspring
Foetal alcohol spectrum disorder describes a range of features seen in babies who have been exposed to alcohol while in the womb
Genes the blueprint of the body that controls growth, development and how the body functions
Implantation when a cluster of cells that will become an embryo attaches itself to the endometrium
Intellectual needs knowledge, understanding, curiosity and search for meaning
Intergenerational the health and wellbeing of one generation affects the health and wellbeing of the next
Low birthweight weighing less than 2500 grams at birth
Morula a solid ball of cells created from a zygote
Neural tube defect failure of the neural tube (which develops into the central nervous system) to close during the development of the embryo, resulting in conditions such as spina bifida
Object permanence an awareness that objects continue to exist even when they are out of sight
Organogenesis the formation of organs
Parenting the process of promoting the physical, emotional, social, and intellectual development and health and wellbeing of a child from birth to adulthood
Physical needs the need for food, air, water, activity, rest and physical safety
Placenta an organ that allows the transfer of nutrients, gases and wastes between mother and foetus
Protective factor something that enhances the likelihood of a positive health and wellbeing outcome and lessens the likelihood of negative health and wellbeing outcomes from exposure to risk
Proximodistal development development that occurs from the core or centre of the body outwards towards the extremities
Regenerate regrow to replace damaged, old or dead cells or tissue
Responsibility being answerable or accountable for something within one's control
Risk factor something that increases the likelihood of developing disease or injury
Sanctions rewards or punishments imposed to encourage appropriate behaviour
Social needs the need for belonging, self-worth and the respect of others
Social support informal, emotional or practical assistance from relatives, friends, neighbours or the community
Socialisation the process by which an individual learns to live according to the expectations of a group or society
Teratogen anything in the environment of the embryo that can cause defects in development. Examples include tobacco smoke, alcohol, prescription medication and some diseases, such as rubella.

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9.2 Considerations when becoming a parent

KEY CONCEPT Parents play a crucial role in promoting the health and wellbeing and development of their children. Parenting actually begins before birth in the prenatal stage, and affects the course of health and wellbeing of children through to adult life.

9.2.1 The responsibilities of parenting

Parenting refers broadly to the activity of raising a child. Not just the biological relationship, it covers all people who carry out parenting responsibilities, including biological parents, step-parents, adoptive parents, foster parents and other carers. Parenting includes a set of behaviours that characterise how parents interact daily to meet the needs of their child, and the beliefs and attitudes about parenting that underpin these behaviours.

FIGURE 9.2 In the early years of life, humans are wholly dependent on others to provide for their needs and uphold their rights.

The UN Convention on the Rights of the Child lists the rights or things every child should have or be able to do. These include the following:

- Children have the right to live a full life.
- Children have the right to good quality healthcare, clean water, nutritious food and a clean environment so that they will stay healthy.
- Children have the right to a standard of living that is good enough to meet their physical and mental needs.
- Children have the right to relax, play and join in a wide range of leisure activities.
- Children have the right to be protected from being hurt and mistreated, in body and mind.

These rights dictate that children have the right to grow up in an environment in which they are enabled to reach their full potential in life.

It is parents' **responsibility**, with the support of other caregivers and family members, communities and governments, to ensure that the rights that relate to a child's needs and for an optimal environment for development are fulfilled.

Over the past 50 years, changing social factors have led to changes and challenges in how parents carry out their job. Some of these include more flexible work hours, more women in the full-time workforce and people working from home, different income and education levels, higher divorce and remarriage rates, and single parenthood by choice. The responsibilities for the parenting of a child can therefore be carried out in different ways and under different circumstances.

Parents must understand and respond appropriately to the needs and rights of a child from birth, which requires skills and knowledge. Parenting knowledge can be limited by lack of exposure to parenting experiences. Smaller family units mean less opportunity to watch parents interacting with siblings or less contact with extended family networks, which can all reduce confidence in relation to parenting skills. Information may now be gained from parenting courses, online sources, social networking sites and the media rather than from family experiences alone.

Adults embarking on parenthood need to consider the responsibility of the role:

- Can a child's needs be met?
- Can an environment that will promote optimal development be provided?
- Is the impact on lifestyle acceptable?

Can a child's needs be met?

A child's needs are constantly changing. The obligation, and challenging task, is to figure out what those needs are and how best to meet them.

Children have **physical needs** which are linked to basic survival. Parents or carers must provide an appropriate quantity and variety of nutritious food, conditions for adequate sleep, safety, adequate housing and access to healthcare to enable physical health and wellbeing and development. A baby or child who is cold, sick or hungry will not be very interested in socialising or learning. Babies must also feel safe from personal danger and threats. When a child is fearful, all concentration goes to calming the fear with no thought for any other task.

Children have **social needs**, which can be satisfied through interaction with others. This involves **socialisation**, which means acquiring beliefs, values and accepted behaviours through imitation, observation, family interaction and education systems. This requires parents to provide love, attention, confidence and opportunities for interaction, achievement and independence.

Children have **emotional needs**. Parents need to use positive parenting practices with warmth and praise to create emotional security and stability for children. Children's emotional needs are supported when parents have good mental health and wellbeing and resilience. Human beings need relationships with others and to feel love and belonging. Through healthy relationships with parents and caregivers, children can learn self-respect and develop confidence, achievement, independence and freedom.

Children have **intellectual needs**, which include learning, communication and skill development. Intellectual needs can be met by creating opportunities for problem solving, learning and understanding, which allows them to have control over their environment.

FIGURE 9.3 Parenting can be rewarding — and demanding.

FIGURE 9.4 Warmth and praise help meet children's emotional needs.

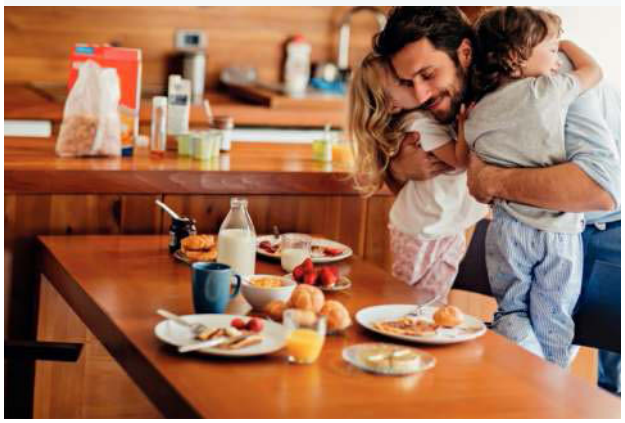


FIGURE 9.5 Children's social and intellectual needs can be met through opportunities for play with others.

Can an environment that will promote optimal development be provided?

Children should be given opportunities to develop physically, socially, emotionally and intellectually. Physical and intellectual development in children involves using the senses and actions to learn and grow, from basic reflexes in newborns, to more complex motor skills and thought processes in later childhood. A family needs to provide opportunities for new experiences, age-appropriate toys and experiences that allow motor and sensory stimulation.

A positive parent–child relationship allows children to develop socially through positive communication and parents encouraging desirable social behaviour through praise. Parents teach skills and behaviours to children through direct instruction, **sanctions**, by acting as role models and interacting with them. For children to develop emotionally they need to learn to form appropriate feelings and reactions to situations. Parenting involves managing a child's behaviour through establishing limits, providing instruction and enforcing appropriate consequences for problem behaviour.

Are the changes that parenting will bring acceptable?

With parenting, personal freedom gives way to responsibility. Parents-to-be should consider whether any changes in diet and lifestyle are needed in order to have a healthy pregnancy and healthy child. New parents can find it difficult to do all the things they used to do while also caring for a newborn. They must be prepared to let some things go for a while. New parents may find themselves faced with changes in their relationship, an increase or change in household duties, the possibility of becoming the sole provider or even a stay-at-home parent. Financial priorities also change, and a balance between career responsibilities and family will have to be found. Preparing for the increase in responsibility might mean building up savings, choosing one parent to stay home with the new baby full time or taking newborn education or parenting classes.

FIGURE 9.6 Parenting is an intense, 24 hour a day, 7 day a week job.

To help get them through this initial adjustment, parents should have a strong relationship and good communication skills. New parents need a supportive network of friends and family to lean on or talk to when things get tough. Expectant parents should also prepare for a significant decrease in the social events they can attend, especially in the first few months after the birth of the baby. When the new baby arrives, the amount of time parents have to spend with their partners is significantly less than before the arrival of the baby, especially if one or both parents works. Spending less time together can sometimes lead to relationship friction and communication issues.

9.2.2 Social and emotional support for new parents

Once a person decides to become a parent or caregiver they will need **social** and **emotional support**, as parenting involves learning on the job, often without any previous experience of child rearing.

Social support

Social support for new parents could include practical assistance such as money, babysitters, help with meal preparation, care of other children, sharing of information, assistance with transport and help in case of emergencies or with household tasks. Having family members, such as grandparents, available and prepared to babysit can mean parents are able to work which will increase financial resources. Greater financial resources will give parents greater capacity to provide adequate housing, clothing and food. Contact with extended family can also teach children about history and culture through the stories their grandparents tell.

Parents with higher levels of social support are better able to cope with stress and be more resilient. For example, women who receive strong social support from their families during pregnancy appear to be protected from sharp increases in a stress hormone, making them less likely to experience depression after giving birth. Good social support is also of benefit to the child. Having other people in the child's life who show them affection, praise and warmth strengthens the child's trust and emotional security. This increases the likelihood of them becoming competent and independent when interacting outside the family in later life.

FIGURE 9.7 Social support increases the resources available to parents to carry out their parenting role.

Emotional support

The idea of parenting can bring a mix of emotions: both positive and negative. Fears about whether they will be a good parent can lead to doubts and negative thoughts, which can cause stress for adults considering parenthood. Once the baby arrives there may also be frustration and regret at losing a lifestyle that may have involved greater financial independence, career advancement and spontaneity related to time with a partner or friends.

The birth of a baby involves a period of adjustment. A survey conducted by Healthdirect Australia revealed the biggest challenges facing new parents were lack of sleep for themselves and the baby, feeding, recovering from birth and juggling care for other children. Participants reported that their top concern during pregnancy was that something was 'wrong' with their baby. During the first week after birth, up to 80 per cent of mothers will experience the 'baby blues' which can involve feelings of anxiety, mood swings and irritability. These feelings tend to peak three to five days after the birth and are mainly caused by hormonal changes after childbirth.

Grandparents can be a great source of support to new parents through sharing their own experiences. Other people can offer new parents emotional support through encouragement, active listening and reassurance. People who are willing to share ideas and advice in a non-judgemental way can increase self-esteem and resilience for parents. This helps parents to see things in a more positive light and identify ways to cope.

Having adequate social and emotional support is important for parents and carers. Parents who are well supported are better able to provide for their child's needs, feel less stressed, feel better able to relate to their child, make good decisions and model appropriate behaviours. This is all positive for the child's mental health and wellbeing. Research shows that the extent to which parents perceive themselves as competent, being as good as or better than other parents, is strongly linked to parent wellbeing and children's health and wellbeing and development. Children whose needs are met and who have strong social and emotional skills are likely to become adults who find it easier to create and maintain a supportive social network. This increases the likelihood that they will be effective parents of their own children.

9.2.3 Resources new parents need

Families must be able to access and use resources effectively to undertake their parenting responsibilities. As discussed in section 9.2.1, the amount of time a person can put into the role of parenting is a significant consideration in becoming a parent, and a major resource if the person decided to become a parent. Time has an impact on parents' ability to use other resources required for effective parenting, including knowledge of health-promoting behaviours and parenting practices, material resources, such as income and food, and resources provided by all levels of government.

Knowledge

Parents' level of education and knowledge is a resource that affects the developing baby in a number of ways. Knowledge of health and wellbeing behaviours (also known as 'health literacy') can increase the probability of parents caring for themselves in ways that promote the health and wellbeing and development of their unborn baby. Accessing healthcare, consuming nutritious food, not smoking, and avoiding alcohol and drugs are more likely to occur in those who are educated about the benefits of maintaining optimal health and wellbeing during pregnancy. Education will also increase knowledge about the benefits of breastfeeding or ways to avoid the risk of SIDS. Parental education also increases employment opportunities and the ability to generate an adequate income, which can be used for resources such as adequate nutrition and healthcare.

FIGURE 9.8 Discussing parenting with others shapes a parent's attitudes and beliefs about their own competence in the role.

Material resources

When a newborn child enters a household, income may decrease temporarily or permanently as carers withdraw from the workforce. Alternatively, household income may increase due to becoming eligible for family assistance. According to the Australian Institute of Family Studies, parents of first-born children report increased expenditure on groceries, health and wellbeing and children's clothing, but reduced levels of spending on holidays. Money may be required for items to clothe, transport, bathe and feed a baby, as well as give it a safe place to sleep and explore.

In terms of financial resources, new parents need to consider who is going to be the primary caregiver and whether the primary caregiver is going to work after the birth. These considerations will be affected by family values and current financial commitments.

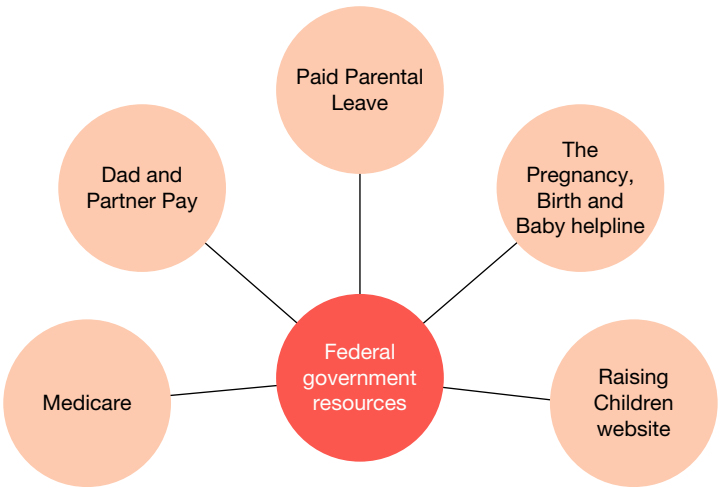
New associated costs during and after pregnancy may include:

- doctor and hospital bills, scans and special medical tests
- maternity clothes
- baby clothes and equipment
- childcare, whether it is provided by family members or childcare centres.

9.2.4 Federal government resources for new parents

Medicare is Australia's universal health insurance scheme that provides free or subsidised treatment for all Australians through the public health system. Pregnant women can access a range of Medicare-funded health services throughout their pregnancy, including free treatment in public hospitals. By making healthcare more affordable, Medicare increases accessibility to **antenatal care**, which can assist with early detection of issues during pregnancy and medical intervention when required. Medicare also assists in providing

FIGURE 9.9 Federal government resources for new parents



professional health workers such as nurses, midwives, doctors and obstetricians to assist with the birthing procedure at no charge to the patient in a public hospital.

Dad and Partner Pay gives new dads or partners, including same-sex partners, up to two weeks of government-funded pay while on unpaid leave from work during the first year following birth or adoption of a child. The Australian Government's Dad and Partner Pay can provide partners with a chance to take time off work to bond and connect with the baby, learn by doing, share experiences as a family and support a partner. Dad and Partner Pay gives up to two weeks of government-funded pay at the rate of the National Minimum Wage (in 2019, $719.35 per week before tax). Other benefits for families include Paid Parental Leave, which is a short-term payment while you are on leave from work to care for your new child, and the Family Tax Benefit — a payment that helps eligible families with the cost of raising children.

FIGURE 9.10 There is a strong relationship between regular prenatal health care and positive health and wellbeing outcomes for both mother and baby.

The Pregnancy, Birth and Baby helpline provides a free phone and online service for pregnant women and new parents who have a baby up to 12 months of age. It provides information and advice on topics such as maternal nutrition, breastfeeding, baby development and sleeping habits, as well as direction to maternity-related services including specialist and support services. This service is delivered by maternal child health nurses.

Raisingchildren.net.au is the Australian government parenting website that aims to equip parents with the information they need to optimise the health and wellbeing of their child.

9.2.5 State government resources for new parents

Maternal and Child Health Service

The Maternal and Child Health Service is a primary health service, free for all Victorian families with children from birth to school age. There are maternal and child health centres in every local government area in Victoria, which are jointly funded by state and local governments and usually managed by local government. The centres are staffed by highly qualified maternal and child health nurses. After a baby is born, the hospital notifies the local service and the nurse will contact a parent during the first days at home to arrange an appointment. This is usually a home visit where the nurse will provide the location of the nearest centre, information about further visits and services, and how to contact a maternal and child health nurse at any time. The service is available 52 weeks of the year and provides appointments to check a child's health and wellbeing, growth and development at ten key ages and stages from birth to three and a half years of age. These visits focus on parenting, health and wellbeing, growth, development, promotion of health, health and wellbeing and safety, social supports, referrals and links with local communities.

My Health, Learning and Development Record

This resource is given to the parents of every newborn child in Victoria and is designed for parents to record their child's milestones, health and wellbeing, growth, development and immunisations. It also allows them to add personal details about their child's development, with space for photos and plastic sleeves for important documents.

My Health, Learning and Development Record provides:

- a paper-based record of a child's health and wellbeing, growth and development
- a reminder for parents to attend maternal and child health visits and ask any health and wellbeing, growth and development questions

- important child health and wellbeing and development education
- a booklet for information to be recorded at each visit to a maternal and child health nurse
- a way of communicating between parents, healthcare professionals and other healthcare providers.

Maternal and Child Health Line

The Maternal and Child Health Line is a telephone support service that is available 24 hours a day, seven days a week to families throughout Victoria with children from birth to school age. The Maternal and Child Health Line is staffed by qualified maternal and child health nurses who provide information, support and advice regarding child health and wellbeing, nutrition, breastfeeding, maternal and family health and wellbeing, and parenting. The Maternal and Child Health Line can link families with the Maternal and Child Health Service and to other community, health and wellbeing and support services.

9.2.6 Local government resources for new parents

Local governments implement a range of strategies and programs to promote the health and wellbeing and development of children, including:

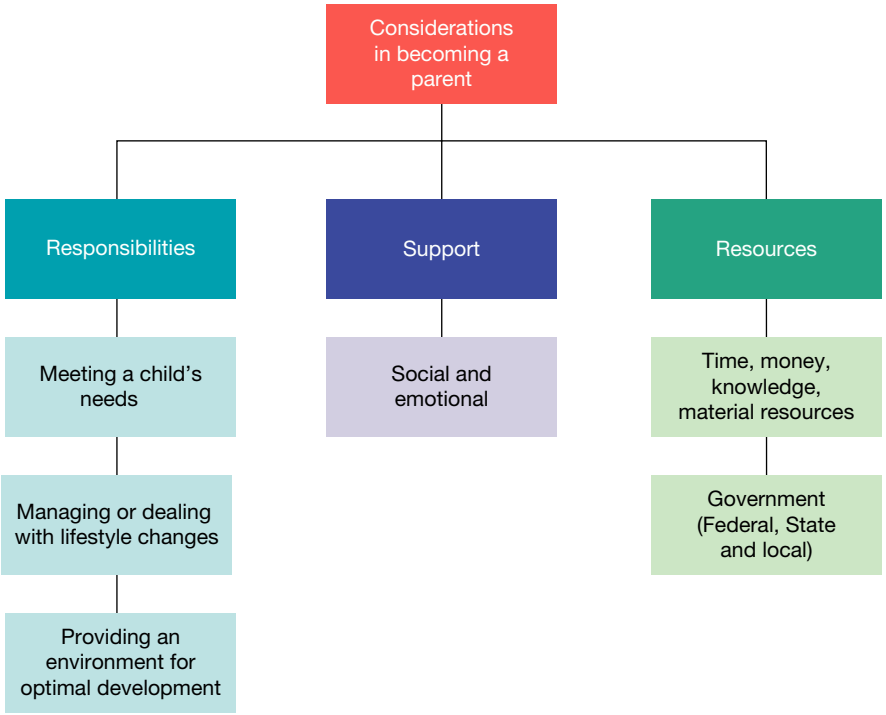
- providing access to recreation facilities such as walking and cycling paths, parks, gardens and public swimming pools
- implementing community health and wellbeing plans that aim to address the needs of the local community and promote healthy lifestyles by encouraging healthy eating, exercise and social interaction
- implementing immunisation programs within the local community as part of the National Immunisation Program
- providing long daycare, which is a centre-based form of childcare service. Long daycare services provide all day or part-time care for children of working families and the general community. Local councils may run these services. Long daycare services may also provide care for school children before and after school and during school holidays.
- providing locally based maternal and child health services which give parents support, information and access to professional advice on a range of health and wellbeing-related concerns from child behaviour and nutrition to breastfeeding and family planning. The service is jointly funded by the Victorian Government and local councils and is usually operated by local councils.
- providing playgroups for infants, toddlers and preschoolers and their parents or caregivers. Adults stay with their children at playgroup, which gives them the chance to meet other people going through similar experiences while also learning about the community, health and wellbeing and support services available within the local community.

FIGURE 9.11 Resources such as parks promote the health and wellbeing and development of children.

on Resources

Weblinks Raising Children
Healthy families
sms4dads

FIGURE 9.12 Raising a child is a full-time demanding role. Thinking ahead about the challenges, support and resources required can assist new parents.



9.2 Activities

1. Access the **Raising Children** weblink in the Resources tab, then provide an example of how a video, article or app on the website supports the parenting role in relation to meeting the needs of a child.
2. Through their Healthy Families website, beyondblue provides a range of resources for health professionals, women and their families to maintain mental health and wellbeing during pregnancy and after the baby is born. Access the **Healthy Families** weblink in the Resources tab and evaluate its effectiveness in offering support for the emotional health and wellbeing of new parents.
3. The University of Newcastle, in collaboration with beyondblue and the Movember Foundation, has a project called sms4dads. It is a world-first service that sends men regular messages with advice and information that is linked to their baby's stage of development. It also has a mood tracker to help them care for themselves while caring for their family. Research the program using the weblink **sms4dads** in the Resources tab and then provide a description of how it would reduce the stress associated with the parenting role for men and provide benefits for the child.

9.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. What is meant by the term 'parenting'?
2. Outline the considerations that need to be made in the transition to parenthood about:
   (a) responsibilities
   (b) social and emotional support
   (c) resources.
3. Summarise the types of needs children have that parents and caregivers are responsible for satisfying.
   (a) Create a mind map or table listing each type of need.
   (b) Provide examples of each type.
   (c) Add the resources that parents would have to access to satisfy each need.

4. Why is social support important for a parent? What are the benefits for a child?
5. Why is emotional support important for a parent? What are the benefits for a child?
6. Describe how one government resource supports the parenting role.

9.2 Exercise 2 APPLY your knowledge

1. How does the government's Dad and Partner Pay support parents in meeting a child's needs?
2. How does the My Health, Learning and Development Record support parents in providing an environment for optimal development?

studyON

9.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.3 Fertilisation and the stages of prenatal development

KEY CONCEPT The process of fertilisation and prenatal development

Understanding **fertility** and the process of fertilisation is important because falling pregnant can be difficult. Currently, one in six Australian couples experience fertility problems. To gain an understanding of the stages of prenatal development, fertilisation and the cells required for this process need to be explored.

Once genetic material is provided by each parent at fertilisation, the prenatal stage of development commences. Even though the foundations of social, emotional and intellectual development start at this stage, the physical aspect of development is the most noticeable. Development during this stage is the most rapid of all lifespan stages. The prenatal stage is generally divided into three stages: the germinal, embryonic and foetal stages. This is a time of great opportunity in child development as well as being a time of high risk.

9.3.1 Sperm, ova and fertilisation

Most cells in the human body contain a 'nucleus', which is like the brain of the cell. It contains the genetic material or blueprints that allow human cells to keep reproducing throughout the lifespan, although some types of cells **regenerate** more than others. Sperm and ova (singular ovum, sometimes referred to as 'egg') are the names given to the male and female sex cells respectively. Sperm production in males starts during puberty, and sperm form in the testes at a rapid rate (over 12 billion per month). Ova form in the ovaries prenatally. Once born, the female already has all the ova that she will have for life. These ova will mature once puberty occurs.

Fertilisation (sometimes referred to as conception) occurs when a sperm penetrates an ovum and the genetic materials fuse together to make a single cell called a zygote. The zygote contains 23 **chromosomes** from the sperm and 23 chromosomes from the ovum and these carry the **genes** that will determine the rate and timing of development, whether the child is male or female and its characteristics. The individual resulting from this single fertilised cell will therefore display some characteristics of each of their parents.

During sexual intercourse, sperm are deposited in the vagina and swim towards the fallopian tubes (figure 9.14). If an ovum is present, any sperm that reach it will compete to break through the ovum's membrane. To do this, the sperm release an enzyme that breaks down the outer barrier of the ovum. Once a sperm has penetrated the membrane, other sperm are blocked from entering by changes to the outer surface

of the ovum. If more than one sperm were to enter, the zygote would have an incorrect amount of genetic information and would not survive.

FIGURE 9.13 Original cells split in different ways each time a sperm or ovum is created, resulting in the vast variation typically seen among siblings.

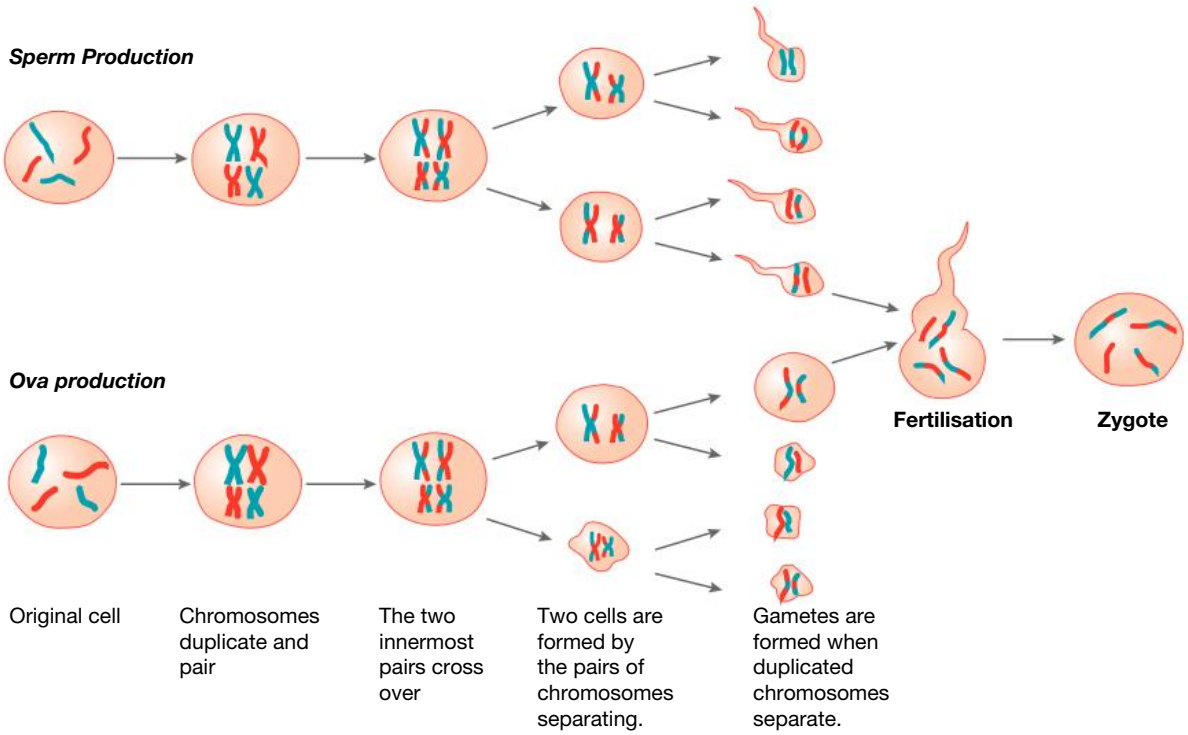
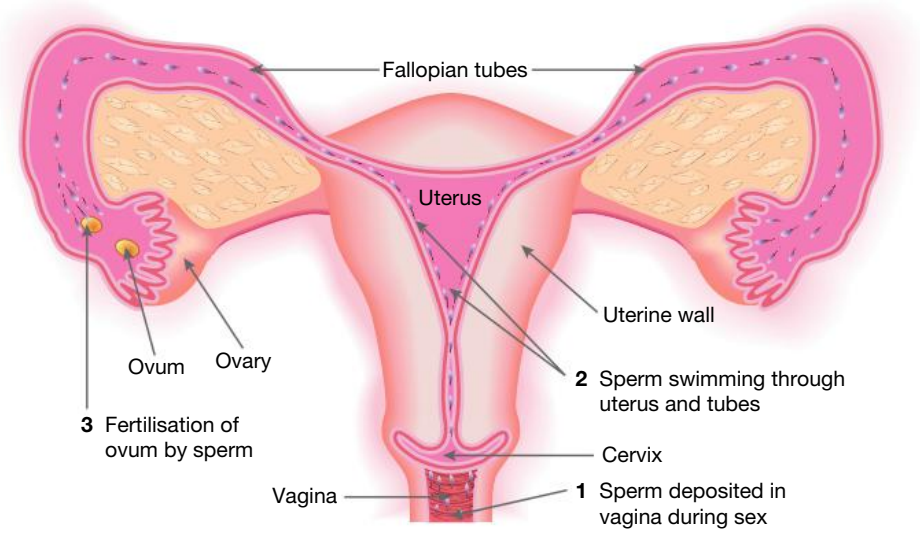


FIGURE 9.14 Fertilisation takes place in one of the fallopian tubes and the fertilised cell moves into the uterus where it implants in the lining of the uterus.



9.3.2 Germinal stage (0–2 weeks)

The germinal stage starts at fertilisation and ends with **implantation** (figure 9.15). When fertilised, the newly formed cell (zygote) travels down one of the fallopian tubes while constantly dividing. Around three

to four days after fertilisation, when there are about 16 cells, the zygote takes on a spherical shape and is now known as a morula. At around five days after fertilisation, when it is made up of around 64 cells, the **morula** transforms to include an outer cell mass, an inner cell mass and a hollow, fluid-filled centre known as a **blastocyst**. The inner cell mass will become the embryo and the outer cell mass will eventually become the **placenta**. When it reaches the uterus, the blastocyst implants itself in the **endometrium** and at this point it becomes known as an 'embryo'. As soon as implantation occurs, the placenta begins to form.

FIGURE 9.15 The germinal stage of prenatal development sees the morula transform to include an outer cell mass, an inner cell mass and a hollow, fluid-filled centre known as a blastocyst.

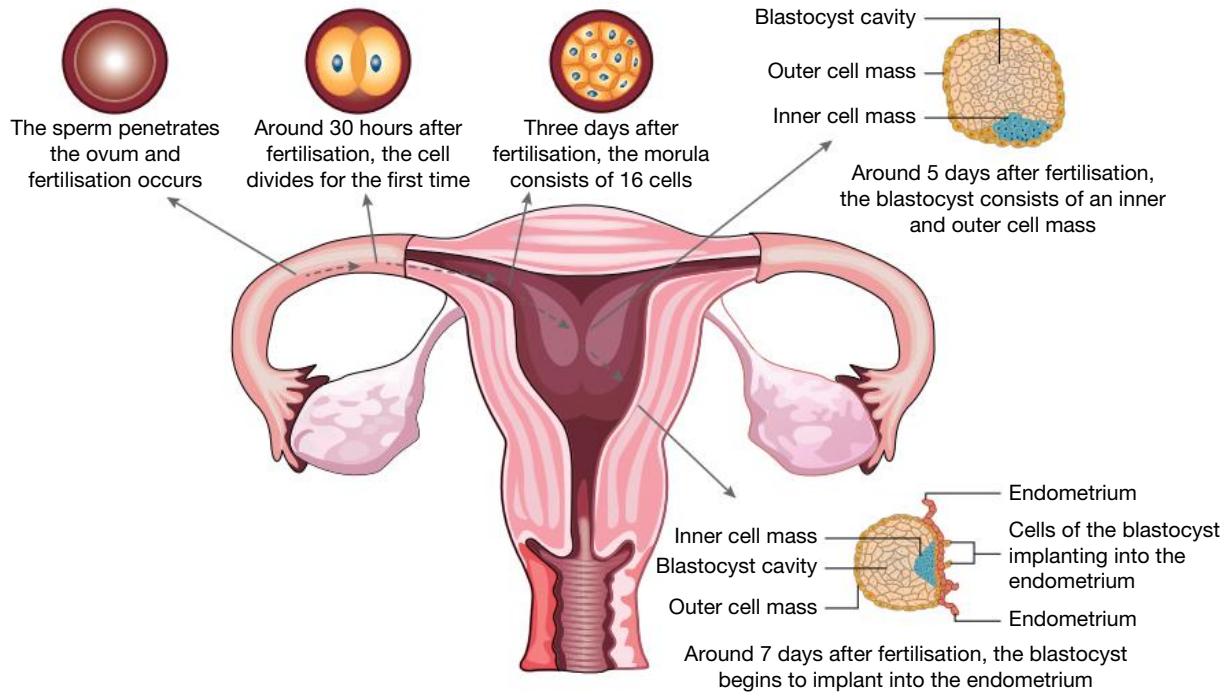


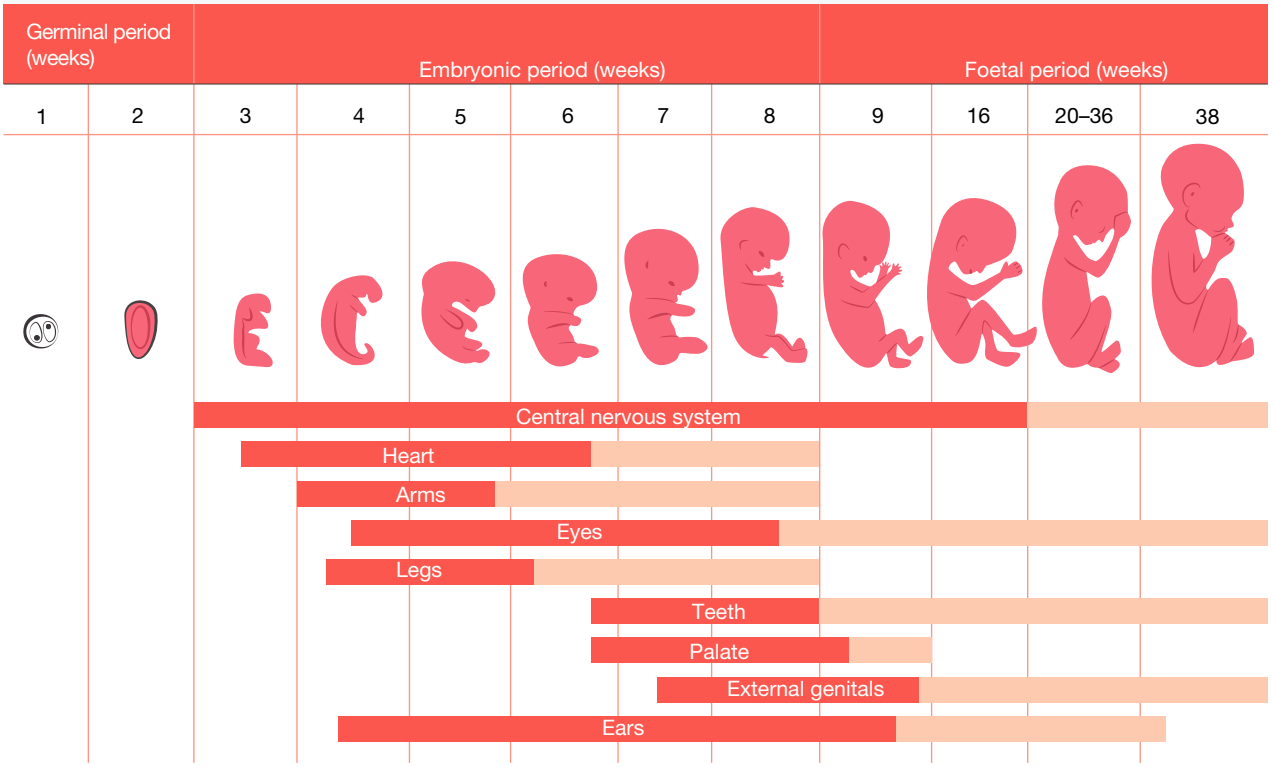
TABLE 9.1 Characteristics of development that occur during the germinal stage

Stage of prenatal development	Week of prenatal development	Characteristics of development
Germinal	1	• Fertilisation occurs when a sperm cell combines with an egg cell to form a zygote. • Thirty hours after fertilisation, the process of cell division begins and will continue for life. • After three days, the zygote consists of 16 cells. • The zygote travels down the fallopian tube and into the uterus.
	2	• Around a week after fertilisation, and while smaller than a grain of rice, the ball of cells now known as a blastocyst begins to implant into the endometrium. The implantation process takes about a week to complete. • The formation of the placenta begins.

9.3.3 Embryonic stage (3–8 weeks)

The embryonic stage starts at implantation and ends at the eighth week. This stage is characterised by **cell differentiation**. This is when the cells start taking on specialised roles such as heart cells, skin cells and bone cells. This stage is perhaps the most critical for development. While the embryo is only around 2 centimetres in length by the end of this stage, many of the internal organs and systems have begun to form in a process called **organogenesis**. These include the circulatory system, the stomach and kidneys, lungs, the nervous system and the digestive system. The brain and spinal cord are almost complete by the end of it (although they will grow in size and increase in complexity for years to come).

FIGURE 9.16 The embryonic stage is the most critical for development.



The blood and circulatory system, powered by the heart, is the first organ system to develop. The neural tube (brain, spinal cord and other neural tissue of the central nervous system) is also well formed at this stage. Bone starts to replace cartilage and limbs that start out as buds are emerging from the torso and continue to grow, along with fingers and toes. By the eighth week, the embryo becomes distinctly human looking, although the head and neck still account for around half the embryo's total length, and the brain makes up almost half of its body weight.

Because major organs and systems are formed during this time, the embryo is very sensitive to environmental influences. For coordinated body systems to develop, the specialised tissues that are forming require specific connections from the brain and spinal cord to the muscles and outer parts of the developing embryo to occur. **Teratogens** such as tobacco, alcohol and medication are particularly influential during this stage of development. They are thought to interfere with the formation of these connections.

At the eighth week, the embryo has begun to form every major organ and system, and many are close to completion. In fact, 90 per cent of the structures found in an adult human can be found in an eight-week-old embryo. The remainder of the prenatal stage is characterised by rapid growth and the maturing of these organs

TABLE 9.2 Characteristics of development that occur during the embryonic stage

Stage of prenatal development	Week of prenatal development	Characteristics of development
Embryonic	3	• Implantation is complete, and the developing baby is referred to as an embryo. • Cells continue to divide rapidly and start taking on specialised roles as the organs begin to develop.
	4	• The tissues that will become the brain and spine (called the neural tube) start to develop. • Around 3 mm in length, the embryo secretes hormones to maintain the endometrium and to prevent the mother from having a menstrual period.
	5	• Buds appear on each side of the embryo that will become the limbs. The heart begins to beat. • It will be several weeks until the placenta is fully functional to access oxygen and nutrients from the mother's bloodstream. • Brain cells are being generated at a rate of 100 per minute.
	6	• The spinal cord looks like a tail and the head is large in relation to the rest of the body. • The embryo is approximately 1.3 cm long.
	7	• Blood cells are being made in the liver. • Facial features such as the eyes and mouth are forming. • Tiny muscles have formed which allow the embryo to move.
	8	• The embryo is around 2.5 cm in length. • Fingers and toes are starting to form. • The brain is now active.

9.3.4 Foetal stage (9–38 weeks)

The foetal stage starts at the ninth week of pregnancy and continues until birth at around 38 weeks. During this stage, the unborn baby is referred to as a 'foetus'. The foetus measures 2.5 centimetres in length and weighs about 2 grams at the beginning of this stage, and is about 50 centimetres and 3500 grams by the end. Although this stage is characterised by rapid growth, many other developmental milestones occur as well.

All organs and systems formed in the embryonic stage — including the lungs, digestive system, liver and kidneys — mature and are functioning in the early stages of foetal development. By 14 weeks, the placenta is fully developed and functioning. The placenta is a disc-shaped temporary organ, largely made up of blood vessels that facilitate the exchange of substances between mother and foetus. The placenta acts like a lung, digestive system and kidney for the foetus by supplying it with oxygen, nutrients and immune support, and removing wastes such as urine and carbon dioxide (see figure 9.17). The placenta also produces hormones, such as progesterone, that assist in maintaining the pregnancy by preventing ovulation of any more ova.

Sex organs start taking shape and by around the 15th week a female foetus will have produced millions of ova, but this number will be reduced by the time she is born. The testes of a male foetus will be producing testosterone.

Movement occurs in almost all parts of the foetal body and becomes more noticeable as the foetus grows. Reflexes such as sucking and grasping are highly responsive and continue to develop throughout this stage. The foetus displays a breathing movement but its lungs are filled with **amniotic fluid**, not air.

During the second half of the foetal stage, tooth buds form in the gums. The bones, which mainly consist of cartilage, also start to harden or ossify around this time. This is a process that will continue until the end of puberty. The senses also begin to function around 25 weeks after fertilisation, and the foetus may respond to light, sound and touch. These senses become more sensitive throughout the remainder of the foetal stage.

Babies are considered premature if they are born three weeks before their due date. A baby born after 24 weeks may survive with intensive care. At 28 weeks most babies are likely to survive. A number of changes happen during the final trimester of pregnancy that assist the baby to survive in the outside world. Surfactant is a substance that reduces the surface tension in the lungs and keeps the small air sacs in the lungs from collapsing when the foetus exhales. In preparation for breathing, a foetus begins making surfactant around week 24. By the end of the foetal stage, the lungs are fully developed. Fat is also deposited under the skin during the later weeks of the foetal stage. This assists with temperature regulation after birth.

FIGURE 9.17 The placenta connects the foetus to the uterine wall of the mother, providing the foetus with nutrients and oxygen and removing its waste products.

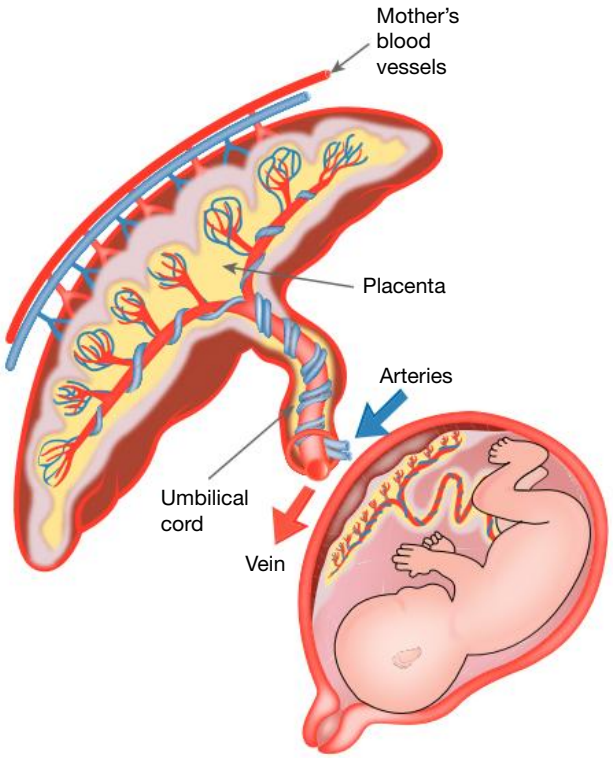


TABLE 9.3 Characteristics of development that occur during the foetal stage

Stage of prenatal development	Week of prenatal development	Characteristics of development
Foetal	9–13	• The developing baby is now known as a foetus. • All the body's organs are formed but not all are functioning at this point. • The foetus is around 7 cm in length in week 11. • Teeth are beginning to form in the gums. • Eyelids are fused over the eyes.
	14–18	• The foetus is around 14 cm in length in week 14. • The tongue develops taste buds. • Ears are fully functioning and the foetus can hear muffled sounds from the outside world. • The sex of the foetus can be distinguished via an ultrasound.

	19–23	• The foetus is around 33 cm in length in week 22. • The foetus will swallow regularly but takes in only amniotic fluid. • The eyelids separate into upper and lower lids and the foetus can open and shut its eyes.
	24–28	• The foetus is around 37 cm long and weighs approximately 1 kg. • The fingers and toes grow nails. • The foetus's body has grown and it is now more in proportion with the size of the head but will take until childhood to completely catch up. • In preparation for breathing, production of surfactant begins.
	29–33	• The foetus spends most of its time asleep. • Eyebrows and eyelashes grow. • Fat is laid down under the skin to assist with adjusting to life outside the uterus. • The foetus moves in a strong and coordinated way.
	34–38	• The foetus assumes the 'head down' position in preparation for birth. • The lungs develop at a rapid rate during this time. • The foetus is around 50 cm in length.

EXAM TIP

When responding to questions about prenatal development, it is important that you are accurate in relation to the timing of each stage and specific about the characteristics of each stage in prenatal development.

on Resources

Digital documents In-vitro fertilisation worksheet (doc-31675)

Weblink In-vitro fertilisation

In-vitro fertilisation costs

Prenatal development

9.3 Activities

1. One of the most common techniques used to assist with fertilisation is called in-vitro fertilisation. Access the **In-vitro fertilisation** weblinks and worksheet in the Resources tab to explain this process.
2. Using the **Prenatal development** weblink in the Resources tab and the information in this subtopic, devise a timeline of significant aspects of prenatal development.

9.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. When does sperm production begin in males?
2. When are ova formed?
3. Use a flow chart to outline the process of fertilisation.
4. Draw up a table with three columns, one for each stage of prenatal development. Provide examples that represent the key characteristics of physical development in each of the three stages of prenatal development.
5. Why is the placenta important for the developing embryo/foetus?
6. Generally, babies born under 36 weeks' gestation will be admitted to a neonatal unit and very preterm babies under 30 weeks' gestation will need to be cared for in a neonatal intensive care unit. Why are babies born prematurely in need of extra support?

9.3 Exercise 2 APPLY your knowledge

1. Why do non-identical twins show just as much variation as brothers and sisters from single pregnancies?
2. Thalidomide was a medication prescribed in the 1950s and 1960s to reduce the symptoms of morning sickness. Unfortunately, it led to limb deformities when taken in early pregnancy. Using your knowledge of the embryonic stage, explain how this medication would have affected prenatal development.

studyON

9.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.4 The role of parents in achieving optimal prenatal development

KEY CONCEPT Understanding factors that influence development during the prenatal stage

Understanding the **risk** and **protective factors** that influence the health and wellbeing and development of a foetus during the prenatal stage allows parents, carers and the community to use or provide resources to optimise the health and wellbeing and development of unborn babies and, in turn, put the children on a pathway to enhanced adult health and wellbeing.

An important part of parental responsibility during pregnancy is seeking antenatal care. Antenatal care is important to monitor the health and wellbeing of the mother and baby, provide health education and advice to the mother, promote protective factors, identify any risk factors for the mother and baby, and provide medical interventions if necessary. The National Antenatal Care Guidelines recommend that the first antenatal visit occurs within the first ten weeks of pregnancy and that first-time mothers with an uncomplicated pregnancy attend ten visits.

9.4.1 Maternal diet

For women of child-bearing age, ensuring a healthy balanced diet prior to becoming pregnant is a protective factor, as the ongoing development of the foetus is dependent on the health and wellbeing of the embryo.

A woman's nutritional status during pregnancy is dependent on the nutritional reserves that are built up in her body prior to conception. Women who have nutritional deficiencies prior to conceiving a child are likely to have these deficiencies during pregnancy, particularly as the body faces additional nutritional

demands because of the growing baby. It is particularly important that women consume the required amount of folate, iodine and iron prior to and during pregnancy.

Folate (folic acid)

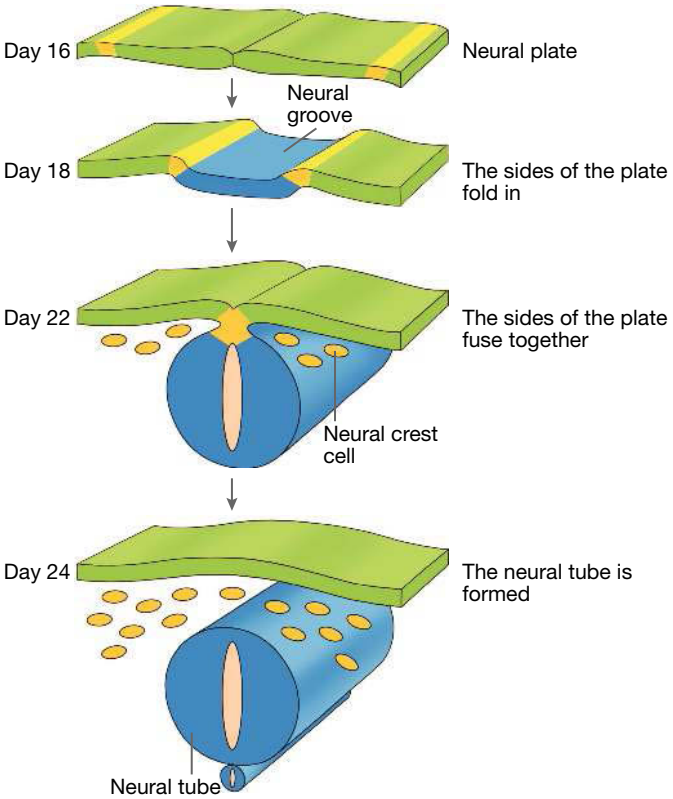
Folate is a B-group vitamin that is required for the formation of red blood cells, which transport oxygen around the body. It also assists with DNA synthesis, cell growth and the development of the nervous system of the foetus. Adequate folate consumption before and during pregnancy reduces the risk of **neural tube defects** in the baby. The neural tube (see figure 9.18) is a cylindrical structure that will house the brain and spinal cord of the embryo. Neural tube defects involve damage to the brain and spine, and to the nerve tissue of the spinal cord. The vertebrae or skull may not close properly during development, which results in the spinal cord or brain being exposed and placed at risk of further damage. Spina bifida is the most common neural tube defect.

Spina bifida may result in one or more of the following symptoms:

- walking difficulties, which may result in the inability to walk
- reduced sensation in the legs and feet
- increased risk of burns and pressure sores due to limited feeling
- urinary and faecal incontinence
- sexual dysfunction
- deformities of the spine, commonly referred to as scoliosis.

Good sources of folate include green leafy vegetables, poultry, eggs, cereals, citrus fruits and legumes. In Australia, the government has mandated that all wheat flour used in bread making must contain folic acid as a common and inexpensive source for pregnant women. Breakfast cereals and fruit juices sold in Australia may also have folic acid added.

FIGURE 9.18 How the neural tube is formed



The neural tube is a cylindrical structure that will house the brain and spinal cord of the embryo. Before the tube is formed, the outer cells of the embryo lay flat to make a neural plate. form around day 16 to 24 after fertilisation, the neural plate folds in on itself and the sides fuse together to form the neural tube.

Source: Reprinted by permission form Macmillan Published Ltd: 'The origin and development of glial cells in peripheral nerves' by Jessen & Mirsky, *Nature Reviews Neuroscience*, Vol 6, Iss. 9, pp. 671–682, © 2005.

Iodine

Iodine is particularly important during pre-conception and the first 16 weeks of pregnancy to ensure the healthy development of the baby's brain and nervous system. If iodine is deficient during pregnancy, the consequences can be serious and include stunted growth and intellectual disability.

Countries that have a sufficient iodine concentration in the soil generally get enough iodine from crops grown on the land. In countries that do not have enough iodine in the soil (such as Australia), there has been a re-emergence of iodine deficiency. Iodine in the form of iodised salt is added to other food items such as wheat flour used in bread making. Australians are reducing their intake of salt because of the increasing rates of cardiovascular disease, so people are now at an increased risk of iodine deficiency and need to ensure their requirements are being met by other dietary sources, especially during pregnancy. Iodine is present in fish, seaweed, eggs, cow's milk and strawberries.

Iron

Iron is a mineral that is required in greater amounts during pregnancy due to the increased demand for oxygen for the developing foetus as well as the increased energy needs of the mother. During pregnancy, there is an increase in blood volume to cater for the developing baby as well as the enlarging reproductive organs of the mother. Iron is needed for haemoglobin, a component of blood that carries oxygen around the body. Additionally, the developing foetus draws iron from the mother to last it through the first five or six months after birth for its high growth demands.

Good sources of iron include red meat, fortified cereals, egg yolks, legumes, nuts and green leafy vegetables. Vitamin C assists with the uptake of iron from the small intestine. High-fibre diets, alcohol and tannic acid in tea can interfere with iron absorption. Lack of iron can lead to iron-deficiency anaemia, resulting in the body not having enough iron to form haemoglobin. In pregnant women, iron-deficiency anaemia can increase the risk of a premature birth and a low birthweight baby.

Foods pregnant women should avoid

Maternal diet can be a risk factor for the developing foetus. Some foods contain the bacteria *Listeria monocytogenes*, which can cause listeria infection and increase the risk of miscarriage, stillbirth or premature labour. For this reason, pregnant women should avoid the following foods:

- soft-serve ice-cream
- unpasteurised foods and soft cheeses such as camembert, brie and ricotta unless cooked and served hot
- pre-cooked or prepared cold foods such as quiches, delicatessen meats, salad from buffets, paté
- raw seafood such as sashimi, oysters and smoked seafood such as salmon.

FIGURE 9.19 Maternal nutrition is important for the health and wellbeing and development of the growing baby.

Foods that contain high levels of mercury can put the baby at risk of delayed development in the early years. The effects may not be noticed until the child fails to reach developmental milestones at the expected age. It may also result in difficulties with memory, language and attention span. Women need to be selective about the type of fish they consume during pregnancy as some fish have significantly higher levels of mercury than others. Shark, swordfish, barramundi, gemfish, orange roughy and southern bluefin tuna should all be avoided.

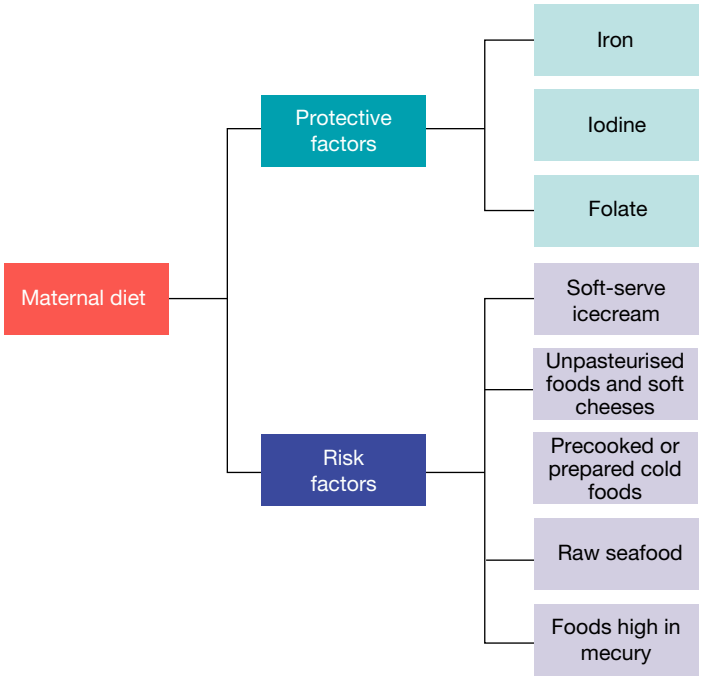
Upon implantation, the embryo divides into two types of cells — those that form the foetus and those that form the placenta. In undernourished women, a greater proportion of cells are likely to form the placenta rather than the foetus, which means the foetus will be relatively small when it begins its growth, and its development in the uterus will be restricted. There is also an increased risk that the baby will be **low birthweight** when born.

As many babies with low birthweight are also premature, it is difficult to separate the problems due to the prematurity from the problems of low birth weight. In general, the lower the birthweight, the greater the risk for complications such as:

- low oxygen levels at birth
- inability to maintain body temperature
- difficulty feeding and gaining weight
- infection
- breathing problems, such as infant respiratory distress syndrome (a respiratory disease of prematurity caused by immature lungs)
- sudden infant death syndrome (SIDS)

Subtopic 9.7 will discuss in more detail why avoiding low birthweight is important for optimal development of a child's body systems, and reduced risk of a range of health and wellbeing and development problems into adulthood.

FIGURE 9.20 Summary of the risk and protective factors of the maternal diet



9.4.2 Parental smoking and tobacco smoke in the home

Smoking during pregnancy is a significant risk factor for a number of conditions for both the mother and her unborn baby. Tobacco smoke contains thousands of chemicals, and acts to reduce oxygen flow to the placenta and exposes the developing foetus to numerous toxins. Fathers who smoke can have their fertility affected and maternal smoking increases the risk of a range of health and wellbeing and developmental conditions of the unborn baby including:

- low birthweight
- spontaneous abortion (miscarriage)
- ectopic pregnancy
- prematurity
- complications of the placenta
- birth defects
- lung function abnormalities and respiratory conditions
- perinatal mortality.

FIGURE 9.21 Maternal smoking and tobacco smoke in the home can have similar impacts on the unborn baby.

According to the Australian Institute of Health and Welfare, there is evidence that the more cigarettes a mother smokes, the higher the risk of poor birth outcomes.

Tobacco smoke in the home increases the risk of passive smoking among pregnant women. Passive smoking means breathing in other people's tobacco smoke. Tobacco smoke cools quickly, which prevents it from rising. As smoke is heavier than air, it tends to hang in mid-air rather than be dispersed into the atmosphere. This increases the amount of second-hand smoke people breathe as it is concentrated in the lower half of the room. For pregnant women who live with one or more smokers, the home can be a source of exposure to second-hand smoke. Exposure to environmental tobacco smoke can contribute to the same health and wellbeing and development effects as maternal smoking.

9.4.3 Alcohol use during pregnancy

Alcohol can cause problems for women even before pregnancy because it may interfere with fertility. Therefore, women who are trying to fall pregnant should limit their consumption of alcohol or stop it altogether. The consumption of alcohol during pregnancy can cause significant harm to the unborn child. When alcohol is consumed by a pregnant woman, it crosses the placenta from the mother's blood to the baby's blood. This can result in **foetal alcohol spectrum disorder** (figure 9.22).

FIGURE 9.22 Foetal alcohol spectrum disorder is seen in the facial features of affected children.

A foetus that is severely affected by foetal alcohol spectrum disorder is at risk of dying before birth. The alcohol may harm the development of the nervous system of the foetus, including the brain. It may also narrow the blood vessels in the placenta and umbilical cord, thereby restricting blood supply to the foetus. The impact of foetal alcohol spectrum disorder on the health and wellbeing and development of the unborn child is shown in table 9.4.

Heavy consumption of alcohol, particularly in the first trimester (first three months) of pregnancy, is particularly dangerous to the foetus. The World Health Organization recommends that pregnant women consider not consuming alcohol at all.

TABLE 9.4 Impact of alcohol consumption on the health and wellbeing and development of the unborn child

Impact of alcohol consumption on health and wellbeing	Impact of alcohol consumption on physical development
• Increased risk of premature birth • Increased risk of stillbirth • Undernourishment of the growing baby due to alcohol blocking the absorption of nutrients • Reduction in the amount of oxygen available to the baby due to alcohol narrowing the blood vessels in the placenta and/or umbilical cord resulting in the restriction of blood supply	• Low birthweight • Smaller head circumference (microcephaly) • Small eyes and epicanthal folds • Flattened face, including the bridge of the nose due to earlier than normal cell changes in the baby's face during development • Underdeveloped vertical ridges between the nose and upper lip • Smaller lower jaw • Heart defects • Restriction of movement of elbow and knees due to tightening of ligaments, muscles, tendons and skin around the joints

Source: Adapted from 'Foetal alcohol syndrome', Better Health Channel, www.betterhealth.vic.gov.au.

on Resources

Digital documents Teratogens worksheet (doc-31676)

Weblink Teratogens

Environmental tobacco smoke

9.4 Activities

1. Access the **Teratogens** weblink in the Resources tab, then complete the worksheet.
2. Access the **Environmental tobacco smoke** weblink in the Resources tab, and watch the video showing an advertisement on environmental tobacco smoke during pregnancy. Create your own video, infographic or cartoon to educate people about the dangers of tobacco smoke, alcohol or poor nutrition during pregnancy.

9.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Why is seeking antenatal care a responsibility of parenting?
2. With the use of examples that apply to pregnancy, explain the difference between a risk factor and a protective factor.
3. How can the health and wellbeing of a baby be determined even before conception?
4. Create a concept map showing the risk and protective factors that influence prenatal development. Include in your concept map a brief description of the effect of each factor on prenatal development.
5. Why does the government specifically choose bread-making flour as the food to fortify with folate and iodine?

9.4 Exercise 2 APPLY your knowledge

1. A mother's body adjusts to a pregnancy. It requires less energy production as body processes slow down, absorption of nutrients, fat stores and blood volume increase, and the lungs take up more oxygen. Explain the value of these adjustments to optimal development in the prenatal stage.
2. The health of a father prior to conception and at the time of conception is a factor that is often overlooked. Why do you think it is suggested that fathers do not smoke, for optimal fertility and prenatal development?

studyON

9.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.5 Development in infancy

KEY CONCEPT Understanding the physical, social, emotional and intellectual development in infancy

Newborns are relatively helpless. They cannot feed, maintain body warmth, or stay clean or hydrated without the assistance of others. Infants need an adult with whom to form an attachment who can understand and respond to their signals. They need things to look at, touch, hear, smell and taste, and opportunities to play and explore their world. Appropriate language stimulation and support in acquiring new motor, language and thinking skills is essential. Parents and carers also need to offer infants a chance to develop some independence and help in learning how to control their own behaviour. Infancy is marked by significant developmental milestones such as learning to walk, talk and interact with others. Infancy is the first stage of the lifespan after birth and lasts until the second birthday.

9.5.1 Physical development

Growth

Physically, the infancy stage is the second fastest period of physical development in the lifespan, second only to the prenatal stage. Birthweight doubles by six months and triples by twelve months. The size of an infant's head decreases in proportion from 1/3 of the entire body at birth, to 1/4 at age 2, to 1/8 by adulthood. At birth, the neonate's brain is 33 per cent of its adult size but only 25 per cent of its adult weight. By the end of the second year, the brain weighs about 75 per cent; by puberty, it weighs nearly 100 per cent of that of an adult brain. During the first year, an increase in the level of body fat will occur. This 'baby fat' allows body temperature to be maintained but as the baby grows and begins to build muscle, this baby fat will begin to disappear. Muscles account for about 25 per cent of weight at birth. No new muscles develop after birth, however, there is an increase in muscle thickness and length. In the first 18 months, muscle mass increases at twice the rate of bones.

During infancy, body proportions also start to change, reflecting the **cephalocaudal** pattern of development, where development occurs from the head downwards. Bones continue to ossify during the first year; they increase in size and weight and harden further to enable the child to support its own weight, stand and walk by around the age of one.

Changes to systems

The system of nerves that transmit messages to and from the brain and between brain cells becomes more complex and a fatty material called myelin allows messages to be transmitted more rapidly and efficiently. The senses continue to develop and, although vision is still largely blurry, the infant will soon begin to recognise familiar faces and sounds.

FIGURE 9.23 By the end of their first year, many infants can support their own weight.

At birth, a baby has a full set of 20 primary teeth consisting of 10 in the upper jaw and 10 in the lower jaw hidden within the gums. These primary teeth are also known as baby teeth, milk teeth or deciduous teeth. The breaking of a tooth through the gumline is called 'eruption' and in babies, this can also be called 'teething'. The timing of tooth eruption differs from child to child and may vary from the first tooth as early as a few months old, to as late as 12 months old or more. Generally, a baby's first tooth comes through the gum between 6 to 9 months of age and a full set of 20 primary teeth should be present in the mouth by 3 years of age.

Newborn babies have around 300 bones, some of which are made entirely or partly of pliable, flexible cartilage to allow a baby to be less prone to breaks as they are growing and learning to crawl, walk and run. Many of these bones fuse together as the body matures and adults have only 206 bones. The leg bones, femur and tibia, of a 3-year-old child are half their eventual adult length.

Sleep is very important for the developing infant; therefore, establishing a bedtime routine is important. During sleep, a baby's brain cells lay down important connections and pathways that enable all learning, movement and thought. They are the keys to a baby's understanding of everything they see, hear, taste, touch and smell as they explore the world.

Motor skill development

Reflexes are automatic reactions to stimulation that enable infants to respond to the environment before any learning has taken place. For instance, babies automatically suck when presented with a nipple, grasp at a finger that is pressed into their hand, and startle when exposed to loud noises. Reflexes are gradually

replaced by controlled movements as motor skills develop. A newborn infant does not have much control over its body but will soon learn to lift its head and roll over. At around six months, infants start crawling.

Motor development follows the **proximodistal** pattern. An infant reaches for a toy by using shoulder and torso rotation to move the hand closer to the object. A pincer grasp — where the thumb and first finger are used — is developed. An infant can place objects into a container and take them out and begin to do more functional activities, such as hold a spoon or turn pages in a book. In childhood, the elbow and wrist will be responsible for the main movements. By the age of one, the infant can support its own weight and many infants can stand and walk. By age two, they can usually throw and kick a large ball.

9.5.2 Social development

Relationships

The family is the most significant influence on social development at this stage of the lifespan. The infant is totally dependent on its parents or other caregivers and will learn certain social skills by observing these people.

Communication skills

The infant begins to smile at around six weeks, and after around six months will begin to recognise the facial expressions of others, such as a smile or a frown.

Behaviours

As infants develop and their motor skills improve, play forms an important part of interaction and social development. They enjoy games and become increasingly responsive to them. Separation anxiety can begin at around eight months old, as a baby starts to become aware of themselves and who other people are. An infant may hide their face or react strongly when a parent leaves for work. An infant will start to mimic behaviors, such as waving and talking on the phone, and communication and social interaction will mean behaviours such as waving goodbye begin. At around one year of age, it is normal for some children to appear shy or nervous around strangers. They will probably enjoy being around and observing other children, but they are unlikely to play with them. They may cry if someone touches their favorite toy, and they may snatch toys from others as they haven't discovered empathy for others' feelings yet and are unlikely to share. By the age of three, many are beginning to understand about turn-taking and sharing. An 18-month-old may be able to say thank you but not necessarily grasp the true meaning of the word. By 2 1/2, children can link the word to the concept to display manners.

9.5.3 Emotional development

Emotional development also revolves around the family at this stage of the lifespan. One of the first signs of emotional development is when the hurt or distressed infant can be comforted by its caregivers.

Experiencing a range of emotions

Emotional attachment is formed with the caregivers within months and this helps the infant to feel secure, safe and loved. It also helps to build trust. The emotional bond between caregivers and the infant may be so strong that the infant may become distressed when held by a stranger or when a caregiver leaves the room. Separation anxiety usually peaks between the ages of 9 and 18 months and fades before the second birthday. Stranger anxiety is a reaction of distress when an infant encounters a stranger. Fear may be shown when confronted by unfamiliar things such as a clown or a dog.

Emotional attachment

Breastfeeding promotes the social and emotional attachment between mother and child. The secretion of the maternal hormones prolactin and oxytocin encourages the development of a maternal bond with the child. Oxytocin plays a role in counteracting stress, which allows both mother and baby to feel comfortable and relaxed.

FIGURE 9.24 Breastmilk can supply more than half the nutrients required by the child between six and twelve months of age, and up to a third of the nutrients needed between one and two years of age.

Learning appropriate ways of expressing emotion

By eight months, the infant can express anger and happiness, and may become frustrated if interrupted in their activities (e.g. when playing games). This expression of frustration may result in tantrum-throwing in later months. By the age of 12 months, the infant becomes sensitive to approval from parents or carers and may become upset or distressed if approval is not given.

Developing self-concept

Babies do not have the understanding that they exist as a separate person from their caregivers until they are around nine months old. At this stage, babies may begin to experience separation anxiety when they are apart from their caregivers. Toddlers become more self-aware and relationships with caregivers continue to play a vital role in developing a sense of self. Toddlers can now sense how others feel about them, which influences how they feel about themselves. As they become more capable and more aware of themselves as individuals, their self-confidence in their own abilities grows. Their sense of self is concrete and based largely on what they can see and do. Preschoolers become more independent and see themselves as 'able to do things'. They have learned that their minds are separate from others', and that their thoughts and feelings may be different from those around them.

9.5.4 Intellectual development

Knowledge and memory

From the time of birth, all senses are working (although they become more acute over time) and the baby is capable of learning. Sight, smell, hearing, touch and taste are how the baby understands the world around him or her. Many infants collect information around them by putting objects into their mouths. This is often where they learn about concepts such as hard, soft, bitter and sweet. This behaviour will often change as the infant develops and starts to use its other senses.

Within months, the infant will recognise its name and will respond when called. Over time, this word–object association progresses, and the infant will begin to recognise the names of favourite people, toys, other objects and basic colours. They will use simple gestures, such as shaking their head for 'no' or waving for 'bye-bye'.

For a child to learn about people, places and things, they need to be exposed to them, as every new interaction gives them information about the world and their place in it. Early infancy also signifies an emerging understanding of cause and effect. Infants will begin to associate certain actions with particular outcomes. For example, if they cry, they get attention. If they reach for someone, that person may pick them up. If they kick their legs around, their caregivers might play with them.

Language

As language develops, infants can interact better with those around them. Language development is rapid during infancy. A three-month-old will make speech-like sounds ('goo' and 'gaa') and will be able to say a couple of basic words by the first birthday ('dada' or 'mumma'). The development of language occurs very quickly after this point. This allows parents and carers to more easily guide the social development of their infant. By the end of infancy, the individual can say around 150–300 words, although there is still confusion in context and pronunciation. By 18 months, the infant can imitate and pretend in play activities. By observing others, the infant learns a lot about the world around it. Infants may imitate talking on a phone or having a dinner party.

Reading aloud is important to building a child's vocabulary and boosting their imagination and language skills. When parents and other caregivers talk and interact with children in their first language, it helps them to develop the ability to think and express themselves. Children learn language quickly and easily through hearing and singing songs, having stories told or read to them, repeating rhymes and playing games.

Attention

The attention span of an infant is short and may last only a matter of seconds and certainly no longer than a minute for a single action type of activity, for instance playing with a toy. The infant may give extra attention to games and objects that it finds interesting, but only for very short periods of time. In other words, any new activity or event will distract an infant.

Thought patterns and problem-solving

At around six months of age, the infant can enjoy basic games such as peekaboo (figure 9.25). This game reflects the process through which an infant begins to differentiate themselves from their primary caregiver. It requires many new skills such as the ability to compare themselves to others, to perceive differences and likenesses, to remember and to display a variety of new emotions.

FIGURE 9.25 The level of intellectual development experienced during infancy contributes to the joy many infants get out of playing peekaboo.

At around six months of age, most infants have not grasped the concept of **object permanence**. In the mind of the infant, an object that is out of sight no longer exists. Therefore, a toy that is placed in a cupboard no longer exists. This contributes to the joy that most infants get out of playing peekaboo. As the infant develops intellectually, they begin to understand that, although a person or object cannot be seen, it still exists. They can create an image of the person or object in their mind's eye, and with it all the memories of how they sound, feel and smell. They can feel the security of the object or person's presence, while yet maintaining a separateness that is now their 'self'.

All infants need access to a variety of simple play materials that are suitable for their stage of development and learning. Water, sand, cardboard boxes, wooden building blocks, and pots and lids are just as good for facilitating an infant's play and learning as toys bought from a shop. Sometimes it is helpful to give toys and activities that are beyond an infant's abilities to encourage their development. When an activity doesn't come easily to an infant they have to work out a new way to accomplish it, which develops their problem-solving ability.

Resources

Weblink Raising Children — babies and toddlers

9.5 Activity

Use the **Raising Children — babies and toddlers** weblink in the Resources tab to create a timeline or infographic of development in infancy.

9.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. When does the infancy stage of the lifespan begin and end?
2. Describe the pattern of growth during infancy.
3. List three significant characteristics for each type of development during the infancy stage:
   (a) physical
   (b) social
   (c) emotional
   (d) intellectual.

9.5 Exercise 2 APPLY your knowledge

1. Explain why a simple game of peekaboo is such fun for infants and how it can show important characteristics of development.
2. Discuss why a set of animal-shaped finger puppets would be a good gift to enhance the development of a two-year-old infant.

studyON

9.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.6 Development in early childhood

KEY CONCEPT Understanding the physical, social, emotional and intellectual development in early childhood

Early childhood lasts from the second birthday until six years of age, typically the preschool years. Although not long in years, significant development occurs during early childhood. Preschool-aged children need opportunities to develop fine motor skills as well as activities that will develop a sense of mastery and encourage creativity. Encouragement of language through talking, being read to, singing and experimentation with pre-writing and pre-reading skills can be promoted. Parents and carers need to facilitate opportunities to learn cooperation, helping, sharing and making choices as well as encouragement to develop self-control, cooperation, persistence and self-worth.

9.6.1 Physical development

Growth

Early childhood is characterised by slow and steady growth. Although the rate of growth is variable, height increases by around 6 centimetres per year and weight by around 2.5 kilograms per year. Bones continue

to lengthen and ossify during early childhood, resulting in the increases in height experienced. Body proportions change during early childhood, and the limbs and torso become more proportionate to the head. Body-fat levels also decrease, giving the child a leaner body. Brain growth slows down in the second year and reaches 75 per cent of adult size at age three and 90 per cent of adult size by age five. During early childhood, children's proportions change — from 3–5 years all children become less toddler-like and less top heavy as growth takes place in the trunk and legs.

Changes to systems

The first set of teeth is complete by the third year.

Motor skill development

In early childhood, the large muscles develop extensively, particularly leg and arm muscles, and motor skill development continues at a rapid rate. Gross motor skills increase and the walking style becomes more fluid and refined. The child can climb stairs but will still need to place both feet on each step until towards the end of early childhood. Kicking, catching and throwing skills also develop, and the child might also learn how to skip. Coordination improves, allowing the child to pedal and steer a tricycle. Fine motor skills progress, and the child can learn to manipulate buttons on clothing (figure 9.26), hold crayons, use scissors and even tie shoelaces. Because of these activities, left- or right-handedness starts to appear in certain activities.

Being physically active is very important for young children. Movement develops their motor skills, helps them think and gives them an opportunity to explore their world. A child needs plenty of opportunities for active play, both inside and outside.

FIGURE 9.26 As children gain greater control over their body, more complex activities such as doing up buttons can be achieved independently.

FIGURE 9.27 Being physically active is very important for young children.

9.6.2 Social development

Relationship and communication skills

The family remains the primary social contact during early childhood and is responsible for many achievements a child makes in social development. The child begins participating in a wider range of family routines, such as attending social functions, eating at the table and helping with the shopping. Communication skills and acceptable social behaviours increase as a result of these experiences.

As young children grow, they need opportunities to learn and socialise with other children. The child may attend a playgroup, kindergarten or childcare centre, and this provides many opportunities to further develop social skills such as sharing and taking turns. As the child becomes accustomed to spending short periods of time away from the family, independence starts to develop. The child may start wanting to do things for themselves, such as dressing or washing, although they may not be completely successful.

Behaviours and social roles

Many social skills are learnt about sharing and taking turns through play. This may occur with siblings and parents at home, and also with other children at childcare or playgroup. Through experiences such as these, the infant also begins to learn culturally acceptable behaviours such as listening to parents and other caregivers and not hitting others. Social roles are also imitated such as pushing a pram with a doll in it.

FIGURE 9.28 Play takes many forms and is a great way of increasing social development.

Behaviours such as eating with a knife and fork are established during early childhood, but they will be refined over time. Children at this age like to be accepted by others and may behave in a way that brings attention to them. This can include showing off or performing for family and friends.

Play is still an important aspect of social development, although it is more advanced than in infancy (figure 9.28). Children may have a friend they particularly like to play with and some will create an imaginary friend. Make-believe play also assists the child in learning roles and expected behaviours.

9.6.3 Emotional development

Experiencing a range of emotions

Emotional development continues to occur at a fast pace during early childhood. Play often gives children a way of expressing their feelings. Children take pride in their achievements and may want to show them off to everyone. As a result of enjoying positive feedback from others, they may become jealous when another child receives attention.

Learning appropriate ways of expressing and communicating emotions

The emotional development of a two-year-old is quite different from that of a six-year-old. A child will begin to develop a sense of empathy and may care for people who are crying or upset. Yet their way of dealing with emotions is still in its early stages, and children may use physical violence to express their frustration. This is particularly common with other children or siblings. Play often gives children a way of expressing their feelings. Children's moods can change quickly during this stage, as they often do not have the skills required to control their feelings. As a result, they can switch from being happy to being upset and then happy again in a very short period.

Developing self-concept

Children begin to develop an identity that will continue to form for years to come. They learn to see themselves as being separate from others and begin to associate certain things with themselves such as ownership of a toy.

9.6.4 Intellectual development

Language

Learning new words and how to use language occurs fairly rapidly during this stage and is a key part of the child's intellectual development. By the age of five, a child knows approximately 1500–2500 words.

Knowledge, memory and attention

As interest in the world around them increases, children begin to question many aspects of their environment. They ask parents or caregivers 'why?' and like to share their knowledge with others about colours, objects and animals. As their attention span lengthens and knowledge of language increases, children can remember and follow basic instructions such as getting a toy from the bedroom, bringing it back to the lounge room and sitting in a designated place with it.

In the first years of early childhood, the child can classify objects based on one aspect such as colour. For example, they can separate orange blocks from green blocks, but find it more difficult to classify items according to multiple aspects such as colour and size. These more complex skills develop over time.

Thought patterns and problem solving

Children in this lifespan stage may learn to write basic letters and read basic books. They can also learn to count to 10 or 20, although this is often memorised without really understanding the formation of numbers. Abstract thought and prediction of the outcome of events is still difficult, and children are more comfortable thinking about objects they have already encountered.

on Resources

Weblink United Nations Convention on the Rights of the Child

9.6 Activity

Access the **United Nations Convention on the Rights of the Child** weblink in the Resources tab. Select four Articles from the Convention and create a concept map of the resources that a parent or caregiver would require to uphold each Article.

9.6 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. When does the early childhood stage of the lifespan begin and end?
2. Describe the pattern of growth during the early childhood stage.
3. List three significant characteristics for each of the following types of development during the early childhood stage:
   (a) physical
   (b) social
   (c) emotional
   (d) intellectual.

9.6 Exercise 2 APPLY your knowledge

1. Carolyn is four years old and lives in rural Victoria with her mother, father and three older brothers. Her father runs their farm and her mother is a stay-at-home mother. Her brothers all go to school so, for most of the day, it is just Carolyn and her mother at home. Carolyn's physical development has been very slow, and her mother is worried because Carolyn is significantly smaller than other children her age. To assist with her social development, Carolyn's mother takes her to a local playgroup once a week.

(a) Describe the physical development Carolyn would be experiencing at this stage of her life.
(b) i. What is the average growth during this stage of the lifespan?
ii. Explain why it is important to use these figures as averages only.
(c) Identify the factors that may affect Carolyn's social development.
(d) Explain ways that Carolyn's slow physical development might affect other dimensions of her development both in the short and long term.

studyON

9.6 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.7 Early life experiences and the intergenerational nature of health and wellbeing

KEY CONCEPT Understanding intergenerational health and wellbeing

Health and wellbeing are considered to have an **intergenerational** impact. This means that the health and wellbeing and development of one generation influences the health and wellbeing and development of the next. For example, research indicates that children born to mothers with high levels of stress hormones during pregnancy are more likely to become addicted to nicotine as adults and children of mothers who smoke during pregnancy have higher rates of obesity and poorer cardiovascular health decades later. A healthy mother starts a cycle of intergenerational health.

FIGURE 9.29 An intergenerational impact occurs as the health and wellbeing and development of one generation influences the health and wellbeing and development of the next.

It also means that an individual's early life experiences are linked to their health and wellbeing and development in the adult stage. For example, risk factors such as low birthweight or stress experienced in early life can have effects that accumulate over time to create adult chronic disease. The prenatal stage, infancy and childhood can set us on a path towards or away from good health and wellbeing and optimal development. Recognising that experiences in early life have an impact on later health and wellbeing and development can guide parents to make positive decisions about their children's upbringing.

Resources

Teacher-led video Intergenerational health (tlvd-0274)

CASE STUDY

Epigenetics: how your life could change the cells of your grandkids

What you experience in your lifetime can modify your DNA, and these changes can be passed down through the generations. We explain what the new science of epigenetics means for your children and grandchildren.

Everyone's heard of the genome: that double helix DNA code that is uniquely yours, unless you happen to have an identical twin. But there's another layer of complexity responsible for creating us — and that's the epigenome.

Your epigenome sits in your cells with your genome. It's a set of instructions that decides which bits of your DNA are activated, or which genes are switched on or off.

While every one of us has one unique DNA code, we all have many epigenomes because every different type of cell in the body — in your skin, fat, liver and brain — has its own epigenome.

The science of epigenetics is just getting started, but promises to deliver big changes to the way we treat disease and understand heredity.

Making music with your DNA

If your DNA is the unique 'song of you', your epigenomes are the audio engineers that decide how that music will be played — which bits are loud, or edited out, whether the melody is dominant or maybe the drums are lost altogether.

Each of your audio engineers takes the same set of musical notes but creates their own unique production. Similarly, in our bodies our epigenomes manipulate our DNA to create different types of cells.

Throughout your life, your DNA (the 'song of you') stays constant, but your epigenomes (the audio engineers) are more fluid — they change as we develop (such as during puberty) but also due to a host of other reasons that scientists are just starting to understand.

These epigenetic changes affect our cells and how they function and therefore the health of our bodies — both positively and negatively.

...

How can our lifestyles change our epigenome?

Epigenetic changes occur throughout our lives, in fact a degree of adaptability seems to be required for normal human health.

We know that smoking, alcohol consumption, diet, physical activity, obesity, psychological stress, trauma, physical stress, infectious diseases, environmental pollutants, sun exposure, working night shift and countless other environmental factors can change our epigenomes. We just don't know a lot of the details about how and to what extent.

'It's complicated, and we've only really in the last five years had the tools to be able to address the epigenome,' said Professor Susan Clark, Head of Genomics and Epigenetics at the Garvan Institute of Medical Research.

Research into epigenetics is in its early days and understanding the impact of lifestyle factors on an individual's epigenome and health is tricky, mostly because it's difficult to run studies on humans for ethical reasons.

'The other challenge is that each person has one genome but multiple epigenomes, depending on the cell type. And as we age, our epigenomes age, so it's an order of magnitude more complex.'

...

How can mothers (and grandmothers) pass on epigenetic changes?

What a mother does while she is pregnant can impact on the epigenome of her developing baby. And, because a female baby's lifetime supply of eggs is created when she's growing in her mother's womb, it can also impact on these eggs, and eventually the children they may become. In this way, the activity of the pregnant mother can touch the lives of her grandchildren.

There's a very famous well-documented case where we can clearly see the impact of famine during pregnancy on a population over generations, Professor Clark said.

During WWII, the Germans cut off food supplies to parts of the Netherlands causing a famine. Professor Clark said babies born to women during this time had a lower birthweight. When those babies grew up and had their own babies, the third generation had significantly more problems with diabetes and obesity than the rest of the population.

Can fathers transfer epigenetic changes?

Fathers could transfer epigenetic changes to their children, and possibly grandchildren, through changes to sperm around the time of conception, although most of our current evidence for this comes from studies in mice and rats.

Professor Hannan and his team at the Florey Institute have shown that stress affects the epigenome of mouse sperm — and this can have an impact for more than one generation.

Physical stress in the father mice has been shown to increase anxiety in offspring, Professor Hannan said. But it's not all doom and gloom — increased physical activity in the father mice has positive effects too.

Can you heal your life (and those of your children and grandkids) through epigenetics?

Sort of. Professor Clark says while we can't change our DNA sequence, we can change our epigenome, pointing out that this is already happening in some areas of cancer treatment.

'There's epigenetic therapy drugs that are being used in cancer that basically remodel your epigenome,' she said.

'There's lots of potential, it's an incredibly exciting area. But we need to understand a lot more about the building blocks and the functional consequences of what makes up the epigenome and how lifestyle and environment impacts on the epigenome.'

And until we know more, following a healthy lifestyle and doing the things we know have a positive impact on your health — such as eating a good diet, avoiding alcohol, doing exercise, and keeping stress to a minimum — is a good idea.

So for now, eat your broccoli and watch this space!

Source: Andrews, K 2017, 'Epigenetics: how your life could change the cells of your grandkids', *ABC Science Friction*, 21 April, https://www.abc.net.au/news/science/2017-04-21/what-does-epigenetics-mean-for-you-and-your-kids/8439548.

Case study review

1. What is meant by 'epigenome'?
2. Explain what is meant by 'If your DNA is the unique 'song of you', your epigenomes are the audio engineers that decide how that music will be played'.
3. How can our lifestyle change our genome?
4. How can mothers and grandmothers pass on epigenetic changes?
5. Can fathers transfer epigenetic changes?

9.7.1 Body weight

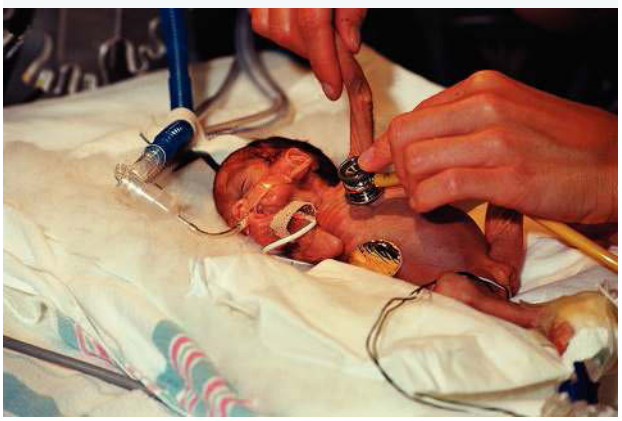
The first 1000 days between a woman's pregnancy and her child's second birthday are the most critically important in their development. An expanding body of evidence shows that what happens during this period sets the basis for a child's health and wellbeing throughout the course of their life. Studies have proved that children born of an undernourished mother will have an increased risk of premature birth and low birthweight, a weakened immune response and higher incidence of coronary heart disease, obesity and hypertension in later life.

Low birthweight

Adequate birthweight generally indicates that the body's systems have developed optimally in the prenatal stage, leading to good adaptation and decreased risk of health and wellbeing issues after birth. Low birthweight, on the other hand, may indicate that the body's systems are underdeveloped, and the risk of a range of health and wellbeing and development problems increases.

Babies are classified as 'low birthweight' if they weigh less than 2500 grams at birth. Low birthweight babies can be further classified as 'very low birthweight' if they weigh 1000–1500 grams, and as 'extremely low birthweight' if they are below 1000 grams. Babies can be born with low birthweight because they are born prematurely

FIGURE 9.30 Low birthweight can have an impact on a baby's health and wellbeing and development in a number of ways.



or have experienced some disruption to their growth within the uterus due to parental smoking or poor nutrition.

Babies born with low birthweight may have a harder time feeding, gaining weight and fighting infection. Because they have so little body fat, low birthweight babies often have difficulty staying warm in normal temperatures. They may be more likely than normal weight babies to have certain health conditions later in life (see table 9.5). Latest data indicates that 1 in 20 Australian babies was low birthweight. Babies of Indigenous mothers were significantly more likely to experience low birthweight at a rate of 1 in 10; however, this trend is reversing.

TABLE 9.5 The impact on health and wellbeing and development of very low or extremely low birthweight

Impact of very low or extremely low birthweight on health and wellbeing	Impact of very low or extremely low birthweight on development
• Reduced lung function • Increased risk of bronchiolitis (an inflammation of the small airways in the lungs) • Feeding difficulties leading to lack of nutritional intake • Increased risk of bradycardia (a slowing of the heart rate) • Apnoea (a short-term suspension of breathing) • Jaundice (yellowing of the skin due to the immature liver being unable to process the compound bilirubin, which is found in the blood) • Increased probability of a lengthy hospital stay following birth • Increased risk of asthma during childhood	• Reduced muscle bulk • Reduced coordination • Poor sucking and swallowing reflexes • Greater likelihood of impaired growth and motor skill development • Greater likelihood of impaired learning capabilities • Damage to the retina of the eye resulting in sight difficulties including blindness • Increased risk of cerebral palsy • Increased risk of deafness

Overweight

Early childhood is characterised by a slowdown in the growth rate, which may result in a less reliable appetite. Children have small stomachs, so it is difficult for them to achieve their daily nutritional requirements with only three meals per day. Grazing and snacks might therefore be necessary.

Eating patterns in early childhood should ensure consumption of foods from all five core food groups and a variety of foods from within each group. The emphasis should be on healthy family foods and an environment around eating that encourages healthy food behaviours.

Childhood obesity rates have increased significantly over the past two decades. A child is more likely to make healthy food choices and be active if they see caregivers eating healthily and being active. A dietary intake consisting of a large proportion of saturated fats and simple carbohydrates, or the overconsumption of carbohydrates, fats and protein, increased screen time, busy family lifestyles and lack of outdoor space all make it easy for young children to overeat and harder for them to be active.

FIGURE 9.31 Obesity during childhood is a strong predictor of adult obesity and the chronic diseases of diabetes and cardiovascular disease.

About 80 per cent of obese youth will become obese adults. The earlier an individual is exposed to obesity, the earlier they may see the onset of complications, including type 2 diabetes, cardiovascular disease, metabolic syndrome and

cancer. Research from The Netherlands indicates that being overweight during childhood triples the risk of developing depression in later life. Table 9.6 outlines the short- and long-term consequences of childhood obesity on health and wellbeing and development.

TABLE 9.6 Consequences of childhood obesity on health and wellbeing

Short-term consequences on health and wellbeing	Long-term consequences on health and wellbeing
• Physical discomfort • Bone and joint problems • Asthma or shortness of breath during exercise • Tiredness/lethargy • High blood pressure • Abnormal cholesterol levels • Interrupted sleep due to breathing difficulties (sleep apnoea) • Social and psychological distress as obese children often experience discrimination, bullying and teasing by their peers • Low self-esteem • Poor peer relationships	• Twice the risk of developing cardiovascular disease (high blood pressure, angina, heart attack) in adulthood • Three times the risk of developing type 2 diabetes in adulthood • Increased risk of premature death • Poor self-esteem can lead to an increased tendency to smoke and drink alcohol, resulting in health and wellbeing conditions such as lung cancer, cardiovascular disease and cirrhosis of the liver

9.7.2 Early relationships

Attachment is a strong, long-lasting bond between a baby and his or her caregiver. A secure attachment develops in response to consistent and empathetic love and care in the first months of a baby's life. It builds a foundation for a sense of security, safety and good coping skills.

FIGURE 9.32 Parents or carers with positive mental and emotional health and wellbeing are better able to foster a healthy parent–child relationship.

Attachments formed in infancy can support social, emotional and mental health and wellbeing throughout the lifespan and influence:

- the success or failure of future intimate relationships
- the ability to maintain emotional balance
- the ability to enjoy being ourselves and to find satisfaction in being with others
- the ability to rebound from disappointment and misfortune.

When a young child is protected by supportive relationships with adults, they learn to cope with everyday challenges such as encountering new people or new situations or the frustration and pain of a minor fall. With loving care their stress response system returns to normal after a difficult event. Even with more serious difficulties, such as a frightening injury or parental divorce, a child surrounded by caring adults who help them to adapt is protected against the potentially damaging effects of abnormal levels of stress hormones. However, when frequent or prolonged adverse experiences, such as extreme poverty, maternal depression or family violence is experienced without adequate adult support, excessive cortisol disrupts the development of the brain. Problems created by stressful environments in childhood include poor school readiness, poor literacy and communication, and social health and wellbeing issues. Problems created in

adulthood include mental health problems, aggression and antisocial behaviour, poor literacy and the effects of substance abuse.

Parenting practices

Parenting practices refer to the way in which parents or carers interact on a daily basis with their child and how they model behaviour. It incorporates the type of discipline that is used and the way in which the parent/carer responds to the child in different situations. Some children may live in situations where the parents/carers use abuse as a part of their parenting practices. Children who are abused by their parents/carers are at greater risk of emotional and behavioural problems when compared with other children.

Short-term effects of child abuse include:

- having sleeping difficulties
- regressing to earlier stages of development, such as bedwetting and thumb sucking
- being anxious or fearful
- displaying aggressive or antisocial behaviour or isolating themselves
- not attending social or school events
- becoming a victim or perpetrator of bullying or being cruel to animals
- suffering from stress-related illnesses such as headaches and stomach cramps
- displaying speech problems such as stuttering.

The long-term effects of exposure to abuse may result in the child learning to solve problems using violence. Witnessing violent behaviours of adult role models, children may grow up to behave in destructive ways in their own adult relationships. Parents or carers with positive mental and emotional health and wellbeing are better able to foster a healthy parent–child relationship than those with poor mental health and wellbeing. For example, parental warmth means interactions between the parent and child are characterised by affectionate behaviours, interest and involvement in the child's activities, responsiveness to the child's moods and feelings, and positive expressions of approval and support. This supports better social health and wellbeing through successful interpersonal relationships with peers at school, at work and with friends and partners.

9.7.3 Early environment and learning opportunities

Stress during pregnancy releases cortisol. In the first days of pregnancy, cortisol suppresses the mother's immune system, preventing the mother's body from attacking the foetus, and helps regulate blood flow between the placenta and the foetus. A pregnant woman with high stress, and therefore cortisol levels consistently higher than normal, has greater risk of premature birth and having a baby who displays a much higher sensitivity to stress. Research indicates that as these babies grow from infancy to early childhood, they may exhibit heightened levels of anxiety compared with other children, such as being scared of going to school.

The human brain begins forming just three weeks after conception, but in many ways brain development is a lifelong journey. At birth, babies have approximately the same number of neurons as an adult but approximately ten times fewer connections. From birth to age three the number of connections multiplies by 20. A process of 'pruning' selectively eliminates connections that are not used. This process of pruning helps to structure the brain's architecture into organised efficient networks, resulting in every child's brain being unique depending on individual experiences. Repeated use and stimulation strengthens connections and contributes to the connectivity and efficiency of the networks that support learning, memory, and other cognitive abilities.

It has been shown that children should have at least sixty minutes per day of unstructured play when they entertain themselves, either alone or with other children, without adult or technological interference. This is when they use imagination and creativity and practice decision-making and problem solving.

Many developmental experts believe that the best toys are the one with the fewest rules. By playing, the toddler has something to learn about the world.

In the UK, the Association of Teachers and Lecturers reports that pervasive tablet use among preschool-age children is producing development outcomes including developmental delays in attention span, fine motor skills and dexterity, speaking and socialisation. UK research also indicates rising numbers of infants lack the motor skills needed to play with building blocks because of an 'addiction' to tablet computers and smartphones.

FIGURE 9.33 Stimulating experiences and positive relationships with caregivers foster optimal brain development.

Parents or carers who are preoccupied with a daily struggle to ensure that their children have enough to eat and are safe from harm may not have the material resources, information or time they need to provide the stimulating experiences that foster optimal brain development. Infants and children who are rarely spoken to, who are exposed to few toys, and who have little opportunity to explore and experiment with their environment may fail to fully develop the neural connections and pathways that facilitate later learning.

An aspect of the parenting role is to provide adequate play space and an assortment of play materials. Play has benefits for emotional, social, intellectual and physical development. The emotional benefits of play in childhood include a reduction in fear, anxiety, stress and irritability. Play can create joy, self-esteem and mastery. The social benefits of play in childhood include increased empathy and sharing. It improves relationships and attachment. The physical benefits of play include increased efficiency of immune, endocrine and cardiovascular systems, and increased agility, coordination, balance, and fine and gross motor skills. Intellectual benefits include creativity, problem solving and language skills.

If a child has their safety needs met, they can focus their attention on play and exploring, allowing their brain to take in all the experiences around them. If, however, their needs are not met consistently and pleas for comfort are usually ignored or met with harsh words, the infant will continue to focus their energies on ensuring that their needs are met. They will have more and more difficulty interacting with people and objects in the environment, and their brain is more likely to shut out the stimulation it needs to develop optimal intellectual and social skills.

When there is no routine for eating and sleeping, and comforting occurs unpredictably, sleep–wake patterns and ability to settle do not develop well. This means there is less likelihood that the baby will form healthy routines and the ability to self-regulate. Secure, stable housing with quiet, predictable sleeping areas for babies are important for promoting optimal development in childhood and through to adulthood. Research suggests that inadequate amounts of sleep lead to disruptive behaviour patterns, diminished intellectual performance and a greater risk of obesity in childhood and adulthood.

on Resources

Digital documents Healthy Mothers, Healthy Babies worksheet (doc-31677)

Weblink Healthy Mothers, Healthy Babies

9.7 Activity

Access the **Healthy Mothers, Healthy Babies** weblink and worksheet in the Resources tab, then complete the worksheet.

9.7 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain health and wellbeing as an intergenerational concept.
2. Briefly explain why low birthweight babies are more likely to experience ill-health than those of normal body weight.
3. Discuss four ways obesity in childhood could affect health and wellbeing later in life.
4. Discuss three ways that early relationships can affect health and wellbeing and/or development later in life.
5. Discuss two ways that early learning experiences such as play can affect health and wellbeing and/or development later in life.

9.7 Exercise 2 APPLY your knowledge

Evidence suggests that families that experience social disadvantage decrease a child's ability to gain optimal health and wellbeing, as well as the intellectual, emotional and social skills needed for optimal transition from childhood to youth and to become gainfully employed, engaged individuals, and caring partners and friends when they transition to adulthood. Social disadvantage therefore has an impact on health and wellbeing that extends throughout an individual's lifetime, within families and across generations.

Social disadvantage includes:

- lack of access to material resources and employment
- reduced education and poor skill development
- reduced levels of health and wellbeing
- poor social connections
- low sense of community
- low personal safety.

1. Justify one action that could be taken by the government or community to support families in overcoming the impact of social disadvantage on a child's health and wellbeing in the first two years of life.
2. Justify one action that could be taken by the government or community to support families in overcoming the impact of social disadvantage on a child's health and wellbeing prior to beginning school.

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9.7 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

9.8 Topic 9 review

9.8.1 Key skills

KEY SKILL Analyse factors to be considered and resources required for the transition to parenthood

To demonstrate this skill, it is essential to analyse what someone would need to consider if they undertake the role of parent. You also need to be able to examine in detail the needs of a child and to explain the importance of social and emotional support and resources in assisting parents with this role.

The ability to use specific and relevant examples to demonstrate this understanding is expected. When outlining the parental responsibilities and the availability of social and emotional support and resources, it is important to remember the various needs of a child. Consider the following example, which is a discussion of considerations required for the transition to the parenting role.

Parenting is the process of promoting the development and health and wellbeing of a child from infancy to adulthood. When individuals are thinking about parenthood they must consider whether they can meet a child's needs.[1] These include physical (food, safety and shelter), emotional (security, stability), social (love, attention and achievement) and intellectual needs (mental stimulation and learning opportunities).[2] They also need to consider whether they are ready to make any needed changes in their lifestyle in order to have a healthy pregnancy and healthy child. Being prepared to eat a healthy diet, and avoid smoking and alcohol are some of the changes that may need to be made when considering the parenting role.

A further consideration relates to their level of support from family and friends and whether they are ready to accept responsibility for promoting an optimal environment for the development of their child. To undertake the parenting role, social support is required. This refers to the informal, emotional or practical help that parents receive from relatives, friends, co-workers or neighbours. Parents with higher levels of social support are better able to cope with stress and be resilient. Parents also require emotional support. This is the feeling that others understand your needs and will try to help you. Having people who are willing to share ideas and advice and talk things over, particularly those who are in the same position, increases the ability to cope with problems related to parenting.[3]

When considering the parenting role, individuals should be aware of their level of family resources, such as time, income, knowledge and housing as well as access to government and community resources such as antenatal care.[4]

1 A consideration to be made about the role of parent is identified.

2 The types of needs are identified.

3 Further considerations about the role of parent are identified and the importance of social and emotional support is explained.

4 A range of resources is discussed.

Practise the key skill

1. 'Deciding on how many children to have seems harder today than ever. People are distressed about the future for reasons like climate change, questions of affordability, whether their partner will stand by them, and whether becoming a parent will affect their employment prospects.' Discuss the considerations in becoming a parent.

KEY SKILL Explain factors that influence development during the prenatal and early childhood stages of the lifespan

To demonstrate this skill, it is necessary to have an understanding of the impact of factors on health and wellbeing and development. The ability to use relevant examples to demonstrate this understanding is expected. Examples include maternal diet, the effects of smoking and alcohol during pregnancy, and early life experiences.

When explaining how factors influence development during these stages, it is important to remember the following:

- It is important to be able to describe the factor.
- When explaining the influence of the selected factor, explain the way in which it influences development during the prenatal stage or health and wellbeing and development in the infancy and/or childhood stages.

It is important to read the question carefully to determine which lifespan stage is the focus and if there are any limitations on the factors that can be discussed.

Consider the following example in which the influence of maternal nutrition is explained with regard to development during the prenatal stage of the lifespan.

During pregnancy, foods that are included in the maternal diet must include a variety across and within the five core food groups to supply sufficient nutrients for optimal foetal development.[5] Iodine is required in greater amounts during pregnancy to promote optimal brain and nervous system development in the foetus.[6] If iodine is deficient during pregnancy, consequences for physical development include stunted growth and can include retardation.[7] Implications for intellectual development later in the lifespan arise, as pregnant mothers who were deficient in iodine are more likely to have children with learning difficulties.[8]

5 An explanation of the factor is provided.

6 A specific link is made between the factor and foetal development during pregnancy.

7 A second link is made between the factor and development.

8 A link is made between the factor and development during early childhood.

Practise the key skill

2. Explain how alcohol intake can influence development during the prenatal stage of the lifespan.
3. Outline two aspects relating to early life experiences and explain how each can influence children's development.

KEY SKILL Explain health and wellbeing as an intergenerational concept

To demonstrate this key skill, an understanding of the meaning of intergenerational health and wellbeing is required. This will be important to explaining why parents need to provide an environment for optimal prenatal development. The ability to use relevant examples to demonstrate this is expected.

The factors that shape prenatal development also shape health and wellbeing and development between generations and over the lifespan. This means that parents' health and wellbeing influences the health and wellbeing of children, and conditions in prenatal development are linked to health and wellbeing outcomes later in life.[9]

9 The concept of intergenerational health and wellbeing is described.

Risk factors can be independent, but they can accumulate and interact over time. Conditions such as stress that parents encounter or tobacco smoking during pregnancy affect prenatal development by leading to low birthweight. Low birthweight is linked to later development of adult chronic diseases such as diabetes, heart disease, high blood pressure and obesity.[10]

The decisions that parents make and the resources that they have access to are important to creating an optimal prenatal environment. A pregnant woman who makes use of social support such as advice or childminding help from grandparents and friends, can reduce stress levels, and therefore have less risk of a premature birth and a baby who displays a much lower sensitivity to stress. As the baby grows from infancy to toddlerhood, they will be less likely to exhibit high levels of anxiety when faced with new experiences such as going to school.[11]

10 An example of a factor in the mother during the prenatal stage affecting the child at birth is provided and a link made to the adult stage.

11 An understanding of how the health and wellbeing of one generation influences the health and wellbeing of the next generation is shown.

Practise the key skill

The authoritarian parenting style is when parents/carers use an overemphasis on discipline and little or no opportunity for the child to make decisions. Authoritarian parents/carers can be intimidating, with an expectation of obedience and respect. Expectations are not explained but simply demanded of the child, and the parent/carer will become angry and forceful if the expectations are not met.

4. Discuss the impact that this parenting style may have on the health and wellbeing and development of a child.
5. What are the possible implications of this parenting behaviour for development later in life?

9.8.2 Topic summary

Considerations when becoming a parent

- Parenting is the process of promoting and supporting the physical, social, emotional and intellectual development of a child from infancy to adulthood.
- It is the responsibility of parents, other caregivers and family members, communities and governments to ensure that the rights that relate to a child's needs and an optimal environment for development are fulfilled.
- Children have physical, social, emotional and intellectual needs.
- Social support refers to the informal, emotional or practical assistance that parents and carers receive from relatives, friends, neighbours or the community.
- Emotional support refers to the feeling that others understand your needs and will try to help you.
- Parents/carers with higher levels of social and emotional support are better able to cope with stress and be resilient.
- Children whose needs are met and who have strong social and emotional skills are likely to become adults who find it easier to create and maintain a supportive social network. This increases the likelihood that they will engage in effective parenting with their own children.
- Resources available to parents/carers include time, energy, knowledge, Medicare, the Pregnancy, Birth and Baby helpline, and Maternal and Child Health Services.

Fertilisation and the stages of prenatal development

- Fertilisation is the process whereby the genetic material of the sperm and ovum fuse together to make a complete cell called a zygote. This process usually occurs in the fallopian tube.
- Fertilisation marks the beginning of the prenatal stage of the lifespan.
- The prenatal stage can be divided into the germinal, embryonic and foetal stages.
- Growth during the prenatal stage is the fastest of all lifespan stages.
- The germinal stage is characterised by rapid cell division.

- The embryonic stage is characterised by organ development, called organogenesis.
- Teratogens can have a large impact on the developing baby, particularly during the embryonic stage.
- The foetal stage is characterised by rapid growth.
- The placenta is an organ that facilitates the transfer of nutrients, liquids and gases from mother to baby.
- A neural tube defect is a condition that is sometimes diagnosed during pregnancy.

The role of parents in achieving optimal prenatal development

- Antenatal care is essential to monitor the health and wellbeing of the mother and baby.
- A range of risk and protective factors have an impact on both pregnant women and their unborn babies during the prenatal stage of the lifespan.
- Adequate nutrition is important in ensuring that the nutrients required for optimal health and wellbeing and development of the unborn baby are present. Deficiencies in specific nutrients such as folate and iodine can contribute to health concerns, such as spina bifida and intellectual disability.
- Parental smoking causes toxic substances to cross the placenta. This increases the risk of low birthweight, birth defects and perinatal mortality.
- Alcohol use during pregnancy can lead to foetal alcohol spectrum disorder. Foetal alcohol spectrum disorder increases the risk of premature birth, heart defects, behavioural problems and a range of physical characteristics.

Development in infancy

- Infancy is a period of rapid growth. All areas of development occur quickly during this stage.
- Physical development follows cephalocaudal and proximodistal patterns.
- The family is the most significant influence on social and emotional development.
- Language skills, knowledge and memory develop rapidly in response to sensory input, new experiences and rapid changes to brain structure.

Development in early childhood

- Physical development during early childhood is slow and steady.
- Gradual increases in height and weight are accompanied by increases in bone strength.
- As the child grows and gains strength, their motor development progresses and they become capable of more complex motor skills.
- Social development is facilitated by play and interaction with family members. Children often imitate the actions of older people as a way of learning social skills and roles.
- By the end of early childhood, the child can use a knife and fork.
- The child gains an increasing sense of self during the childhood years and may become self-conscious in certain circumstances.
- Intellectual development continues to progress and as the child ages, language skills become increasingly complex.

Early life experiences and the intergenerational nature of health and wellbeing

- Health and wellbeing over the lifespan and over generations can be shaped through exposure to risks early in life that have effects that are independent, cumulative and interact over time.
- Early life experiences that include birthweight, presence or absence of stress, relationships and environments for learning will contribute to health and wellbeing and development in infancy and childhood, and can determine the pathway to adult health and wellbeing.

EXAM TIP

When responding to questions for this topic, check carefully whether your response needs to address health and wellbeing or development.

Resources

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To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0023).

9.8 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Julian and Christie have been thinking about having a child. They both work full time and have an active social life that includes going to music venues, bars and restaurants with friends. Julian's parents live in France and Christie's parents live in the same city as Julian and Christie.

a. Outline three things Julian and Christie will need to consider before becoming pregnant. **(3 marks)**
b. Describe two risk factors and two protective factors that they need to consider to promote the health and wellbeing of their child during the prenatal stage. **(4 marks)**
c. Explain two of their newborn's needs that they will have to meet. **(2 marks)**
d. Describe two examples of social support and two examples of emotional support that will assist them in their parenting. **(4 marks)**
e. Discuss two resources that Julian and Christie can use in their parenting role to optimise the health and wellbeing and development of their child. **(4 marks)**
f. Discuss two examples that demonstrate why the early life experiences Julian and Christie provide for their child will be important to the child's adult health and wellbeing. **(4 marks)**

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9.8 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

Resources

Interactivities Crossword (int-6860)
Definitions (int-6861)

School-Assessed Coursework Unit 2 AOS 1 Outcome 1

Area of Study 1 Developmental transitions

Outcome 1

Explain developmental changes in the transition from youth to adulthood, analyse factors that contribute to healthy development during prenatal and early childhood stages of the lifespan and explain health and wellbeing as an intergenerational concept.

School-Assessed Coursework 4 online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Or, to download the assessment as a Word document, go to your eBook at www.jacplus.com.au, and go to the Resources tab.

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Digital document School-Assessed Coursework 4 (doc-30075)

10 Australia's health system

10.1 Overview

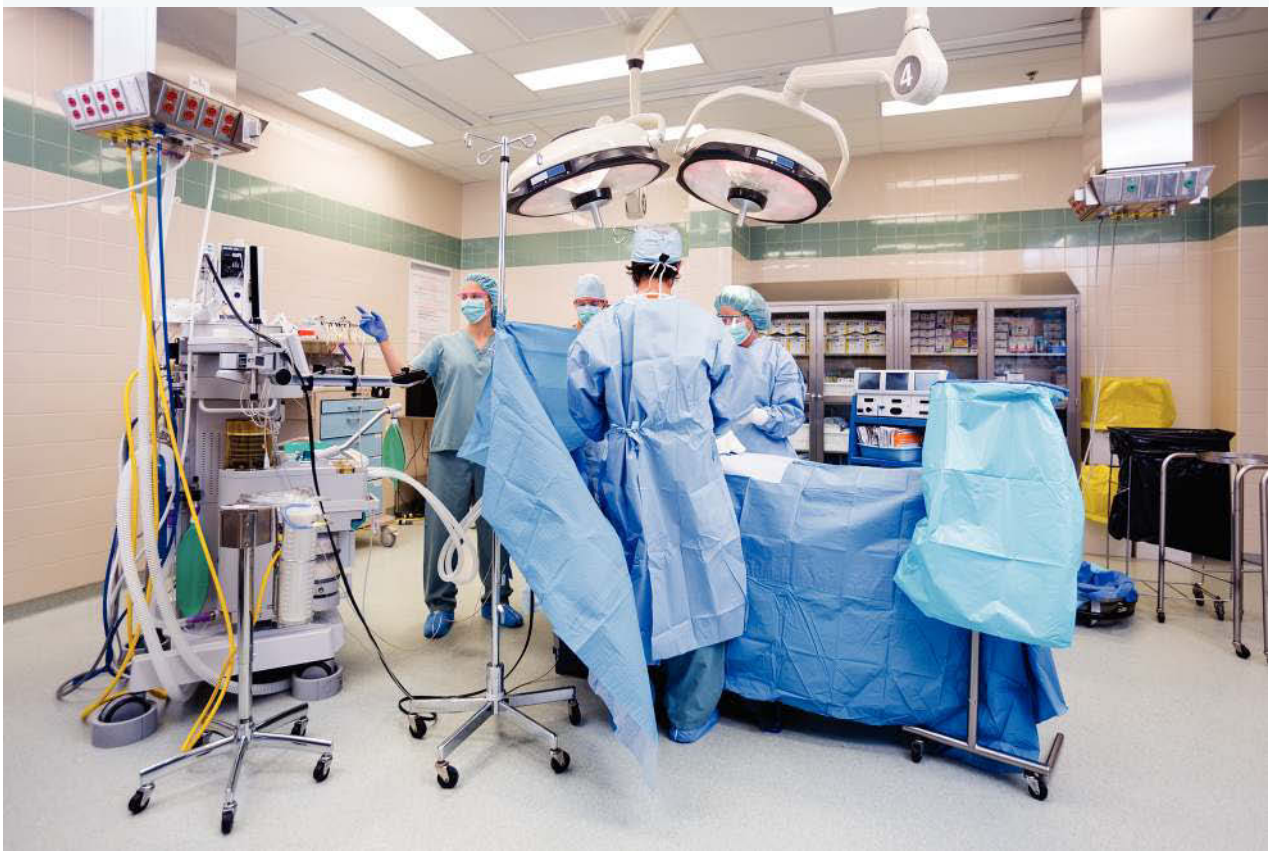
Key knowledge

- Key aspects of Australia's health system such as Medicare, the Pharmaceutical Benefits Scheme and private health insurance
- The range of services available in the local community to support physical, social, emotional, mental and spiritual dimensions of health and wellbeing
- Rights and responsibilities associated with accessing health services, including privacy and confidentiality relating to the storage, use and sharing of personal health information and data

Key skills

- Describe key aspects of the health system
- Research health services in the local community and explain which dimension/s of health and wellbeing each one supports
- Discuss rights and responsibilities of access to health services

FIGURE 10.1 Healthcare in Australia includes traditional medical services such as hospitals.



KEY TERMS

Bulk billing when the doctor or specialist charges only the Schedule fee. The payment is claimed directly from Medicare so there are no out-of-pocket expenses for the patient.
Incentive something that motivates or encourages someone to do something
Income test a determination of whether an individual or family is eligible for government assistance based on their level of income. This is sometimes referred to as means testing.
In-hospital expenses (Medicare) costs for treatment and accommodation in a public hospital
Medical confidentiality means that anything discussed between a doctor and a patient must be kept private
Medicare levy 2 per cent tax for all Australian tax payers to fund Medicare
Medicare levy surcharge an additional 1–1.5 per cent tax on high income earners who do not have private health insurance
Medicare Safety Net ensures that people who require frequent services covered by Medicare, such as doctor's visits and tests, receive additional financial support
Out-of-hospital expenses (Medicare) costs for services such as doctors, specialists, tests and x-rays
Out-of-pocket expenses costs that patients must pay themselves
Patient co-payment the payment made by the consumer for health products or services in addition to the amount paid by the government
PBS Safety Net ensures that people who spend a large amount of money on Pharmaceutical Benefits Scheme (PBS) medications receive additional financial support
Premium the amount paid for insurance
Privacy in medicine means that all information relating to a patient, including their personal details and any stored information, must not be shared
Private health insurance an insurance policy that helps pay for services not covered by Medicare
Responsibility being answerable or accountable for something within one's control
Right a moral or legal entitlement to have or do something
Schedule fee the amount that Medicare contributes towards certain consultations and treatments. The government decides what each item is worth and that's what Medicare pays
SIDS Sudden Infant Death Syndrome; deaths of babies usually up to around six months old, which have no real explanation

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10.2 Medicare and the Pharmaceutical Benefits Scheme (PBS)

KEY CONCEPT Understanding the Australian health system: Medicare and the Pharmaceutical Benefits Scheme

Australia's health system is a complex network of public and private services and providers.

Australia's health system is the **responsibility** of all levels of government — federal, state and local — as well as the private sector. It is comparable to other developed nations with regard to its structure and function, and generally provides a high level of care which ensures good health and wellbeing outcomes for Australians. Three key aspects of Australia's health system which aim to increase access to healthcare for all Australians are:

1. Medicare
2. the Pharmaceutical Benefits Scheme (PBS)
3. private health insurance.

These three key aspects will be explored in this subtopic and subtopic 10.3. Figure 10.2 shows what an average day in healthcare in Australia looks like.

FIGURE 10.2 An average day in healthcare in Australia

	$467 million is spent on health ($19 per person)
	406 000 visits are made to a general practioner (GP)
	777 000 prescriptions are filled under the Pharmaceutical Benefits Scheme (PBS)
	21 400 presentations are made to public hospital emergency departments **17 300** hospitalisations are in public hospitals **11 800** hospitalisations are in private hospitals **91 500** services are provided in public hospital outpatient clinics
	6000 elective surgeries are performed
	26 000 specialised community mental health care services are provided

Note: The 'average' day value is the year total divided by 365.

Source: Australian Institute of Health and Welfare 2018, *Australia's health 2018: in brief,* Cat. no. AUS 222. Canberra: AIHW.

on Resources

Teacher-led video Medicare and bulk billing (tlvd-0275)

10.2.1 Medicare

Medicare is Australia's universal health insurance scheme. Established in 1984, Medicare gives all Australians, permanent residents and people from countries with a reciprocal agreement (New Zealand, the United Kingdom, the Republic of Ireland, Sweden, the Netherlands, Finland, Belgium, Slovenia, Italy, Malta and Norway) access to healthcare that is subsidised by the federal government. Medicare aims to provide access to affordable basic healthcare in what is known as the public health sector. Doctors often work in private practice (especially GPs) but consultations with them are partially covered by Medicare.

FIGURE 10.3 Every Australian citizen is entitled to receive Medicare benefits. Dependent children under the age of 18 are listed on their parent's or guardian's Medicare card.

10.2.2 What does Medicare cover?

Out-of-hospital expenses

Medicare will pay all or some of the fees relating to many essential healthcare services. This includes consultation fees for doctors (general practitioners or GPs) and specialists (e.g. dermatologist, paediatrician), tests and examinations needed to treat illnesses, such as x-rays and pathology tests, and eye tests performed by optometrists.

Most surgical and other therapeutic procedures performed by general practitioners are also covered. Although most basic dental services are usually not covered by Medicare, some dental procedures can be covered, including:

- some surgical procedures performed by approved dentists
- services for some children aged 2–17.

Under the Child Dental Benefits Schedule, some children are eligible for Medicare-funded dental procedures. Medicare will provide $1000 worth of dental treatment over two years for those who qualify. In order to qualify, the individual must be eligible for Medicare and receive (or their family, guardian or carer must receive) certain government benefits, such as Family Tax Benefit Part A or Youth Allowance (forms of social security) for at least part of the calendar year.

FIGURE 10.4 Consultations with a GP are covered by Medicare.

Medicare will cover a limited number of consultations with a psychologist; however, the patient must be referred by a GP who will assess the patient and complete a Mental Health Treatment Plan.

The **Medicare Safety Net** ensures that people who require frequent services covered by Medicare, such as doctor's visits and tests, receive additional financial support. Once an individual's or family's **patient co-payments** for out-of-hospital medical expenses reach a certain level ($2093.30 in 2018), services covered by Medicare become cheaper for that individual or family for the rest of the calendar year.

In-hospital expenses

As a public patient in a public hospital, treatment by doctors and specialists is completely covered by Medicare, including initial treatment and aftercare. The cost of staying in a public hospital is also completely covered by Medicare. If an individual chooses to be admitted to a private hospital or as a private patient in a public hospital, Medicare will pay 75 per cent of the **Schedule fee** for treatment by doctors and specialists.

WHAT IS THE SCHEDULE FEE?

The Schedule fee is an amount set by the federal government for each medical service. For most general practice consultations, Medicare now rebates 100 per cent of the Schedule fee. The Medicare Benefits Schedule is a document that lists the range of services covered and the amount that Medicare will contribute to each. The Schedule fees are based on the amount that is thought to be 'reasonable' on average, for that particular service. For example, the Schedule fee for a standard GP's visit in 2018 was $37.60. Based on this contribution, every time an individual goes to the doctor for a standard consultation, Medicare will contribute $37.60. This is the amount that the patient will receive back from Medicare, regardless of how much the doctor charges.

WHAT ARE OUT-OF-POCKET EXPENSES?

As many doctors charge more than the Schedule fee, you may still have to pay a certain amount in 'out-of-pocket' expenses (a 'gap fee'). For an example of how this works in practice, a GP might charge $55 for a standard consultation. The Medicare rebate for this is $37.60, leaving a gap of $17.40 for you to pay. This is the gap or **out-of-pocket expenses**.

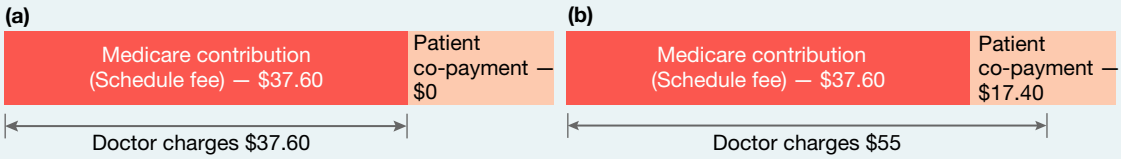
Example general practitioner's fees	
EXAMPLE: Standard consultation	**Cost**
Doctor's consultation fee	$55.00
Medicare Schedule fee	$37.60
Medicare rebate to patient (100 per cent of Schedule fee)	$37.60
Out-of-pocket expense to patient	$17.40

Unless you have been bulk billed, you used to have to pay the full consultation fee, and claim back the schedule fee from Medicare. This claim can now be made with Medicare electronic claiming, allowing you to claim your Medicare rebate when you pay your account at the doctor's surgery.

WHAT IS BULK BILLING?

Bulk billing is when the doctor accepts the Medicare benefit (the Schedule fee) as full payment for the services rendered. You don't have to pay any out-of-pocket expenses as the doctor has only charged the schedule fee (see figure 10.5). In this case, Medicare pays the doctor directly and the patient does not pay at all. Some clinics advertise that they are a bulk billing clinic, increasing access to free healthcare for all people. Other clinics may bulk bill patients who are pensioners, healthcare card holders or under 16 years of age.

FIGURE 10.5 (a) A bulk-billed GP consultation and (b) a GP consultation requiring patient co-payment



Source: www.health.gov.au

10.2.3 What is not covered by Medicare?

Medicare covers most 'clinically necessary' hospital and doctors' fees. Any cosmetic or unnecessary procedures such as breast enlargement or a 'nose job', simply for cosmetic reasons, are generally not covered. Other services not covered by Medicare include:

- costs associated with treatment in a private hospital. Medicare will pay 75 per cent of the Schedule fee for *treatment* in private hospitals but will not contribute to accommodation and other costs.
- most dental examinations and treatment. Although some children aged 2–17 can qualify for Medicare-funded dental care, most individuals are responsible for meeting their own costs associated with dental healthcare.
- home nursing care or treatment
- ambulance services.

A number of treatments that exist in addition to traditional medicine are generally not covered by Medicare. Often these are seen as 'alternative medicines' and include chiropractic services, acupuncture, remedial massage, naturopathy and aromatherapy. Medicare may contribute if these services are carried out or referred by a GP.

Allied health specialties such as physiotherapy, podiatry, or additional dental services such as orthodontics are not covered by Medicare. Health-related aids such as glasses and contact lenses, hearing aids and the cost of artificial limbs (prostheses) are also exempt from Medicare rebate. Pharmaceuticals are not covered under Medicare but may be subsidised under the PBS. Medical costs for which someone else is responsible (for example, a compensation insurer (e.g. TAC or WorkCover), an employer, or a government or non-government authority) do not qualify for a Medicare contribution as the person or organisation responsible is expected to pay the medical fees. Individuals and/or families can choose to purchase **private health insurance** to cover many of these services if they wish. This will be covered in a later section of this topic.

EXAM TIP

Items not covered by Medicare include medical services and procedures such as physiotherapy and cosmetic surgery, and also products such as glasses and hearing aids. If a question asks about *services* not covered by Medicare, then these *products* cannot be used in the answers.

10.2.4 The advantages and disadvantages of Medicare

The advantages and disadvantages of Medicare are summarised in table 10.1.

TABLE 10.1 The advantages and disadvantages associated with Medicare

Advantages	Disadvantages
• Reduced cost for essential medical services including free treatment and accommodation in a public hospital • Choice of doctor for out-of-hospital services • Available to all Australian citizens • Reciprocal agreement between Australia and other countries allows Australian citizens to access free healthcare in selected countries • Covers tests and examinations, doctors' and specialists' fees (Schedule fee only), and some procedures such as x-rays and eye tests • The Medicare Safety Net provides extra financial contributions for medical services once co-payments reach a certain level.	• No choice of doctor for in-hospital treatments • Waiting lists for many treatments • Does not cover alternative therapies or allied health services • Often does not cover the full amount of a doctor's visit

10.2.5 How is Medicare funded?

In the 12 months from July 2017 to June 2018, Medicare paid out over $23 billion for services that it covers. Medicare is funded through three sources of income: general taxation — income collected through general income tax of all Australians; the Medicare levy; and the Medicare levy surcharge.

The **Medicare levy** is an additional 2 per cent tax placed on the taxable income of most taxpayers. Those with low incomes (below $20 000) or with specific circumstances (e.g. Government pension card holders) may be exempt from paying the levy.

The **Medicare levy surcharge** is an additional 1 to 1.5 per cent tax on the income of people without private hospital insurance earning more than a certain amount ($90 000 a year for individuals and $180 000 for families in 2014–18) The Medicare levy surcharge increases as income increases; for example, an individual without private hospital insurance earning more than $90 000 will pay an extra 1 per cent of their income to Medicare, and an individual without private health insurance earning more than $140 001 will pay an extra 1.5 per cent of their income to Medicare. The Medicare levy surcharge aims to encourage individuals to take out private hospital cover and, where possible, to use the private system to reduce the demand on the Medicare-funded public system. The revenue collected from the Medicare levy and Medicare levy surcharge does not meet the full operating costs of Medicare; therefore, some of the general income tax is also used to help fund the cost of Medicare.

TABLE 10.2 Medicare services and benefits July 2017 to June 2018

	Number of patients	Number of services provided by Medicare	Number of services per person	Benefits paid by Medicare ($)	Benefits paid by Medicare per person ($)	% of services bulk billed	Average out-of-pocket expenses per service $ (out-of-hospital services)
Males		174 177 427		9 852 822 370			
Females		240 155 445		13 343 485 942			
Total	22 467 335 (91.3% of the population)	414 332 872	18.4	23 196 308 312	1032.40	78.9	63.47

10.2.6 Pharmaceutical Benefits Scheme (PBS)

Along with Medicare, the Pharmaceutical Benefits Scheme (PBS) is a key component of the federal government's contribution to Australia's health system. The PBS has been evolving since 1948 when the government provided free medicines to pensioners and 139 lifesaving and disease-preventing medications to the rest of the community free of charge. The aim was to provide essential medicines to people who needed them, regardless of their ability to pay. The purpose of the PBS remains the same today, but instead of being free, medicines are now subsidised and consumers must make a patient co-payment. From 1 January 2018, you pay up to $39.50 for most PBS medicines or $6.40 if you have a concession card. The government pays the remaining cost of the medicines.

FIGURE 10.6 Over 4000 essential medicines are subsidised by the Pharmaceutical Benefits Scheme.

These costs are adjusted each year on 1 January to stay in line with inflation. In addition to the initial subsidy, individuals and families are further protected from large overall expenses for PBS-listed medicines through the **PBS Safety Net**. Once they (or their immediate family) have spent $1521.80 (2018) within a calendar year on PBS-listed medicines, the patient pays only a concessional co-payment rate of $6.40 rather than the normal $39.50. Currently, over 4000 brands of prescription medicine are covered by the PBS. This includes different brands of the same medicine. There are also a number of drugs not covered by the PBS. These drugs require the patient to pay the full amount. Available medications are reviewed regularly by the Pharmaceutical Benefits Advisory Committee (PBAC). The PBAC is an independent committee made up of health professionals who review and consider new medications for inclusion in the PBS. In 2016, more than $10.8 billion was paid in subsidies for PBS listed medications and there were 208 million medicines issued on PBS prescriptions.

CASE STUDY

'She's never had to think about what she'll do in the future': Patients hail listing of CF drug

News that a long-sought cystic fibrosis drug will be listed on the PBS has given many Australians a sense of hope.

Early Tuesday morning, Evie Marshall turned to her mother and asked a simple question.

'Does this mean I can go to work and get a job, like other people?'

Her mother, Sonia, just nodded.

Evie, a 12-year-old from the Sunshine Coast, has cystic fibrosis, a cruel disease that dramatically shortens lifespan to an average of 37.5.

The Pharmaceutical Benefits Advisory Committee (PBAC) last week recommended that a ground-breaking combination therapy, Orkambi, be placed on the Pharmaceutical Benefits Scheme (PBS) after years of negotiation with drug company Vertex over the cost.

At present, the drug – a combination of lumacaftor and ivacaftor – costs a prohibitive $250,000 a year.

The drug is not a cure, but it may hold the promise of a significant boost to lifespan of up to 20 years for the

FIGURE 10.7 Sonia Marshall and her daughter Evie, who is 'completely over the moon' with news of the new PBS listing.

1000 people who make up the largest group with cystic fibrosis – those who have two copies of the F508del CFTR mutation.

'Evie's still in shock,' Sonia Marshall told *newsGP*.

'She's never had to think about what she'll do in the future before. She knew she might not have one.

'Evie has been a kid with a life expectancy hanging over her head. She understands this very well, and she's seen other kids with the same condition pass away.

'Now she's completely over the moon. It's completely life-changing.'

In clinical trials in the US, the drug therapy has been shown to reduce pulmonary exacerbations, which are linked to mortality, by around 40 per cent.

Last month, the Pharmaceutical Benefits Advisory Committee (PBAC) announced there was a 'clinical place for Orkambi at a price commensurate with its clinical benefits ... [h]owever, the evidence presented at that time did not support the clinical claims made by [Vertex] that Orkambi slows the rate of decline in lung function'.

The PBAC subsequently accepted a new submission from Vertex.

However, experts caution that the long-term benefits of the drug remain unclear.

'Short-term outcomes show promise, particularly as it reduces the rate of pulmonary exacerbations – that is, the acute worsening of symptoms – because this is a predictor of survival,' Dr Siobhain Mulrennan, director of the Adult Cystic Fibrosis unit at Perth's Sir Charles Gairdner Hospital, told the ABC.

'But longer-term data and analysis will be required if we are to determine if Orkambi can modify the course of the disease.'

Many people with cystic fibrosis have already gained access to the drug through a compassionate trial offered by Vertex.

When approved for PBS listing, Orkambi will be available to people over the age of six with cystic fibrosis. The Department of Health will monitor the drug's impact closely and collect data on its long-term effects.

Cystic Fibrosis Australia CEO Nettie Burke told *newsGP* that people in the community are 'walking on air'.

'It's incredible. I've spoken to people who will benefit personally, and to parents who can now see their child live a normal life expectancy and do what everybody should be allowed to do,' she said.

'Most of the current treatments treat the symptoms, but this is treating the disease – and cystic fibrosis is a really dreadful disease.

'We're absolutely thrilled that they saw fit to give us this drug. The cystic fibrosis community was an inspiration in advocating for it – we all got together with one voice, very loud, and people had to listen.'

Source: Hendrie, D 2018, 'She's never had to think about what she'll do in the future: Patients hail listing of CF drug', Royal Australian College of General Practitioners, 21 August, https://www1.racgp.org.au/newsgp/clinical/%E2%80%98she%E2%80%99s-never-had-to-think-about-what-she%E2%80%99ll-do-in.

Case study review

1. What is the average life expectancy for people who have cystic fibrosis?
2. How would life expectancy be changed by access to the drug Orkambi?
3. (a) What was the yearly cost of the drug before it was listed on the PBS?
   (b) What will the cost of the drug be now that it is listed on the PBS?
4. Explain how listing the drug on the PBS could impact on Australia's health status.

on Resources

Digital documents PBS worksheet (doc-32170)
Medicare worksheet (doc-32171)

Weblinks PBS
Medicare

10.2 Activities

1. Access the **PBS** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Access the **Medicare** weblink and worksheet in the Resources tab, then complete the worksheet.

10.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) What is Medicare?
   (b) What services does Medicare cover?
   (c) What services are not covered by Medicare?
2. What is meant by the following terms?
   (a) Schedule fee
   (b) Bulk billing
3. What percentage of the Schedule fee does Medicare pay if individuals are treated as private patients?
4. Calculate the out-of-pocket expenses paid by a patient whose GP charges them $81.72 for a standard 15-minute consultation.
5. Explain the Medicare Safety Net.
6. (a) Identify the three ways in which Medicare is funded
   (b) Complete the following table summarising the Medicare levy and Medicare levy surcharge.

	Who pays?	How much do they pay?
Medicare levy		
Medicare levy surcharge		

   (c) How much can singles and families earn before having to pay the Medicare levy surcharge if they don't have private health insurance?
7. (a) What is the Pharmaceutical Benefits Scheme (PBS)?
   (b) Outline one difference and one similarity between Medicare and the PBS.

10.2 Exercise 2 APPLY your knowledge

1. Explain how Medicare and the Pharmaceutical Benefits Scheme have the potential to improve the health status of Australians.
2. According to the data in table 10.2:
   (a) What percentage of Medicare services were bulk billed?
   (b) What is the difference in the numbers of Medicare services accessed by males compared with females?
   (c) Suggest two possible reasons for this difference.
   (d) Only 91 per cent of the Australian population accessed Medicare services between 2017 and 2018. Suggest some reasons that may have prevented all Australians from accessing Medicare services (apart from good health).

studyON

10.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

10.3 Private health insurance

KEY CONCEPT Understanding the Australian health system: private health insurance

Private health insurance is a type of insurance for which members pay a **premium** (or fee) in return for payment towards health-related costs not covered by Medicare. It is an additional insurance product that people can choose to purchase to cover the costs of medical services in addition to Medicare. Private health insurance forms an important part of Australia's health system. As well as giving individuals more choice

with regard to their healthcare, private health insurance also helps to significantly reduce the burden on the public health system.

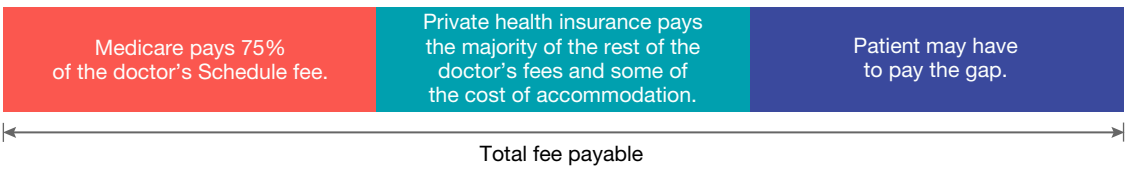
FIGURE 10.8 Medibank, NIB and Bupa are large private health insurance providers in Australia.

As well as contributing some of the necessary funding for Australia's health system, it gives Australians choice in the sort of care they wish to access. Consumers can purchase cover for private hospital insurance and/or 'extras' cover. Private hospitals (which are largely funded by private health insurance companies) provide about one-third of all hospital beds and 40 per cent of hospital separations. Extras cover can cover services provided by dentists, physiotherapists and chiropractors and other services not generally covered by Medicare.

Like all insurance policies, private health insurance works by participants paying a premium, which can vary depending on how many people are covered by the policy and the options the policy includes. The basic benefit of most policies is being able to be admitted as a private patient in a public or private hospital with many of the expenses met by the insurance company. Medicare will still pay 75 per cent of the doctor's Schedule fee, but not the costs of staying in the private hospital.

People with private health insurance generally have greater choice in terms of hospitals and doctors. As private hospitals charge much more than public hospitals, generally only people with insurance tend to use them. In private hospitals, patients get their choice of doctor, can have their own room if available and generally don't have to wait for extended periods for elective surgery (e.g. knee reconstruction), which can happen in the public system. Private hospitals usually charge more than the Schedule fee for services. Generally, private health insurance companies pay the additional costs, but sometimes the total bill may exceed the amount contributed by the insurance company. In these cases, the patient has to pay the rest (known as 'the gap'). Many health insurance companies have partnership arrangements with hospitals to ensure that gap payments are kept to a minimum.

FIGURE 10.9 Breakdown of fees paid for using private hospitals



EXAM TIP

If asked to discuss advantages or disadvantages, you may have to link to a case study — therefore advantages or disadvantages need to be specific to the case study and not general in nature.

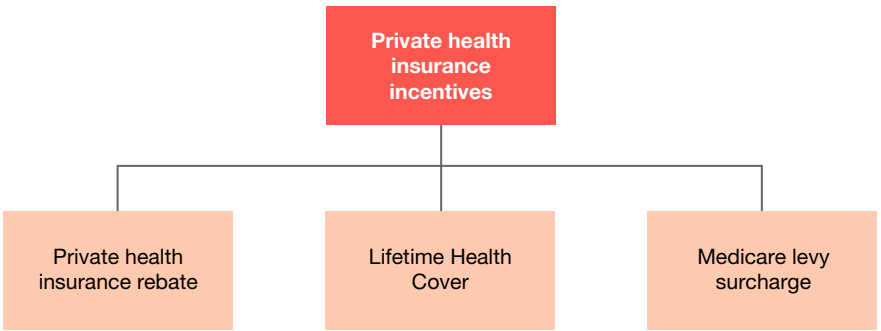
TABLE 10.3 Advantages and disadvantages of private health insurance

Advantages	Disadvantages
• Enables access to private hospital care • Choice of doctor while in public or private hospital • Shorter waiting times for some medical procedures such as elective surgery • Depending on the level of cover, part or all of the services such as dental, chiropractic, physiotherapy, optometry and dietetics could be paid for • Helps to keep the costs of operating Medicare under control • High income earners with private health insurance do not have to pay the additional tax, called the Medicare levy surcharge • Government rebate for eligible policy holders • 'Lifetime Health Cover' incentive	• Costly in terms of the premiums that have to be paid • Sometimes there are 'gap' costs for the patient, which means the insurance doesn't cover the whole fee and the individual must pay the difference • Qualifying periods apply for some conditions before the individual can make a claim on their health insurance (e.g. pregnancy)

10.3.1 Private health insurance incentives

The proportion of people who have private health insurance has varied over the years. When Medicare was introduced, many people opted out of private health insurance as they could access essential treatments without having to pay expensive private health insurance premiums. This put a strain on the public health system as fewer people were using private hospitals. In order to encourage people back into private health insurance, the government introduced three main financial **incentives** to people who purchase hospital cover (see figure 10.10).

FIGURE 10.10 The three incentives put in place to encourage people to take out private health insurance



Private health insurance rebate

In 1999, the Australian government introduced the 30 per cent rebate incentive. Under this scheme, policy holders received a 30 per cent rebate (or refund) on their premiums for private health insurance. In 2012, this rebate became **income tested**. From April 2018, under this arrangement, individual policy holders under the age of 65 received the following rebates:

- individuals with an income under $90 000 received a 25.4 per cent rebate
- individuals with an income between $90 001 and $105 000 received a 16.9 per cent rebate
- individuals with an income between $105 001 and $140 000 received an 8.5 per cent rebate
- individuals with an income of more than $140 001 received no rebate.

The threshold amounts are higher for families to reflect the extra expenses families have compared to individuals.

In 2018:

- families earning under $180 000 received a 25.4 per cent rebate
- families earning between $180 001 and $210 000 received a 16.9 per cent rebate
- families earning between $210 001 and $280 000 received an 8.5 per cent rebate
- families earning more than $280 001 received no rebate.

Eligible policy holders aged between 65 and 70 received approximately an extra 5 per cent rebate, and those aged over 70 received an extra 9 per cent rebate.

Eligible private health insurance policy holders can opt to pay a reduced premium based on their rebate amount (with the government contributing the remainder) or pay the total and reclaim the rebate in their tax return. Although the government is paying a substantial amount to fund this incentive, it raises much-needed funds for the health system that would not have been generated otherwise.

Lifetime Health Cover

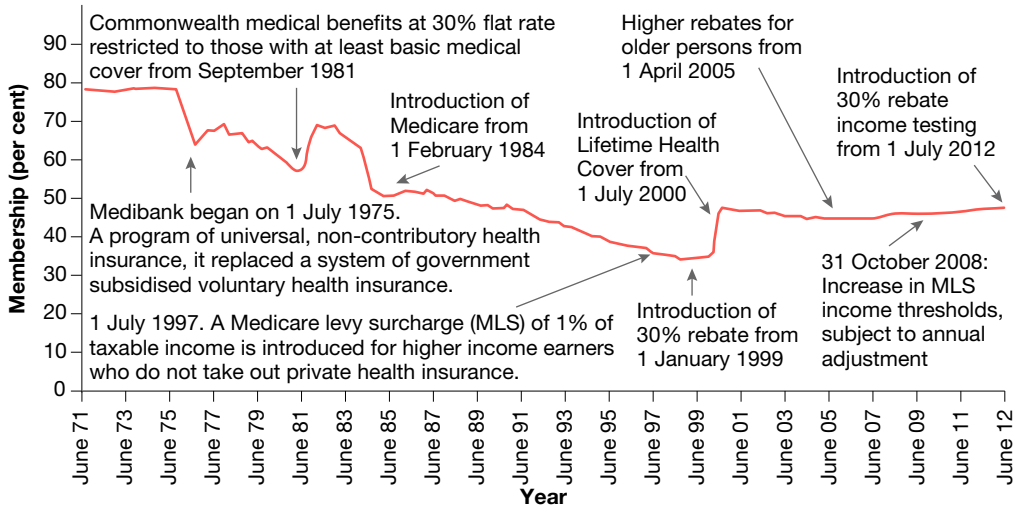
A second incentive is referred to as Lifetime Health Cover. People who take up private hospital insurance after the age of 31 pay an extra 2 per cent on their premiums for every year they are over the age of 30. For example, a person who takes out private health insurance at age 40 will pay 20 per cent more than someone who first takes out hospital cover at age 30. The additional 2 per cent cost for the premium lasts until the person has had hospital cover continuously for 10 years. After that time, the premium returns to the normal cost. This encourages younger people to take up private health insurance when they are less likely to claim, and keep it for life.

Medicare levy surcharge

A third incentive is the Medicare levy surcharge. People earning more than $90 000 a year ($180 000 for families) pay an extra tax as a Medicare levy surcharge if they do not purchase private hospital insurance. The Medicare levy surcharge is calculated according to income and ranges from 1 per cent to 1.5 per cent. This encourages high income earners to take out private health insurance, rather than relying on the public health system.

Figure 10.11 demonstrates the changes in private health insurance membership over time from 1971 to 2012. After the introduction of Medicare in 1984, private health insurance membership gradually declined as people were able to access good quality, affordable essential healthcare. This decline slowed after the introduction of the health insurance rebate in 1999 and in 2000, when Lifetime Health Cover was introduced, private health insurance membership rose sharply, showing the effectiveness of government incentives. There has been little change in private health insurance since 2012 with 47 per cent of Australians purchasing hospital cover in 2018.

FIGURE 10.11 Changes in private health insurance membership over time



Source: www.phiac.gov.au

10.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Explain what is meant by private health insurance.
2. Identify three reasons for the declining membership in private health insurance policies.
3. Complete the following table to summarise the three incentives used to encourage people to take up private health insurance.

Incentive	Description
Medicare levy surcharge	
Lifetime Health Cover	
Private health insurance rebate	

4. What is a premium?
5. What is 'the gap'?
6. Identify three advantages and three disadvantages of private health insurance.
7. Identify four services that are usually covered by private health insurance but are not covered by Medicare.
8. Suggest reasons why an individual or family may choose not to take out private health insurance.

10.3 Exercise 2 APPLY your knowledge

1. Explain how private health insurance can promote:
   (a) the health and wellbeing of individuals
   (b) health status in Australia.
2. Why do you think the government provides incentives for people to take out private health insurance?
3. What is a possible consequence of reduced numbers of people taking out private health insurance?
4. People without private health insurance can still use private hospitals. Discuss this statement.
5. Outline two differences between Medicare and private health insurance.

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10.3 Exercise 3 studyON: Practice exam questions online only

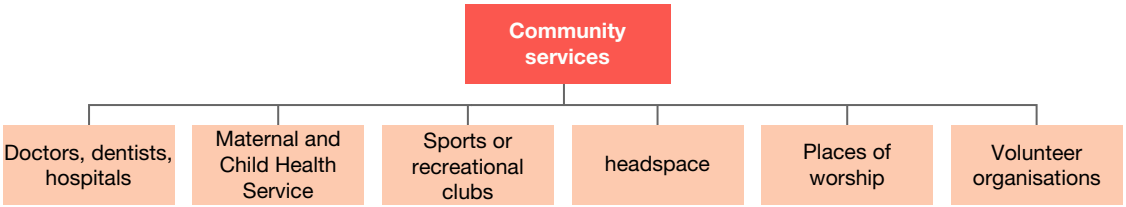
To answer practice questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

10.4 The range of community services to support the dimensions of health and wellbeing

KEY CONCEPT Services provided within communities that support optimal health and wellbeing

There are a large number and wide range of services within communities that support the dimensions of health and wellbeing. Six different examples are discussed in this subtopic.

FIGURE 10.12 A selection of services available in the community to support health and wellbeing



10.4.1 Doctors, dentists, hospitals

Most communities have access to a range of conventional medical services, such as general practice clinics, medical specialists, public and private hospitals, ambulance services and dental services. These more conventional medical services generally support people in taking care of their physical and mental health and wellbeing. Patients who are ill or injured can seek treatment from a GP or at the emergency room of a public hospital. Sometimes specialist treatment may be required and patients can be referred to these services by their GP. Dental health is a major consideration in maintaining physical health and wellbeing, so accessing dental services in the community is essential for optimal health and wellbeing. Mental health and wellbeing is also promoted through these conventional medical services as people can access psychologists or counsellors to help reduce stress and anxiety levels at critical times.

FIGURE 10.13 People are able to maintain their mental health and wellbeing or have mental health issues treated by health professionals such as a psychologist.

10.4.2 Maternal and Child Health Service

The Maternal and Child Health Service is provided by the Victorian Government and the local council to support families in parenting, health and wellbeing and development of children from birth up to beginning primary school. All consultations with the maternal and child health nurse are free, and there is also a help line available 24 hours a day, 7 days a week. The nurse records children's growth and developmental progress from birth through scheduled consultations up to 3.5 years old. At each visit, parents receive 'tip sheets' on topics such as safe sleeping and **SIDS**, making the most of childhood, vaccination, developmental milestones, play, dental hygiene and many more relevant topics. These are produced in several languages appropriate to the local population for each council area. When parents are educated about SIDS and vaccination, death and serious illness can be avoided, increasing the physical health and wellbeing of their children.

FIGURE 10.14 Regular measuring and weighing helps the Maternal and Child Health Service monitor growth and development of children from birth up to 3.5 years of age.

Being the parent of a young baby or toddler can be a stressful and challenging time. For the mother, this service can be extremely beneficial in supporting mental and emotional health and wellbeing. One of the

most stressful experiences in early parenthood is a baby who doesn't sleep well. The Maternal and Child Health Service offers assistance and advice on helping the baby to settle and sleep, restoring the parents' ability to function fully, both physically and mentally.

Another important function of the service is to organise mothers' groups, which promote and support the emotional and social health and wellbeing of new mothers. As the children of the group get older, their social health and wellbeing is also supported as they learn to interact with others.

FIGURE 10.15 An important role of the Maternal and Child Health Service is organising mothers' groups where young children and their mothers are able to socialise regularly.

10.4.3 Sporting and other recreational clubs and associations

Although not thought of as traditional health services, many people satisfy large areas of their health and wellbeing needs through sporting and recreational activities. These clubs often provide outlets for social and mental wellbeing as well as physical health and wellbeing through physical activity and social interaction. Being part of a sporting club or other recreational association, such as a music or theatre group, provides many people with a strong sense of belonging and helps to shape their identity, which are both key aspects of emotional and spiritual health and wellbeing. Outside the direct social interactions that a sports club provides, members also learn resilience and appropriate expression of emotions

FIGURE 10.16 Sports clubs can be very effective in promoting many dimensions of health and wellbeing, particularly in rural areas such as Shepparton in country Victoria.

through winning and losing matches, enhancing emotional health and wellbeing. Playing sport directly supports physical health and wellbeing through promoting physical fitness and helps to maintain a healthy body weight, cardiovascular health and a well-functioning immune system.

The role of sporting clubs in supporting overall health and wellbeing can be significant, particularly for males, young people building relationships with people outside of their immediate family and those in rural areas where other health-supporting facilities may be limited. For example, men who typically choose not to seek medical intervention for health problems might share stories or personal issues with teammates after a game of football. These casual social interactions might help improve the mental health and wellbeing of these men and, in some cases, even help to prevent suicides. Other examples of recreational associations that have benefits in supporting the dimensions of health and wellbeing include Scouts or Guides, musical groups such as community orchestras or choirs, amateur theatre groups and community organisations such as Lions or Rotary Clubs. These community and volunteer organisations often provide a sense of belonging and promote spiritual health and wellbeing by giving meaning and purpose through helping others.

BALD EAGLES FOOTBALL CLUB

The Bald Eagles are a group of men all over the age of 35 who get together to relive the glory days of their youth playing football. They train through freezing Sunday mornings and play all over the outer reaches of Melbourne in the quest for physical fitness and mateship. While far from the medical clinic, the health and wellbeing benefits for this group of 'blokes' is astounding. They have often been referred to as a men's health group who happen to play footy. Many have lost weight and improved their physical fitness through the increased physical activity, some have rehabilitated after heart attacks or major surgery and almost all have built strong social connections, which can be missing for men of this age as work and children's activities take priority over time to socialise.

FIGURE 10.17 A social get-together after training for bacon and egg breakfast and a chance to chat

The footy is secondary to the social outlet this group provides. For many of these men, playing and training for football is the only social interaction they have with other men their age with shared interests. Like all men, these blokes don't like going to the doctor and will put it off as long as possible. However, the advantage for these men is that in this group, problems are discussed. Mental health issues are openly supported and more than one of these players admits that they might not still be here if not for the support of the footy team. Middle age can sometimes be a lonely time for men as many activities centre on the family, but the football club offers a strong sense of belonging and support through hard times. This football team play hard, train reasonably hard and finish off with breakfast and an opportunity to catch up, solve their problems and go home happy for another week.

10.4.4 headspace

headspace is the National Youth Mental Health Foundation, which provides mental health services to 12- to 25-year-olds. Information and services for young people can be accessed through the headspace website, their online counselling services and at headspace centres, which are located across metropolitan, regional and rural Australia. These centres are designed and built with input from young people and don't have the same feel and look as traditional health services. Through these centres, young people can access a range of health workers including GPs, drug and alcohol workers, psychologists, social workers and counsellors. These services are provided free or at low cost.

The primary focus of headspace is to support mental health and wellbeing. Its focus is on reducing stress and anxiety and lowering the incidence of mental disorders among young people. headspace aims to implement early intervention strategies to reduce the burden of youth mental health issues and suicide. Through access to GPs and counselling services, young people can address issues of identity, gender and sexuality, which may be sources of low self-esteem and self-confidence. Help with discovering who they are and what their purpose is in life can promote the emotional and spiritual health and wellbeing of youth.

FIGURE 10.18 headspace is an important health service available to young Australians in urban and rural communities.

headspace
National Youth Mental Health Foundation

Source: © headspace National Youth Mental Health Foundation Ltd

10.4.5 Places of worship

Spiritual health and wellbeing is not the same as religious belief; however, many people feel a strong sense of belonging and emotional support from a place of worship such as a church, mosque, temple or synagogue. Places of worship can provide a purpose and meaning for many people and this supports spiritual health and wellbeing. Religious organisations are founded on shared beliefs and values, and helping people to determine what is important to them is a key role of a church or religious group. These community organisations also promote social health and wellbeing as people with shared opinions, values and beliefs can interact on a regular basis. Through places of worship, people are able to build a supportive social network that involves communication and productivity with others. For example, it is common for church groups to help others in the community such as refugees or new immigrants to Australia. This gives members healthy and meaningful social interactions and a sense of purpose in life.

FIGURE 10.19 Places of worship fulfil the spiritual, emotional and social wellbeing needs of many Australians.

10.4.6 Volunteer organisations

St John Ambulance Australia

St John Ambulance Australia is an organisation dedicated to caring for Australians who are sick, distressed, suffering or in danger. This organisation has 15 000 volunteers who provide over 1 million hours to a range of important community services every year. One of the most significant contributions of the St John volunteers is to provide health services at large public events such as concerts, sports and festivals. These volunteers are trained to provide life-saving first aid and CPR and care for all members of the Australian public. These volunteers learn new skills, make new friends and have the satisfaction of helping their community. The volunteers of St John also gain life skills of teamwork, management and leadership. For the people they help, St John volunteers generally promote physical health and wellbeing, taking care of injuries, illness and performing CPR and other first aid. For the volunteers, all dimensions of health and wellbeing are supported. For example, the feelings associated with helping others and involvement in the community promote spiritual health and wellbeing, while forming meaningful connections with other volunteers promotes social health and wellbeing.

FIGURE 10.20 St John Ambulance has over 15 000 volunteers Australia-wide.

FIGURE 10.21 Volunteers at St John Ambulance support the health and wellbeing of Australians at large public events such as concerts.

on Resources

Digital documents headspace worksheet (doc-31679)
Maternal and Child Health Service worksheet (doc-32172)

Weblinks headspace
Maternal and Child Health Service

10.4 Activities

1. Access the **headspace** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Access the **Maternal and Child Health Service** weblink and worksheet in the Resources tab, then complete the worksheet.
3. Design a brochure advertising a local community or suburb, focusing on the health and wellbeing benefits of living in that location. Include a range of health-promoting services for a variety of age groups, which together completely cover all five dimensions of health and wellbeing.

10.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Make a concept map of all of the local services or resources in your area and illustrate how each could support the dimensions of health and wellbeing.
2. (a) Using Google maps choose a postcode in Victoria and then identify all the resources within that postcode that support the five dimensions of health and wellbeing.
   (b) Draw a table like the one below to record the information from your research and identify the dimension(s) of health and wellbeing supported by each service.
   Postcode: 3016

Community service or resource	Dimension of health and wellbeing
Manningham Templestowe Leisure Centre (basketball and netball courts)	Physical Social Mental
Physiotherapy Clinic Templestowe	Physical
Lavarin and Lawrence Orthodontists	Physical Emotional Mental
St Marks Anglican church	Social Spiritual

3. How can a sporting club support a person's
   (a) mental health and wellbeing
   (b) spiritual health and wellbeing?

10.4 Exercise 2 APPLY your knowledge

1. Research the range of services available in your local community. Choose one service each that addresses the health and wellbeing of adults and children in the local community. Describe each of these services, then explain how the service supports at least two dimensions of health and wellbeing.
2. Respond to the following statement: A community can meet the health and wellbeing needs of all residents with a general practice clinic, a public hospital and a dental surgery.

studyON

10.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

10.5 Rights and responsibilities of access to healthcare

KEY CONCEPT Understanding the rights and responsibilities of patients and providers when accessing healthcare

10.5.1 Australian Charter of Healthcare Rights

The Australian Charter of Healthcare Rights outlines the rights of patients, consumers and other people using the Australian healthcare system. These **rights** are essential to ensure that no matter where healthcare is provided within Australia, it is of high quality and is safe for patients and practitioners. The charter was developed by the Australian Commission on Safety and Quality in Healthcare (a federal government organisation) in 2007/8 after considerable consultation within the healthcare system. The charter applies to the provision of healthcare in all settings within Australia, including public and private hospitals, general practice and other community environments. The aim of the charter is to allow patients, families, carers and service providers to have a common understanding of the rights of people receiving healthcare. This charter is available in 17 different languages, braille and audio format to ensure accessibility for a wide range of the population, increasing overall accessibility of healthcare for all Australians.

The charter of healthcare rights has three guiding principles that describe how it applies in the Australian health system:

1. Everyone has the right to be able to access healthcare and this right is essential for the Charter to be meaningful.
2. The Australian government commits to international agreements about human rights, which recognise everyone's right to have the highest possible standard of physical and mental health and wellbeing.
3. Australia is a society made up of people with different cultures and ways of life, and the Charter acknowledges and respects these differences.

The charter of healthcare rights has been condensed into easy-to-understand posters and brochures as in figure 10.23. These posters explain the rights of all people accessing healthcare in Australia.

These basic rights are access, safety, respect, communication, participation, privacy and comment.

FIGURE 10.22 Patients have rights and responsibilities when accessing health services such as ambulances.

FIGURE 10.23 Posters such as this one briefly outline the healthcare rights to which all Australians are entitled.

The following table explains what each of these seven rights actually means to individuals accessing healthcare in Australia.

TABLE 10.4 What can I expect from the Australian health system?

My rights	What this means
Access I have a right to healthcare.	I can access services to address my healthcare needs.
Safety I have a right to receive safe and high quality care.	I receive safe and high quality health services, provided with professional care, skill and competence.
Respect I have a right to be shown respect, dignity and consideration.	The care provided shows respect to me and my culture, beliefs, values and personal characteristics.
Communication I have a right to be informed about services, treatment, options and costs in a clear and open way.	I receive open, timely and appropriate communication about my healthcare in a way I can understand.
Participation I have a right to be included in decisions and choices about my care.	I may join in making decisions and choices about my care and about health service planning.
Privacy I have a right to privacy and confidentiality of my personal information.	My personal privacy is maintained and proper handling of my personal health and other information is assured.
Comment I have a right to comment on my care and to have my concerns addressed.	I can comment on or complain about my care and have my concerns dealt with properly and promptly.

Source: Australian Commission on Safety and Quality in Healthcare, 2017.

Patient rights

In accordance with those outlined in the Australian Charter of Healthcare Rights, a patient has the right to:

- information about their diagnosis
- information from the doctor or health service on the costs of the proposed treatment, including any likely out-of-pocket expenses
- seek other medical opinions about their condition
- information on visiting arrangements for family and friends while they are in hospital
- privacy of and access to their own medical records
- treatment with respect and dignity
- care and support from nurses and allied health professionals
- participate in decisions about their care
- make a comment or complaint about any aspect of their hospital or medical treatment.

Patient responsibilities

Along with their rights, patients also have certain responsibilities when accessing healthcare. It is a patient's responsibility to:

- provide information about their past and present illnesses, hospitalisations, medications and other matters relating to their health history
- ask questions when they do not understand explanations given about the risks and benefits of the proposed healthcare, treatments or procedures
- follow the instructions and medical orders of their doctors, nurses and medical support staff to bring about the best outcomes from treatment

- report any safety concerns immediately to their doctor, nurse or healthcare support staff
- treat medical staff with respect
- ask questions about costs before treatment.

Where there are out-of-pocket expenses, it is the responsibility of the patient to ensure that all expenses are paid in the required time frame.

10.5.2 Privacy and confidentiality

There are laws that outline how a patient's medical records and information can be stored and shared in order to protect their personal privacy and confidentiality. All healthcare professionals are bound by these laws and cannot discuss a patient's health information without their consent. The storage of medical information and records must also reflect these privacy laws. With the consent of the patient, their health information may be shared with other healthcare providers to help them make decisions about the correct treatment. Every patient has the right for the confidentiality of their condition and treatment to be maintained. Every patient also always has a right to access their own health information.

FIGURE 10.24 Medical practitioners and staff have responsibility for patient privacy and confidentiality.

MY HEALTH RECORD

In January 2019, My Health Record was set up for all Australians who chose not to opt out of this medical information storage system. An initiative of the Australian Government Digital health agency, My Health Record in an online summary of an individual's key health information, recorded from visits to GPs and specialists, Medicare claims, pharmacy prescriptions and the results of tests and scans. It is accessible to individuals (and their family if under 18 years old) and healthcare providers. This online storage of data allows sharing of health information between patients and their doctors and has the potential to benefit patients who are from diverse cultural and linguistic backgrounds. Many Australians chose to opt out of the scheme due to concerns about the safety and privacy of their online health information.

FIGURE 10.25 My Health Record will provide a digital summary of health information for every Australian who doesn't opt out.

Medical confidentiality is a set of rules that means that anything discussed between a doctor and patient must be kept private. This is known as doctor–patient confidentiality. When a patient consults a new doctor, they can choose whether to share their previous medical records with them.

Privacy in healthcare means that what a patient tells their doctor, any information the doctor stores, medications prescribed and any other personal information is kept private. There are exceptions to this: if the patient is a child then their parents have access to their own child's medical information, and carers may be authorised to access the information of adults under their care.

Exemptions to privacy laws

There are two situations where a health service such as a doctor, pharmacy, hospital, maternal and child health centre or other may be required to share medical information without the patient's consent:

- if the patient or someone else's health and wellbeing or safety are seriously threatened (e.g. if a patient is unconscious and a paramedic, doctor or nurse needs to know whether the patient is allergic to any drugs)
- when the information will reduce or prevent a serious threat to public health or safety (e.g. warning the public if there is an outbreak of a serious contagious illness).

CASE STUDY

Freezing out the folks: default My Health Record settings don't protect teens' privacy

Consider this scenario:

Katy is 16 years old and, after a couple of months of dating another 16-year-old, Tom, they start having sex. Katy's regular GP has looked after her asthma since she was six but she feels awkward seeing him. Katy visits a GP that her school friend recommends to ask about contraception and to get a pregnancy test. The GP offers and does a chlamydia test, as recommended by the Australian guidelines for STI testing. She really doesn't want to discuss this with her mother just yet.

There are options for 14- to 18-year-olds like Katy to keep their medical records private under the My Health Record scheme, but teens must be proactive and change their settings or ask their health providers not to upload this data.

Remind me, what is a My Health Record?

My Health Record stores and manages each individual's health information — such as blood tests, prescriptions, diagnoses, vaccinations and allergies — online. Every Australian will have a My Health Record generated unless they choose to opt out before October 15, 2018. [*Note:* Opt-out period extended until 31 January 2019]

Parents may opt out their children, and those aged over 14 are able to opt out themselves.

Some information will be automatically uploaded as soon as a My Health Record is created. This includes Medicare claims for things like GP visits, and Pharmaceutical Benefits Scheme (PBS) claims for subsidised medications.

Other My Health Record information such as what is recorded by a GP when you see them, or letters from specialists to your GP, could be uploaded by them. Any test results and x-ray reports might get uploaded by the laboratories and x-ray centres directly, rather than through your GP.

Medicare and PBS claim information will not be visible on the record to parents of teenagers aged 14 and over, even if they are on the family Medicare card. It has long been the case in Australia that parents cannot see Medicare information for children aged 14 and over, and this recognises the rights of young people to confidentiality as they become more independent.

But this is not currently the case with other information on the My Health Record. Parents or legal guardians act as authorised representatives of their under-18 child's record.

The parent can see other documents such as the health summary, medications prescribed, any test results, and specialists' letters. At 18, parents' access to the young person's record is cancelled.

However, if you are between 14 and 18 years old you can choose to take control of your own My Health Record.

FIGURE 10.26 Teenagers experiencing mental health concerns may wish to keep this private from their parents.

How teens can protect their confidentiality

Teenagers can have control over what is uploaded onto their My Health Record. They can ask their doctor and any other health professional they see not to upload the information about their health visit they wish to keep confidential.

Teens can also ask the doctor to tick the 'MHR opt out' box on pathology requests and prescriptions so these are not uploaded. Or they can ask the pharmacist not to upload medication dispensing information.

Doctors, pharmacists and other health professionals should also remember to ask all young people whether they want their test results, prescriptions or health summaries uploaded or not.

If either party doesn't request an opt-out, pathology tests and prescriptions will be automatically uploaded.

Problems with this system

Young Australians have the legal right to confidential healthcare. This means they can visit a health professional on their own, and the information shared must be kept confidential unless there is a risk of suicide or if the young person is under 16 and being abused.

Confidentiality has been shown to improve young people's willingness to seek help early and thereby prevent unwanted consequences of behaviours or mental health issues. Katy, for example, has obtained an STI test and contraception which will help prevent unwanted sexual health issues.

This current system for protecting the confidentiality of teenagers' information on their My Health Record has obvious flaws. It relies on busy health professionals — some of whom may not be experienced in the My Health Record — remembering to ask every teenager whether they want information uploaded or not.

It also places the onus on teenagers, who in many cases may not be fully versed in the healthcare system. It relies on them to remember, and have the confidence, to ask for information not to be uploaded.

Teen-friendly My Health Records

The overwhelming concern is that young people will forgo important and timely healthcare because of concerns about confidentiality. We should be progressing the confidence of young people to take charge of their health, not driving them back.

At the same time, young people may not have the benefits that accrue with an electronic health record if they continuously choose not to have health events uploaded for fear that others will find out.

The Australian Digital Health Agency must urgently redesign the My Health Record program to respect young people's right to autonomy and confidential healthcare.

The My Health Record must be automatically shifted to the control of the young person once they turn 14, with no obligation for parental access.

The uploading of pathology tests and prescriptions should be opt-in, not opt-out. This would mean healthcare providers must ask each time whether information gets uploaded.

An official communication campaign is needed for young people aged 14 to 18 to explain what the My Health Record will mean for them and how they can have the benefits of a record, without losing their rights to confidential healthcare. Communications must be targeted at young people and designed in collaboration with young people.

These important steps will enable young people to feel secure in managing their own healthcare and their My Health Record.

Source: Kang, M & Sanci, L 2018, 'Freezing out the folks: default My Health Record settings don't protect teens' privacy', *The Conversation*, 27 July, https://theconversation.com/freezing-out-the-folks-default-my-health-record-settings-dont-protect-teens-privacy-100598.

Case study review

1. What is My Health Record?
2. (a) What can a parent of 14- to 18-year-olds see on their My Health Record?
   (b) When is a parent's access to their child's My Health Record cancelled?
3. How can teenagers protect their medical confidentiality if they do have a My Health Record?
4. Describe the health benefits of confidentiality of health records for young people.
5. What are the possible consequences if young people do not maintain a complete digital health record?

10.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. List five rights of patients when accessing healthcare.
2. List five responsibilities of patients when accessing healthcare.
3. What are the three guiding principles of the Australian Charter of Healthcare Rights?

4. Using the information in table 10.4, explain what is meant by the following rights as outlined by the Australian Commission on Safety and Quality in healthcare.
   (a) Safety
   (b) Participation
   (c) Privacy
   (d) Comment
5. Outline the two situations where there are exemptions to the privacy laws in Australian healthcare.

10.5 Exercise 2 APPLY your knowledge

1. Explain how knowledge of patient rights and responsibilities could improve:
   (a) the health and wellbeing of individuals
   (b) health status in Australia.
2. Discuss why it is necessary for the government to have written the Australian Charter of Healthcare Rights.
3. Choose three of the rights outlined in table 10.4 and, for each right, describe how it could improve the health and wellbeing of individuals.
4. Explain why it is important to have certain exemptions to the medical privacy laws.

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10.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

10.6 Topic 10 review

10.6.1 Key skills

KEY SKILL Describe key aspects of Australia's health system

This skill requires a detailed understanding of the key aspects of Australia's health system including Medicare, PBS and private health insurance. Detailed knowledge of all aspects of Australia's health system should include specific information about each of the aspects listed above.

This includes:

- what Medicare is
- the services covered by Medicare
- the services not covered by Medicare
- how Medicare is funded
- what the PBS is and what it covers
- how Medicare and the PBS contribute to better health and wellbeing of Australians
- the contribution private health insurance makes to the health system
- the incentives used to encourage people to take out private health insurance.

Again, a summary table can be a useful tool for collating information about the various components of Australia's health system. An example of this skill could be explaining the role that Medicare plays in improving the health and wellbeing of Australians.

A possible response could be as follows.

Medicare is Australia's universal health insurance scheme that provides subsidised or free access to selected health services for all Australians, permanent residents and visitors from countries with a reciprocal agreement with Australia.[1] Medicare provides subsidised consultations with doctors and treatments in public hospitals at no cost to the user. This means that Australians with medical problems can be checked and treated if necessary, thus substantially improving the health and wellbeing of many Australians. For example, being able to access affordable healthcare makes it more likely that individuals will undertake preventative health checks, which increases the chances of early diagnosis of diseases such as cancer. Early treatment of cancer promotes both physical and mental health and wellbeing by increasing life expectancy and decreasing stress and anxiety levels.[2]

1 This statement gives a brief overview of Medicare and the function it performs.

2 This statement relates directly back to the role Medicare plays in improving health and wellbeing outcomes. It highlights a specific improvement to physical and mental health and wellbeing as a result of being able to access the affordable healthcare offered by Medicare.

Practise the key skill

1. What is Australia's universal health insurance scheme called?
2. Explain the PBS.
3. Discuss the contribution private health insurance makes to Australia's health system.
4. Explain how Medicare is funded.
5. Explain how Medicare and the PBS can promote the health and wellbeing of an individual with cardiovascular disease.

KEY SKILL Research health services in the local community and explain which dimension/s of health and wellbeing each one supports

The first part of this key skill requires research into the range of services in local communities that provide support for the dimensions of health and wellbeing. It is important to identify that community services or resources are not confined to medical services and include anything which supports a number of the dimensions of health and wellbeing. For example, in this topic the following services/resources have been identified as supporting the dimensions of health and wellbeing.

- Conventional medical services — these include hospitals, ambulances, GP clinics, dentists, psychologists, counsellors.
- Maternal and Child Health Services — these centres are provided by municipal councils.
- Sporting and recreational clubs or associations — for example, football, netball, soccer, hockey club, musical or theatre associations and many other community groups such as Scouts and Girl Guides.
- headspace — which has services located throughout many suburban and rural areas.
- Places of worship — including churches, mosques, synagogues and other temples.
- Volunteer organisations such as St John Ambulance Australia.[3]

3 A range of services and resources that support the dimensions of health and wellbeing in local communities are identified. There may be many more in the communities researched by individual students.

It is important to identify that, in this sense, 'the community' means local services and resources that most people within a common municipal area can access.

The second part of this skill requires an explanation of the role of the services previously identified in supporting the dimensions of health and wellbeing. Each service may support more than one dimension of health and wellbeing. A detailed explanation of how the service supports any dimension of health and wellbeing should be provided. This discussion should focus on the actual outcomes achieved in each dimension of health and wellbeing.

In the following example, the role of a local football club in supporting the dimensions of health and wellbeing is discussed.

The local football club is a support to many people, particularly males, who otherwise often choose not to access healthcare. Playing a team sport such as football has many benefits for achieving physical health and wellbeing. Being physically active improves physical fitness and cardiovascular health and helps maintain a healthy body weight. Increased physical fitness also improves the functioning of the immune system and reduces the chances of getting sick with common infections, such as colds.[4]

4 Physical health and wellbeing outcomes as a result of playing football are discussed.

The football club is also a good support to the player's mental and social health and wellbeing. Developing and improving skills increases self-esteem and results in improved mental health and wellbeing. Playing sport also helps to reduce stress and anxiety, also improving mental health and wellbeing. Social health and wellbeing is improved through playing team sports such as football as it offers a range of social interactions, which can result in friendships. Interactions before or after the game or at training can strengthen social relationships with players and coaches.[5]

5 A range of mental and social health and wellbeing benefits are discussed.

A summary table may be useful to condense the information required in this key skill.

Practise the key skill

6. In relation to services researched in a local community:
   a. List the services found that support the dimensions of health and wellbeing.
   b. Identify which dimension(s) of health and wellbeing each service supports.
   c. Discuss how these services support each of the dimensions of health and wellbeing.

7. Respond to the following statement: A local GP will be able to fulfill the healthcare needs of all people in the community.

KEY SKILL Discuss rights and responsibilities of access to health services

This key skill requires an understanding of the general rights patients have when accessing health services and the responsibilities that patients must remember when accessing these services.

All patients have the right to:

- information about their diagnosis
- information on the costs associated with treatment
- seek another opinion
- treatment with respect and dignity
- privacy of and access to medical records
- make comment or complaint about treatment or services.[6]

6 A range of rights for patients accessing health services are discussed.

Patients also have responsibilities to:

- provide information about their medical history
- ask questions about their proposed healthcare
- follow instructions and orders of doctors and nurses
- treat medical staff with respect
- ask questions about the cost of treatment.[7]

7 A number of responsibilities are discussed.

For example, a question might ask how patient confidentiality and privacy might improve the health status of young Australians. A suggested answer could be:

If young people are assured that everything they tell their doctor will be kept private and not shared in any way with other people, nor added to their My Health Record that their parents can access, they would be more likely to seek medical attention[8], even for conditions that might seem awkward or embarrassing such as a prescription for contraception, pregnancy or STI testing. If young people know that the doctor will not disclose any part of the consultation or upload to their digital record, they may seek help earlier, and a potentially serious health condition could be caught earlier, increasing life expectancy and reducing morbidity. If more young people sought medical advice, there would be lower levels of teenage pregnancy, which would reduce levels of stress and anxiety in the population, and STIs could be avoided or treated, reducing the prevalence of these diseases.[9]

8 This links the knowledge of patient confidentiality to seeking medical help.

9 This part of the question links earlier medical treatment with improved health outcomes of life expectancy and morbidity.

Practise the key skill

8. What is the name of the document developed by the Australian Commission on Safety and Quality in Healthcare that outlines the rights of all Australians accessing healthcare?
9. What are the seven rights identified in the above document?
10. Explain how knowledge of these rights could improve the health and wellbeing of a person suffering from a physical condition such as obesity.

10.6.2 Topic summary

Medicare and the Pharmaceutical Benefits Scheme

- Australia's health system is complex and includes public and private services.
- Medicare is Australia's universal health insurance scheme.
- Services covered by Medicare include: GP and specialist doctors, treatment and accommodation in a public hospital, x-rays, pathology and eye tests.
- Services not covered by Medicare include: accommodation in a private hospital, ambulance, most dental treatment, cosmetic surgery and allied health services such as physiotherapy.
- Advantages of Medicare include: reduced cost for essential medical services, reciprocal agreements between Australia and other countries and extra financial support through the Medicare Safety Net.
- Disadvantages of Medicare include: no choice of doctor for in-hospital treatment, long waiting list for many treatments and out-of-pocket expenses for many services.
- Bulk billing is when the government covers the full cost of seeing a GP because the GP only charges the Schedule fee.
- Medicare is funded by general taxes, the Medicare levy and the Medicare levy surcharge.
- The PBS subsidises the cost of over 4000 essential medications.

Private health insurance

- Private health insurance plays an important role in healthcare in Australia.
- People pay a premium to purchase a policy for hospital and/or extras cover to pay for services not covered by Medicare.
- Advantages of private health insurance include: choice of doctor for in-hospital treatments, access to private hospitals, shorter waiting times for elective surgeries and cover for services not provided by Medicare.
- Disadvantages of private health insurance include: the cost of premiums, some out of pocket expenses and qualifying periods for some conditions.
- To encourage people to take out private health insurance, three incentives were created by the federal government: the private health insurance rebate, Lifetime Health Cover and the Medicare levy surcharge.

The range of community services to support the dimensions of health and wellbeing

- Communities offer a wide range of resources that support the dimensions of health and wellbeing.
- Conventional medical and dental services support physical and mental health and wellbeing.
- The Victorian Maternal and Child Health Service supports the health and wellbeing of mothers and children up to 3.5 years of age.
- Sporting clubs and associations can be very beneficial for physical, mental and social health and wellbeing, particularly for some population groups.
- headspace supports the mental and emotional health and wellbeing needs of young people from 12–24 years of age.
- Places of worship cater for the spiritual health and wellbeing needs of many in the community and also offer opportunities for improved social health and wellbeing.
- Volunteer organisations such as St John Ambulance Australia support the health and wellbeing of both the volunteers and the Australian public.

Rights and responsibilities of access to healthcare

- Australians have a range of rights and responsibilities when accessing healthcare.
- Patient rights are outlined in the Charter of Healthcare Rights.
- Patient rights include: access, safety, respect, communication, participation, privacy and comment.
- There are laws to protect patient privacy and confidentiality.

Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0024).

10.6 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Towards the middle of every year, there are a large number of advertisements on TV and radio advising people to take out private health insurance before they turn 30.

a. What is private health insurance? **(1 mark)**

b. Why would private health insurance companies be advising people to take out private health insurance prior to turning 30? **(2 marks)**

Question 2

Cosmetic surgery is not generally covered by Medicare. List two other services that Medicare does not cover. **(2 marks)**

Question 3

Explain the role that the Pharmaceutical Benefits Scheme (PBS) plays in improving the health and wellbeing of Australians. **(2 marks)**

Question 4

'A person's health and wellbeing is solely the responsibility of the healthcare sector.' To what extent do you agree with this statement? **(4 marks)**

Question 5

Privacy and confidentiality are important rights for patients accessing healthcare. Explain how the provision of privacy and confidentiality can improve the health and wellbeing of a teenager who has recently become sexually active. **(2 marks)**

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10.6 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

Resources

Interactivities Crossword (int-6862)
Definitions (int-6863)

11 Health information, technology and complaints

11.1 Overview

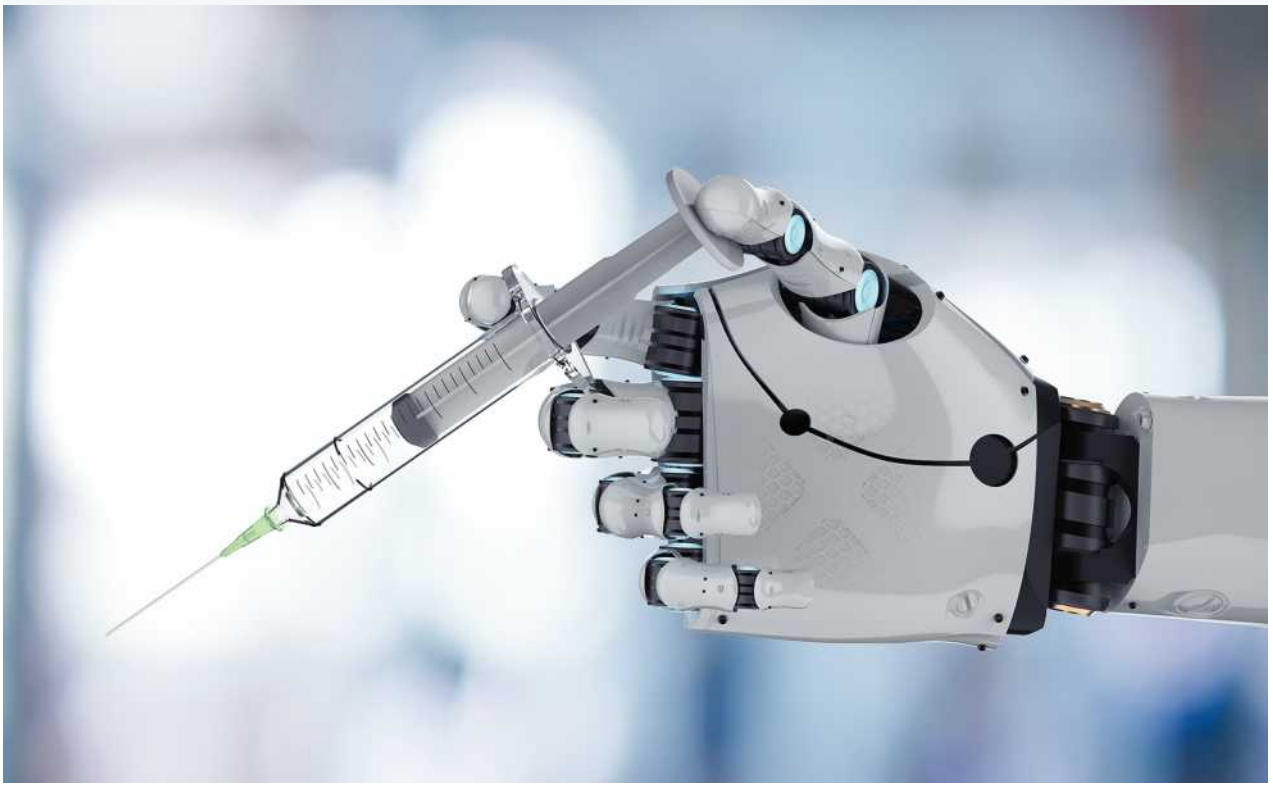
Key knowledge

- Factors affecting access to health services and information
- Opportunities and challenges presented by digital media in the provision of health and wellbeing information — for example, websites, online practitioners and digital health apps
- Issues such as ethics, equity of access, privacy, invasiveness and freedom of choice relating to the use of new and emerging health procedures and technologies
- Options for consumer complaint and redress within the health system

Key skills

- Identify and explain factors that affect people's ability to access health services and information, including digital media, in Australia
- Analyse issues such as ethics, equity of access, privacy, invasiveness and freedom of choice associated with the use of new and emerging health procedures and technologies
- Explain the options for consumer complaint and redress within the health system

FIGURE 11.1 The use of robotics is an emerging medical technology.



KEY TERMS

Artificial intelligence the development of computer systems that are able to perform tasks normally requiring human intelligence
Cell-based therapies treatment in which stem cells are induced to differentiate into the specific cell type required to repair damaged or destroyed cells or tissues
Cyberchondria a term used to describe people who search medical symptoms online and believe they have the worst-case scenario for their symptoms
Differentiation the process whereby an unspecialised embryonic cell acquires the features of a specialised cell such as a heart, liver or muscle cell
Equity in health relates to everyone having a fair opportunity to achieve their full health potential
Health services all services associated with the diagnosis and treatment of disease or the promotion of health and wellbeing
Nanotechnology the science and technology of extremely small things, smaller than 100 nanometres in size
Redress to remedy something that has been judged to be wrong and/or compensate for it
Self-diagnosis the process of diagnosing or identifying medical conditions in oneself using books, online resources or past personal or family experiences
Self-medicating a behaviour in which an individual uses a medication or substance to self-administer treatment for physical or psychological ailments. The most widely used substances for self-medication are over-the-counter medicines used to treat common health issues at home.
Stem cells cells that have the potential to become many different types of cells in the human body

on Resources

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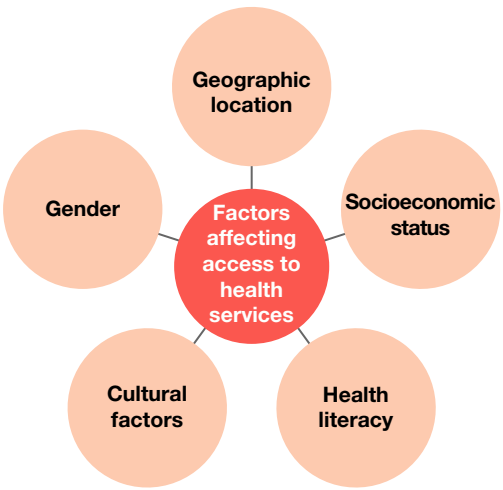
To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0025).

11.2 Access to health services and information

KEY CONCEPT Understanding the factors that affect access to health services and information

There are many factors that affect a person's ability or desire to access **health services** and use health information. Some of these factors are geographic location, socioeconomic status (SES), levels of health literacy, cultural factors and gender.

FIGURE 11.2 Factors affecting access to health services



11.2.1 Geographic location

Australia is a large country with a relatively small population. Although the majority of Australians live in major cities (e.g. Melbourne, Sydney or Perth) or regional centres such as Ballarat or Bendigo, about one-third of the population lives in rural and remote areas of the country. People living in rural and remote regions of Australia have difficulty accessing the level of health services available to those living in major cities, often simply because of the large distances that need to be covered to access doctors and hospitals. Access to healthcare for rural and remote Australians is not only limited by lower numbers of doctors, specialists and hospitals, but also by the reduced availability of current technology for diagnosis and treatment of patients with both emergency and chronic health needs. The latest data from the Australian Institute of Health and Welfare shows that in 2014 the overall rate of medical practitioners, including specialists, was 253 per 100 000 population in rural and remote areas, compared with 409 per 100 000 population in major cities. The number of GP services provided per person in very remote areas during 2010–11 was about half that of major cities.

Access for some people might be improved by services such as the Royal Flying Doctor Service, but treatment for emergency health needs is still considerably slower than for those living in major cities, where access to emergency medicine is facilitated by ambulances and close proximity to hospitals. Preventative health services such as cancer screening are also difficult to access for people living in rural and remote areas, which means they might have to travel to a large regional hospital or the city. Time taken away from work and family and the stress of travelling large distances are a major barrier for rural and remote populations in accessing health services.

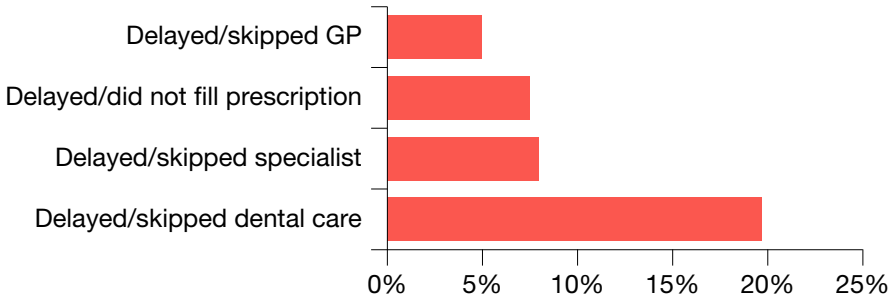
FIGURE 11.3 Australians living in rural or remote areas may need to travel vast distances to access medical services.

FIGURE 11.4 Access to health services for rural and remote populations in Australia is limited compared with those living in major cities.

11.2.2 Socioeconomic status

Socioeconomic status refers to a person's position in society relative to other people based on the factors of income, occupation and education. All three of these factors, particularly income, can affect a person's ability to access health services and information. Considerable numbers of Australians face barriers to accessing health services based on cost. Many health services are unavailable to families and individuals on low incomes because they are simply too expensive. Despite Medicare offering bulk billing GP services and free treatment and accommodation in a public hospital (see topic 10), there can still be large out-of-pocket expenses for prescription medication, specialists, surgery and dental care. About 1 in every 20 Australian people who needed to see a GP skipped the visit or delayed it because of cost in 2014–15. The number of people who delayed or skipped dental care because it was too expensive was almost one in five. These statistics have remained relatively constant, with 1.3 million Australians delaying seeing a GP due to cost in 2016–17.

FIGURE 11.5 The percentage of Australians who delayed or skipped healthcare because of cost (2014–2015)



Private health insurance may be out of reach for people on low incomes, which means they may face long waiting times for elective surgeries accessed through the public hospital system, and there are still out-of-pocket expenses associated with treatment by a specialist. Private health insurance premiums can cost over $3000 per year for families. Many families on low incomes are not able to afford these premiums.

Limited financial resources can also reduce options for transport. Without easy access to transport, such as a car or affordable public transport, it can be very difficult for some people to access health services. This can become a significant barrier, particularly for older Australians and those living in rural and remote areas.

A person's occupation can also affect their ability to access medical services. Occupation is linked to income, which has been discussed; however, the occupation itself can be a factor for access. For example, people who work long hours, do shift work or travel for their occupation can probably afford the medical services if they earn a high income, but do not have the time to seek medical treatment outside their work hours. Many people in well-paying jobs with high levels of responsibility feel that they cannot take time off from work to seek medical attention. Some people may not have provisions for sick leave in their employment; for example, casual workers or those who are self-employed. For these people, taking time off work to access medical services means that they would not get paid. This is a barrier that prevents some people from accessing the health services they may need.

Education is the third aspect of socioeconomic status and its impact on the ability to access health services and information is significant. This will be discussed in the following section on health literacy.

11.2.3 Health literacy

Overall levels of education are important in accessing and understanding health information; however, health literacy is a specific factor that can affect access to health services and information. Health literacy is the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions. The need for health consumers to be 'health literate' in today's society is greater than ever before. Health consumers are required to participate in more complicated preventative healthcare and self-care regimes, understand more complex health information and navigate more complex health systems. Low levels of health literacy are a significant problem in Australia — only 40 per cent of adults have the level of individual health literacy needed to meet the complex demands of everyday life. This drops to 26 per cent for those who speak English as a second language and to only 21 per cent in populations with low incomes.

Health literacy is not just about reading and interpreting information about health problems and issues, but using the information to make good decisions based on a thorough understanding of the health services available and how best to access and use these services. Low levels of health literacy are associated with lower rates of participation in preventative health approaches such as cancer screening, vaccinations and mismanagement of medications. The likelihood of a person experiencing barriers to health literacy

increases where there are low levels of general education, socioeconomic disadvantage and existing language barriers. High levels of health literacy help people access a greater range of health services and use health information to make better decisions to promote their health and wellbeing. As a result, overall levels of health and wellbeing are improved for those people.

FIGURE 11.6 Health literacy is an important factor in accessing health services and using information to promote health and wellbeing.

11.2.4 Cultural factors

There are many different cultural factors that may affect a person's ability to access health services and information. These factors include language barriers, religious beliefs, values and expectations of the services provided. People from different cultural backgrounds may have different reasons that prevent them from accessing healthcare; however, a language barrier is a consistent and significant factor common in limiting access to medical services and information. Australia is a culturally diverse country with many residents originating from non-English speaking backgrounds. These residents may be Indigenous Australians, migrants or refugees, all of whom do not use English as their first language at home. Those with a language barrier are much less likely to access medical services and information because they don't understand the information they are given and may not feel that they are in a safe or culturally appropriate environment.

For Indigenous Australians, the predominantly western-oriented health system is staffed by non-Indigenous practitioners who may lack understanding of Indigenous culture and concepts of health and wellbeing. This can leave patients feeling disempowered and less likely to access health services. Indigenous Australians, particularly in very remote areas, experience difficulties communicating with medical staff and as a result are less likely to access medical services, even when they are available.

Religious beliefs and values also contribute to barriers to some Australians accessing medical services. In some religions, beliefs prevent patients from receiving some available treatments. For example, members of the Jehovah's Witness religion are not allowed to receive blood donations from others, limiting their ability to access a full range of medical services if needed during an emergency or surgery. Other religions may prohibit women from consulting with male doctors and requirements for dressing modestly may make some patients reluctant to expose parts of their body for examination. This may prevent them from seeking medical assistance at all. Religious beliefs around food and fasting may also act as a barrier for people to access necessary services such as in-hospital treatment where meals need to be provided.

FIGURE 11.7 Indigenous Australians may not access health services and information due to language and cultural barriers.

FIGURE 11.8 There may be cultural factors such as language or religion that prevent people from accessing the healthcare they need.

An additional barrier to accessing the Australian healthcare system for new migrants is that they might not be covered by Medicare, increasing the costs of any services they might require.

11.2.5 Gender

Australia's population of 25.3 million is roughly half male and half female and yet there is a large disparity in the use of medical services between these two genders. In 2017–18, males accessed 42 per cent of the total Medicare services claimed while females accessed 58 per cent. Compared with females, males made a smaller proportion of GP consultations and hospitalisations. Eleven per cent of males enrolled with Medicare in 2015–16 did not access any Medicare-provided services at all.

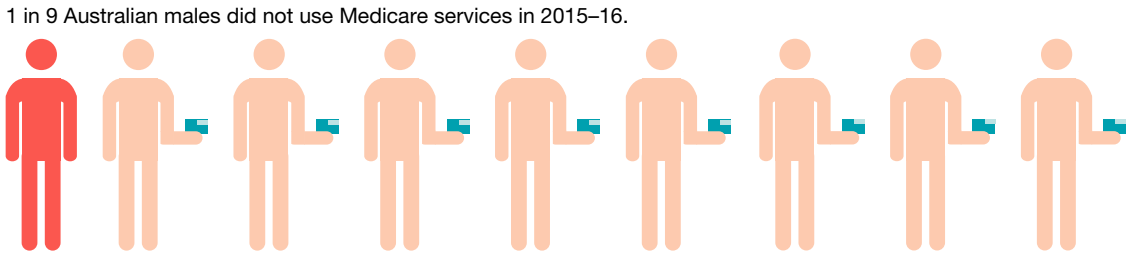
FIGURE 11.9 Males face significant barriers to accessing medical services.

Several key factors have been identified as major barriers to males accessing health services. These include:

- limited opening hours outside of work hours
- lack of male health professionals and embarrassment at discussing sensitive, emotional issues or reproductive health services with female health professionals
- discomfort in the waiting room and having to state the reason for the visit
- social norms and values associated with a traditional view of masculinity including self-reliance and perseverance in the face of pain.

These factors among others mean that males are often reluctant to access medical services and ignore preventative health measures that may be offered.

FIGURE 11.10 Australian males use fewer Medicare services than females.



Source: Australian Institute of Health and Welfare 2017, *The Health of Australia's Males*. Cat. no. WEB 199. Canberra AIHW.

CASE STUDY

Pit Stop Men's Health Check

Pit Stop is a men's health screening tool delivered in a variety of rural settings, including field days, shows, car displays and workplaces. Pit Stop invites men to have their roadworthiness (health status) assessed by running through a series of brief stations (health checks), for example:

- chassis check (hip to waist ratio)
- fuel additives (alcohol consumption)
- oil pressure (blood pressure)
- shock absorbers (coping skills).

If participants fail more than two stations, a 'Work Order' sticker is issued that requires the participant to have a 'tune-up' before being considered roadworthy. Men are encouraged to make lifestyle changes or consult a

doctor if needed. There are over 150 sites throughout Australia including Pit Stop in their health programs. A 2005 evaluation, funded by the Australian government, found that in rural areas Pit Stop successfully reached men with significant health risk profiles and resulted in nearly half of the men changing their behaviour and/or seeing a health professional. Pit Stop is a WA Country Health Services initiative. In 2006–07, the Australian government provided funding to Gascoyne Population Health Regional Health Services to update and reprint the Pit Stop material and develop the Pit Stop website. This initiative has spread to other rural areas outside of WA and is successful in reaching some men who would otherwise not access medical services.

Source: Australian Institute of Health and Welfare, 2011, *The Health of Australia's Males*. Cat. no. PHE 141, p. 45, Canberra: AIHW.

Case study review

1. What is the advantage of delivering the Pit Stop program in settings such as field days, car displays and shows?
2. Why do you think the program uses car parts to describe parts of the body and to assess men's health and wellbeing in terms of roadworthiness?
3. Do you think this program would be successful for men who are not based in rural Australia? Justify your answer.

on Resources

Digital document General Practice Rural Incentives Program worksheet (doc-32173)

Weblink General Practice Rural Incentives Program

11.2 Activities

1. Access the **General Practice Rural Incentives Program** weblink and worksheet in the Resources tab, then complete the worksheet.
2. Surveys of men indicate that a major reason why males don't use medical services as often as females is that they suffer discomfort in the waiting room. Design a waiting room with features that would make males more comfortable and therefore more likely to use medical services such as the GP. This could be presented as text, or a model, diagram or video.
3. Research the Royal Flying Doctor Service and explain, using specific examples, how this service increases access to healthcare for Australians living in rural and remote areas.

11.2 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. List the factors that could affect a person's ability to access health services and information.
2. What factors contribute to the reduced ability to access health services for males in Australia?
3. Describe how having higher socioeconomic status can impact on a person's ability to access health services compared with those of lower socioeconomic status.
4. (a) List the cultural factors that can act as a barrier to accessing health services.
   (b) Explain how religious beliefs might affect the ability of a pregnant woman to access appropriate health services.
5. (a) What is meant by the term 'health literacy'?
   (b) Besides general levels of education, what factors can contribute to low levels of health literacy?
   (c) How does health literacy affect the accessibility of health services?

11.2 Exercise 2 APPLY your knowledge

1. There are many reasons why those living outside Australia's major cities have poorer health status than the Australian population overall. In terms of access to health services, explain why there is such a difference in health status between these two population groups.

2. In a paper to be presented to the Australian government, outline recommendations you would make to help increase the health literacy of Australian adults.

studyON

11.2 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

11.3 Digital media and health and wellbeing

KEY CONCEPT Understanding the opportunities and challenges for health and wellbeing presented by digital media

11.3.1 What is digital media?

The world we live in is filled with digital media products, which enable and deliver experiences in many industries, including health and wellbeing. Digital media refers to audio (sound), video and photographic content that has been converted into a digital media file. After this conversion, the information can be easily manipulated, distributed and played by computers and transmitted to others over computer networks.

Examples of digital media products include:

- websites
- mobile apps
- social media
- games
- data and databases
- digital audio (MP3)
- digital images and video
- computer software
- e-books
- virtual reality.

Digital media and its applications are expanding at a great rate, and one area where there has been a large uptake of this technology is in the health and wellbeing industry. There are many applications for the use of digital media in providing and distributing health and wellbeing information in a number of different formats. These include technology-based patient consultations, virtual reality, symptom checkers, general health and wellbeing websites and mobile apps, and search engines such as Google.

FIGURE 11.11 Digital media for health and wellbeing

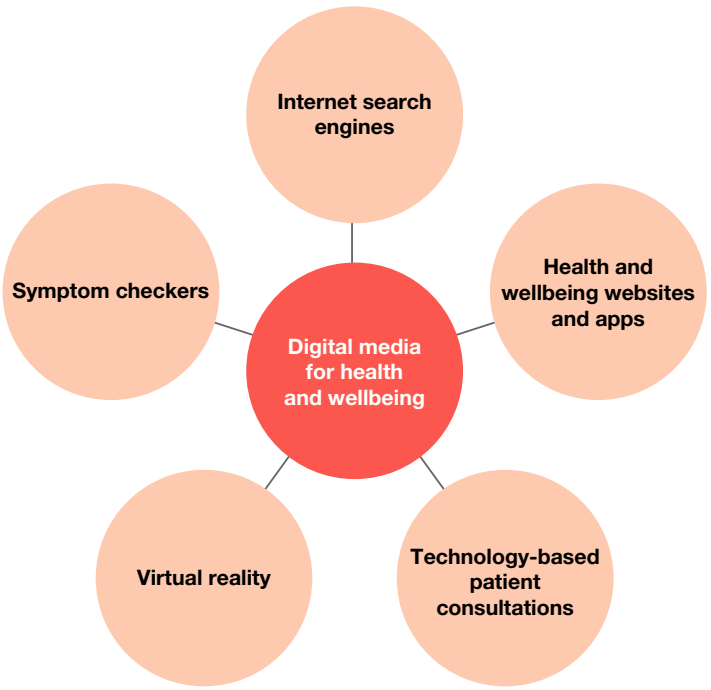


FIGURE 11.12 Digital media in its many forms is a part of everyday life for most Australians.

Technology-based patient consultations

These are doctor–patient consultations that use any form of technology, including video conferencing, internet or telephone, as an alternative to face-to-face consultations. These services are increasingly being used by all medical specialties in Australia, in addition to normal medical practice, where the patient and their medical history are well known to the doctor. This type of consultation does not replace a face-to-face consultation where there often needs to be a physical examination; however, this technology can increase access to care for patients and increase efficiency and effectiveness of the medical practice.

Virtual reality

There are a wide range of emerging applications for virtual reality technology in healthcare. These include distraction therapy for cancer patients undergoing chemotherapy and various forms of doctor training. Virtual reality can be used to train surgeons where it is difficult to observe some surgeries. It is also being trialled for use in improving doctor–patient relations for elderly people or those suffering from dementia. In these cases, doctors can use virtual reality to experience what it is like to be elderly with low vision and hearing or spend time living as a dementia patient. These applications are aimed at improving connections between elderly patients and their much younger doctors, helping to improve access to healthcare for those patients.

Symptom checkers

Many Australian websites and mobile apps, including Healthdirect and myDr, and overseas-based websites such as mayoclinic.org have web-based 'symptom checkers'. People can access these 24 hours a day and either search for various symptoms they may be suffering or answer a number of basic questions to determine the best action to take when feeling unwell or experiencing certain specific symptoms. Healthdirect is an Australian government website which has a symptom checker that advises whether to see a GP or a pharmacist or go to an emergency department of a hospital after users answer a number of questions about their symptoms. It also provides some basic self-care information to follow as a result of answers that were provided to the initial questions.

FIGURE 11.13 Symptom checker websites help people to determine a course of action when they are feeling unwell.

myDR provides a drop-down menu of symptoms to choose from. Opening a symptom, for example back pain, gives general information on this problem, causes of the condition and some advice on relieving the problem.

Mobile apps

Mobile apps can be can be used to access specific health information on a wide range of topics including food ingredient lists for people with allergies, exercise trackers, menstrual period trackers and skin checks for moles. There are many health and fitness apps which help motivate people to be more physically active, such as Couch to 5K which encourages people to start running for fitness, weight loss or enjoyment and offers beginner running programs for first-time runners. In this category, there are many apps which people use to gain knowledge of their own levels of physical activity and share their physical activity goals and achievements with others.

FIGURE 11.14 An app analysing the energy content of meals can help with maintaining a healthy body weight.

Many government and non-government organisations that focus on specific health conditions have also established apps to assist consumers. For example:

- Beyondblue produced the BeyondNow app for people experiencing suicidal thoughts and feelings. This app provides a mobile, personalised safety plan that people can carry at all times in their pocket to help them through tough times or to get help when needed.
- On Track with The Right Mix is an app developed by the Department of Veterans' Affairs which allows people to keep track of their drinking over time and provides information on the short- and long-term health effects of drinking alcohol.
- SkinVision is an app designed to evaluate moles and other skin lesions for skin cancer risk. The user takes a photo of any moles or skin conditions they are concerned about, then the app analyses the photo and gives a recommendation based on a traffic light system. The app allows people to track any changes in their skin over time, share this information with doctors and together assess their risk of skin cancer and any actions to be taken.
- My QuitBuddy is a free app associated with the Quitnow initiative, designed to help people get, and stay, smoke free. It's with smokers through the hardest times with helpful tips and distractions to overcome cravings, tracking systems to chart progress towards quitting smoking and the facts needed to understand the impact smoking has on health and wellbeing. There are versions of this app targeting Indigenous Australians and pregnant women.

General health and wellbeing websites

There are many websites globally that provide general health and wellbeing information. In Australia, there are both government and non-government organisations that make large volumes of health and wellbeing information available through their websites.

- Healthdirect (www.healthdirect.gov.au) is a service from the Federal government providing free Australian health advice on the internet. In addition to the symptom tracker already mentioned, this website provides an extensive A–Z listing of health information based on conditions, symptoms or common health experiences for different life stages. Healthdirect also has a mobile app which provides similar information and assistance.

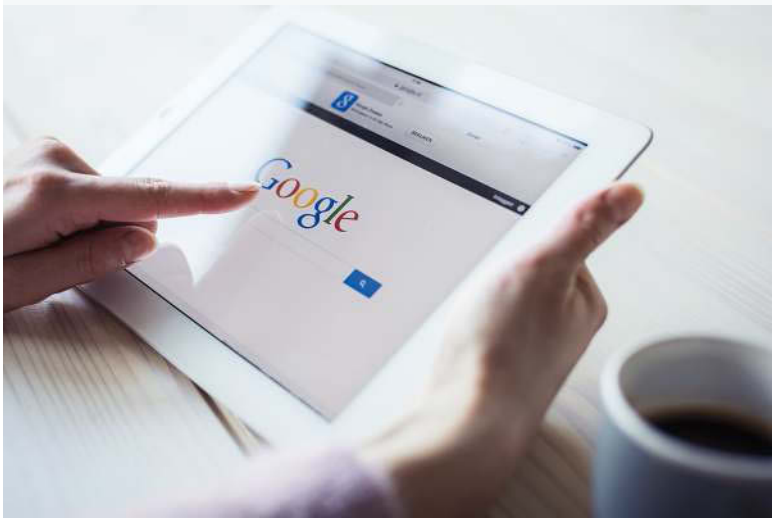
- The Better Health Channel (www.betterhealth.vic.gov.au) is a comprehensive health and wellbeing and healthy living website provided by the Victorian Government. Tools such as a BMI calculator and health-related apps are available from the Better Health Channel. The Vax On Time app developed by the Victorian Department of Health and Human Services helps to remind parents and carers when their child's vaccinations are due. The Better Health Channel app lets people set personal health alerts and notifications for pollen, UV levels and smog. A range of healthy recipes and articles on other healthy living topics are provided on the website.
- myDr.com.au, a project of DrMe Pty Ltd, is an independent website which claims to provide reliable Australian health information, health tools and calculators covering symptoms, diseases, tests and investigations, medicines, treatments, nutrition and fitness. Health information is categorised by age and gender and can be browsed for common concerns. This website has a search engine to find a GP for people needing access to medical assistance.

FIGURE 11.15 There are many health and wellbeing-based websites on the internet.

Search engines

One in twenty Google searches are for health-related information. In 2016, the company responded by adding medical facts about common ailments, including symptoms, treatments and useful facts when basic health conditions are searched for through their search engine. Google's idea was for users to be able to easily access a single reliable source of health information that has been checked by doctors from the Mayo Clinic and Harvard Medical School, instead of numerous poor or unreliable websites. This basic information should assist users to gather more relevant information and decide which course to take. For example, searching 'headache on one side', on Google will result in a list of associated conditions such as 'migraine', 'common cold' or 'tension headache'.

FIGURE 11.16 One in twenty Google searches are for health-related issues.



For general searches, such as 'headache', the company will also give an overview description along with information on self-treatment options or symptoms that warrant a doctor's visit. It is not designed to take the place of one-on-one consultations with medical professionals. Google was quoted as saying on news.com.au, 'By doing this, our goal is to help you to navigate and explore health conditions related to your symptoms, and quickly get to the point where you can do more in-depth research on the web or talk to a health professional'.

Around one quarter of all Australians regularly seek health information online. One study showed that searching for health and medical information was among the top ten internet activities for Australians aged

over 16. This increasingly popular practice of using digital media in the provision of health and wellbeing information presents many opportunities but also some notable challenges.

11.3.2 Opportunities for health and wellbeing created by digital media

TABLE 11.1 Opportunities for health and wellbeing created by digital media

Health and wellbeing issue	Opportunity created by digital media
Australians living in rural and remote areas	Increased access to health information resources such as websites and mobile apps without having to travel long distances to see a healthcare professional. This means less time away from work and family and less money spent on travel.
Australians of low socioeconomic status	Apart from the cost of the internet or phone connection, large amounts of the health-related information is available on websites or via mobile apps that are free. This makes healthcare more accessible for those who struggle with the cost of individual appointments.
Language barriers	Those with language barriers can access health information, as many websites offer information in a variety of languages, or an online translator can be used to interpret information.
Expanding on a diagnosis	Websites can be useful for someone who wants to find out more about an injury or disease diagnosis from a doctor. The consultation time might be limited, the patient might think of more questions after they have left the clinic, or the doctor might have given large amounts of information that is difficult to process all at once.
Support groups	Through the internet or social media sites, people can share their experiences, treatments or offer advice and support to people with certain health conditions. They can connect with people and ask questions without having to travel long distances to seek personal support, or remain anonymous if they choose.

Overall, using the internet as a source of health and wellbeing information can help patients to be more informed and make better decisions about health issues; however, it is usually an additional resource, not a substitute for seeing a doctor or health professional in person.

CASE STUDY

Is online therapy as good as talking face-to-face with a clinician?

First, what is digital mental healthcare?

Digital mental health treatment often involves working your way through a structured, online program based on standard, evidence-based psychological treatment methods.

Many are based on cognitive behaviour therapy (CBT), whereby you learn to identify and change unhelpful thoughts and behaviours that contribute to your symptoms.

Some web-based treatment programs are designed to be done entirely on your own. Others can be done with support from a health professional, usually via a weekly email. In some cases, telephone, online chat or face-to-face assistance is provided.

Why provide mental healthcare over the internet?

Digital mental health services offer more choices and greater flexibility in how we get help.

Some people are uncomfortable opening up to a health professional face-to-face; they prefer the anonymity of online assistance. Where email communication with a health professional is involved, we can take our time to read and respond to emails.

A number of the services are freely available and there are no added travel costs. For some people, especially those in remote areas, no other mental health services are accessible to them.

Technology can also be used to supplement face-to-face care. A person might see a health professional face-to-face and use a digital mental health service in between sessions. Websites and apps may also be a tool to facilitate discussion in sessions or for a person to monitor their symptoms.

FIGURE 11.17 Some web-based programs are done with support from health professionals.

Is it effective?

There is strong evidence that psychological therapy, particularly cognitive behaviour therapy, can be effectively delivered online to treat a range of mental health difficulties.

In some research trials, online therapy has been found to be as effective in reducing symptoms as therapy delivered face-to-face by a clinician. Evidence is particularly strong that anxiety, stress and depression can be treated online.

Who isn't it suitable for?

Digital mental health services are not for everyone. Some people prefer the in-person dialogue with a health professional and some types of therapy rely on that rather than the use of structured treatment materials. Some people don't feel confident about using computers or other technology, so trying to navigate a digital service may increase their anxiety levels.

Online treatment is generally less suited to more severe forms of mental illness, such as psychosis. But there are emerging developments in using technology in severe mental illness treatment, such as the use of iPads to use website resources within face-to-face therapy sessions with clients with psychosis.

Online treatment tends also to be less effective with largely physical problems rather than those related more to emotions, thoughts and behaviours, but again there are exceptions to this. Many physical health conditions, such as cancer, have a psychological impact, which internet-based therapy can be effective in helping people cope with.

Digital mental health services are generally less suitable for people experiencing an immediate crisis. But, in some cases, an online service may be the only way a person is willing to reach out for help.

People dealing with multiple mental health problems can often benefit more from a more personalised face-to-face approach — though web-based programs that tailor treatment to the individual's reported symptoms are available.

What are the disadvantages?

Despite their benefits, digital mental health services have some disadvantages over face-to-face treatment.

Services that involve only written communication, by email or online chat, don't enable the face-to-face visibility for the client and therapist to notice body language and tone-of-voice cues. This can increase the chances of misunderstandings occurring. Digital services can also require a fair amount of self-motivation for the client to make the time to work through self-help materials.

While digital mental health services such as those funded by the federal Health Department are freely available, there are also challenges to health professionals being able to offer digital services at a low cost as there are no Medicare rebates for online psychological services in Australia.

There may be concerns about how secure and confidential personal information entered online is. Using technology for health reasons requires thinking differently about security than you may be comfortable with for social reasons.

Source: Adapted from Abbott, J 2016, 'Is online therapy as good as talking face-to-face with a clinician?', *The Conversation*, 22 April, https://theconversation.com/is-online-therapy-as-good-as-talking-face-to-face-with-a-clinician-51492.

Case study review

1. Outline three of the advantages of online therapy for mental illnesses.
2. Referring to the article, is there evidence that this type of therapy is effective?
3. Discuss why online therapy might not be suitable for all mental health patients.
4. Respond to the following statement: Online mental health services are not suitable at all when a person is having an immediate mental health crisis.
5. Outline three of the disadvantages of online therapy for mental illnesses.

11.3.3 Challenges for health and wellbeing created by digital media

TABLE 11.2 Challenges for health and wellbeing created by digital media

Challenge for health and wellbeing	Description
Reliability of information	Online sources are not always accurate, truthful, reliable or even honest, and users rarely know exactly who is providing the information or advice. Because of the nature of medical advice about conditions or treatments, misinformation can be particularly harmful as it may directly affect a person's health and wellbeing.
Low health literacy	Many people do not have the levels of health literacy to give them the skills or knowledge to seek reliable advice, and therefore act on ill-informed opinions or information. High levels of health literacy are needed to sort through the massive amount of information available and decide what is useful, accurate and safe.
Self-diagnosis	Internet resources give information only and can't ask the questions required to accurately diagnose or identify a health condition, increasing the risk of people misdiagnosing their health concerns. This may result in people dismissing serious symptoms as nothing of concern, or beginning inappropriate treatments for symptoms that may have been misdiagnosed. See table 11.3 for examples of the possible diagnoses of common conditions from different web searches. Self-diagnosing can cause a delay in seeing a doctor and beginning treatment for health conditions.
Self-medicating	Choosing medications based on a self-diagnosis may mean the real condition is not treated or the medication chosen may cause health problems itself. This can mean that potentially life-threatening health conditions are not adequately treated, or dangerous medications may be taken when not appropriate.
Cyberchondria	This term describes people who research any and all symptoms of a rare disease, illness or condition, and cause themselves a state of medical anxiety. People who fear catastrophic injuries or diseases may search their symptoms online and become even more anxious because of the (often dubious) information they have found.

FIGURE 11.18 Many internet users self-diagnose their medical conditions.

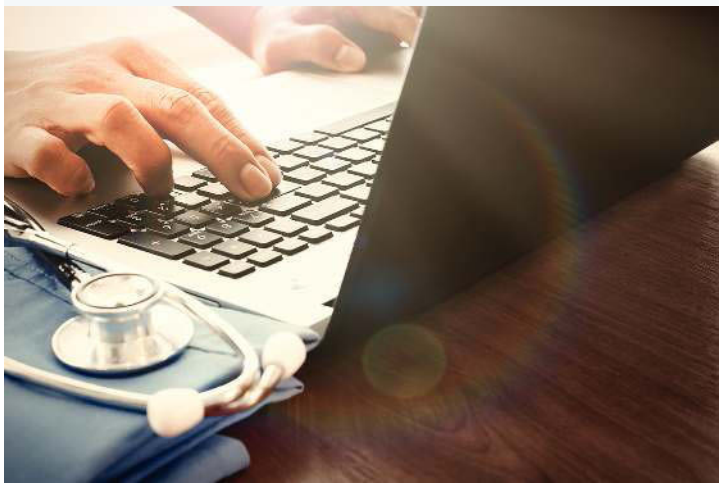


TABLE 11.3 Different diagnoses found through internet searches

Symptom	Potential health conditions suggested by different websites for one symptom		
	Website A	**Website B**	**Website C**
Pins and needles	Vitamin B12 deficiency	Sciatica	Multiple sclerosis (MS)
Stomach cramps	Indigestion	Appendicitis	Heart disease or angina
Earache	Common cold	Ear infection	Brain abscess
Blurred vision	Presbyopia	Glaucoma	Cataracts
Rash	Contact dermatitis	Psoriasis or eczema	Meningitis

Source: Bupa Health Pulse, 2011.

on Resources

Digital document Australian government health information worksheet (doc-32174)

Weblinks Australian government health information
Know Your Noise
Beyond Blue: Dadvice
Healthy produce
Eat for health

11.3 Activities

1. Research health and wellbeing mobile apps and make a brochure advertising your top five. Describe each app, what it aims to do and how it improves health and wellbeing for users. Discuss any potential negative impacts of each app.
2. Access the **Australian government health information** weblink and worksheet in the Resources tab, then complete the worksheet.
3. Analyse the health information provided by the following government and non-government websites. Which types of website provide more reliable information? Suggested websites include those discussed in this subtopic and those listed in the Resources tab:
   - Know Your Noise
   - Beyond Blue: Dadvice
   - Department of Health — healthy produce
   - Eat for health.

11.3 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. (a) What is meant by the term 'digital media'?
   (b) Give some examples of digital media.
2. Complete the following table outlining the uses of digital media in the health industry.

Digital media type	Example of an application for health
Technology-based patient consultations	
Symptom checkers	
Health and wellbeing websites	
Health and wellbeing apps	
Search engines such as Google	
Virtual reality	

3. How can digital media increase access to health services and information for Australians who live outside major cities?
4. (a) Outline three benefits to health and wellbeing when digital media is used as a source of health information.
   (b) Outline two of the challenges associated with accessing health information from digital media resources.
5. What is meant by cyberchondria?

11.3 Exercise 2 APPLY your knowledge

1. Outline some guidelines that could be taught at school to help users increase the reliability of the health information they find from digital media sources.
2. Refer to table 11.3.
   (a) What effect do you think searching for symptoms on Google may have on the health and wellbeing of some people? Use an example from table 11.3 to justify your answer.
   (b) After reviewing table 11.3, how accurate do you think the internet is at providing health and wellbeing advice and information?

studyON

11.3 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

11.4 Issues in health services

KEY CONCEPT Understanding the issues relating to the use of new and emerging health procedures and technologies

There have been rapid and beneficial advances in medical procedures and technologies; however, there are several issues that accompany the use of new medical processes.

Advances in medicine include:

- assisted reproductive technologies such as in-vitro fertilisation (IVF)
- **nanotechnology**
- robotics and **artificial intelligence**
- 3D printing of body parts
- **stem cell** use.

Using these technologies and procedures is associated with issues as outlined in table 11.4.

TABLE 11.4 Issues associated with advances in medical technology

Issue	Description
Ethics	Ethics are the moral principles that govern a person's behaviour, decisions or how they conduct an activity. Ethics relates to what people believe is essentially right or wrong. As a society we have certain general beliefs about what is right and wrong, but individual ethics on particular issues can vary greatly.
Privacy	As discussed in topic 10, privacy associated with health is primarily related to personal details and information being kept private between a patient and their doctor.
Equity	New medical procedures and technologies may not be available to all, based on cost or other factors such as sexuality or socioeconomic status. Equity of access addresses this issue as it refers to all people being able to achieve the same outcome.
Invasiveness	Some procedures can be extremely invasive due to the need for incision or insertion of an instrument. The issue of invasiveness may be addressed by new technologies which can reduce the impact of a particular procedure.
Freedom of choice	Freedom of choice means that people have the right to do what they want, when they want as long as they don't infringe on other people's rights.

11.4.1 New health procedures and technologies

Assisted reproductive technologies such as IVF

There are a range of assisted reproductive technologies available to couples or individuals wishing to conceive a baby. One of these treatments is in-vitro fertilisation (IVF).

IVF is not a new technology — the first baby conceived using this technique was born in 1978. However, IVF continues to be refined and modified to improve success rates. IVF is the process of fertilisation by manually combining an egg and sperm in a laboratory dish, and then transferring the embryo to the uterus.

Women are given hormones to increase the production of eggs, several of which are harvested, fertilised and implanted in the mother. IVF is recommended for healthy heterosexual couples who have been unable to conceive a baby naturally after 12 months. Approximately 8–10 per cent of couples have reproductive problems and may wish to try to have a baby through IVF. Same-sex couples and single women can also access IVF if they are wanting to have a baby without the involvement of a male partner. Success rates for pregnancies from IVF treatment are about 40 per cent per embryo for women under the age of 30. This drops to 8.5 per cent per embryo for women over the age of 40 and only 2 per cent by the age of 44.

Assisted reproductive technologies such as IVF raise many ethical issues and, because of the wide range of opinions on the subject, a consensus cannot be reached by society as a whole. Some people believe that nothing should stop people from fulfilling their desire to have children; others question the fundamentals of the procedure, saying that the idea of artificially creating life is not morally right. Some religions do not agree with IVF and do not allow it. There are questions about whether IVF should be offered to older women wanting to become mothers, particularly after reports of women in their 60s and 70s in Spain and India having babies through IVF. Many people believe that it is not fair on the children to have such old mothers, who may not live long after the birth of their child.

One of the pressing ethical questions relates to the embryos that are created but not used in each IVF cycle. A number of embryos are created for IVF but only two or three are usually transferred to the woman's uterus, leaving a number of embryos unused if a pregnancy results. These embryos are frozen and stored in case the couple wants to try for more babies in the future. In 2016, there were already approximately 46 000 frozen embryos in Victoria alone. There is an ethical dilemma about what happens to these embryos after they have been stored for a number of years. Not all people feel that it is morally right to create these potential lives but then destroy them after a period of time if they are not used.

Equity of access is also an issue raised by the use of IVF, which is an expensive medical procedure. An average cycle of IVF costs around $5000, with ongoing costs for services such as embryo storage. The high cost of this procedure puts it out of reach for some Australians.

In Australia, fertility treatment and the procedures involved in IVF may be eligible for a Medicare rebate if there is a medical cause of infertility. This may mean that single women and same-sex couples who wish to access IVF treatment can't, because they might not be eligible for the Medicare rebate for the high costs involved. Many people object to their taxes being used to fund the public health system to provide IVF, particularly for older women because the success rates are so low.

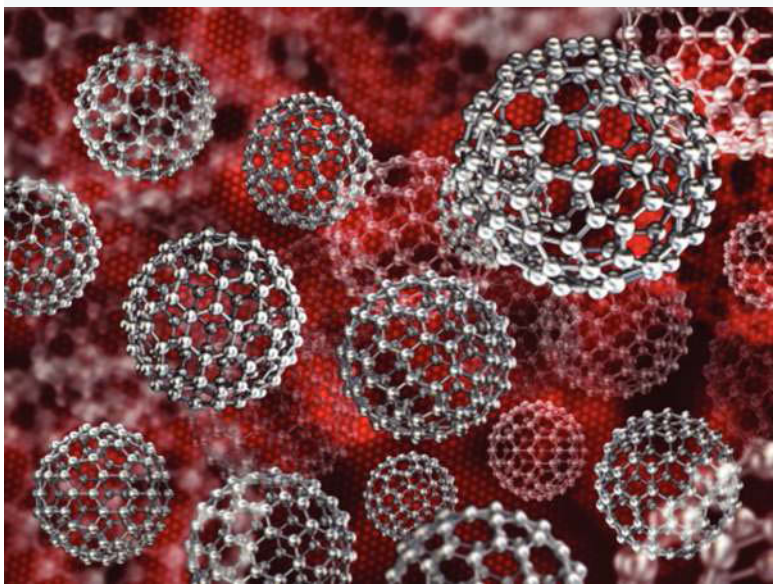
FIGURE 11.19 Between 8 and 10 per cent of healthy couples have problems conceiving and turn to IVF to have a baby.

There is a great deal of controversy over the issue of freedom of choice in relation to 'designer babies'. Many people argue that it is unethical and unnatural to be able to create your own baby by selecting certain characteristics or gender. Scientists have found ways to genetically alter human embryos created through IVF. In the years since this technology has been developed, some people have used the process to have children that will be an exact match to an older sibling who is terminally ill. This way there is always someone who can donate organs, blood, bone marrow and other such body parts. Some people object to babies being created solely to act as a donor for a sick sibling.

Nanotechnology

The science of the extremely small holds enormous potential for healthcare, from delivering drugs more effectively, diagnosing diseases more rapidly and sensitively, and delivering vaccines via aerosols and patches. This type of technology is evolving rapidly and has the potential to reduce the issue of invasiveness in medical treatment. Diagnosing some diseases can be very invasive, with a battery of blood tests, scans and procedures needed to identify the cause of ill health. Diagnosing diseases such as cancer and HIV can be achieved using nanotechnology with barely a drop of blood drawn.

FIGURE 11.20 Nanotechnology is the science of extremely small things and has many applications in medicine.



Vaccinations and drug delivery can also be revolutionised using nanotechnologies. Drugs can be more effectively absorbed and targeted to the specific site where they are needed and vaccinations can be delivered without having to use an injection. There are significant

costs involved with developing these medical advances; however, the cost savings made by increasing the effectiveness of medications and reducing the number of health practitioners needed to vaccinate children, particularly in low-income countries, is significant and increases equity of access to healthcare. For example, aerosol or skin-patch delivery systems for vaccinations reduce the need for refrigerated transport and nursing services required to vaccinate large numbers of people.

There are ethical questions involved in the use of nanotechnology. What is technically possible and what is ethically appropriate is a matter of heated debate. For some people, nanomedicine evokes similar ethical issues to genetically modified foods, and these people are more concerned with the technologies rather than the benefits they might provide.

CASE STUDY

Melbourne researchers flag potential for new hearing loss treatment using nanoparticles

Melbourne researchers say they have come up with a treatment using nanoparticles for hearing loss that could potentially replace hearing aids for millions of people worldwide.

Scientists from Melbourne's Bionics Institute and the University of Melbourne believe they can use nanotechnology to deliver restorative drugs to deep within the ear to sufferers of neural hearing loss. It is the most common form of deafness, affecting people as they age, or if they've been exposed to prolonged periods of loud noise in industries such as music, mining, construction, manufacturing or the military.

Jim Findley is one of millions who could benefit from the research.

When the former US Army infantry officer's ears started ringing for three days straight, he knew something was seriously wrong. He had just completed a period of combat in Afghanistan, and he thought the cacophony of sounds on the battlefield — including gunfire, artillery and his comrades shouting at one another — had taken their toll.

'When the action starts, it's overwhelming to the senses. The light can be blinding, the noise can be deafening, and then everything breaks loose,' he said.

Like many defence force personnel around the world, it was his hearing that was damaged. Permanently. He has had partial hearing loss in his left ear for about a decade.

FIGURE 11.21 Jim Findley says potential nanoparticle treatment for his hearing loss would be a boon.

The isolation of hearing loss

Lead medical researcher Andrew Wise said the nanoparticle treatment currently being tested on animals would especially help people suffering from sensory hearing loss, which occurs when the nerve connections to the inner ear become damaged. It is the most common disability in developed nations according to the Bionics Institute, and is on track to affect one billion people worldwide by 2050. Sufferers wear hearing aids and there is no treatment.

Melbourne's Epworth Hospital ear, nose and throat surgeon, Sherryl Wagstaff, said hearing loss makes people isolate themselves.

'They don't want to go out, they don't want to socialise and as we know there are now links to dementia as a result of it,' Dr Wagstaff said.

She said the potential new treatment could be 'earth-shattering'.

Putting a sprinkle into a nanoparticle

The researchers believe restorative drugs can be 'loaded' into the nanoparticles, about half a millimetre in diameter and smaller than a cake sprinkle, or a 'hundred and thousand', and delivered to the inner ear.

Associate Professor Wise said the properties of the particles were 'remarkable' and he likened then to volcanic rock.

'They're very porous, and that property enables us to load very high levels of the growth factors (or drugs) into these particles, and then these growth factors come out of the particles quite slowly after many months,' he said.

Although drugs that can repair inner-ear nerve damage are already available, no-one has yet been able to find a way to get them to the inner ear in the quantity required to work.

If animal trials are successful, researchers said the technique could eventually replace hearing aids in millions of people around the world.

'People (who) have problems with hearing, problems with processing sound, information, in challenging environments ... where they can hear but have difficulty interpreting speech, that population is probably the target population, at least initially,' Associate Professor Wise said.

FIGURE 11.22 Associate Professor Wise holding sprinkles to demonstrate the size of the nanoparticles used to deliver drugs to the inner ear.

The treatment is still a few years away from human trials, but the US Department of Defence is so excited by the prospect it has committed $1.1 million to the research.

Like many defence forces around the world, payouts to servicemen and women who have suffered hearing loss due to exposure to noise make-up the majority of compensation payouts.

For veteran Jim Findley, it offers new hope.

'Mate, it would be brilliant,' he said with a smile.

Source: Longbottom, J 2018, 'Melbourne researchers flag potential for new hearing loss treatment using nanoparticles', ABC News, 9 November, https://www.abc.net.au/news/2018-11-08/nanoparticle-treatment-possible-for-common-form-of-hearing-loss/10477498.

Case study review

1. How could this application of nanotechnology impact on social health and wellbeing?
2. What size is the nanoparticle that could be used to deliver drugs to the inner ear?

Artificial intelligence and robotics

Artificial intelligence and robotics in healthcare is no longer the subject of futuristic dreams. It is already being used in some forms in mainstream medicine, and its potential uses are many and varied. Artificial intelligence refers to the development of computer systems that are able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision making and translation.

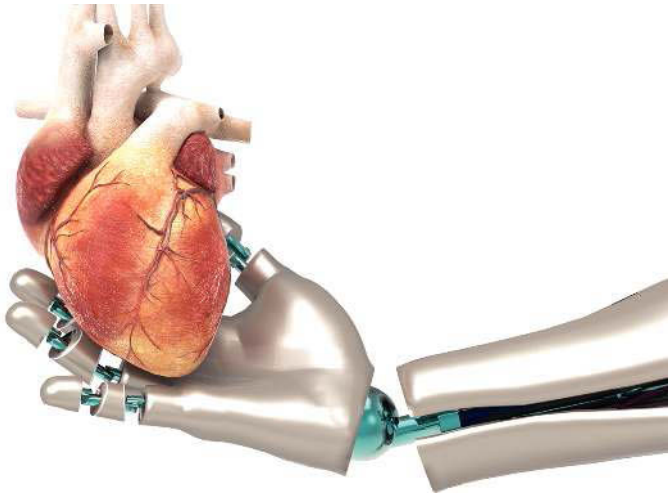
Currently artificial intelligence and robots are used to augment rather than replace human medical staff, but the potential for hospitals to become 'doctorless' in the future does exist. In the current medical context, artificial intelligence involves computers that are able to access and analyse vast amounts of data to identify patterns that humans don't have the processing power to do. The benefit is that doctors are saved from impossible amounts of reading and researching to find information to assist with a diagnosis. The computer programs use complex algorithms to provide information in a very short period of time. The computers can take full advantage of masses of electronic medical files and turn them into a resources goldmine for doctors almost immediately. This is a major step in diagnosis, especially for rare health conditions. Without artificial intelligence, doctors might make several incorrect diagnoses and perform unnecessary tests, lengthening the time before an accurate diagnosis can be made.

Artificial intelligence and its ability to rapidly analyse stored health data can also be used to determine an appropriate medication to prescribe to each patient. This could make healthcare more tailored to individual circumstances and improve treatment effectiveness. At this stage, however, computers are not good enough

to tell doctors with 100 per cent certainty a diagnosis or treatment. They only add to the information the doctor has gathered to help them make a decision, but ultimately the doctor needs to use their own judgement to decide on a course of action for each individual patient.

Despite the obvious benefits of this technology, the biggest concern is privacy. Although online medical records and data have enormous potential for researchers and doctors, the door is open for hackers to walk through and access patients' private and confidential records. This information could be made public or used for other unintended and unsanctioned purposes. In 2016 numerous high-profile Olympic athletes had their medical records released publicly after hackers broke into the World Anti-Doping Agency's (WADA) database. In 2018, over 1.5 million Singapore citizens had their personal information stolen, including the Singaporean prime minister. The possibility for the hacking of personal medical information and the resulting invasion of privacy is a large barrier for people accepting this technology in medicine. As outlined in topic 10, the concerns around privacy of health records have resulted in many Australians 'opting out' of the My Health Record initiative of the Australian Government.

FIGURE 11.23 Robots and artificial intelligence have important roles to play in the future of healthcare.



In conjunction with artificial intelligence, some surgeons also use robots to assist with surgery in the operating theatre. Currently the surgeon remains in control and uses the robot as a tool only. However, with advances in the technology, there is the potential for robots to be completely in control of surgeries and dispensing medications, with humans still making the decisions.

Artificial intelligence and robots could ultimately reduce costs in healthcare for patients, which could open up access to health services for lower socioeconomic status populations. This technology could also address equity of access to health services by providing specialised services where a doctor is unavailable to go. Accepting artificial intelligence and robots into mainstream medicine could be of great benefit to many people; however, with privacy a major stumbling block, many people are unwilling to do so.

3D printing of body parts

The applications of 3D printing in medicine are numerous and currently largely untapped. Some applications of 3D printing of body parts have already been realised, but the potential for benefit and advancement of medicine is enormous. This is a field of research that is rapidly expanding. Scientists have spent many years developing biologically compatible materials that do not degenerate over time and printers precise enough to complete the tasks required for the smallest of body parts, such as blood vessels and heart valves.

Currently the largest application of 3D printing is for bones and hard tissue. Soft tissue required for organs and muscles are still being developed. Bones can be printed from titanium, which is already used in surgical implants such as screws and plates used to repair badly broken bones. Already implants are being printed to provide replacement 'bones' to reconstruct body parts damaged through serious injury or surgical removal. In England in 2014, surgeons repaired the face of a man who was seriously injured in a motorcycle accident two years prior. Conventional reconstructive surgery was not able to completely fix his face and the man was embarrassed to be seen in public because of the shape of his damaged face. Surgeons repaired his facial structure by printing titanium bone implants to reconstruct his cheek bones and eye sockets. In doing so, they significantly improved the man's face shape and reduced his anxiety about going out in public.

Australia is leading many of the advances in 3D printing in medicine. In 2014, surgeons replaced the heel bone of a man diagnosed with an aggressive cancer with a titanium, 3D printed bone. Traditionally, the tumour in the heel bone of this patient would have caused the amputation of leg below the knee. Instead, a Melbourne biotechnology company printed a titanium bone implant which was used to rebuild the foot after the cancer-containing bone was removed. This type of technology is not only lifesaving but far less invasive than traditional treatments such as amputation of a limb.

In the near future, the medical application of 3D printing could be the use of printed 'living' body parts. Research and development continues in an attempt to produce muscle, cartilage and skin that can be printed and implanted in the human body. Fully functioning organs have not been developed yet, but functional organ structures such as heart valves have been produced. If organs or replacement organ parts could be successfully printed and implanted, the need for organ donors would be reduced. This would reduce ethical and privacy issues associated with traditional organ donation, as a donor and their family would not need to be involved in the process. This could also speed up treatment for sick patients who are usually on long waiting lists for a compatible organ to be donated.

There are issues in relation to equity of access associated with treatments of this kind. Development of technological applications such as 3D printing has high costs, and most treatments are still considered somewhat experimental. The high costs of treatment could put this technology out of reach financially for some people. As discussed earlier, people in rural and remote areas of Australia may not be able to access this type of treatment, as cutting edge technology and medical personnel trained in its use are not usually available in the hospitals in rural areas or even regional centres.

CASE STUDY

3D printed heel saves man from amputation

Australia continues to be a happening place for 3D printing in medicine. Not only does the nation offer the world's first Masters in Bioprinting program, but doctors there are continually in the news for aiding patients with 3D printing. Most recently, doctors at St Vincent's Hospital have saved a man from amputation with the technology.

According to the *Herald Sun*, 71-year-old Len Chandler was diagnosed with cartilage cancer in April. The tumour had already taken over the calcaneus, or heel bone, on his right foot. Because the complex bone moves in conjunction with the shin and foot bones, such a tumour would have typically resulted in a leg amputation below the knee. Professor Peter Choong at St Vincent's had other plans. Chandler relays, 'Prof. Choong said we could take the risk, and I had nothing to lose. I was hesitant and I didn't know whether it would work, but I had to try it.'

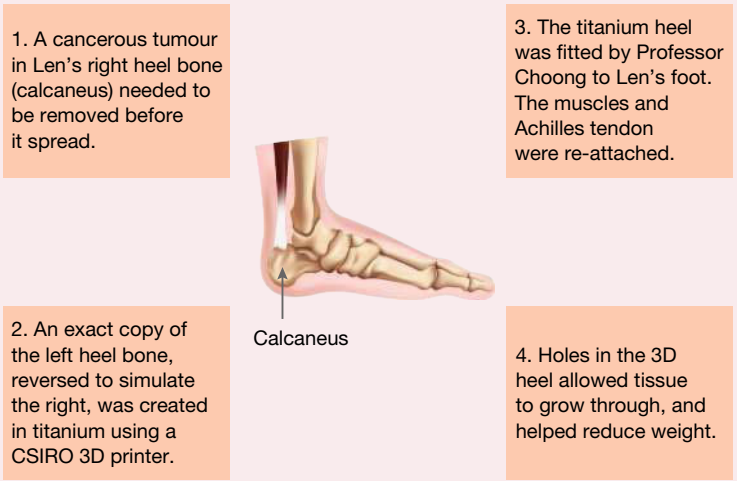
FIGURE 11.24 Anatomics biomedical technician Stuart Hall with a prototype heel of the revolutionary implant used to save Len's leg.

Working with Melbourne biotech company Anatomics and the nation's federal science research institution, CSIRO, Prof. Choong was able to provide Chandler with a 3D printed implant. First, the medical team scanned the patient's intact heel bone from his left foot. Anatomics was then able to create a mirror image for his right foot. The resulting 3D model was sent to CSIRO, which 3D printed an exact replica in titanium using an Arcam 3D printer. After the tumour was removed, the doctors were able to successfully implant the new heel bone.

The CEO of Anatomics, Andrew Batty, said, 'This is very much a pioneering procedure.' The procedure was a world first, as most 3D printed implants are not load-bearing to the extent that this heel bone will be. In the past, 3D printing has been used to create implants in the skull or, more rarely, the hip. In Chandler's foot, however, it will be bearing an even greater amount of weight. Additionally, the implant required both a smooth surface, to work with his other foot bones, that was also porous, so that tissue could grow inside it and allow the body to accept it.

Prof. Choong said of the procedure, 'Science advances have allowed us to consider 3D printing of bones and we were able to get information from Len's foot and use that to tell the computers precisely how big his foot is, and reproduce that using the new 3D technology. Going from the possibility of an amputation to where you preserve the limb on account of one (replacement) bone is rewarding if you can achieve it.'

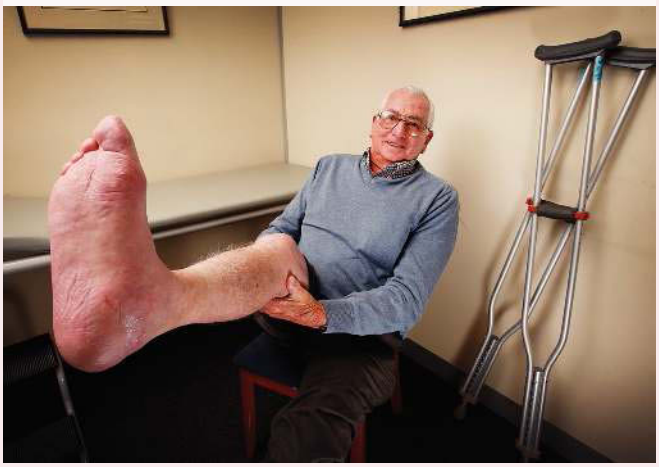
FIGURE 11.25 The process that saved Len's foot



John Barns, a spokesperson for CSIRO, added, 'Prof Choong was really taking the risk and Anatomics were coming up with the design, and we were willing to back them up.'

After his surgery on July 11, Chandler, a construction worker, is already on the path to recovery and can carry more than half of his own weight. By Christmas, Prof. Choong believes he will no longer need crutches. Chandler said, 'I didn't know how good it was going to be — I don't think Prof Choong knew how good I'd be — but I'm going very well.' If the researchers can secure the $180 million in federal funding, they may be able to perform more such procedures through the planned Aikenhead Centre for Medical Discovery.

FIGURE 11.26 Len and his new foot



Source: Molitch-Hou, M 2014, '3D printed heel saves man from amputation', *3D Printing Industry*, 20 October.

Case study review

1. What caused Len to need a 'new' heel bone?
2. What is involved in the traditional treatment for such a tumour?
3. Outline the series of processes needed to replicate Len's heel bone using 3D printing.
4. Why was this procedure considered to be 'pioneering'?
5. How is the issue of invasiveness reflected in this case study?

Stem cells

Stem cell science is a fast-moving field of research, with advances made almost every day. Stem cells are a type of unspecialised cell that has the potential to **differentiate** into many different cell types in the early stages of embryonic development. There are a number of types of stem cells that occur naturally in humans and have different roles depending on their type and location. Scientists primarily work with two kinds of stem cells: embryonic and adult. Embryonic stem cells are derived from human embryos 3–5 days after fertilisation. These embryonic stem cells are the most potent form of stem cell, as they can differentiate into any type of cell in the human body. Adult stem cells can also come from embryos or adult tissue. Adult

refers to the fact that these stem cells have already differentiated to a degree and can make new cells of certain types only. For example, adult stem cells in bone marrow can differentiate into different types of blood cells. Generally the role of adult stem cells is to generate replacement cells for those that are lost through normal degeneration and as a result of disease.

FIGURE 11.27 Stem cells grown in the laboratory have many applications in medicine.

There are many ways in which human stem cells can be used in the future. The potential for disease treatment is almost endless because of the unique regenerative abilities of these cells and their use in **cell-based therapies**. Stem cells offer great potential for treating diseases such as diabetes, heart disease and multiple sclerosis by replacing damaged cells with new ones derived from stem cells grown in the laboratory. For example, the insulin producing cells of the pancreas are destroyed when a person has diabetes, leaving them unable to regulate blood glucose levels. These cells could be replaced with new functional cells grown from embryonic stem cells. As yet, this type of therapy is not available in mainstream medicine, but this is the hope of researchers for future stem cell applications.

One of the most important potential applications of stem cells is the replacement of cells in organs that are failing. Currently, donated organs are used to replace failing ones, but the demand for organ transplants is far greater than the supply. Stem cells could be used as a renewable source of replacement cells rather than needing to replace the entire organ through transplantation. For example, it may be possible to use stem cells to generate healthy heart muscle tissue to repair a heart after a heart attack or as a result of heart disease. This would reduce the need for organ donors, the ethical questions of organ donation and the invasiveness of heart transplant surgery. The need for fewer organ donors could also reduce the privacy issues surrounding organ donation. These applications have not been realised yet, but this is the future of stem cell research.

There are many potential benefits of using human stem cells; however, there is controversy around the ethics of using and destroying human embryos. Generally, the embryos used for research are unused embryos created through IVF treatment. When they are no longer needed for reproductive purposes, these embryos can be donated for research. The ethical dilemma associated with stem cell research involves two conflicting moral principles: to prevent or alleviate suffering and the duty to care for and value human life. Human life is considered by many to begin at the moment of fertilisation. Therefore, using embryos for stem cell research and therapies is considered to be destroying human life. Like other advanced technologies, there are also issues of equity of access due to the cost of these potential therapies and the resources available at health services in rural or remote areas as discussed earlier.

EXAM TIP

To show an understanding of the issues relating to new and emerging medical technologies, you need to address a medical technology and make an analysis to determine whether any of these issues apply. You could use examples to discuss the issue or issues that are applicable. It is, however, not necessary to attempt to discuss every issue for each procedure or technology. Issues could be discussed in the positive, for example a technology such as 3D printing of body parts might reduce the invasiveness of a traditional procedure.

11.4 Activity

Research the applications of nanotechnology then create a brochure that a GP could use to inform patients about the potential use of the technology, the potential for success and any other challenges or ethical issues associated with the technology.

11.4 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Create a mind map including an explanation and a picture to illustrate each of the issues outlined in this subtopic: ethics, privacy, equity of access, invasiveness and freedom of choice.
2. Complete a summary table like the one below to link these issues to each of the medical procedures and technologies. Tick the box for each issue that might apply to the procedure or technology. (Stem cell use has been completed as an example.)

Medical technology	Description			Issues		
		Ethics	Privacy	Equity of access	Invasiveness	Freedom of choice
Stem cell use	Stem cells are unspecialised cells derived from human embryos 3-5 days after fertilisation	✓		✓		✓

3. Explain the potential health and wellbeing benefits and challenges of each of the technologies in this topic, using a summary table like the one below.

Technology	Benefits	Challenges
Assisted reproductive technologies		
Nanotechnology		
3D printing		
Artificial intelligence		
Robotics		
Stem cell use		

11.4 Exercise 2 APPLY your knowledge

1. Suzanne is in her mid-thirties and, despite not finding a lifelong partner, has decided that she wants to have a baby by herself, using a sperm donor. She is healthy and has no known fertility issues. Research IVF in Australia and answer the following questions.
   (a) Can Suzanne access IVF as a single woman in her thirties?
   (b) Is there a Medicare rebate available for Suzanne in this scenario?
   (c) Explain the process of IVF, including any medication needed and success rates for Suzanne, taking into consideration her age and health status.
   (d) Outline the potential costs of IVF, including doctors' fees, embryo storage and medications.
   (e) What issues might Suzanne face in relation to equity of access, ethics, freedom of choice and invasiveness when considering IVF as a means to having a child?
2. James had a serious parachuting accident five years ago and due to a spinal injury has been unable to walk. Research the possible use of stem cell therapy to repair James's spinal cord so that he might be able to walk again.
   (a) What type of stem cells would be used?
   (b) How likely is it that stem cell therapy could work in spinal injuries?
   (c) Is this type of therapy available? If not, when do researchers think stem cells could be used in this way?

studyON

11.4 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

11.5 Health system complaints

KEY CONCEPT Understanding the options for complaints and redress within the health system

FIGURE 11.28 Complaints are resolved by the Office of the Health Complaints Commissioner.

As discussed in topic 10, patients have the right to make a complaint about a health service provider if they feel they have reason. In Victoria, individuals have the right to make a complaint through the Health Complaints Commissioner (HCC). The HCC is an independent, fee-free organisation whose role it is to receive and resolve complaints about health service providers through an impartial and confidential process. The Health Complaints Commissioner works under the newly created *Health Complaints Act* (2016). This new legislation allows the Health Complaints Commissioner to undertake work in dealing with complaints in the health system with greater investigative powers and a broader definition of what qualifies as a health service. The commissioner plays a role in protecting the public and supporting safe and ethical healthcare in Victoria.

Anyone can make a complaint to the HCC about any health service provided in Victoria, or about any organisation that holds health records, including schools, gyms and other non-health service providers, about how they handle personal information. Complaints may be made by patients, their friends, family or guardians or another health service provider. Even concerned community members can make complaints to the HCC.

The HCC manage complaints related to:

- access to services
- quality and safety
- care and attention
- respect, dignity and consideration
- communication about treatment, options and costs
- the level of involvement in healthcare decisions
- access, privacy and confidentiality of personal health information
- complaint handling by the health service provider.

People may complain about health service organisations, such as a public or private hospital, GP clinics or community health services or about an individual health practitioner. Complaints can be lodged about both registered and non-registered practitioners. Examples of these include:

- **Registered health practitioners**

  Doctors, dentists, nurses, surgeons, midwives, physiotherapists, chiropractors, psychologists, pharmacists, Chinese herbalists, occupational therapists, optometrists, osteopaths, podiatrists, radiographers and Indigenous health practitioners
- **Non-registered health practitioners**

  Audiologists, naturopaths, dietitians, speech pathologists, homeopaths, counsellors, paramedics, masseurs, alternative therapists and other providers of general health services

  Wherever possible it is advised that the issue be **redressed** directly with the health service provider, but if this does not work then the HCC receives the complaint in writing, over the phone or through an online form to begin the process of resolution. The HCC is independent and does not take sides. It works with the person who made the complaint and the provider to resolve complaints cooperatively, quickly, fairly and effectively. Depending on the details of the complaint, the outcomes a person may be able to obtain are:
- an explanation about what happened, and why it happened
- an apology
- access to treatment
- access or amendment to health records
- a refund or compensation
- a change in policy or practice to prevent future problems.

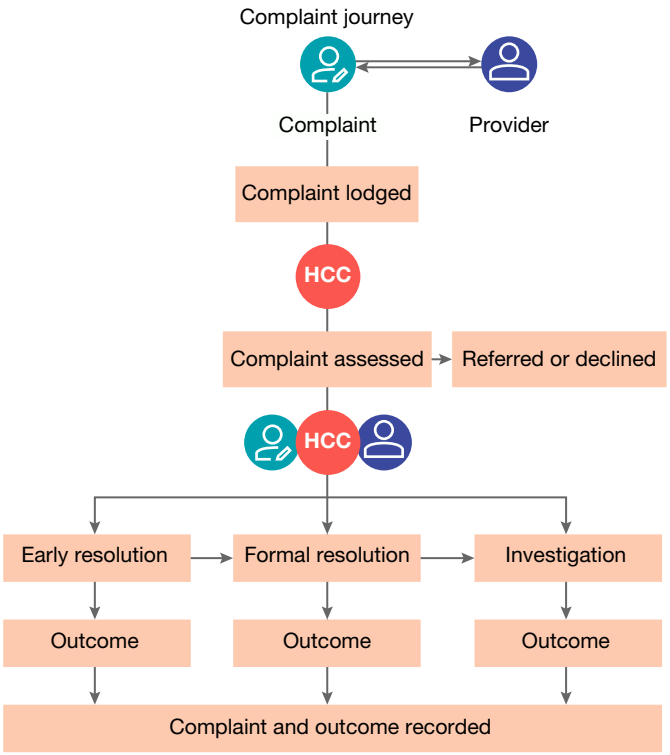
The HCC can also launch formal investigations and warn the public about dangerous health service providers.

11.5.1 The complaint process

When a complaint is received, the first step is to decide whether the HCC should deal with the complaint or if another agency is more appropriate. The next step is to confirm that the person making the complaint has tried to resolve their issue directly with the service provider. This is often the quickest and easiest way to resolve an issue and the HCC are legally required to recommend this happens before any further action will be taken. Once the HCC accepts the complaint, they are recommended to take the least formal course of action possible to efficiently resolve the issue.

Once a complaint has been assessed and accepted by the HCC, there are three courses of action possible: early resolution, formal resolution or investigation. Early resolution is the least formal (and often the quickest) way to resolve complaints. In most cases, the complaint is discussed with both parties over the phone to clarify the problem and to identify an acceptable solution. If no resolution is reached through this process, the HCC may be unable to assist further. However, if the

FIGURE 11.29 Flowchart outlining the progression of a complaint through the HCC



complaint is too complex to resolve over the phone, but it can be resolved, the HCC may attempt a formal resolution. They may also decide to initiate a formal investigation.

The formal resolution process involves a series of documented steps, each leading towards finding an acceptable solution. This process begins by working with the complainant to write a formal description of the complaint, which is then sent, along with a resolution plan, to the health service provider. The resolution plan may include requests for meetings, medical records, reports or independent opinions. Any improvements the provider agrees to make in response to the complaint will be documented and shared with all parties. If no resolution is reached, the HCC may be unable to assist further. The complaint may also be considered for investigation.

An investigation is a formal and detailed examination, often used in handling large or highly complex matters. The HCC may investigate public and private organisations as well as individual practitioners. Following an investigation into a registered or non-registered practitioner, the HCC may issue a public warning statement to alert people to serious risks to their health, life, safety or welfare.

In the 2017–18 reporting year, the HCC received 6835 complaints, 68 per cent of which were resolved through informal processes within three months. The remaining 2183 cases were handled by resolutions officers or investigators and reflect more complex complaints. Together with resolving complaints, the Health Complaints Commissioner uses any information supplied in the complaints to help improve health services in the future.

Resources

Digital document Health Complaints Commissioner (doc-31680)

Weblink Health Complaints Commissioner

11.5 Activities

1. Research the office of the Health Complaints Commissioner and outline the processes involved in making and resolving a complaint.
2. Access the **Health Complaints Commissioner** weblink and worksheet in the Resources tab, then complete the worksheet.

11.5 Exercise 1 TEST your knowledge

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

1. Name the organisation to which complaints about health services are directed in Victoria.
2. Make a list of people who can make a complaint.
3. List three services patients can make complaints about.
4. (a) Outline some reasons why a person might make a complaint about a health service provider.
   (b) What are the possible outcomes of making a complaint about a health service provider?

11.5 Exercise 2 APPLY your knowledge

1. Patients having the right to complain about any health services improves the health status of Australians. To what extent do you agree with this statement?
2. What are the possible implications for Australia's life expectancy of people making complaints about health service providers?
3. Aaron had weight loss surgery, but he has not been satisfied with the results and he overheard the doctors talking about how enormously fat he was before they came into the operating theatre. Aaron claims that the doctors were laughing and joking about him and did not respect him as a patient.
   Outline the process that Aaron should follow if he wishes to make a complaint about his surgeon's behaviour before his weight loss surgery.

studyON

11.5 Exercise 3 studyON: Practice exam questions online only

To answer practice exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

11.6 Topic 11 review

11.6.1 Key skills

KEY SKILL Identify and explain factors that affect people's ability to access health services and information, including digital media, in Australia

This key skill requires being able to identify factors that affect people's ability to access health services and information. Some factors that can affect access to health services and information include:

- geographic location
- socioeconomic status
- health literacy
- gender
- cultural factors.

Digital media is another factor that can increase access to health services and information; however, despite the many benefits of this source of information there are many challenges associated with gathering health information in this way. Digital media for the provision of health information includes:

- websites
- mobile apps
- search engines such as Google
- technology-based consultations.

Once these factors have been identified, explain how each factor increases or decreases the ability to access health services or information. A possible response might be:

Indigenous Australians have difficulty accessing health services and information for many reasons. Because many Indigenous Australians live in rural or remote areas[1], their access to doctors, hospitals and health technologies is limited by the relatively small number of medical services in areas outside of major cities. The long distances that need to be travelled to access health services in major cities or regional centres means that many Indigenous people choose not to do so. Cultural factors and health literacy also limit access to health services and information. Indigenous cultures have different beliefs and expectations surrounding healthcare, which often prevent them from accessing health services. Indigenous people may also have language barriers if English is not their preferred language[2], which means that health information is not understood. Therefore, Indigenous Australians often do not seek the health services they need. Lower levels of education in the Indigenous population reduce health literacy, which means people do not seek out the information or health services they need or do not understand the information they are given.[3]

1 Geographic location is discussed.

2 Cultural factors decrease access to health services and information for indigenous populations.

3 Health literacy and its impact on accessing health information is discussed.

Indigenous Australians may be able to overcome some of the barriers to accessing healthcare by using digital media such as the My QuitBuddy app to help them gain the health benefits of quitting smoking.[4]

4 An opportunity for digital media to overcome barriers to accessing health services or information is included.

Practise the key skill

1. Identify and explain two factors that affect the ability of Australians of low socioeconomic status to access health services and information.
2. a. Identify two examples of digital media used to access health information.
   b. Briefly explain each.
3. Digital media can impact the access that some people have to health services and information. Identify the groups of people for whom digital media can increase access to health information.
4. Explain the challenges and opportunities for health and wellbeing that are created by using digital media to access health information.

KEY SKILL Analyse issues such as ethics, equity of access, privacy, invasiveness and freedom of choice associated with the use of new and emerging health procedures and/or technologies

This key skill requires knowledge of new medical procedures and technologies and an understanding of the issues that may be associated with these advances in medicine.

The medical procedures and technologies include:

- assisted reproductive technologies such as IVF
- nanotechnology
- 3D printing of body parts
- artificial intelligence and robotics
- stem cell use.

The issues investigated are ethics, equity of access, privacy, invasiveness and freedom of choice. The skill requires you to select a procedure or technology to be analysed for any of these issues that may apply. It is not necessary to discuss every issue for each procedure or technology. Often the focus is on negative outcomes of an issue; however, negative or positive aspects should be discussed. For example, 3D printing of body parts has the potential to reduce the invasiveness of certain medical outcomes such as amputation of a limb. In this case, there are positive outcomes of this medical advancement that reduce the issue in question. Negative aspects such as equity of access as a result of cost could also be discussed.

An example of an answer could be:

The use of stem cells is very valuable in the treatment of diseases such as multiple sclerosis, cancer and diabetes. However, there are issues of ethics and equity of access involved with these treatments. To generate a source of stem cells, embryos are created, raising the ethical issue of creating embryos only as a source of stem cells for the treatment of another person. Many people think it is morally wrong to create a potential human life simply to take cells from it to treat someone else.[5] After the stem cells have been used, there is no potential for the embryo to survive and become a baby. Other people may not be able to afford the cost of stem cell therapy, or may not be able to access a source of embryos, creating inequity of access to these forms of treatment.[6]

5 The issue of ethics is discussed.

6 The issue of equity of access to the use of stem cells is discussed.

Practise the key skill

5. What is meant by equity of access in relation to emerging medical technologies and procedures?
6. Which medical technologies and procedures raise ethical questions about their use?

7. Select one procedure or technology (other than stem cell use) and thoroughly discuss the issues it raises or addresses.

KEY SKILL Explain the options for consumer complaint and redress in the health system

This key skill requires knowledge of the complaint process and possible outcomes from a complaint made in the health services sector.

Complaints in Victoria are handled by the Office of the Health Complaints Commissioner. Any patient, family, friend or other health practitioner can make a complaint. Any health services can be the subject of a complaint.[7] A complaint may result in the case being dismissed, or redress in the form of compensation, apology or professional consequences for the medical practitioner.[8] The Health Complaints Commissioner can also use aspects of any complaint to make changes to procedures or practices in the future to make healthcare safer for all.

7 Aspects of the complaint process are outlined.

8 Possible redress outcomes of the complaint process.

Practise the key skill

8. Who can make a complaint about a health service?
9. Who can complaints be made about?
10. Which organisation deals with complaints about health services?
11. What are the likely outcomes from a complaint?

11.6.2 Topic summary

Access to health services and information

- Factors that affect a person's ability to access health services and information include geographic location, socioeconomic status (SES), cultural factors, gender and levels of health literacy.
- People who live in rural and remote areas of Australia have less access to health services than those in major cities.
- There are fewer health practitioners, infrastructure and medical technology available in rural and remote areas.
- People with low SES have less access to health services because of the cost of those services (e.g. dental) and private health insurance.
- Language barriers, religious beliefs and other cultural factors can reduce the ability to access health services and information.
- Indigenous Australians have less access to health services and information due to geographic location, low SES, and language and cultural misunderstandings.
- Males are less likely to access health services and information than females.
- Health literacy is about understanding information and using it to make informed decisions about health and wellbeing.
- Only about 40 per cent of adult Australians are considered to have adequate levels of health literacy.
- Low levels of education contribute to low health literacy.

Digital media and health and wellbeing

- Digital media is a part of everyday life for most Australians.
- Digital media includes websites, mobile apps, games, social media, digital photos, videos and audio, computer software and virtual reality.
- The health industry is rapidly expanding its use of digital media.
- Applications of digital media in health and wellbeing include technology-based patient consultations, health-related websites and mobile apps, symptom checker websites and apps, Google, and doctor training and patient wellbeing using virtual reality.

- All forms of digital media can increase access to health information and can present many opportunities for improving health and wellbeing.
- People who live in rural and remote areas of Australia can access large amounts of health information without having to travel large distances.
- People with low SES can increase their access to health information through the use of free websites and mobile apps.
- There are challenges associated with accessing health information from digital media sources.
- Online information is not always reliable or accurate.
- Low levels of health literacy make deciphering large volumes of online health information difficult.
- Self-diagnosis based on digital media resources can lead to high levels of fear and anxiety.
- Serious conditions can be missed due to self-diagnosis.

Issues in health services

- New and emerging medical procedures and technologies provide advances for medicine and treatments of disease or injury.
- Procedures and technologies include assisted reproductive technologies such as IVF, nanotechnology, 3D printing of body parts, artificial intelligence and robotics, and stem cell use.
- Despite the benefits, there are issues associated with medical advances.
- Some procedures may address some of these issues positively; others may have negative implications.
- Many medical advances raise ethical questions.
- Other issues associated with new technologies and medical advances are privacy, equity of access, freedom of choice and invasiveness.

Health system complaints

- Patients have the right to complain about health service providers (e.g. doctors, nurses, hospitals, dentists, specialists, paramedics and allied health providers).
- In Victoria, complaints are made to the Office of the Health Complaints Commissioner.
- Complaints can be made by patients, family, friends or another health practitioner.
- The Office of the Health Complaints Commissioner resolves disputes when initial attempts between the person making the complaint and the doctor have failed.
- Redress may take the form of an apology, refund, compensation, access to health records or health services, or a change in policy or practice.
- The Health Complaints Commissioner uses information gathered from complaints to improve the health industry in Victoria.

Resources

studyON

To access key concept summaries and practice exam questions, download and print the **studyON: Revision and practice exam question booklet** (sonr-0025).

11.6 Exercise 1 Exam preparation

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Question 1

Australians of low SES have poorer health and wellbeing outcomes than other Australians. One reason for this is because they have limited access to health services and information.

a. Identify three factors that would contribute to the limited access to health services and information for Australians of low SES. **(1 mark)**

b. Select one of the factors identified in 1a and explain how it would have an impact on the ability of Australians of low SES to access health services and information. **(2 marks)**

Question 2

Digital media is a significant source of health information, and many Australians prefer to search their symptoms on Google rather than see a doctor.

a. Outline the challenges presented to the patient by accessing health information from digital media sources. **(2 marks)**

b. Explain possible impacts on Australia's health status if large numbers of the population relied only on health information from digital media sources. **(2 marks)**

Question 3

The use of stem cells is a rapidly expanding technology that has the potential to revolutionise the healthcare industry.

a. What are embryonic stem cells? **(1 mark)**

b. Identify and explain an issue presented by the use of stem cells in healthcare. **(2 marks)**

Question 4

Laura had emergency surgery on a broken finger, but she has not been satisfied with the results. After the surgery, she could not straighten her finger fully and had no feeling from the finger down into her hand. She overheard the surgeon complaining to a nurse that he had been dragged out of a party on a Saturday afternoon to attend to this accident that occurred while Laura was playing netball. Laura claims that the doctor was drunk and did not treat her to his best ability as a result. Outline the process that Laura should follow if she wishes to make a complaint about this surgeon's behaviour and the poor outcome of her surgery. **(3 marks)**

studyON

11.6 Exercise 2 studyON: Topic test online only

To answer past VCE exam questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

on Resources

Interactivities Crossword (int-6864)
Definitions (int-6865)

School-Assessed Coursework Unit 2 AOS 2 Outcome 2

Area of Study 2 Healthcare in Australia

Outcome 2

Describe how to access Australia's health system, explain how it promotes health and wellbeing in their local community, and analyse a range of issues associated with the use of new and emerging health procedures and health technologies.

School-Assessed Coursework 5 online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Or, to download the assessment as a Word document, go to your eBook at www.jacplus.com.au, and go to the Resources tab.

on Resources

Digital document School-Assessed Coursework 5 (doc-30076)

GLOSSARY

Abstract thought a complex thought process where ideas are the focus rather than tangible objects
Abuse physical, psychological or sexual ill treatment of a person
Acupuncture a form of alternative medicine in which thin needles are inserted into the body. It is a key component of traditional Chinese medicine.
Advocacy promoting the interests or cause of an individual or a group of people
Amniotic fluid the fluid surrounding the embryo/foetus that protects the unborn baby
Anaemia a condition characterised by a reduced ability of the body to deliver enough oxygen to the cells due to a lack of healthy red blood cells
Antenatal relates to the medical care given to pregnant women before their babies are born
Anxiety uneasy emotional state that may be brought on by an actual or perceived threat to the safety and wellbeing of the individual
Artificial intelligence the development of computer systems that are able to perform tasks normally requiring human intelligence
Authoritarian parenting a style of parenting that employs strict rules, and punishment if rules are broken
Authoritative parenting a style of parenting that uses positive reinforcement of good behaviours and flexibility in interpretation of rules
Ayurveda holistic Hindu science of health and medicine which sees physical wellbeing as being intertwined with emotional and spiritual wellbeing as well as the universe as a whole. Treatments include yoga, meditation, diet and herbal medicines.
Belonging the feeling whereby a person feels they have a place and a role in society
Bilingual being able to speak two languages fluently
Binge drinking consuming seven or more standard drinks for males or five or more standard drinks for females in one sitting
Blastocyst thin walled hollow structure consisting of a cluster of cells making up an outer cell mass that becomes the placenta, and an inner cell mass which becomes the embryo
Blended family a family consisting of a couple, the children they have had together and their children from previous relationships
Body image how you see your body, the way you feel about your body, the way you think about your body and the behaviours in which you engage as a result
Bulk billing when the doctor or specialist charges only the Schedule fee. The payment is claimed directly from Medicare so there are no out-of-pocket expenses for the patient.
Burden of disease a measure of the impact of diseases and injuries; specifically it measures the gap between current health status and an ideal situation where everyone lives to an old age free of disease and disability. Burden of disease is measured in a unit called the DALY. (VCAA)
Cartilage connective tissue that protects and cushions the joints, and provides structure and support to various body tissues
Cell-based therapies treatment in which stem cells are induced to differentiate into the specific cell type required to repair damaged or destroyed cells or tissues
Cell differentiation when cells take on specialised roles
Cell membrane the outer layer of a cell that provides the structural support for the cell and allows nutrients, gases and waste into and out of the cell
Cephalocaudal development development that occurs from the head downwards
Cholesterol a type of fat required for optimal functioning of the body that in excess can lead to a range of health concerns including the blocking of the arteries (atherosclerosis). Can be 'bad' low-density lipoprotein (LDL) or 'good' high-density lipoprotein (HDL).
Chromosomes strands of DNA that contain genetic information

Chronic conditions any disease or condition that lasts a long time (usually longer than six months). It usually can't be cured and therefore requires ongoing treatment and management. Examples include arthritis and asthma.

Cognitive the mental action or process of acquiring knowledge and understanding through thought, experience and the senses

Communication the passing or sharing of information between people

Community expectations behaviours or actions that can be anticipated

Community values judgements about what is important to or good for a community

Concrete thought a simple thought process that centres on objects and the physical environment

Connectedness relates to the quality, number and frequency of interactions with others in a social setting

Core activities relate to three main areas of life: self-care, mobility and communication

Core activity limitation when an individual has difficulty, or requires assistance, with any of the three core activities

Cultural factors the set of beliefs, moral values, traditions, language and laws (or rules of behaviour) held in common by a nation, a community or other defined group of people

Cyberchondria a term used to describe people who search medical symptoms online and believe they have the worst-case scenario for their symptoms

Dental caries decay of teeth caused by a breakdown in the tissues that make up the tooth

Depression extreme feelings of hopelessness, sadness, isolation, worry, withdrawal and worthlessness that last for a prolonged period and interfere with normal activities

Development the series of orderly, predictable changes that occur from fertilisation until death. Development can be physical, social, emotional or intellectual.

Developmental milestone a significant skill or event occurring in a person's life (e.g. learning to walk, getting a job or having children)

Differentiation the process whereby an unspecialised embryonic cell acquires the features of a specialised cell such as a heart, liver or muscle cell

Direct costs costs associated with preventing the disease or condition and providing health and wellbeing services to people suffering from it. Direct costs include all those associated with developing and implementing health promotion strategies as well as the diagnosis, management and treatment of the condition.

Disability adjusted life years (DALY) a measure of burden of disease. One DALY is equal to one year of healthy life lost due to illness and/or death. DALY are calculated as the sum of the years of life lost due to premature death and the years lived with disability for people living with the health condition or its consequences.(AIHW, 2018)

Discretionary foods foods and drinks not necessary to provide the nutrients the body needs, but that may add variety. However, many of these foods are high in kilojoules and are therefore described as energy dense.

Discrimination when a person or group of people is treated differently from other people, often as a result of factors such as race, religion, sex, sexual orientation or gender identity

Dynamic continually changing

Ejaculation the process whereby semen is ejected from a male's penis

Emotional abuse the use of verbal abuse, threats, rejection, put downs and other behaviour in order to have control over another person

Emotional development relates to experiencing the full range of emotions, and increasing complexity relating to the expression of emotions, the development of a self-concept and resilience

Emotional health and wellbeing relates to the ability to express feelings in a positive way. It is about the positive management and expression of emotional activities and reactions, as well as the ability to display resilience. Emotional health and wellbeing is the degree to which an individual feels emotionally secure and relaxed in everyday life.

Emotional intelligence an individual's ability to recognise and respond to either their own or others' emotions
Emotional needs the need to feel loved and wanted by caregivers
Emotional support the feeling that others understand your needs and will try to help you
Empathy the ability to understand and share the feelings of another
Endometrium the nutrient-rich lining of the uterine wall in which the ovum (blastocyst) embeds or that is expelled every month if pregnancy does not occur
Epiphyseal plates a cartilage section at each end of long bones that allows the bone to lengthen, resulting in growth
Equality the state of being equal, whereby all people involved in a relationship are valued and able to contribute to and take from the relationship. They have the same expectations of the relationship.
Equity in health relates to everyone having a fair opportunity to achieve their full health potential
Fertilisation the fusing of a sperm and an egg cell. Marks the beginning of pregnancy. Also known as conception.
Fertility is the natural capability to produce offspring
Fine motor skills the manipulation and coordination of small muscle groups such as those in the hands
Foetal alcohol spectrum disorder describes a range of features seen in babies who have been exposed to alcohol while in the womb
Food insecurity 'the state in which all persons obtain nutritionally adequate, culturally appropriate, safe food regularly through local non-emergency sources' (VicHealth, 2008)
Fortified when a nutrient has been artificially added to food to increase its nutritional value
Generation gap the difference in attitudes and opinions experienced by people of different generations
Genes the blueprint of the body that controls growth, development and how the body functions
Glycaemic index (GI) a scale from 0 to 100 indicating the effect on blood glucose of foods containing carbohydrates
Gross motor skills the manipulation and coordination of large muscle groups such as those in the arms and legs
Haemoglobin a component of blood, largely consisting of iron and protein, that transports oxygen throughout the body
Halal permissible by Muslim law, particularly in relation to how meat is slaughtered
Hard tissue tissue in the body that forms hard substances such as bones, teeth and cartilage
Health a state of complete physical, mental and social wellbeing; it is not merely the absence of disease or infirmity
Health action behaviour change where health-compromising behaviours are replaced by health-enhancing behaviours
Health and wellbeing the state of a person's physical, social, emotional, mental and spiritual existence, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged
Health indicators standard statistics that are used to measure and compare health status (e.g. life expectancy, mortality rates, morbidity rates)
Health inequalities differences in health status or in the distribution of health risk and protective factors
Health literacy the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate decisions about their health and wellbeing
Health services all services associated with the diagnosis and treatment of disease or the promotion of health and wellbeing
Health status an individual's or a population's overall health (and wellbeing), taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors (AIHW, 2008)
Honesty the quality of being honest — choosing not to lie, deceive or cheat
Hospital separations episodes of hospital care that start with admission and end at transfer, discharge or death
Illicit use of drugs use of an illegal drug, which is prohibited from manufacture, sale or possession, or the misuse of a legally available drug

Implantation when a cluster of cells that will become an embryo attaches itself to the endometrium
Incentive something that motivates or encourages someone to do something
Incidence refers to the number (or rate) of new cases of a disease/condition in a population during a given period
Income test a determination of whether an individual or family is eligible for government assistance based on their level of income. This is sometimes referred to as means testing.
Indirect costs costs not directly related to the diagnosis or treatment of the disease, but that occur as a result of the person having the disease
Indoor air pollution when the air inside a house or building contains pollutants, such as fine particles and carbon monoxide. It is often caused by inefficient cooking and heating practices.
Infirmity the quality or state of being weak or ill; often associated with old age
In-hospital expenses (Medicare) costs for treatment and accommodation in a public hospital
Intangible costs costs on which it is difficult to place a monetary value. They often involve emotions or feelings for both the individual and community.
Intellectual development the increase in complexity of processes in the brain such as thought, knowledge and memory
Intellectual needs knowledge, understanding, curiosity and search for meaning
Intergenerational the health and wellbeing of one generation affects the health and wellbeing of the next
Intimate relationship an interpersonal relationship that involves physical and/or emotional closeness
Karma the spiritual principle of cause and effect whereby the intent and actions of an individual (cause) influence the future of that individual (effect)
Kessler Psychological Distress Scale (K10) a scale of psychological distress based on the answers to ten questions about negative emotional and mental states in the four weeks prior to the interview. This system classifies psychological distress as low, moderate, high and very high.
Kilojoule (kJ) a unit for measuring energy intake or expenditure
Kosher describes food (or premises in which food is sold, cooked, or eaten) satisfying the requirements of Jewish law
LGBTIQ acronym for commonly used definitions of people who are not heterosexual: lesbian, gay, bisexual, transgender, intersex, questioning
Life expectancy the number of years of life, on average, remaining to an individual at a particular age if death rates do not change. The most commonly used measure is life expectancy at birth. (AIHW, 2018)
Lobbying trying to influence or persuade an organisation or government to take action
Low birthweight weighing less than 2500 grams at birth
Loyalty the quality of being faithful to others. It also means that people stick by each other and provide support and consistency even through challenging times.
Macronutrient nutrient that is required by the body in large amounts (e.g. protein, carbohydrates, fats)
Medical confidentiality means that anything discussed between a doctor and a patient must be kept private
Medicare levy 2 per cent tax for all Australian tax payers to fund Medicare
Medicare levy surcharge an additional 1–1.5 per cent tax on high income earners who do not have private health insurance
Medicare Safety Net ensures that people who require frequent services covered by Medicare, such as doctor's visits and tests, receive additional financial support
Menarche the first occurrence of menstruation in females
Menstruation the discharge of blood and other tissue from the uterus that marks the beginning of the menstrual cycle
Mental disorders an umbrella term that encompasses a wide range of mental health conditions that affect how we feel, think and behave with greater severity and for prolonged periods, such as anxiety or depression

Mental health and wellbeing the current state of wellbeing relating to a person's mind or brain and the ability to think and process information. A mentally healthy brain enables an individual to positively form opinions, make decisions and use logic.
Mental health conditions refer to both mental health problems and mental disorders
Mental health plan care plan to help decide what services are needed, to set goals and decide on the best treatment options
Mental health problems a negative impact on a person's thoughts, feelings and social abilities that is often temporary and disappears with time. Examples of mental health problems include anger, changed eating patterns, loneliness, self-esteem issues, sleep problems and increased stress levels.
Metabolism a collection of chemical reactions that takes place in the body's cells. Metabolism converts the fuel in the food we eat into energy.
Micronutrient nutrient that is required by the body in small amounts (e.g. minerals and vitamins)
Morbidity ill health in an individual and levels of ill health within a population (often expressed through incidence, prevalence) (AIHW, 2018)
Mortality the number of deaths in a population in a given period (AIHW, 2018)
Morula a solid ball of cells created from a zygote
Nanotechnology the science and technology of extremely small things, smaller than 100 nanometres in size
Narcissistic having an over-inflated sense of self-importance
Neural tube defect failure of the neural tube (which develops into the central nervous system) to close during the development of the embryo, resulting in conditions such as spina bifida
Nirvana a place of peace and happiness, where suffering is removed. In Buddhism nirvana means the cycle of rebirth has ceased, whereas in Hinduism the soul has been absorbed into the higher power of Brahman.
Non-verbal communication the use of gestures, body language, mannerisms and facial expressions to express yourself
Object permanence an awareness that objects continue to exist even when they are out of sight
Organogenesis the formation of organs
Orthorexia eating disorder characterised by an excessive preoccupation with eating 'healthy' food
Osteoporosis a condition characterised by a reduction in bone mass that makes bones more likely to break and fracture
Out-of-hospital expenses (Medicare) costs for services such as doctors, specialists, tests and x-rays
Out-of-pocket expenses costs that patients must pay themselves
Parenting the process of promoting the physical, emotional, social, and intellectual development and health and wellbeing of a child from birth to adulthood
Pasteurisation a process that kills microbes (mainly bacteria) in food and drink, such as milk, juice and canned food
Patient co-payment the payment made by the consumer for health products or services in addition to the amount paid by the government
PBS Safety Net ensures that people who spend a large amount of money on Pharmaceutical Benefits Scheme (PBS) medications receive additional financial support
Peak bone mass the maximum bone mass (i.e. density and strength) reached in early adulthood
Peer influence the social influence a peer group exerts on its members, as each member attempts to conform to the expectations of the group
Period *see* menstruation
Permissive parenting a style of parenting that is low in discipline and whereby parents see themselves more as friends than parents
Physical abuse any physical act that hurts or scares an individual
Physical development changes to the body and its systems. These can be changes in size (i.e. growth), complexity (e.g. the increase in complexity of the nervous system) and motor skills (e.g. learning to walk).

Physical health and wellbeing relates to the functioning of the body and its systems; it includes the physical capacity to perform daily activities or tasks
Physical needs the need for food, air, water, activity, rest and physical safety
Placenta an organ that allows the transfer of nutrients, gases and wastes between mother and foetus
Political factors the decisions and actions taken by government and non-government agencies on issues relating to healthcare, health policies and health funding
Premium the amount paid for insurance
Prevalence the number or proportion of cases of a particular disease or condition present in a population at a given time (AIHW, 2008)
Primary sex characteristics body parts that are directly involved in reproduction and form what are commonly referred to as 'genitals' and organs of reproduction
Privacy in medicine means that all information relating to a patient, including their personal details and any stored information, must not be shared
Private health insurance an insurance policy that helps pay for services not covered by Medicare
Protective factor something that enhances the likelihood of a positive health and wellbeing outcome and lessens the likelihood of negative health and wellbeing outcomes from exposure to risk
Protective nutrient any nutrient that acts to protect a person from a certain condition
Proximodistal development development that occurs from the core or centre of the body outwards towards the extremities
Psychological distress relates to unpleasant feelings and emotions that affect an individual's level of functioning
Puberty biological changes that occur during youth and prepare the individual for sexual reproduction
Redress to remedy something that has been judged to be wrong and/or compensate for it
Regenerate regrow to replace damaged, old or dead cells or tissue
Relationship a connection between two or more people or groups of people
Resilience the ability to manage adversity and stress effectively and in a way that increases the ability to respond to future adversity
Respect the consideration of others' feelings, opinions, rights and needs
Responsibility being answerable or accountable for something within one's control
Right a moral or legal entitlement to have or do something
Risk factor something that increases the likelihood of developing disease or injury
Risk nutrient any nutrient that increases the chances of developing a certain condition
Role model a person whose behaviour can be emulated by others, especially by younger people
Safety the state of being free from danger, either physically or emotionally
Sanctions rewards or punishments imposed to encourage appropriate behaviour
Schedule fee the amount that Medicare contributes towards certain consultations and treatments. The government decides what each item is worth and that's what Medicare pays
Secondary sex characteristics traits arising from changes in both males and females at puberty. They are neither directly related to reproduction nor present at birth.
Self-diagnosis the process of diagnosing or identifying medical conditions in oneself using books, online resources or past personal or family experiences
Self-disclosure the process of communication by which one person reveals information about themselves to another. This can be in the form of feelings, thoughts, fears, likes and dislikes.
Self-esteem reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgement of oneself as well as an attitude toward the self.
Self-medicating a behaviour in which an individual uses a medication or substance to self-administer treatment for physical or psychological ailments. The most widely used substances for self-medication are over-the-counter medicines used to treat common health issues at home.
Semen a substance containing sperm and fluids that is released from the penis during ejaculation
Sexual health a state of physical, mental and social wellbeing linked to sexuality

SIDS Sudden Infant Death Syndrome; deaths of babies usually up to around six months old, which have no real explanation

Social connections the relationships you have with the people around you

Social development the increasing complexity of behaviour patterns used in relationships with other people (VCAA)

Social exclusion when an individual is unable to participate fully in social and economic life, such as not having a job, not receiving an adequate income, not getting a good education or not being connected to family, friends and the community

Social factors aspects of society and the social environment that impact on health and wellbeing

Social gradient of health the higher a person's income, education or occupation level, the healthier they tend to be

Social health and wellbeing relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations. It also includes the level of support provided by family and within a community to ensure that every person has equal opportunity to function as a contributing member of the society.

Social inequality unequal distributions of resources, wealth and opportunities within a group or society based on characteristics such as religion, ethnicity, gender, age and class

Social needs the need for belonging, self-worth and the respect of others

Social networking the use of dedicated websites and applications to interact with other users, or to find people with similar interests

Social support informal, emotional or practical assistance from relatives, friends, neighbours or the community

Socialisation the process by which an individual learns to live according to the expectations of a group or society

Sociocultural factors the social and cultural conditions into which people are born, grow, live, work and age. These include socioeconomic status, social connections, family and cultural influences, food security, early life experiences, and access to affordable, culturally appropriate healthcare.

Soft tissue organs and tissues in the body that connect, support or surround other structures. They include skin, muscles, tendons, ligaments, collagen and organs.

Sperm a component of semen. Sperm are the male sex cells required for reproduction.

Spermarche relating to the first ejaculation in males

Spiritual health and wellbeing relates to ideas, beliefs, values and ethics that arise in the mind and conscience of human beings. It includes the concepts of hope, peace, a guiding sense of meaning or value, and reflection on your place in the world.

Stem cells cells that have the potential to become many different types of cells in the human body

Step family a family formed after the remarriage of a divorced or widowed person that includes a child or children

Sterilisation the procedure of making an object free of live bacteria or other microorganisms

Stevia a shrub native to tropical and subtropical America, the leaves of which may be used as a calorie-free substitute for sugar

STI sexually transmitted infection

Stress a response to pressure or a threat

Subjective wellbeing refers to how people experience the quality of their lives and includes both how they feel about their lives and what they think about their own personal circumstances

Supernatural phenomena includes all that cannot be explained by science or the laws of nature, including things characteristic of or relating to gods, ghosts or other supernatural beings, or to things beyond nature

Teratogen anything in the environment of the embryo that can cause defects in development. Examples include tobacco smoke, alcohol, prescription medication and some diseases, such as rubella.

Trust the feeling of having confidence in another person and feeling emotionally and physically safe around them

Uninvolved parenting a parenting style whereby parents show little interest in their children's lives
Values judgements about what is important in life
Vegan a type of vegetarianism that excludes foods of animal origin, including eggs and dairy
Verbal communication the use of sounds and words to express yourself
Wellbeing a complex combination of all dimensions of health, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged
Years lost due to disability (YLD) a measure of how many healthy years of life are lost due to disease, injury or disability
Years of life lost (YLL) a measure of how many years of expected life are lost due to premature death
Youth people aged 12 to 18 years; however, it should be acknowledged that classifications for the stage of youth can differ across agencies (VCAA)
Zygote a full cell resulting from the fusion of a sperm and an ovum

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