

 Titan Education

# EXPLORING HPE

Health & Physical Education for Years 9–10



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# Introduction to Exploring HPE Years 9–10

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## Using Exploring HPE Years 9–10

Exploring HPE Years 9–10 reflects the dynamic nature of health, safety, wellbeing and participation in physical activity in the context of a diverse and rapidly changing society. It addresses a range of concepts by developing students' health and physical activity literacy.

### Learning activity

Exploring HPE Years 9–10 features a series of learning and practical activities that address the major ideas of the course. The activities focus on key concepts to promote understanding of the content.

### Internet activity

Exploring HPE Years 9–10 features internet-based activities that build upon skills and reinforce key concepts.

### Case study

Exploring HPE Years 9–10 features case studies that apply key concepts to various situations. They emphasise key concepts to strengthen understanding of the content.

## Digital resources

The following digital resources are available to complement this textbook.

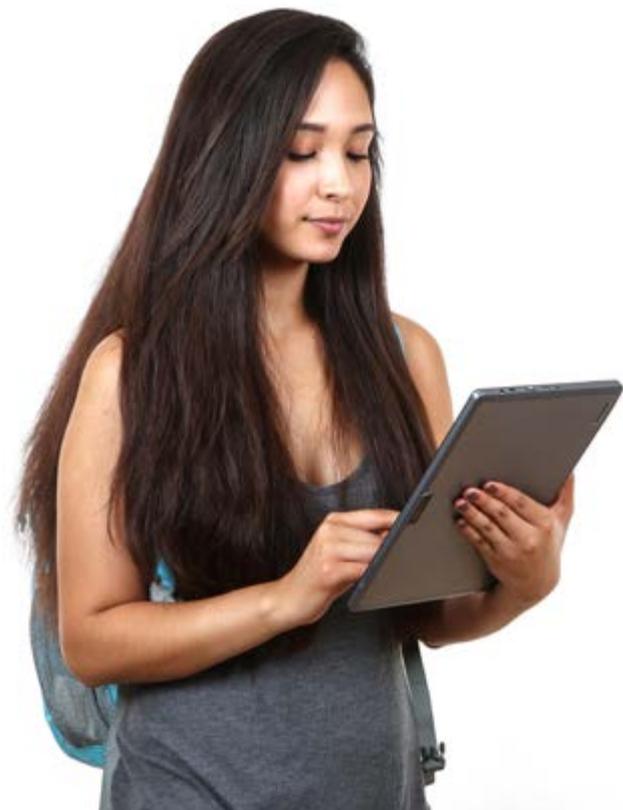
### Access to TitanOnline internet activities

Internet activities throughout this textbook direct the reader to log in to TitanOnline, Titan Education's digital learning platform. These activities supplement the text and engage students in critical thinking, research and analysis. By offering these activities online, any links and references that may change after publication, or become outdated, can be revised to remain current and relevant.

### Digital textbook

The PDF version of this textbook is ideal for viewing on tablets and computers.

**To receive access to digital resources, please email [hpe@titaneducation.com.au](mailto:hpe@titaneducation.com.au) with your school's details.**







## CHAPTER 1

# Alcohol and other drugs

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Alcohol and other drugs is a broad topic that involves many types of drugs, including exploring legal and illegal drugs. This chapter will explore how drugs are classified and the reasons for classifying drugs. An analysis of the short-term and long-term effects of drug use on the body and the factors influencing drug use such as the media, stress, illness and peer pressure will help equip individuals with the health literacy to handle situations concerning alcohol and drugs. Students will explore the concept of drug abuse and the impact it has on the community, as well as the impact it has on mental health. Students will conclude by examining services available to support young people targeting alcohol and other drugs.

### Focus areas

- Classifying drugs
- Legal and illegal drugs
- Performance-enhancing drugs in sport
- The impact of drug use on individuals and communities

# Classifying drugs

Classifying drugs into categories can help people understand similarities that certain drugs will have on the body. It also helps them to understand the legality of certain drugs or the common reasons for their use or misuse. There are several ways that drugs are commonly classified.

- **Based on their effect on the mind or body:** Drugs can be classified as a depressant, stimulant or hallucinogen. Depressants slow down the activity of a person's nervous system, slowing down the messages that go to and from the brain. Stimulants work by speeding up the activity of the nervous system, making the messages that go to and from the brain faster. Hallucinogens alter a person's perception of reality, as well as their feelings – they can cause a person to hear and see things that are not real or are not actually there.
- **By the drug's legal status:** Drugs can be classified as legal or illegal (illicit), or prescription or over-the-counter.
- **By the drug's common usage:** Drugs can be classified by why they are used. For example, performance-enhancing drugs in sport, painkillers and medications.

In this chapter, the majority of the drugs discussed are categorised according to their legality. Part of the chapter is discussed in the illegal drugs section.

Performance-enhancing drugs are covered using a detailed case-study approach, as their legality varies depending on the context of their usage. Most performance-enhancing drugs are illegal to supply to Australians without a prescription, but may have valid medical uses when prescribed by a doctor to non-athletes. For example, using anabolic steroids to treat muscle loss caused by cancer. Performance-enhancing drugs are banned in sports because they can give an athlete an unfair advantage over their competitors.

## Did you know?

In Australia, there are far more health problems and drug-related deaths from legal drugs, such as alcohol and



**Figure 1.1:** Drugs can be classified as prescription or over-the-



**Figure 1.2:**

The amount of alcohol consumed determines the effects on the brain and the body.

## Legal and illegal drugs

### Legal drugs

In Australia, as in many other countries around the world, some drugs are deemed legal for use within certain conditions. By legalising certain drugs, governments assume some control over quality, strength and supply. In addition, legal drugs provide a revenue stream for governments who place taxes on these products. The two most commonly used legal drugs in Australia, which are not taken for medicinal purposes, are alcohol and nicotine.

### Alcohol

Alcohol is a depressant drug that slows down the functions and reactions of the body. The main ingredient, ethanol, is produced through the fermentation of grains and fruit. Common types of alcohol are wine, beer and spirits. The amount consumed determines the effects on the brain and the body. The law for alcohol in Australia states that people under the age of 18 may not buy alcohol. They may only drink or be in the possession of alcohol under parental supervision but not in pubs, clubs and licensed restaurants.

#### Internet activity

Log on to TitanOnline to complete Activity 1.1 to explore current articles about alcohol use.

Australia's drinking habits have considerably changed over the years. Young people between 15–24 years of age in 2014 reported on average their first alcohol consumption at 14 years of age. Current trends demonstrate the age of young people first trying alcohol to be increasing, to approximately around 16 years of age. The number of individuals drinking in excess of the recommended limits is decreasing. The percentage of Australians not consuming alcohol has almost doubled, from 11 per cent in 2007 to 20 per cent in 2020 (AIHW, 2020). The number of individuals who indicate that they drink on a daily basis is also slowly declining, while the number of individuals who drink moderately is increasing (approximately 63 per cent of all drinkers). This percentage is up from 48 per cent of all drinkers. The home reports to be the most common place for individuals to consume alcohol, followed by licensed premises. It is reported that individuals are drinking less due to the increased knowledge of the negative health outcomes and potential implications that can be the result of alcohol consumption.

**Table 1.1:** Effects of alcohol.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Decreased heart rate.</li> <li>▪ Decreased breathing rate.</li> <li>▪ Slurred speech.</li> <li>▪ Slowed reflexes and reaction times.</li> <li>▪ Blurry vision.</li> <li>▪ Unstable movements.</li> <li>▪ Distorted judgement.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dependency.</li> <li>▪ Cancers of the mouth, throat, bowel and breast.</li> <li>▪ Liver failure.</li> <li>▪ Sexual and reproductive problems.</li> <li>▪ Weakening of the immune system</li> </ul>

### Pre-loading

Pre-loading or pre-drinking is drinking alcohol before going out. Young people pre-load for a variety of reasons and in various scenarios:

- Something to do while getting ready for a night out.
- 'Pumping up' or getting in the mood before going out.
- To get friends together for a night out.
- Saving money on buying a drink at a venue that doesn't serve alcohol.
- Because it is an accepted practice in Australia.

**Figure 1.3:**

The number of people binge drinki



Pre-loading is considered dangerous for the following reasons:

- It often happens in groups of young people without parental supervision or approval.
- Many people pre-load to get drunk, which is unsafe in itself.
- Going out drunk means leaving a safe environment (if young people are pre-loading at a house) and heading out into public environments, putting themselves and others at greater risk.
- When people get together to drink they may try to keep up with each other and drink more than they can handle.
- If individuals are mixing their own drinks, the drinks can be extremely strong, so people might think they have consumed less alcohol than the actual amount.
- Under-age people gathering at a friend's house to pre-load may be drinking alcohol without permission from their parents.
- Pre-loading is a form of binge drinking, which in itself has major health implications.

Statistics on pre-loading:

- Three-quarters of Victorian young people are 'pre-loading' alcohol before a night out at bars and clubs.
- There are strong relationships between pre-drinking and extreme bingeing; that is, consuming 11 or more standard drinks in a session at least once a month.
- Excessive alcohol consumption puts people at greater risk of being involved in fights, accidents and road trauma.
- Many young people end up being drunk before even reaching the second venue.
- Young people stated that they pre-load because it is cheaper to buy alcohol from bottle shops than from clubs and pubs, particularly alcoholic energy drinks, wine and alcopops.
- If loading up on alcohol before going out, an individual is more likely to be drinking at a level that puts them at high risk of short- and long-term harm.

Source: Turning Point (<http://www.turningpoint.org.au>)



**Figure 1.4:**  
Many people pre-load to get drunk.



**Figure 1.5:**  
Eating food slows down the effects of alcohol.

### Internet activity

Log on to TitanOnline to complete Activity 1.2, to research and propose the impact of Australia's lockout laws on pre-loading.

## Drink spiking

Drink spiking has become a significant issue throughout Australian communities and reported occurrences continue to rise. It occurs when alcohol or drugs have been added to a drink without the consumer knowing or giving approval. Drink spiking is illegal and can cause serious health issues and concerns, including death.

Any type of drink can be spiked – water, soft drink, juice or alcohol. There are numerous substances being used to spike drinks including:

- alcohol
- prescription drugs such as muscle relaxants and hypnotics
- illicit drugs such as ecstasy, LSD, ketamine and GHB.

The effects of drink spiking differ from person to person. Effects depend on a number of factors such as the type of substances used, the amount used, individual weight, size and health status. An individual whose drink has been spiked may feel:

- dizzy
- nauseous
- lightheaded
- drowsy
- disorientated.

Individuals may experience:

- vomiting
- pass out or lose consciousness.
- memory blanks

People spike drinks for a number of reasons. They may want to see the effect it has on a person; they may think the individual would have a better time if intoxicated or drugged; they may be planning to sexually assault someone; or they may intend to rob or steal from an individual. Individuals who spike drinks often don't consider the potential consequences of their actions. In reality, if an individual becomes seriously unwell or dies, they may face manslaughter or murder charges.



**Figure 1.6:**  
Illicit drugs are often used to spike drinks.

### Internet activity

Log on to TitanOnline to complete Activity 1.3 to review products that have been created to reduce drink spiking.



**Figure 1.7:**

Individuals can reduce their alcohol intake by drinking water between each alcoholic drink.

### Safe drinking advice

Drinking alcohol is a major aspect of socialising and having fun during adolescence and even into adulthood. Individuals can practise numerous steps in order to stay safe while drinking or around alcoholic environments. Advice for drinking safely includes the following:

- Eat a meal to line the stomach before starting to drink.
- Consume a glass of water between each alcoholic drink.
- Drink pre-mixed drinks so that it is easier to accurately measure how much alcohol has been consumed by reading the label.
- Avoid mixing different types of alcohol.
- If consuming drinks that need to be mixed, use accurate measuring implements.
- Avoid binge drinking.
- Drink in safe environments, where there are people to look after each other.
- Know when to stop – if feeling nauseous, stop drinking.

The Australian culture and socialising with alcohol are strongly linked, which can create positive memories. However, it can also create some of the worst memories if individuals don't practise safe drinking habits.

### Internet activity

Log on to TitanOnline to complete Activity 1.4 to evaluate methods that may assist the reduction of negative alcohol related experiences.

## Nicotine

Cigarettes are a cylinder of cut and rolled tobacco leaves. They contain the addictive, psychoactive stimulant nicotine. Nicotine is known to cause many health problems and illnesses. The law states that anyone under the age of 18 is not able to purchase cigarettes. Laws have also been introduced regarding smoke-free areas at restaurants, clubs and cafés.

Recent Australian data illustrates that approximately 12.8 per cent of males and 10.4 per cent of females over 18 years of age are regular daily smokers. Statistics consistently indicate reduced consumption by females in comparison to males. The number of daily smokers continues to decline for all age groups, beginning from the 1970s to present. A greater percentage of individuals between 14–18 years of age indicate they have never smoked, in comparison to those over 18 years of age and this trend continues to positively increase. However, more young people between 14–18 years of age have tried electronic e-cigarettes in comparison to the older population. Low socioeconomic status population groups to have a higher proportion of individuals who smoke.



**Figure 1.8:** Smoking causes many short- and long-term effects to the body.

**Table 1.2:** Effects of nicotine.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Decreased lung capacity.</li> <li>▪ Increased heart rate.</li> <li>▪ Increased risk of illness.</li> <li>▪ Coughing.</li> <li>▪ Reduction of athletic ability.</li> <li>▪ Addiction.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cancers of the mouth, throat, lung, stomach, kidney, bladder, cervix and pancreas.</li> <li>▪ Heart and lung diseases.</li> <li>▪ Stroke.</li> <li>▪ Emphysema and bronchitis.</li> <li>▪ Circulatory problems.</li> <li>▪ Premature ageing.</li> <li>▪ Damage to reproductive organs and reduced fertility.</li> </ul>

### Learning activity

1. Draw a diagram of the human body and connect the short- and long-term effects of alcohol to the related area.
2. Discuss and create a fact sheet about the law surrounding alcohol and cigarettes.

## E-cigarettes

E-cigarettes are devices that deliver an aerosol by heating a solution that users breathe in. The aerosol is commonly referred to as ‘vapour’. Using an e-cigarette is commonly referred to as ‘vaping’. E-cigarettes are battery operated and may look like cigarettes, cigars, pipes, pens or memory sticks. The liquids used in e-cigarettes:

- may contain a range of toxic chemicals including those that add flavour
- sometimes contain nicotine even if they are labelled as being ‘nicotine free’.

In 2019, 11 per cent of the population had used e-cigarettes. Of those who had tried e-cigarettes, 18 percent used them at least monthly and nine per cent used them daily. Of those aged 18–24, 64 per cent of current smokers and 20 per cent of non-smokers reported having tried e-cigarettes. The most common reason for trying e-cigarettes was curiosity (54 per cent). Almost one in four (23 per cent) used e-cigarettes because they thought they were less harmful than regular cigarettes.

Source: AIHW, 2020: Alcohol, tobacco and other drugs in Australia.

### Effects of e-cigarettes

Even though scientists are still learning about e-cigarettes, they are not considered safe. Hazardous substances have been found in e-cigarette liquids and in the aerosol produced by e-cigarettes, including formaldehyde, acetaldehyde and acrolein, which are known to cause cancer. Some chemicals found in e-cigarette aerosols can also cause DNA damage.

E-cigarettes do not produce the tar found in conventional cigarettes, which is the main cause of lung cancer. However, many scientists are concerned that using e-cigarettes could increase risk of lung disease, heart disease and cancer.

### Did you know?

E-cigarettes may also be known as electronic cigarettes, e-cigs, electronic nicotine delivery systems (ENDS), electronic non-nicotine delivery systems (ENNDS), alternative nicotine delivery systems (ANDS), personal vaporisers, e-hookahs, vape pens and vapes.



**Figure 1.9:**

There is insufficient evidence to promote the use of e-cigarettes to quit smoking.

Research also indicates the following:

- There is a strong association between the use of e-cigarettes by non-smoking youth and future smoking.
- Many e-cigarette users appear to be continuing to use conventional tobacco products at the same time (dual users). However, this is not a safe way to improve health. Dual users may be exposing themselves to even higher levels of toxicants compared to people who solely use conventional tobacco products.

It can be hard to assess the safety of e-cigarettes and liquids because:

- there is a wide variety of devices and liquids sold
- their labels are often incomplete or incorrect
- users can change the liquid they use in their e-cigarette and how the device operates
- many diseases (such as cancer) take a long time to develop.

Currently, there is insufficient evidence to promote the use of e-cigarettes for people looking to quit smoking.

### The law and e-cigarettes

Under existing state and territory laws in Australia, the sale of nicotine e-cigarettes and liquid nicotine to someone without a doctor's prescription is illegal. But this does not guarantee all e-cigarettes sold legally are nicotine-free. The possession or use of these products without a prescription is illegal in all states and territories, except South Australia. Importing nicotine e-cigarette products and refills from overseas websites without a valid doctor's prescription is also illegal after October 1, 2021.

People can legally buy e-cigarettes that do not contain nicotine. It is illegal, however, for manufacturers or retailers to make any therapeutic claims about e-cigarettes. For example, they can't claim that e-cigarettes help people to quit smoking. It is also against the law in most states and territories to use e-cigarettes in legislated smoke-free areas.

Source: Australian Government Department of Health.



**Figure 1.10:**

Scientists are concerned that vaping could increase risk of lung disease, heart disease and cancer.



**Figure 1.11:**

It is against the law in most states and territories to use e-cigarettes in legislated smoke-free areas.

## Illegal drugs

The use of illicit drugs in Australia continues to change for several reasons. Law enforcement can impact supply of certain drugs, making users look for alternative, readily available drugs. Some drugs gain popularity due to lower costs while others may be viewed as trendy or popular with celebrities. Some interesting facts about illicit drug use in Australia includes:

- In 2019, around 3.4 million Australians reported using an illicit drug in the last 12 months.
- In 2019, the most common illicit drug was cannabis, followed by ecstasy, misuse of pharmaceuticals, and then cocaine.
- While overall use of methamphetamine has decreased, use of crystal methamphetamine (ice) continues to be a problem.
- People who are using crystal methamphetamine (ice) are using it more frequently, which increases the risks and harms.
- While people aged 20–29 are still the most likely to use illicit substances, a greater proportion of older people are misusing pharmaceuticals and illicit substances than in previous years.

Source: National Drug Strategy Household Survey 2019.

## Cannabis

Cannabis (marijuana) belongs to the cannabinoid group of drugs and involves the preparation of the dried leaves, flowers, stems and seeds from the hemp plant *Cannabis sativa*. It contains the psychoactive chemical tetrahydrocannabinol (THC), as well as other compounds. Cannabis, when smoked, contains many cancer-causing agents. The immediate effects of cannabis use will vary from one person to another, depending on how much is taken and the strength of the drug.

The chemical in cannabis is absorbed by the fatty tissues of the organs in the body. This means that THC can be in body systems for several days, weeks or even months after someone has used the drug. Traces can be detected in urine samples.

When cannabis is smoked, THC passes quickly from the lungs into the bloodstream. The blood then carries the chemical to the brain and other organs in the body. When THC reaches the brain it targets a molecule on brain cells, known as cannabinoid receptors, which make up part of the neural communication network. This network plays a major role in normal brain functions and development.



**Figure 1.12:**

THC passes quickly from the lungs into the bloodstream when cannabis is smoked.

### Internet activity

Log on to TitanOnline to complete Activity 1.5 and discuss messages communicated through anti-drug advertisements.



**Figure 1.13:**  
When cannabis is smoked regularly and/or in heavy amounts, it can become addictive.

**Table 1.3:** Effects of cannabis.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Poor coordination of movement.</li> <li>▪ Decreased reaction time.</li> <li>▪ Impaired memory.</li> <li>▪ Difficulty thinking and concentrating.</li> <li>▪ Increased heart rate.</li> <li>▪ Sensory distortion.</li> <li>▪ Bloodshot eyes.</li> <li>▪ Dry mouth and throat.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abnormality in the structure of cells.</li> <li>▪ Increased risk of catching common illnesses.</li> <li>▪ Weakening of the immune system.</li> <li>▪ Respiratory problems.</li> <li>▪ Personality and mood changes.</li> <li>▪ Reduced sexual capacity.</li> <li>▪ Growth problems.</li> <li>▪ Increased risk of depression and anxiety.</li> <li>▪ May lead to psychosis.</li> </ul>

Cannabis over-activates body functioning, affecting the parts of the brain that control memory, concentration, perception and coordination. When used heavily by young people, it can affect brain development and have long-term or permanent effects on thinking and memory. When cannabis is smoked regularly and/or in heavy amounts, it can become addictive and have many negative consequences on health.

Medicinal cannabis, which is strictly regulated in Australia and does not contain THC, is synthetic cannabis prescribed by a doctor. Medicinal cannabis is prescribed primarily for pain relief and is used due to its anti-inflammatory properties. Doctors must apply to be able to prescribe patients with medicinal cannabis considering research still indicates the negative side effects relating to the drug.

### Did you know?

Cannabis is the most commonly used illicit drug in Australia.

### Internet activity

Log on to TitanOnline to complete Activity 1.6 and analyse how drug use is dependent on individual factors.

## Ecstasy

One recreational drug that is commonly used is ecstasy. Ecstasy is the street name for a range of drugs with a similar structure to MDMA. It is a hallucinogenic amphetamine, which means it combines the effects of hallucinogens such as LSD and the stimulant effects of speed. Ecstasy is mainly taken orally, in tablet form. Ecstasy is a stimulant and hallucinogen. It has an energising effect, as well as creating distortions in reality. It can induce feelings of emotional warmth, empathy towards others, a general sense of wellbeing and decreased anxiety. Individuals may also experience a rise in blood pressure, body temperature and pulse rate. Jaw clenching, teeth grinding, sweating, dehydration, nausea and anxiety are also common.

The psychological effects of ecstasy include anxiety, depression, depersonalisation, confusion, flashbacks, aggression and impulsivity, lack of motivation, panic attacks and paranoia. The physical effects include raised blood pressure, a rise in body temperature, faster heartbeat, skin tingles, sudden sweating and dilated pupils. Higher doses of ecstasy can produce hallucinations, irrational behaviour, vomiting and convulsions. There is some evidence to suggest that long-term use of ecstasy may cause damage to the brain, heart and liver. Overdose of ecstasy can occur and some deaths have been related to overheating and dehydration. High body temperature and excessive dancing can cause dehydration so it is important for users to consume adequate water. However, excessive water intake can lead to abnormally low body temperature and swelling of the brain.

The typical ecstasy user is changing as ecstasy use spreads beyond the rave and nightclub scene to a broad range of social contexts. Most people first experiment with ecstasy in their late teens, with the 18–25 year age group the most frequent users.

**Table 1.4:** Effects of ecstasy.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Increased heart rate.</li> <li>▪ Increased breathing.</li> <li>▪ Altered perception.</li> <li>▪ Increased blood pressure.</li> <li>▪ Loss of concentration.</li> <li>▪ Hallucinations.</li> <li>▪ Dilated pupils.</li> <li>▪ Loss of appetite.</li> <li>▪ Nausea.</li> <li>▪ Jaw clenching and teeth grinding.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Damaged nerves.</li> <li>▪ Brain damage affecting thought and memory.</li> <li>▪ Difficulties with learning and sleeping.</li> <li>▪ Depression and anxiety.</li> <li>▪ Psychosis.</li> <li>▪ Risk of HIV, hepatitis, blood poisoning or skin abscesses – if ecstasy is injected using shared needles.</li> <li>▪ Risk of unprotected sex and sexually transmissible infections (STIs).</li> <li>▪ Increased need to use other drugs to balance the side effects of ecstasy.</li> </ul>

### Learning activity

1. Identify the effect that cannabis has on the brain.
2. Discuss the risks associated with ecstasy.
3. Research a range of statistics for each drug. Create a fact file for each drug and present this information to the class.

## Ice

Ice is the street name for the synthetic stimulant drug crystal methamphetamine hydrochloride. Ice is usually injected or smoked, but can be snorted or swallowed.

### Case study – Ice epidemic hits Australia

Ice is becoming alarmingly more popular among Australians from all demographics. Ice is the most pure form of amphetamine and is highly addictive. Ice can be administered in a number of ways, such as injecting, smoking, mixing with marijuana, and heating then inhaling. Ice is a stimulant, meaning it speeds up the body. It can cause users to become restless and agitated, lose their inhibitions, begin shaking or breathing faster. Ice also causes hallucinations, which can quickly lead to amphetamine psychosis. When a user begins to come down or 'crash', they can become depressed and violent.

Deaths involving methamphetamine and other stimulants are increasing in Australia. There has been a rapid increase in the number of deaths involving methamphetamine and other stimulants, with the death rate in 2018 four times higher than that in 1999. In 2019, crystal/ice was the main form of meth/amphetamine used in the previous 12 months (AIHW 2020).

Not only does the use of ice place immense pressure on hospitals, but it is also straining the mental health sector. Long-term ice use causes brain damage. Those who take ice may often experience psychotic episodes or paranoia when they begin to come down. Over an extended period of time, this can result in brain shrinkage and even quitting is unlikely to reverse the damage. This brain damage can cause schizophrenic symptoms.

Currently, there is a replacement drug – dexamphetamine – that could help ice users begin to regain control over their lives, but the Australian Government has failed to provide necessary funding to continue testing the effectiveness of this replacement drug.



**Figure 1.14:**  
Ice use leads to many health and social issues.

1. Outline the short-term and long-term physical effects of ice.
2. Discuss how long-term ice use can impact on relationships.
3. Research the trend of ice use in Australia.
4. Propose strategies – at a local, state and national level – that could help minimise the use and effects of ice.
5. Research the health services available for families with an ice-dependent child.

**Table 1.5:** Effects of ice.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Increased heart rate.</li> <li>▪ Dilated pupils.</li> <li>▪ High blood pressure.</li> <li>▪ Tremors of the hands and fingers.</li> <li>▪ Overheating and excessive sweating.</li> <li>▪ Blurred vision and dizziness.</li> <li>▪ Irritability.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Damage to blood vessels of the heart, causing heart attacks, strokes or even heart failure.</li> <li>▪ Kidney and lung damage that can be fatal.</li> <li>▪ Malnutrition and excessive weight loss.</li> <li>▪ Brain damage.</li> <li>▪ Tooth decay.</li> </ul>

## GHB

GHB was originally developed as an anaesthetic, and is also known as fantasy, liquid X, grievous bodily harm (GBH), scoop, cherry meth, soap, salty water, organic Quaalude or G. GHB is distributed as a powder or a liquid. The use of GHB appears to be increasing in Australia and is often associated with the dance party or rave scene. It is most commonly used by males aged in their late 20s. There has been a significant increase in the number of ecstasy users who also use GHB. GHB is a depressant drug that has intoxicating effects and at sufficiently high doses, anaesthetic properties. It is used for its euphoric, sedative and anabolic (body building) effects. High doses of GHB can cause muscle tension or spasms, vomiting, convulsions, intense drowsiness and coma. The risk of overdose with GHB is high because there is a fine line between the dose required to achieve a 'high' and an overdose. GHB and alcohol together have an addictive effect. The most serious effects of a GHB overdose are sudden onset of coma, respiratory problems and death. There is limited information on the long-term effects of GHB. The main long-term risk is dependence.

**Table 1.6:** Effects of GHB.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Decreased breathing rate.</li> <li>▪ Disorientation.</li> <li>▪ Lowered inhibitions.</li> <li>▪ Relaxation.</li> <li>▪ Clumsiness.</li> <li>▪ Drowsiness.</li> <li>▪ Dizziness.</li> <li>▪ Nausea.</li> <li>▪ Tremors.</li> <li>▪ Decreased coordination.</li> </ul>	<p>There is limited information regarding the impact of long-term GHB use on people's health. The long-term effects that have been reported include:</p> <ul style="list-style-type: none"> <li>▪ dependence</li> <li>▪ severe memory problems</li> <li>▪ heart disease</li> <li>▪ hallucinations</li> <li>▪ extreme anxiety</li> <li>▪ breathing problems.</li> </ul>



**Figure 1.15:**  
Cocaine is most commonly administered by snorting.

## Cocaine

Cocaine is a stimulant and speeds up the brain and the nervous system. It was originally used as a pain relief and is extracted from coca leaves. Cocaine is most commonly administered by snorting, but can also be administered by ingesting or injecting. If injected, the effects are much stronger and there is a much higher chance of overdosing.

**Table 1.7:** Effects of cocaine.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Accelerated heart rate.</li> <li>▪ Increased blood pressure.</li> <li>▪ Increased body temperature.</li> <li>▪ Contracted blood vessels.</li> <li>▪ Energy burst.</li> <li>▪ Dilated pupils.</li> <li>▪ Loss of appetite.</li> <li>▪ Dry mouth.</li> <li>▪ Unpredictable or violent behaviour.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insomnia (inability to sleep).</li> <li>▪ Damage to blood vessels in brain and heart.</li> <li>▪ Sexual dysfunction, reproductive damage and infertility.</li> <li>▪ Hallucinations.</li> <li>▪ Eating disorders and weight loss.</li> <li>▪ Depression.</li> <li>▪ Confusion, paranoia and psychosis.</li> </ul>

## Heroin

Heroin is a central nervous system depressant made from the sap of the opium poppy. It is highly addictive and many people who use it become dependent. Heroin is a white or brown powder that is usually injected into the vein.

### Did you know?

Heroin withdrawal symptoms usually start within six to 24 hours after the last dose and usually last for about a week.

**Table 1.8:** Effects of heroin.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Slowed breathing.</li> <li>▪ Decreased heart rate.</li> <li>▪ Decreased blood pressure.</li> <li>▪ Confusion.</li> <li>▪ Slurred speech.</li> <li>▪ Drowsiness.</li> <li>▪ Lowered body temperature.</li> <li>▪ Nausea and vomiting.</li> <li>▪ Reduced coordination.</li> <li>▪ Decreased mental functioning.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Constipation.</li> <li>▪ Cold sweats.</li> <li>▪ Weakened immune system.</li> <li>▪ Respiratory problems.</li> <li>▪ Reduced sexual capacity.</li> <li>▪ Reduced intellectual performance.</li> <li>▪ Memory loss.</li> <li>▪ Depression.</li> </ul>

## Rohypnol

Rohypnol is the common name for the powerful sedative flunitrazepam that depresses the central nervous system. It is a small white tablet that is tasteless and odourless when dissolved in a drink. Due to its 'paralysing' effects, rohypnol is known as a 'date rape' drug. Rohypnol is dangerous when used on its own, but when used with another depressant such as alcohol, it results in a much higher risk of overdose.

**Table 1.9:** Effects of rohypnol.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Loss of muscle control.</li> <li>▪ Confusion.</li> <li>▪ Drowsiness.</li> <li>▪ Amnesia.</li> <li>▪ Relaxation.</li> <li>▪ Blackouts.</li> <li>▪ Loss of memory.</li> <li>▪ Dizziness and disorientation.</li> <li>▪ Nausea.</li> <li>▪ Difficulty with speaking.</li> </ul>	<p>Rohypnol is highly addictive and with continual use can cause physical and psychological dependence. It may be fatal, as it can slow down the heart and breathing rate, which can lead to unconsciousness and death.</p>

## LSD

LSD is a hallucinogen and can produce changes in thought, sense and mood, and can make the user experience things that may not exist. It is made from lysergic acid and can be found in fungus that grows on rye called 'ergot'. LSD affects the brain and sensory functioning. It is usually taken in the form of a tab of absorbent paper that has been soaked in acid, or by dropping it on the skin and letting it absorb. When under the effects of acid, it is said that one is 'tripping' or on a trip. These trips can last anywhere between six hours to 12 hours, depending on how much is consumed. Like many other illicit drugs, one's mood can change dramatically while under the influence of LSD. Some trips may create a euphoric feeling whereas others may leave the user feeling paranoid and anxious.

**Table 1.10:** Effects of LSD.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Paranoia and altered perception.</li> <li>▪ Confusion.</li> <li>▪ Headaches.</li> <li>▪ Nausea and vomiting.</li> <li>▪ Fast or irregular heartbeat.</li> <li>▪ Increased body temperature and sweating.</li> <li>▪ Increased breathing rate.</li> <li>▪ Chills.</li> <li>▪ Dilated pupils.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Anxiety.</li> <li>▪ Depression.</li> <li>▪ Fatigue.</li> <li>▪ Insomnia.</li> <li>▪ Body and muscle aches.</li> <li>▪ Flashbacks.</li> <li>▪ Hallucinations.</li> <li>▪ Hyperthermia.</li> <li>▪ Heart failure.</li> </ul>

## Speed

Speed is a type of methamphetamine that stimulates the central nervous system. It is a white, odourless powder that is usually smoked, inhaled or injected.

**Table 1.11:** Effects of speed.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Increased energy.</li> <li>▪ Talkativeness.</li> <li>▪ Dilated pupils.</li> <li>▪ Loss of appetite.</li> <li>▪ Sweating.</li> <li>▪ Sleep disturbance.</li> <li>▪ Increased blood pressure.</li> <li>▪ Increased and irregular heart rate.</li> <li>▪ Dry mouth.</li> <li>▪ Teeth grinding.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mood swings.</li> <li>▪ Depression.</li> <li>▪ Tooth decay.</li> <li>▪ Insomnia.</li> <li>▪ Weakening of the immune system.</li> <li>▪ Paranoia.</li> <li>▪ Psychosis.</li> <li>▪ Brain damage including memory and movement problems.</li> <li>▪ Skin lesions (bruising, blistering, cuts).</li> </ul>

## Ketamine

Ketamine is also known as K, special K or vitamin K. Ketamine is usually in tablet form, white crystalline powder or clear liquid and is injected or snorted. It appears that this drug is becoming more popular in Australia. Ketamine users are more likely to be males aged around 30 years. Ketamine is an anaesthetic and can cause dreamlike states and hallucinations. Ketamine users try to achieve 'k-hole', which is described as physical immobilisation and social detachment lasting up to one hour. It is characterised by a distorted sense of space and time. Ketamine use also includes an inability to speak, vomiting, blurred vision, lack of coordination and increased body temperature. In high doses, ketamine can cause amnesia, impaired motor function, high blood pressure, depression and potentially fatal respiratory problems. Ketamine can prevent users from feeling pain, placing them at higher risk of suffering injuries. Chronic abuse of ketamine may be associated with memory loss.



**Figure 1.16:** Long-term use of ketamine may cause personality and mood changes.

### Did you know?

Ketamine is a medicine commonly used by veterinarians to sedate animals such as horses.

**Table 1.12:** Effects of ketamine.

Short-term effects	Long-term effects
<ul style="list-style-type: none"> <li>▪ Blurred vision.</li> <li>▪ Lack of coordination.</li> <li>▪ An 'out of body' experience.</li> <li>▪ Hallucinations.</li> <li>▪ Confusion.</li> <li>▪ Relaxation.</li> <li>▪ Sweating.</li> <li>▪ Vomiting.</li> <li>▪ Lowered sensitivity to pain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abdominal pain.</li> <li>▪ Personality and mood changes.</li> <li>▪ Flashbacks.</li> <li>▪ Depression.</li> <li>▪ Impaired memory and concentration.</li> </ul>

### Learning activity

1. Identify what drugs are used as a 'date rape' drug and explain their effects on the body.
2. For each of the illegal drugs above, research a range of statistics. Create a fact file for each drug and present this information to the class.
3. Design a pamphlet for teenagers explaining the negative effects of drug use on both health and lifestyle.



**Figure 1.17:**

Synthetic drugs have become popular among young people at raves, dance festivals and parties.

## Party and synthetic drugs

The term ‘party drugs’ is an Australian term used to describe a diverse group of drugs that have become popular among young people at raves, dance festivals and parties. Many party drugs are manufactured in small laboratories, or ‘bathtub chemists’, and there is no way to know and control how well the product is made. This can cause extremely negative reactions in the users of these drugs. Common party drugs include ecstasy, ketamine, gamma-hydroxybutyrate (GHB), LSD and cocaine. The effects of party drugs depend on their type and the amount taken, the individual’s experience with the drug, their expectations and the mood they are in when they take the drug. Effects can also depend on the quality and purity of the drug.

Synthetic drugs are created by using similar chemical makeup of common illegal drugs, using chemicals that can be sourced without bringing the attention of authorities. They attempt to mimic the effects of other drugs but due to the unknown chemical make-up, the dangers of use are largely unknown. The chemicals individuals use to make these synthetic drugs are often ingredients in prescription and over-the-counter drugs.

## Synthetic cannabinoids

Synthetic cannabinoids are synthesised chemicals that act on the same brain cell receptors as THC (delta-9-tetrahydrocannabinol), the mind-altering ingredient in cannabis. These blends are usually plant material that has been sprayed with one or more active chemicals so that, when smoked, they mimic some of the effects of cannabis. As the active ingredients used are often synthetic and produced in laboratories, they are neither 'herbal' nor 'natural'. Usually, these drugs are stronger than traditional cannabis, and therefore may pose a greater risk.

Because the chemical composition of many synthetic cannabinoid products is unknown, and may change from batch to batch, these products are likely to contain substances that cause dramatically different effects than the user might expect. Possible effects of synthetic cannabinoids are outlined in the following table.

**Table 1.13:** Effects of synthetic cannabinoids.

Short-term effects		Long-term effects
<ul style="list-style-type: none"> <li>▪ Drowsiness.</li> <li>▪ Enlarged pupils.</li> <li>▪ Paranoia.</li> <li>▪ Agitation.</li> <li>▪ Irritability.</li> <li>▪ Memory changes.</li> <li>▪ Confusion.</li> <li>▪ Loss of consciousness.</li> <li>▪ Panic attacks.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rapid or irregular heartbeat.</li> <li>▪ Chest pain.</li> <li>▪ Extreme anxiety.</li> <li>▪ Nausea.</li> <li>▪ Vomiting</li> <li>▪ Appetite</li> <li>▪ Seizures; convulsions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dependence.</li> <li>▪ Withdrawal symptoms when drug use is stopped.</li> <li>▪ Memory problems.</li> <li>▪ Paranoia.</li> </ul>



**Figure 1.18:** Effects of synthetic cannabinoids include anxiety, paranoia and panic attacks.

## Polydrug use

Polydrug use refers to the use of more than one drug at the same time or within a short amount of time (when the effects of the other drugs are still apparent). Polydrug use is dangerous and can cause serious health issues. Although serious risk is apparent, polydrug use is common. The effects of drug use depend on a number of varying factors. The effects are often unpredictable and can change depending on the amount of the drug taken, the chemicals apparent in the specific 'batch' of drugs and how the drug was taken. Polydrug use is even more unpredictable and can be very hazardous. Polydrug use includes mixing over-the-counter drugs, prescription drugs, legal and illegal drugs. Many overdoses occur because the user does not know the purity of the drugs consumed.

Polydrug use increases the risk of:

- serious health problems
- overdose
- psychosis
- sexual harassment or violence
- social problems
- unplanned sexual activity
- STIs
- death.

## Mixing caffeine and alcohol

Another common practice that has emerged in the past 20 years is the use of caffeinated energy drinks such as Red Bull, Mother and V in conjunction with alcohol. Energy drinks are consumed to enable drinkers to drink for longer and achieve higher levels of intoxication without feeling tired.

Since energy drinks contain large doses of caffeine and other legal stimulants like guarana and ginseng, and alcohol is a depressant, the combined effects can be very dangerous. The stimulant effects can mask how intoxicated an individual is and give the impression they are not impaired. When someone drinks too much alcohol, the body will start to shut down. Consuming stimulants may make a person more alert and feeling as though they can continue to consume alcohol. The result is higher consumption of caffeine and higher consumption of alcohol than would normally occur if the drinks were consumed separately.



**Figure 1.19:** Effects of polydrug use are unpredictable and can be very hazardous.



**Figure 1.20:** Consuming alcohol and caffeine may lead to higher levels of intoxication.

It's important to realise that no matter how alert one feels due to the energy drinks, the blood alcohol concentration (BAC) is still the same as it would be if the energy drinks had not been consumed. The opportunity to drink more than normal, and the perception that one hasn't, can increase the consequences of risky binge drinking behaviour. People who mix energy drinks and alcohol are at greater risk of alcohol poisoning, physical injury from falls, impaired driving, being a passenger in a vehicle with an impaired driver, pedestrian accidents, and physical and sexual assault.

There has been very little research into many of the health and nutritional claims made by energy drink companies. What research has been conducted is often funded by the energy drink, which makes the findings questionable. The facts that are known concerning the short-term effects include:

- increased heart rate and in some cases palpitations
- increased body temperature
- increased alertness
- stimulation of the brain and nervous system, which can lead to nervousness and agitation
- increased dehydration due to increased urination – this can lead to diarrhoea, nausea, vomiting, headache, muscle cramp and a more severe hangover
- increased problems with insomnia
- decreased ability to metabolise alcohol.



**Figure 1.21:** Mixing alcohol and energy drinks decreases the ability of the body to metabolise alcohol.

### Learning activity

1. Research the effects of drug use on the developing brain.
2. Analyse how an individual could become addicted to a specific type of illicit drug.
3. Discuss reasons why individuals choose to experiment with illicit drugs.
4. Select one illicit drug discussed in this section. Create a fact sheet including:
 

<ol style="list-style-type: none"> <li>a. street name and scientific name</li> <li>b. form in which the drug is produced</li> <li>c. other ingredients the drug is mixed with</li> </ol>	<ol style="list-style-type: none"> <li>d. short- and long-term effects</li> <li>e. administration methods</li> <li>f. statistics.</li> </ol>
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# Performance-enhancing drugs in sport

Drug use in sport, also known as doping, relates to the use of any substance taken by an athlete to improve their athletic performance. Performance-enhancing drugs can alter the biological function of the human body. This means that they have the ability to significantly improve performance in certain areas. Some of these substances occur naturally in the body at much lower levels than those used by sports' cheats.

## Reasons for doping in sport

The fierce nature of competition in sport can be felt by many athletes. Athletes can be tempted by the potential to meet their personal goals or achieve their dreams of being in a professional sports team and winning medals.

These drugs can be taken for reasons such as helping an athlete recover quickly from an injury, to help mask pain, to help athletes develop improved performance in areas including strength and endurance, and to help athletes develop the capacity to train for longer periods of time and work their bodies harder.

However, there are many risks when using performance-enhancing drugs. There can be sporting and legal consequences such as suspension from games or competitions, or jail sentences. These drugs can also cause many serious and fatal health consequences.

### Internet activity

Log on to TitanOnline to complete Activity 1.7 to explain the development of performance-enhancing drugs



**Figure 1.22:**

Drug doping continues despite the best detection efforts of drug testers.

## Case study

Taylor Brown is one of the lucky ones, if you can call him that. He was always the most athletic in his classes at school; winning titles in athletics and coming first in swimming. His favourite sport was football, though. He was a rugby star. Chosen at 18 to represent his country, he was jaw-dropping to watch.

Taylor played six successful seasons before rumours began to surface concerning his alleged usage of steroids throughout his career. Taylor denied his involvement for more than 17 months while investigations took place. Eventually the investigation by ASADA (Australian Sports Anti-Doping Agency, which was replaced by Sport Integrity Australia in 2020) found Taylor guilty of over 17 instances of using banned substances. Taylor's life began to go downhill; his wife left him, his club sacked him and he lost a lot of support from his fans.

Taylor went off the radar for a whole year. After the hype of the investigation findings died down, he chose to avoid the media to explain his side of the story. He was no longer involved in the ARU and no longer worked with any of his previous sponsors.

Three years later, Taylor appeared on a television current affairs program where he spoke about the day the investigation findings surfaced and how he hit rock bottom afterwards. He spoke of the pressure he felt to remain a 'star', as he was so often referred to when he began his professional sporting career.

Taylor knew he had to make the most of this situation. He had to face his fans, his family, his colleagues and right his wrongs. He had let a lot of people down and he had tarnished not only his own reputation but also the reputation of his family and his club. Taylor started an organisation, Positive Pathways. This program was created as a way of supporting young sportspeople and to help equip them with the appropriate tools to handle the demands of being an up-and-coming professional athlete.

Taylor is now completely clean, slowly regaining the trust of his long-lost fans and is doing some seriously important work for young Australian sportsmen and women. He has travelled to various sporting clubs to discuss his journey with young athletes. He talks about succumbing to the pressures to be the best at any cost.

1. Discuss how the following individuals/groups would have been affected when the investigation findings were made public:
  - a. Taylor Brown
  - b. Taylor's family
  - c. Taylor's football club
  - d. Taylor's fans.
2. Explain the ethical implications of using banned substances as a professional athlete.
3. Research current statistics surrounding the use of banned substances in sport.
4. Are there any programs like the one mentioned in the case study currently operating?
5. Discuss the need for a program like this.

## Classifications of drugs used in sport

Banned substances have various classifications, including anabolic steroids, peptides, stimulants, human growth hormone and diuretics.

### Anabolic steroids

These synthetic substances help athletes become stronger and gain muscle mass by stimulating the proteins that build non-fat muscle. Steroids help people in sports such as football or weightlifting train and play for harder and longer. Anabolic steroids contain both anabolic and androgenic properties. Anabolic properties promote accelerated growth of the muscles and bones. Androgenic properties affect the development of the reproductive system and cause side effects such as increased hair and deeper voice. These types of steroids work by reducing fatigue and recovery time after energy expenditure. Like all drugs, anabolic steroids have side effects, with certain side effects affecting men and women differently.



**Figure 1.23:** Anabolic agents aid in the building and repairing of muscle tissue.

**Table 1.14:** Effects of anabolic steroids on the body.

Effects specific to men	Effects specific to women	Effects on both
<ul style="list-style-type: none"> <li>▪ Development of breast tissue</li> <li>▪ Infertility</li> <li>▪ Baldness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increase facial and body hair growth</li> <li>▪ Menstrual problems</li> <li>▪ Permanent deepening of the voice</li> <li>▪ Foetal damage</li> <li>▪ Clitoral enlargement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jaundice</li> <li>▪ Liver damage</li> <li>▪ Acne</li> <li>▪ Heart problems</li> <li>▪ Euphoria</li> <li>▪ Improved self-esteem</li> <li>▪ Mood swings</li> <li>▪ Depression</li> <li>▪ Paranoia</li> <li>▪ Aggression</li> </ul>



## Peptides

Peptides occur naturally in the body as short chains of amino acids. They can also be taken as supplements. Various types of peptides are banned in sport as they release growth hormone. These include hexapeptides like GHRP-2 and GHRP-6. These peptides have similar effects to anabolic steroids and stimulate muscular growth. They are sold either as a cream or in a solution for injection. Peptides are often used in conjunction with anabolic steroids to promote muscle growth and maintain muscle gains.

Peptides that promote the release of human growth hormone are prohibited by the World Anti-Doping Agency (WADA) and Sport Integrity Australia.

Side effects of peptides include:

- acne
- high blood pressure
- liver and heart problems
- development of breast tissue
- premature hair loss
- increased mood swings and aggression
- depression.

## Stimulants

Stimulants are substances that help boost an athlete's energy and concentration. Stimulants increase alertness and decrease fatigue, which helps during and after competition or training. They act directly on the central nervous system to speed up parts of the brain and body. Adrenaline is an example of a naturally occurring stimulant in the body. Some athletes may use stimulants in an attempt to increase alertness, reduce tiredness, and increase their competitiveness and aggressiveness. Examples of stimulants are amphetamines, cocaine, ephedrine and mesocarb.

Specific stimulants are made from different chemicals, meaning there a range of side effects an individual may feel depending on the stimulant they use. The side effects include:

- faster breathing
- problems with coordination and balance
- aggressive behaviour
- dehydration
- insomnia
- weight loss and hand tremors
- increased heart rate
- problems with heart regulation
- heart palpitations and irregularities
- increased blood pressure and sweating
- dependence and addiction.



**Figure 1.24:** Supplements are one of the leading causes of failed anti-doping tests.



**Figure 1.25:** Some athletes may use stimulants in an attempt to increase alertness.

## Human growth hormone

Human growth hormone (HGH) is a natural substance produced by the pituitary gland. HGH is produced as a treatment for children suffering from growth and stature developmental problems. However, HGH is commonly used to improve performance, as it helps to build muscle. It is used for improvement in endurance and strength, although there is limited evidence that it enhances athletic performance. HGH is taken through injection and is only available with a prescription.

Side effects of HGH include:

- carpal tunnel syndrome (compression of nerves in the wrist causing constant tingling in the fingers)
- increased blood sugar levels, which can cause type 2 diabetes
- heart problems
- gigantism (disproportionate growth of parts of the body).

## Diuretics

Diuretics increase the amount of urine produced by the body. In a medical setting, diuretics are used to treat patients suffering from renal dysfunction. Some athletes may use diuretics illegally to assist them to fall within the required weight categories in sports such as horseracing, judo, weightlifting and rowing. Diuretics can also be used by athletes to mask other performance-enhancing drugs that they have used and prevent detection during competition.

Side effects of using diuretics include:

- dizziness
- headaches
- dehydration
- nausea
- loss of coordination and balance
- cramps
- kidney and heart failure.



**Figure 1.26:**

Athletes can influence their peers by taking a strong stance against doping.

## Drugs used in sport

There are certain sports that have a reputation for being involved with the use of illegal substances.

**Table 1.15:** Occurrences of drug use in Australian sport.

Sport	Incident
<b>Australian football</b>	In 2013, the Essendon Bombers approached the AFL Board and ASADA (Australian Sports Anti-Doping Agency, which was replaced by Sport Integrity Australia in 2020) for help investigating their controversial supplement program. In March 2015, 34 players were cleared of all charges, while coaching staff continued to appeal various charges and fines. This event was deemed 'the darkest day in Australian sport' and was the subject of extensive media attention. WADA appealed the decision, and in January 2016, the prior not-guilty verdict was overturned and the players were found guilty. Players began their suspensions immediately, and majority of players missed the entire 2016 season and many other AFL associated events and formal training. The sport scientist Stephen Dank was found guilty of ten charges, and was suspended from involvement in the sport for life.
<b>Cycling</b>	After retiring, Australian cyclist Stuart O'Grady admitted to doping during competition. It was suggested that he came out and confessed to taking EPO before competing in the 1998 Tour de France after other cyclists confessed once the charges against Lance Armstrong surfaced.
<b>Rugby league</b>	Bronson Xerri, a 19-year-old Sharks player tested positive for a number of performance-enhancing drugs. Xerri was immediately suspended when his 2019 test results came back positive in early 2020.
<b>Swimming</b>	A 2020 re-screening of an eight-year-old drug sample of dual Olympian, Brenton Rickard, proved positive for a banned diuretic. Brenton was a member of the Australian 4 × 100m relay team and has appealed the decision to strip the team of their bronze medals.
<b>Tennis</b>	In 2016, Maria Sharapova tested positive for Meldonium (a sulfonylurea drug used for heart failure). Although Sharapova was initially suspended from the drug for a long period, she was later found not guilty as the drug was banned for two years.



**Figure 1.27:**

It is an athlete's responsibility to be aware of and avoid banned substances.

## Sport Integrity Australia

Sport Integrity Australia was established in 2020 to combine the former functions of the Australian Sports Anti-Doping Authority (ASADA), the National Integrity of Sport Unit and the nationally-focused integrity functions of Sport Australia. As Australia's national anti-doping organisation, Sport Integrity Australia works to eliminate doping in sport and protect Australia's sporting identity. Sport is an important part of Australia's culture and it is essential that it is preserved and protected, so that the spirit and value of sport remains.

Sport Integrity Australia's main anti-doping aim is to ensure pure performance in aspects of health and fitness, achieving ethical competition in sport. The organisation undertakes drug testing in both training and competition for athletes in state and national level competitions, detecting and prosecuting any athlete in breach of the anti-doping code. Sport Integrity Australia also has an educational role, devising learning resources (such as the online courses available at <https://elearning.sportintegrity.gov.au>) as well as providing the sporting community with updates on drug policies and informing them of any safety issues.

Despite the fact that amoral scientists and medical personnel continue to develop performance-enhancing substances, organisations such as Sport Integrity Australia strive to eliminate doping in sport. While sport continues to offer the opportunity for fame and fortune, the battle to eliminate doping in sport will be long and arduous.

National sporting organisations support Sport Integrity Australia in educating athletes and implementing testing. They develop their own policies that promote anti-doping and also implement initiatives, such as sanctioning for offenders.



**Figure 1.28:**  
Doping methods have evolved in an attempt to beat testing systems.



**Figure 1.29:**  
National sporting organisations also educate athletes and implement testing.

### Learning activity

1. Explain the function of Sport Integrity Australia.
2. Explain why some athletes feel the need to use performance-enhancing drugs.
3. Research an Australian and an international athlete who have tested positive to doping, and analyse:
  - a. Their sporting success before the doping offence.
  - b. Their reputation before and after the doping offence.
  - c. The consequences of their doping offence.

# The impact of drug use on individuals and communities

Drug abuse occurs when an individual is using a substance in a destructive pattern, causing substantial problems. This can lead to a drug addiction, where the body develops a tolerance to this abuse or suffers withdrawal symptoms when not using the drug.

- **Injuries:** Drug abuse causes more deaths, illnesses and disabilities than any other preventable health condition. The risk of accidents and injuries, medical problems and violence is much higher for those people who live with drug addiction and dependency.
- **Behavioural problems:** The use of drugs taps into the neurotransmitters in the brain and can cause changes in normal behaviours such as:
  - aggressiveness
  - impulsiveness
  - limited self-control
  - reduced judgement
  - paranoia.
- **Family:** Illegal drug use and drug dependency can cause serious strain and have negative effects on an individual's family. Drug use, both short- and long-term, has adverse effects on an individual's ability to function as they normally would in various aspects of life. Drug use can impair communication skills, cause financial instability and cause changes in mood and overall wellbeing. All of these factors can cause harm to a drug user's family. Relationships may break down because individuals feel mistreated, lied to and mistrusted. Drug use may cause fighting and increase stress levels, which can lead to mental health issues not just for the user but for their family as well. Financial strain can tear families apart and can even lead to homelessness.
- **Community:** Drug dependency also has both direct and indirect harms on the community. In communities where drug use is high, instances of crime, homelessness and unemployment also increase. Being a part of specific communities can often contribute to an individual experimenting with drugs, or even the type of drugs an individual will experiment with. For example, in lower socioeconomic areas, the common drugs in the community may include methamphetamines, for example ice, because it is cheap and readily available. Common drugs in higher socioeconomic areas might include cocaine. It is not uncommon for individuals to fuel their drug habit through adverse means such as crime. This can affect communities in a number of different ways:
  - Small businesses becoming victims of theft/break-ins.
  - Small businesses being understaffed due to an employee taking drugs.
  - Bad reputation for the community as a whole.
  - Taxpayer money going towards drug-related causes.
  - Strain on community health services.
  - Creating a cycle of drug use that impacts susceptible, younger members of the community.

## Internet activity

Log on to TitanOnline to complete Activity 1.8 to investigate challenges that drug users and communities face with addictions.



**Figure 1.30:**

Drugs can often be used by people suffering from mental health problems as a form of self-medication.

## Drugs and mental health

Drug abuse and addiction is common for people with mental health problems. Many people with drug dependency also have mental health problems such as depression, anxiety, bipolar disorder and ADHD (attention deficient hyperactivity disorder). This is because mental health problems and drugs affect the same parts of the brain. Mental health problems and drug abuse influence each other. Drug abuse can increase problems with mental health and mental health problems can increase the use of drugs.

Drugs can often be used by people to self-medicate mental health problems such as depression or anxiety, and reduce the symptoms of these issues. However, over a period of time, drugs can worsen these symptoms, trigger new symptoms and cause unpleasant side effects. Drug use can reduce the effect of medications or make them completely ineffective. It can affect many medications used for mental health problems, including anti-depressants, anxiety pills and mood stabilisers.

The risk of mental health problems can also be increased through drug abuse. If an individual has underlying risks, such as a genetic predisposition, drug abuse may cause them to develop a mental health condition.

The abuse of drugs by people with mental health problems can become a vicious cycle and both issues must be treated. Recovering from drug abuse and mental health problems can be time-consuming and daunting, but it is important to stay committed and focused. Integrated treatment (getting treatment for both problems by the same provider) can increase chances of recovery. Joining a support group to share experiences and worries with other people who are going through the same journey to recovery may also help.

## Drugs and risk-taking behaviours

Dangerous or risk-taking behaviour means engaging in activities that have the potential for harm to oneself or others. Young people want to experiment with new things and test the boundaries. They may not be fully aware of the negative outcomes or decide to ignore the signs of unsafe activity. The effects of drug abuse increase the likelihood that teenagers will choose to participate in high-level, dangerous risk-taking behaviours such as crime, drink/drug driving and drug trafficking.

## Peer pressure and drugs

Peer pressure is something most young people are challenged by and involves the social influence on young people predominately from their peers and those they closely associate with. Individuals of similar age with similar interests often weigh heavily on the decisions made by young people. Young people often experiment in situations and environments while among their friends. Peer pressure can often reinforce negative attitudes and behaviours towards drugs as individuals want to impress their friends and remain part of their various friendship groups. Unfortunately young people are often under educated about the serious consequences that taking drugs can have on the body or that may directly occur from drugs u

## Crime

Substance abuse and criminal activity are known to be typically linked. Drug abuse rarely begins with crime, but crime is often carried out to fuel drug addiction or because of the effects that drug use has on the mind and body. The types of crime that teenagers may be involved in include:

- theft/stealing – from individual or retail businesses (shoplifting)
- manufacture, supply or possession of illegal drugs
- assault and/or disorderly conduct
- drug trafficking
- violence and/or vandalism
- drink/drug driving.

**Figure 1.31:**

Peer pressure can often reinforce negative attitudes and behaviours towards drug



## Driving under the influence of drugs and alcohol

Driving is a very complex task that requires coordination and concentration. People who drive under the influence of alcohol or drugs are putting themselves and others at a much greater risk of an accident due to impaired vision, judgement and decision-making. Alcohol is the leading cause of road crashes in Australia, causing significant trauma and fatality.

Drink driving is the number one contributing factor in approximately 30 per cent of fatal crashes in Australia. Over one in four drivers and riders killed on Australian roads have a blood alcohol concentration (BAC) exceeding the legal limit.

A person does not have to be heavily intoxicated to be affected by alcohol. There are many effects of alcohol on the body even when consuming small amounts. Alcohol affects driving by:

- slowing down the functions of the brain, making it slower for the driver to react to hazards and make decisions
- reducing a driver's ability to give accurate judgement on speed and distances, giving a skewed perception of the closeness to other cars on the road and objects around them
- decreasing the ability of the driver to multi-task, making it difficult to concentrate on steering the car as well as focusing on their speed and their surroundings
- increasing drowsiness, making it possible for a driver to fall asleep at the wheel
- increasing a driver's confidence more than usual, causing them to undertake dangerous and reckless driving.

Laws are in place stating that fully licenced drivers must not have a BAC of more than 0.05 when they are driving. These laws are different for special licence categories such as learner drivers and provisional drivers, where drivers must have a zero BAC. Learner and probationary drivers must not drive if they have any alcohol in their system. Australian police can stop any vehicle at any time and request to breath-test a driver for their BAC. A BAC is an indicator of how much alcohol an individual has in their body. It is measured as the amount of alcohol present per 100 millilitres of blood in the body.

If an individual has been drinking, they should organise another way home rather than drive their car. This could include getting a lift home from a friend who has not been drinking, organising their parents to pick them up, catching a train, taxi or a 'night rider' bus or walking home. However, if a person is walking home intoxicated, they are more at risk on roads and must take extra care.



**Figure 1.32:**  
Alcohol consumption slows down a driver's reaction time.



**Figure 1.33:**

Drug trafficking is a worldwide illegal trade involving the distribution and sale of illicit drugs.

Drugs can also have a negative impact on driving and distort the driver's perceptions. Illegal drugs, prescription and over-the-counter medications can increase the risk of a crash on the road and decrease the risk of being able to drive safely. All drugs work in a different way on the body and have many effects. Some drugs speed up the nervous system, causing drivers to be involved in dangerous and risk-taking driving behaviours, while others can cause drivers to become drowsy, causing drivers to have a decrease in reaction times and an inaccurate perception of their surroundings. It is important for someone who is taking medication to read the warning labels and get advice from a doctor or pharmacist before driving. Taking an excess amount of drugs or mixing drugs with alcohol dramatically increases the risk of a car accident. Random breath testing units are now able to test drivers for the use of illegal drugs and prosecute them accordingly.

### Drug trafficking

Drug trafficking is a worldwide illegal trade involving the cultivation, manufacturing, distribution and sale of illicit drugs. Penalties include many thousands of dollars in fines and two to 25 years imprisonment. The most serious cases can attract lifetime jail sentences.

Other illicit drug usage in Australia by young people remains of concern. Despite statistics generally declining, a great proportion of young people are still using drugs such as cannabis and ice resulting in significant health implications. Cannabis remains the most used illicit drug by young people. According to reports, the percentage of young people 12–17 years of age using drugs are all less than 10 per cent for the various drug classification.

### Learning activity

1. Identify reasons why drug abuse is common for a person with a mental health problem.
2. Propose a range of strategies to promote treatment for people suffering from mental health and drug abuse problems.
3. Discuss the relationship between alcohol/drugs and risk-taking behaviours.
4. Design an anti-drink driving poster that is targeted at teenagers. Include information, statistics and relevant pictures.

## Support services available to young people

Support services across Australia are already under strain as they are under-resourced. With a large spike in the number of young people using and becoming dependent on ice and other drugs, this strain is worsening. Health services such as hospitals, departments and ambulances also have to cater to people who need help due to their drug habits, which costs money and takes time and skills away from helping individuals with serious concerns that are not self-induced. Prolonged drug use leads to various health concerns, particularly mental health concerns. This creates more demand for mental health services. According to a 2018 survey by the Australian Government, tobacco costs the Australian society over \$137 billion and illegal use of opioids approximately \$16 billion.

Some of the many support services available for young people include online, anonymous and 24/7 consultation, advice and information resources include:

- National Alcohol and Other Drug Hotline 1800 250 015
- ReachOut
- Headspace
- Counselling Online
- Family Drug Support 1300 368 186
- Cracks in the Ice
- Stimulant Treatment line 1800 101 188
- Lifeline 13 11 14.

Many of these support services provide free information for people of all ages, including those using the drugs as well as family members needing advice to support a close friend or family member challenged by drug use. Many provide online resources and training programs that aim to provide more specific tips and advice for individuals managing the challenges of drugs.



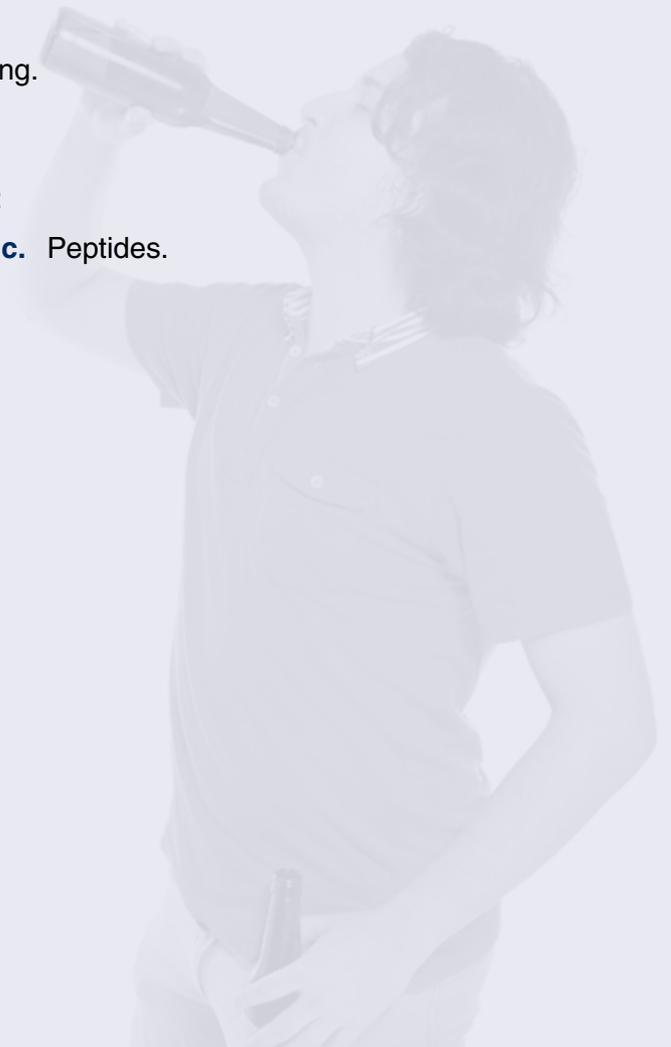
**Figure 1.34:** Support services offer consultation, advice and resources.

### Learning activity

1. Examine an advertisement you have seen in the media that promotes alcohol. Analyse how this can affect your values and behaviours.
2. Research events that use alcohol or other drugs in their promotion. For one of these events, propose some ways in which any harmful effects on children or teenagers could be reduced.
3. Explain how drug abuse can have an effect on:
  - a. behaviour
  - b. lifestyle
  - c. health.

## Revision questions

1. Analyse the effects alcohol and nicotine on the body.
2. Discuss the effects of the following illegal drugs:
  - a. Ecstasy.
  - b. Ice.
  - c. Speed.
  - d. Ketamine.
3. Describe how cannabis impairs the brain.
4. Explain the consequences of drug use on both the individual and wider community.
5. Identify the relationship between mental health issues and drug abuse.
6. Identify how a person suffering from a co-dependency disorder can receive treatment.
7. Analyse the connection between drug abuse and criminal activity.
8. Outline the steps you should take when helping a friend suffering from an overdose.
9. Explain why peer pressure is a common issue for teenagers.
10. Identify the dangers and risks that are associated with partying when alcohol and other drugs are involved.
11. Discuss the risks associated with drinking and driving.
12. Analyse the use of alcohol marketing in the media.
13. Define the following performance-enhancing drugs:
  - a. HGH.
  - b. Steroids.
  - c. Peptides.
14. Explain the role of Sport Integrity Australia.





## CHAPTER 2

# Food and nutrition

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The study of nutrition and the impact it has on health is an important component of developing health literacy. The issue of energy consumption, balanced against energy expenditure is an important issue to consider. Understanding the influences on food choices and eating habits will empower students to adopt healthy dietary options. Students will study the Australian Dietary Guidelines in order to understand the types and amount of foods that are recommended for good health and look at sustainable and ethical food considerations. The issues of undereating, overeating and fad diets will be studied along with the influence technological advancements have on the display of health information, products and services.

### Focus areas

- Healthy nutrition
- Influences on food choices
- Nutrition and physical activity
- Assessing information, products and services



**Figure 2.1:**

Adolescents should be encouraged to enjoy a wide variety of nutritious food.

## Healthy nutrition

Young people should carefully consider the foods they choose to consume as they are growing, as the developing body benefits from good nutrition. Teenagers are recommended to consume between 7,500 and 13,500 kilojoules each day. This intake does vary, however, based on a number of factors including age, sex, level of physical activity and metabolic rate.

The types of foods that young people consume are influenced by many outside factors, besides just their taste buds. Factors that help determine these foods include cultural background, likes and dislikes, peers, advertising and the types of foods available. It is recommended that young people practise positive eating habits, as this has a major impact on their overall dietary choices and health now and in adulthood.

There are a number of habits adolescents should be encouraged to practise:

- Enjoy a wide variety of nutritious food.
- Eat plenty of vegetables, legumes and fruit.
- Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain.
- Include lean meat, fish and poultry and/or alternatives.
- Include milk, yoghurt and cheese and/or alternatives.
- Choose water as a drink.
- Limit saturated fat and moderate total fat intake.
- Choose foods low in salt.
- Consume only moderate amounts of sugar.
- Prevent weight gain by being physically active and eat according to energy needs.
- Know where food comes from and make ethical choices as a consumer.

## Recommended dietary intake

The term ‘recommended dietary intake’, or RDI, is one of three nutrient reference values (NRVs) that identify the recommended nutrient levels individuals should consume to adequately meet the needs of regular daily functioning. RDIs are listed for most macronutrients, vitamins, minerals and some trace elements to assist individuals determining an appropriate amount to consume in proportion to their energy needs. As per most nutrient guidelines, RDIs are based on average body weight, composition and age values, and need careful consideration in application to an individual’s circumstances but are said to be appropriate for the greater percentage of the average population. Pregnancy and lactation are another two influences that change the RDI values.

## Macronutrients and micronutrients

To regulate human body processes so that the body is able to function well, macronutrients, micronutrients and water are required in sufficient quantities. It is extremely important to be aware of the essential nutrients that support optimal health. Macronutrients consist of carbohydrates, proteins and fats. They provide kilojoules and energy for the body. The human body requires large quantities of macronutrients.

Carbohydrates are the main source of fuel for the body and are easily utilised. They help the body maintain intestinal health, manage waste products and help the nervous system to function. Carbohydrates are in many food items, but vary in quantity. They can be found in foods such as potatoes, rice, bread, pasta and cereals.

Protein is important for tissue repair, helping the immune system to function, hormone and enzyme production, growth and for preserving lean muscle mass. Protein can be found in nuts, seeds, meat, cheese, eggs and many other food items – all varying in quantity.

Some fat is essential for survival. Sources that particularly help the body are classified as unsaturated fat. This type of fat should replace products that contain trans fat or saturated fat when possible, for optimal health and to decrease the risk of heart disease. Examples of items that are sources of unsaturated fat include walnuts, olive oil and avocados.

RDIs for some macronutrients are detailed in Table 2.1 on the following page.



**Figure 2.2:**  
Protein is important for tissue repair.

### Did you know?

Many cereals targeted towards children contain high levels of sugar and salt and low amounts of fibre and protein.

### Internet activity

Log on to TitanOnline to complete Activity 2.1 and investigate the different food requirements that are recommended at different stages of the lifespan.

**Table 2.1:** Macronutrient RDIs.

Nutrient	Female RDIs	Male RDIs
<b>Protein</b>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 0.62 grams per kilogram of body weight (g/kg).</li> <li>▪ Aged 19–70 years: 0.60 g/kg or between 2 and 2.5 serves.</li> <li>▪ Aged over 70 years: 0.75 g/kg or 2 serves.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 0.77 g/kg.</li> <li>▪ Aged 19–70 years: 0.68 g/kg or between 2.5 and 3 serves.</li> <li>▪ Aged over 70 years: 0.86 g/kg or 2 serves.</li> </ul>
<b>Fat</b>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 70–85 mg/day.</li> <li>▪ Aged over 18 years: 90 mg/day.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 70–125 mg/day.</li> <li>▪ Aged over 18 years: 160 mg/day.</li> </ul>
<b>Fibre</b>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 21 g/day.</li> <li>▪ Aged over 18 years: 25 g/day.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aged 9–18 years: 26 g/day.</li> <li>▪ Aged over 18 years: 30 g/day.</li> </ul>
<b>Carbohydrates</b>	<ul style="list-style-type: none"> <li>▪ Aged 4–18 years: 4–7 serves.</li> <li>▪ Aged 19–70 years: 6 serves.</li> <li>▪ Aged over 70 years: 3 serves.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aged 4–18 years: 4–7 serves.</li> <li>▪ Aged 19–70 years: 6 serves.</li> <li>▪ Aged over 70 years: 4.5 serves.</li> </ul>

Micronutrients include vitamins, minerals and trace elements. They enable important chemical reactions to take place. Vitamins are classified as either water- or fat-soluble.

Undernutrition is the result of inadequate nutrient intake or illness that interferes with the body's ability to use nutrients. Malnutrition is the result of inadequate the intake of nutrient. The extent of imbalance can influence the health.

The foods people eat can lead to developing certain health conditions. High-energy and high-fat diets lead to obesity and are also thought to increase the risk of some cancers. Eating a wide variety of nutritious foods as described in the 2015 Dietary Guidelines can help prevent cancer.

### Internet activity

Log on to TitanOnline to complete Activity 2.2 to review macronutrient requirements.

**Figure 2.3:**

Carbohydrates provide fuel and energy for the body.

# Australian Guide to Healthy Eating and the Australian Dietary Guidelines

The Australian Dietary Guidelines have information about the types and amounts of foods, food groups and dietary patterns that aim to:

- promote health and wellbeing
- reduce the risk of diet-related conditions, such as high cholesterol, high blood pressure and obesity
- reduce the risk of chronic diseases such as type 2 diabetes, cardiovascular disease and some types of cancers.

The Australian Dietary Guidelines were developed to provide Australians with an accurate guide to what foods are appropriate to eat in what quantities, and how food should be incorporated into daily life. The Australian Dietary Guidelines are as follows:

- **Guideline 1:** To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet energy needs.
- **Guideline 2:** Enjoy a wide variety of nutritious foods from these five groups every day:
  - vegetables
  - fruit
  - milk, yoghurt, cheese or their alternatives
  - grain
  - lean meats and poultry, fish, tofu, nuts and seeds, legumes/beans.

And drink plenty of water.

- **Guideline 3:** Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.
- **Guideline 4:** Encourage, support and promote breastfeeding.
- **Guideline 5:** Care for your food; prepare and store it safely.

Source: Eat for Health ([www.eatforhealth.gov.au](http://www.eatforhealth.gov.au))

The advice regarding the type and amount of foods that should be consumed has varied over the years. The most current advice is outlined in the Australian Guide to Healthy Eating (as seen in Figure 2.6 on the following page), which visually represents the proportion of the five food groups recommended for consumption each day.



**Figure 2.4:** There are multiple benefits to be gained from maintaining a healthy diet.



**Figure 2.5:** Australians are advised to eat plenty of vegetables, legumes and fruit.

## Internet activity

Log on to TitanOnline to complete Activity 2.3 to research appropriate nutritional guidelines for various ethnic groups.



**Figure 2.6:**  
 The Australian Guide to Healthy Eating.  
 Source: Eat for Health ([www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating](http://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating))

## Health problems associated with nutritional choices

Just as there are multiple benefits to be gained from maintaining a healthy diet, there are also serious health problems associated with poor dietary choices. Individuals, depending on how disordered their eating habits are, will experience varying health concerns and issues. Health problems associated with diet can be categorised into two groups: those associated with undereating and those associated with overeating. The following table highlights these problems.

**Table 2.2:** Health problems associated with diet.

Undereating	Overeating
<ul style="list-style-type: none"> <li>▪ Malnutrition.</li> <li>▪ Amenorrhoea (loss of menstruation).</li> <li>▪ Eating disorders including anorexia and bulimia.</li> <li>▪ Weight loss.</li> <li>▪ Light-headedness.</li> <li>▪ Dizziness and nausea.</li> <li>▪ Weakness.</li> <li>▪ Depression and panic.</li> <li>▪ Obsession with food consumption.</li> <li>▪ Tiredness and fatigue.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Type 2 diabetes.</li> <li>▪ Cardiovascular disease and hypertension.</li> <li>▪ Poor fitness</li> </ul>

Another area to consider when discussing health problems associated with diet is the consequences of nutritional imbalance in the diet. Nutritional imbalance for an individual is not consuming enough specific nutrients. This can have a negative impact on the body, leading to many unwanted symptoms such as fatigue, dehydration, and weight loss. Individuals with certain specific requirements such as vegans, people with diabetes, and people who are lactose intolerant, need extra care to ensure they have a balanced and healthy diet. Table 2.3 on the following page highlights some of the necessary nutrients and what consequences an individual can expect if they consume too little or too much of that nutrient.

**Figure 2.7:**

Individuals should limit intake of foods containing saturated fat, added salt and added sugars.



**Table 2.3:** Possible consequences of nutritional imbalance.

Nutrient	Too much	Too little
<b>Carbohydrate</b>	<ul style="list-style-type: none"> <li>▪ If not used, the body processes and stores excess carbohydrate as fat, resulting in weight gain.</li> <li>▪ Increased blood sugar levels.</li> <li>▪ Bloating and gastrointestinal stress.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ketosis.</li> <li>▪ Weight loss.</li> <li>▪ Tiredness and fatigue.</li> </ul>
<b>Protein</b>	<ul style="list-style-type: none"> <li>▪ If not used, the body stores excess protein as fat, resulting in weight gain.</li> <li>▪ Adds stress on the kidney and liver.</li> <li>▪ Dehydration.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not enough essential amino acids – body will start breaking down muscles to access these acids.</li> <li>▪ Weakened immune system.</li> <li>▪ Tiredness and fatigue.</li> <li>▪ Weight loss.</li> <li>▪ Anaemia.</li> <li>▪ Slowed growth in children.</li> </ul>
<b>Fat</b>	<ul style="list-style-type: none"> <li>▪ If not used, the body stores it, resulting in weight gain.</li> <li>▪ Risk of developing high blood pressure, coronary heart disease or type 2 diabetes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Weight loss.</li> <li>▪ Depression.</li> <li>▪ Over consumption of other nutrients.</li> <li>▪ Problems with skin and hair disorders.</li> </ul>
<b>Minerals</b>	<ul style="list-style-type: none"> <li>▪ High blood pressure.</li> <li>▪ Problems with digestive system.</li> <li>▪ Headaches and nausea.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Weak/brittle bones.</li> <li>▪ Tiredness and fatigue.</li> <li>▪ Infertility.</li> <li>▪ Weakened immune system.</li> <li>▪ Anaemia.</li> </ul>
<b>Vitamins</b>	<ul style="list-style-type: none"> <li>▪ Nerve problems.</li> <li>▪ Kidney stones.</li> <li>▪ Bloating.</li> <li>▪ Headaches.</li> <li>▪ Diarrhoea.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Weakened immune system.</li> <li>▪ Weak/brittle bones.</li> <li>▪ Memory failure.</li> <li>▪ Weight loss.</li> </ul>
<b>Fibre</b>	<ul style="list-style-type: none"> <li>▪ Weight gain.</li> <li>▪ Gas.</li> <li>▪ Bloating.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Constipation.</li> <li>▪ Obesity.</li> <li>▪ Pains and cramps in the stomach.</li> </ul>

### Learning activity

1. Compare the health concerns of an individual who is over nourished with an individual who is undernourished.
2. Create a meal that is high in fibre and protein and low in carbohydrates.

# Influences on food choices

## Food, culture and religion

A major influence over dietary choices and habits involves geographical location and cultural heritage. The food trends in Australia have changed over time. Originally, immigrants consumed diets that stemmed from British and Irish cultures. When the first European settlers came to Australia, the diet consisted of seafood, native game and native fruit, vegetables and nuts, as well as traditions for cooking from their homeland. As time progressed and patterns of migration to Australia developed, this shifted and broadened. After World War II, many Europeans and Asians started migrating to Australia, bringing – among many other things – their traditional food preparation and food consumption. The multicultural society now prevalent throughout Australian society has had a vast impact on food choices available, making it possible to enjoy cuisines from all around the world in a unique and blended way.

Enjoying food from different countries is a great way to appreciate different cultures and a great way to socialise. The wide range of restaurants in Australia, offering foods from all around the world, reflects the multicultural population. The following table provides examples of foods commonly associated with countries other than Australia.

**Table 2.4:** International foods.

Country	Food
China	Fried rice, beef and black bean, sweet and sour pork, wonton noodle soup.
India	Butter chicken, lentils, dahl makhani, beef vindaloo, naan bread.
France	Frog legs, escargot (snail), foie gras.
Japan	Teriyaki chicken, sushi, sashimi.
Italy	Pasta, pizza, antipasto, lasagne, bruschetta.
Greece	Souvlaki, stuffed squid, okra, moussaka.
Turkey	Kebabs, pilaf, pide.



**Figure 2.8:** Australia's multicultural society has had a vast impact on food choices available.



**Figure 2.9:** European settlers have brought traditions for cooking from their homeland.

### Did you know?

Adding citrus to green tea increases the level of antioxidants that survive the digestive system.



**Figure 2.10:**

Enjoying food from different countries is a great way to appreciate different cultures and a great way to socialise.

The role food plays in different cultures and religions is complex and varies significantly from one faith to another. The following table outlines dietary requirements of some of the major religions.

**Table 2.5:** Dietary guidelines of specific religions.

Religion	Food
<b>Christianity</b>	<ul style="list-style-type: none"> <li>▪ No specific dietary requirements although during certain times of the Christian calendar, restrictions on the daily intake are encouraged. This includes avoiding red meat on Good Friday (some Christians will refuse to eat meat on any Friday).</li> <li>▪ During mass and ceremonies, Catholics will take Holy Communion (unrisen bread and red wine that has been blessed), which symbolises the body and blood of Jesus Christ.</li> <li>▪ Certain variations of Christianity, such as Mormons and members of the Salvation Army, avoid drinking alcohol and caffeinated drinks.</li> </ul>
<b>Buddhism</b>	<ul style="list-style-type: none"> <li>▪ While Buddhism is not technically a religion, there are still specific dietary guidelines that practitioners may follow, such as:               <ul style="list-style-type: none"> <li>– To avoid killing animals, Buddhists practise a vegetarian diet.</li> <li>– Monks are not allowed to prepare or cook their own food but rather they rely on ‘alms’ or donations from others.</li> <li>– Alcohol and cigarettes should be avoided.</li> <li>– There are five foods that some Buddhists avoid: onion, garlic, scallions, chives and leeks.</li> </ul> </li> </ul>

**Table 2.5:** Dietary guidelines of specific religions.*(continued)*

Religion	Food
<b>Hinduism</b>	<ul style="list-style-type: none"> <li>▪ Hindus believe in karma, which is the concept that behaviours and actions have an influence over an individual's future. For instance, if an individual were to see someone drop something valuable on the ground, it would be good karma to return it and bad karma to keep it. This influences their dietary choices, with many Hindus practising a vegetarian diet, although it is not compulsory.</li> <li>▪ Eating cow should be avoided, because the cow is sacred.</li> <li>▪ Hindus also practise fasting. Specific restrictions apply on various religious days and depending on an individual's social standing.</li> </ul>
<b>Islam</b>	<ul style="list-style-type: none"> <li>▪ There are two terms that are important in relation to diet: 'halal', which means something is permissible and 'haram', which means forbidden. Foods that are prohibited include alcohol, pork, some margarines, some caffeinated drinks and some breads.</li> <li>▪ The Islamic faith also practises fasting, which involves periods of not consuming foods and water. The festival of Ramadan requires Muslims to avoid eating and drinking from dawn until sunset.</li> </ul>
<b>Judaism</b>	<ul style="list-style-type: none"> <li>▪ The word 'kosher' in Judaism relates to food that is allowed or acceptable.</li> <li>▪ Food laws have been part of the Jewish religion for over 3,000 years and provide members with guidelines for how food should be treated.</li> <li>▪ Food must be prepared in a specific way including the way in which animals are slaughtered. Certain foods are banned, including pork and shellfish.</li> <li>▪ There are certain rituals that require Jews to follow dietary customs, including the Passover and Yom Kippur.</li> </ul>

### Learning activity

1. Describe a recipe for a meal from another country.
2. Think about how moods have affected your eating and think about strategies to combat unhealthy binge or comfort eating.
3. Research the British and Irish diets that the Australian diet evolved from and look at what foods have survived till today.
4. Think about your family history and culture. Are there any meals you eat that aren't a regular or common meal in Australia?

### Internet activity

Log on to TitanOnline to complete Activity 2.4 and investigate the various dietary habits of different religions.



**Figure 2.11:**

Traditionally, Indigenous Australians ate food from the land through hunting and gathering.

## Aboriginal and Torres Strait Islander diets

Traditionally, Indigenous Australians ate food from the land through hunting and gathering. The foods that were part of the regular diet would depend on the location of each specific tribe or clan and what was available to them. Typical foods that Aboriginal and Torres Strait Islander people would consume include:

- berries
- fruits
- animal meats
- fish
- insects.

The animal meats that were common in the traditional diet included kangaroo, wallaby, wombat and possum. Other sources of protein included fish, molluscs and crustaceans. The arrival of the British led to a depletion of many sources of food and a disruption to Aboriginal society and food culture.

### Internet activity

Log on to TitanOnline to complete Activity 2.5 to explore Aboriginal and Torres Strait Islander peoples' diet and traditional medicine.

### Learning activity

1. Research ingredients common to Aboriginal and Torres Strait Islander people at around the time of the First Fleet. Create a menu with these ingredients.
2. Create a guide with clear instructions on how to tell whether or not bush food is poisonous to humans.

## Mood

A number of factors have the power to influence an individual's food choices – many of which affect an individual's choices without them even knowing it. For instance, when feeling sad or upset, many people eat or drink without realising how much they are consuming. 'Comfort eating' usually involves eating food because it tastes good rather than because it is nutritional or eaten in response to hunger. It is necessary to be aware of mood when making choices concerning diet because the body is the vessel that allows an individual to function.

The concept of eating disorders associated with mood is also important to consider.

Depression and bulimia have been linked, and stress and anxiety also impact on food and dietary choices. If an individual's mental health is impacting their dietary choices in a negative or unhealthy way, it would be ideal to discuss the issue with a doctor or similar trained professional such as a dietitian or nutritionist.

## Food advertising

Advertising companies often use a number of strategies to increase the attractiveness of their product. This often involves embellishing or exaggerating the quality of the product in order to create a good reputation, improve the customer's perception of the business or product and increase the sales of the product. Some of the many strategies advertising companies use include:

- catchy jingles
- associating the catchy jingles with all advertising so that potential buyers will be aware of the product
- viral marketing methods online
- product placement in shopping centres. sugary, unhealthy foods are often placed at the eye level of children so that they pester their parents to purchase them.
- reward programs organised through large supermarket chains
- misleading product descriptions such as calling products 'juice' or 'all from natural ingredients'
- promises to the consumer such as 'guaranteed weight loss' or 'builds muscle' or 'improved recovery time'
- celebrity endorsements.

### Learning activity

1. Choose an item of food and record the key claims made concerning the product's nutrition information.
2. In pairs, compare your food products. Are there promises that are similar?
3. Discuss three food claims you have seen or heard recently and research the truth surrounding each.
4. Reflect on an advertisement for a food product you like. Discuss the claims that were made and the legitimacy of each.

## Food and ethical issues

It is common for consumers to make food choices based not just on what is most affordable, but also what is ethical, healthy and sustainable. Sustainable food choices often focus on creating eating habits that allow for the preservation of resources, continued sources of food, and ethical treatment of workers, livestock and the planet.

Every year, Australians waste billions of dollars on food. It is estimated that a regular Australian household throws away an equivalent of one fifth of all food they purchase. In Australia, 2.5 million tonnes of edible food is thrown away every year.

Food is being wasted for a number of reasons. Firstly, use by and best before dates lead to a great deal of waste. Foods do not need to be eaten before their best before date. Also, it is not uncommon to forget about foods stored in the freezer. These are often thrown out rather than consumed at a later date. Shopping when hungry or without a shopping list leads to buying foods that an individual does not need, leading to food wastage. Buying a takeaway meal when there is food in the house also contributes to food wastage. When an individual throws away food, they are also wasting the valuable and costly energy and resources that were required for the food to be grown and made, such as water and fuel. Individuals are able to minimise economic and environmental impact of food wastage by some of the following examples of more sustainable nutritional habits:

- Source seasonal foods from local growers or having a vegetable garden is a valuable way to reduce food miles.
- Purchase raw foods that require minimal processing and handling.
- Purchase loose fruit and vegetables with minimal unnecessary packaging.
- Utilise refillable bottles and containers.

When discussing food and food choices, individuals wishing to make good choices should consider the ethics behind their food choices. As the world population increases, the demand for food also rises. At the same time, the gap between the rich and the poor is widening, creating a significant difference in access to nutritious food and clean water. The treatment of farming land and the people working it, the impact of transport, storage and waste impacts on the environment or the treatment and housing of livestock for food, are issues that flow from modern consumerism and the supply of food in today's society.



**Figure 2.12:** Every year, Australians waste billions of dollars on food.

### Internet activity

Log on to TitanOnline to complete Activity 2.6 and investigate the extent of food wastage in our society and strategies to reduce waste that are available in your local community.

### Did you know?

On a daily basis, approximately 10,000,000 plastic straws are used by Australians and 500,000,000 internationally.

There are a number of steps consumers can take to make sure they are informed and making ethical choices. These include:

- Research products or use apps that help with ethical shopping choices.
- Grow as much food as possible, to save money and get foods without pesticides and additives.
- Avoid palm oil.
- Consider the amount of packaging when deciding to purchase products.
- Connect with the big companies and provide feedback on their products and services, making it clear that consumers value ethical behaviour and business practices.
- Source meats and vegetables that have been farmed in an ethical, sustainable manner.
- Plan purchases before going to the shops, to avoid impulse buying and food wastage.

## Organic food

Organic foods are those that are sourced from situations in which the crops and animals are just that – organic. There are no added pesticides, growth regulators or human fertilisers. The use of these additives changes the structure of foods. It is widely believed that organic foods are healthier than conventionally produced foods as they are seen as having superior sensory qualities, lower levels of pesticides and synthetic fertilisers, and a higher nutritional quality.

## Fair trade products

Fair trade products are those that don't exploit people involved in the process of getting the product to the consumer. This involves ensuring employees are treated fairly and humanely. This involves adequate pay and rest, as well as a safe workplace. Products that are fair trade often pose no threat to the environment.

The goal of fair trade agreements is to address discrimination in trade. These agreements often protect countries where land and people are commonly exploited.

## Food miles

'Food miles' is a term used to define the distance food travels before it reaches the plate. This concept urges consumers to think about the trail food leaves – in packaging, in transport and pollution. Food miles, along with other dietary and ethical concerns, has led to a growing number of people and communities embracing common vegetable gardens, home grown products and local food markets.

### Learning activity

1. Research if there are any sustainable food practices around your area. If so, explain. If not, propose one.
2. Research food wastage statistics in your state or territory and record them.
3. Create three tips that encourage people not to waste food. Your tips should be accurate, memorable and easy to practise.
4. Design a meal plan for your week adhering to a strict vegan diet. Make sure the meal plan has adequate nutrients, and that the foods are exciting and healthy.

## Modern lifestyles

Modern lifestyles are generally characterised by hectic schedules around busy careers, study, social life and family commitments. This can influence families and individuals to miss meals or make dietary choices based on the limited time available for shopping and food preparation.

### Junk food

'Junk food' is a colloquial term used for foods that are quick and easy to prepare, and are usually unhealthy and full of salt and/or sugar. Junk food was first introduced at the start of the 19th century and has rapidly expanded in popularity since, largely due to its convenience, low cost and taste. Junk food is often targeted at younger consumers through specific marketing and packaging strategies such as bright colours on the box or catchy slogans. Common junk food snacks include:

- chocolate bars
- lollies
- fruit drinks
- biscuits and crackers
- doughnuts
- chips.

#### Did you know?

Tonic water glows when held under a blue light, because it

### Availability of healthy snacks and meals

While there are thousands of products targeted at people that are full of sugars, fats and preservatives, there is also a growth in the availability of healthy snacks, particularly ones that are easy to consume. In the western world, consumers are placing a higher demand on food chains to provide healthy and tasty options. In the past, many of these were pre-prepared and quick, usually had low nutritional value, and high fat and salt content. Now, more restaurants are offering healthier alternatives, and food chains that market themselves to health-conscious consumers.

For something to be considered a healthy snack, it should:

- not contain excessive sugar – a good guide is to avoid foods that have more than 10 grams of sugar
- not contain excessive sodium (salt)
- have limited or no preservatives – particularly avoid those with preservatives in the 200 range, monosodium glutamate (MSG), or artificial sweeteners
- be an appropriate portion size.



**Figure 2.13:**

There has been a growth in the availability of healthy snacks, particularly ones that are easy to consume.



**Figure 2.14:**  
Technology has made nutritional information more accessible.

## Technology influences on dietary choices

Developing and maintaining healthy habits can be a challenge for some individuals with busy lives. Often, full-time employment and family commitments take precedence over healthy lifestyle behaviours. Technological advancements have made health information more accessible to most individuals with smart devices. There is now a variety of apps available for free or for a small fee that allow individuals to track their nutritional intake and exercise regimes. Many of these apps have features that inform and track nutritional information per serving size of certain foods to reduce the stress of having to calculate the data. Some apps are specifically designed for people with various dietary requirements or allergies, such as vegetarians or people affected by FODMAPs (groups of sugars that are not completely digested or absorbed in the intestines), allowing consumers to apply settings to specifically meet their individual dietary needs and/or personal preferences.

Examples of diet and fitness apps include:

- Health Pal
- MyNetDiary
- Waterlogged
- MyFitnessPal
- Harvest
- FODMAP App.

The internet continues to also provide an abundant array of health, diet and fitness related information. It is important when accessing the information, consumers only seek information from accurate and reliable sources. More and more food services are creating online platforms to assist individuals to develop and maintain healthier lifestyles. For example, HelloFresh, Home Chef, Marley Spoon, YouFoodz and Dinnerly are examples of services that provide delivery of the required grocery items, either already prepared to eat or simply cook by following the attached recipe card. Many Australians are taking to these online food ordering systems to reduce the time needed to prepare meals throughout the week and even reduce unnecessary waste. These business provide customisable ingredients and meals to suit individual requirements and can simply be organised and ordered from a smart device in the comfort of a person's home.

# Nutrition and physical activity

To maintain good health, it is important to eat nutritious food and participate in regular physical activity. The food that individuals consume provides them with energy. Exercise burns energy. Therefore, consuming more energy than burnt from day to day will result in weight gain. Consuming less energy than burnt from day to day will result in weight loss. Consuming the same amount as burnt daily will maintain a stable body weight.

To be able to exercise efficiently, the body needs to be stocked with the right fuel – just like driving a car. The right fuel will depend on what sort of exercise an individual is doing. In most instances, carbohydrates are the preferred fuel source because the body stores carbohydrates as glycogen (sugar) and the muscles use glycogen when they need energy. To perform at an optimal level, it is important to also consider mealtimes. It is necessary to eat before exercise in order to be well energised. However, if a heavy meal is consumed too close to exercising, this will negatively impact performance. The digestive system uses energy to digest the food, and if a person eats too close to exercise, energy will be divided between the muscles and the digestive system. However, if a person does not eat at all before exercise, they can quickly become fatigued and begin to feel faint and lose concentration. Ideally, eating should occur two to three hours before exercise and if still hungry, a light snack can be consumed.

It is very important to keep hydrated at all times, but particularly before, during and after exercise. During exercise, water in the body is used more quickly because body temperature rises and the body sweats to keep cool. Effects of dehydration include:

- faintness
- light-headedness
- dizziness
- thirst
- confusion
- heart palpitations
- dark urine.

The type of exercise or physical activity an individual engages in influences the energy requirements that individual has. Activities that require a lot of running such as soccer or netball require a greater deal of energy than activities such as housework or going for a walk. The body gets its energy through breaking down carbohydrates and fats that are present in the foods individuals consume. If the exercise an individual engages in is intense or vigorous, the body will require more carbohydrates. To achieve maximum health, it is important to consider energy intake and diet. For example, in the Tour de France, a cyclist's daily energy expenditure can be more than 10 times their normal level. Many of the athletes find it difficult to consume all the energy they need through their diet and therefore undertake significant dietary supplements.

## Internet activity

Log on to TitanOnline to complete Activity 2.7 to research the nutritional requirements of athletes.



**Figure 2.15:**

It is important to eat nutritious food and participate in regular physical activity.

## Intake before, during and after exercise

There are specific requirements that athletes should meet before, during exercise and after exercise in order to perform at their optimum level. These requirements and examples of how they can be achieved are shown in the table below.

**Table 2.6:** Intake requirements.

Competition	Requirements	Examples
<b>Pre-exercise</b>	Food choice and consumption must take into account energy needs and time taken for digestion. Good food choices are usually low in fat, easily digestible and high carbohydrate. Adequate hydration is essential. Avoid heavy food and eat at least two to three hours before the event. Liquid meals are effective for some athletes.	<ul style="list-style-type: none"> <li>▪ Cereals.</li> <li>▪ Pasta.</li> <li>▪ Wholegrain breads.</li> <li>▪ Fresh fruits.</li> <li>▪ Liquid meals such as Sustagen or smoothies.</li> </ul>
<b>During exercise</b>	Endurance events or high-energy events lasting more than 90 minutes will require the consumption of food and fluid during the event to maintain blood glucose levels and avoid fatigue. Fluid intake should match fluid loss during exercise.	<ul style="list-style-type: none"> <li>▪ Fruit.</li> <li>▪ Muesli bar/sports bar.</li> <li>▪ Yoghurt.</li> <li>▪ Sports drink or water.</li> <li>▪ Jelly beans.</li> <li>▪ Smoothie.</li> </ul>
<b>Post-exercise</b>	Post-exercise nutrition aims to refuel glycogen levels, return the body to pre-exercise fluid and electrolyte levels, and provide essential amino acids to enable muscle repair and building.	<ul style="list-style-type: none"> <li>▪ Liquid meal supplement.</li> <li>▪ Low-fat milkshake.</li> <li>▪ Fruit smoothie.</li> <li>▪ Vegetable soup.</li> <li>▪ Lean cuts of meat or plant sources of protein.</li> </ul>

### Learning activity

1. Discuss the stages of the lifespan and how the energy and nutrient requirements of each stage differ.
2. Formulate a weekly guide for the average adolescent, detailing appropriate dietary guidelines and nutritional requirements.
3. Research an athlete's diet, showing how it differs from that of an average adult and explaining why.

## Glycaemic index

Food and drinks provide energy by fuelling the body. The main source of fuel comes from carbohydrates. The glycaemic index, or GI, ranks carbohydrates according to how quickly they raise the level of glucose in the blood. Not all carbohydrates are equal, and different carbohydrates cause blood glucose and insulin levels to fluctuate. Carbohydrates are classified as high GI, medium GI or low GI. High GI carbohydrates release glucose into the bloodstream rapidly, whereas low GI carbohydrates release glucose into the bloodstream more slowly.

- Low GI foods include most fruits and vegetables, grainy breads, pasta, milk, yoghurt and some cheeses and nuts. Low GI foods generally have a rating of less than 55.
- Medium GI foods include whole wheat products, some forms of rice, sweet potato and sugar. Medium GI foods generally have a rating of between 55 and 70.
- High GI foods include some cereals (particularly sugary ones such as corn flakes), potatoes, white bread, short grain rice and some fruits including watermelon.

The glycaemic index of a food depends on a number of factors such as starch molecules, the fat and protein content of the food and sugar and salt levels. Carbohydrate intake depends on a number of factors including how much an individual eats, when they eat, what type of activity they have done prior to eating or drinking and what they expect to do following consumption. For example, before an endurance event, it would be beneficial to eat low GI foods as they may improve exercise capacity. Conversely, following an endurance event, it would be beneficial to eat high GI foods to promote recovery and replenish fuel stores. Consumption of foods and drinks with different GI levels can have considerable impacts on health. Individuals who consume low GI foods and drinks are at a lower risk of developing a range of diseases and health concerns such as type 2 diabetes and coronary heart disease. Consumption of foods and drinks of different GI levels can impact on weight. High GI carbohydrate consumption can lead to obesity.



**Figure 2.16:**  
Most fruits and vegetables are low GI.



**Figure 2.17:**  
High GI carbohydrates release glucose into the bloodstream rapidly.

### Did you know?

Bananas, watermelons, tomatoes, pumpkins and avocados are all berries.

## Healthy weight loss and gain

Healthy weight loss or gain must be achieved in conjunction with a balanced diet that supplies adequate nutrients and energy. Kilojoule intake needs to take into account physical activity levels, personal goals and body composition. Adequate nutrition is essential to maintain energy levels and provide nutrients for repair and recovery.

Healthy weight gain involves consumption of extra kilojoules by increasing the frequency of eating, increasing portion size or choosing foods that are more nutrient rich. Extra energy consumption should be balanced with appropriate exercise and activity level, and resistance training is recommended for individuals seeking to increase muscle mass.

Weight loss should include a diet based on a wide variety of nutritious foods combined with at least 30 minutes of moderate-intensity physical activity per day, which burns kilojoules and increases basal metabolic rate (BMR). Easy or quick weight loss promises most often lead to failure and a return to pre-diet weight levels. General guidelines for healthy weight loss are detailed below:

- Avoid a sedentary lifestyle and include planned and incidental activity each day.
- Increase activity and reduce energy intake.
- Maintain a balanced diet including a variety of foods.
- Establish habits that can be maintained for life.
- Increase intake of vegetables and include two to three serves of fruit per day.
- Maintain adequate hydration
- Aim for a weight loss of 0.5–1 kilogram per week, as opposed to rapid weight loss that requires radical changes that are most likely unsustainable. Reality shows that promote weight loss goals of up to five kilograms per week give people false hope and unrealistic expectations.
- Avoid fad diets.
- Avoid saturated fats, alcohol, salt and sugar.



**Figure 2.18:** Weight loss should include a nutritious diet and regular physical activity.

### Did you know?

Losing weight doesn't mean fat cells are reduced in number. It just makes the cells smaller.

### Learning activity

1. Critically analyse a current diet popular among celebrities.
2. Create a list of your five best tips to lose weight safely.
3. Create a nutrition plan that you can implement over the next two weeks.
4. Record how the nutrition plan impacts on the way you feel.

# Assessing information, products and services

Sourcing reliable and accurate health information can be a challenge when unregulated websites are created and published by individuals with no adequate qualifications or training. Information from accredited nutritionists, dieticians and general practitioners ensures that health information meets individual needs and is safe for long-term health benefits. Much of the health information available online involves diet related advice.

## Assessing legitimacy

Individuals need to be aware of the legitimacy of various claims made by food products, as food companies often promote products as having benefits that may not be entirely true or, rather, misleading. Endorsements and advertising of food and drink products can often aim more towards selling the items rather than giving a transparent view of their ingredients and health effects.

One of the most effective ways to assess the legitimacy of a specific product is to become educated on how to read and understand the packaging. Knowing what to look for on the nutrition information panel is important; so too is being able to recognise phrases that are commonly used to make a product seem healthier than it actually is. For example:

- labelling a product 'light' with explanation of what is meant
- labelling a product that is low
- labelling a product as low or without proof.

Another area consumers should be aware of is the person who is endorsing the product. A consumer should research the background of the person used to promote a product to discover whether they should be trusted. For example, if the individual makes medical claims about the benefits of a product and they don't have a medical background, their claims become less credible.

The Australian Consumer Law is designed to protect consumers and ensure fair trade throughout Australia. It provides a set of rights to consumers for the goods and services they acquire.



**Figure 2.19:**

Sourcing reliable and accurate health information can be a challenge.

## Consumer rights

All goods for sale, including health-related products, must meet basic standards. If they don't, the customer is legally entitled to seek a refund, repair, replacement or compensation. Goods must be:

- fit for the purpose that they have been sold for
- of sufficient quality to meet reasonable expectations and continue to work properly for a reasonable time
- free from faults and breakages
- a match to the information that the consumer received when deciding to purchase – this information may have come from a salesperson, an advertisement or product packaging.

## Consumer responsibilities

Consumers play an important role in their own health care. It is important consumers are well-informed regarding their choices. It is also important consumers know how to use health-related products, in order to get the most benefit from them. When purchasing health-related products, consumers should talk to customer service consultants, pharmacists and assistants to ask appropriate questions. The labelling on medications (and inserts) should be read carefully. The internet can be an ideal source of information regarding a range of health-related products, provided the source is accurate and reliable.

## Fad diets

As people strive to improve their appearance, weight and general health, there has been an increase in the popularity of fad diets. These diets are promoted through the media and strive to find a novel approach to good nutrition. By necessity, they often conflict with conventional nutritional advice in order to find their unique place in the market and create controversy. Typically these diets tend to:

- promise rapid weight loss
- include rare foods with 'exceptional' healing powers
- promote food combinations or eating patterns that promote weight loss
- restrict or eliminate particular nutrients or food groups
- use unsubstantiated research or small study groups to back up their claims.



**Figure 2.20:**

One way to assess the legitimacy of a product is to know what to look for on its label, such as nutrition information.



**Figure 2.21:**

Fad diets often conflict with conventional nutritional advice.

### Internet activity

Log on to TitanOnline to complete Activity 2.8 to review rapid weight loss products.

### Internet activity

Log on to TitanOnline to complete Activity 2.9 to compare fad diets.

Examples of diets that have become popular in recent years include:

- **Paleo Diet:** The Paleo or ‘caveman’ diet requires individuals to increase their consumption of lean meats, poultry, fish, seafood, fruits, vegetables, nuts and seeds. The diet is helpful in promoting an individual to cut out fatty, sugary and processed foods from their diet, but also eliminates foods that are beneficial for the body. This includes many calcium-rich products and grains and legumes, which are high in protein, fibre and carbohydrates.
- **Detox diet:** A detox diet aims to remove toxins and chemicals from the body by consuming natural foods and vegetables as well as a lot of water. There are many different forms of the detox diet such as the lemon detox diet and five-day juice fast. These diets remove almost all foods from a person’s normal diet and sometimes only one type of food is to be eaten in one day. Although the detox diet has not been scientifically proven, those people who support the diet believe that the body does not properly remove toxins from the body during the elimination of waste and detoxing will help the process.

## Meal replacement

Meal replacements often come in the form of shakes. Most meal replacement products are marketed to a particular audience for a particular reason such as muscle gain, gluten free and dieting and negatives associated with restriction.

Some positive reasons for individuals using meal replacements include being able to consume a meal in a short time being efficient to consume with little time required. Some of the negatives associated with meal replacements include containing artificial substances or having incomplete nutrients, ingredients, potential expense, possible side effects and individuals not developing the capacity to gain skills for creating nutritious meals.

Deciding to use meal replacements should be a decision made between a health practitioner and the individual to ensure that nutritional requirements are met and are sustainable for the individual’s energy requirements.



**Figure 2.22:**

Meal replacements often come in the form of supplements or shakes.

## Superfoods

The term ‘superfood’ gets used a lot, but there is no standard definition of what a superfood must be. Most foods labelled as superfoods tend to be plant-based – açai berries, wheatgrass, spirulina, leafy greens, tea and turmeric. Although typically packed with nutrients, they have little energy.

For individuals who enjoy these foods and can afford them, there’s nothing wrong with having them as part of a healthy diet. But eating a couple of these with an otherwise poor diet will not provide huge health benefits. It is a person’s overall dietary pattern that has the biggest impact on their health.

Source: Better Health Channel.



**Figure 2.23:** Most foods labelled as superfoods tend to be plant-based.

**Table 2.7:** Superfoods and their properties.

Superfood	Properties
<b>Broccoli</b>	<ul style="list-style-type: none"> <li>Compounds in broccoli potent in prevention of disease and against bladder cancer (only if consumed raw).</li> <li>High levels of fibre.</li> <li>Rich in iron, zinc and phosphorus, and vitamins A,B,C and K.</li> </ul>
<b>Ginger</b>	<ul style="list-style-type: none"> <li>Aids digestion.</li> <li>Relieves nausea, morning sickness and motion sickness.</li> <li>Eases headaches, sore throats and other bodily aches.</li> <li>Helps with asthma, coughs, swellings and loss of appetite.</li> </ul>
<b>Spirulina</b>	<ul style="list-style-type: none"> <li>About 60 per cent complete protein.</li> <li>All eight essential amino acids.</li> <li>Improves the immune system, fights disease and reduces arthritis, osteoporosis, diabetes and depression.</li> </ul>
<b>Blueberries</b>	<ul style="list-style-type: none"> <li>Protect memory and cognition.</li> <li>Lower oxidative stress, inflammation which reduces the risk of developing neurodegenerative diseases.</li> <li>Improve heart health and reduce the risk of cancer.</li> </ul>
<b>Kale</b>	<ul style="list-style-type: none"> <li>Rich in protein, fibre, folate, omega-3 fatty acid, and vitamins A, C and K.</li> <li>Helps with diabetes, heart disease, cancer, bone health and digestion.</li> </ul>
<b>Goji berries</b>	<ul style="list-style-type: none"> <li>All essential amino acids, protein, vitamin C, fibre, calcium, zinc and selenium.</li> <li>Anti-inflammatory, antibacterial and antifungal compounds.</li> <li>Help with kidney and liver problems, as well as back pain and dizziness.</li> <li>Traditional Chinese medicine.</li> </ul>

## Revision questions

1. Discuss the pros and cons of the following two diets:
  - a. Vegan.
  - b. Paleo.
2. Suggest five tips you think are essential when trying to lose weight healthily.
3. Suggest five tips you think are essential when trying to gain weight healthily.
4. Research macronutrients and micronutrients and outline the similarities and differences.
5. Using two countries as points of reference, discuss how culture influences food choices.
6. Select one celebration relating to food within any religion. Discuss the tradition and the importance of the food in celebrating.
7. Write a submission for an organic community garden to be constructed in your community.
8. Research the food miles of three of your favourite foods.
9. Determine the difference between organic and Fairtrade products. Outline how these programs support sustainability in the food industry.
10. What are some common reasons for food waste? Propose how a person can prevent wasting food.
11. Define the term 'superfoods'.
12. Outline the difference between consumer rights and responsibilities.



## CHAPTER 3

# Relationships and sexuality

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Throughout this unit, students examine the concept of sexuality and become familiar with terms such as sexual orientation and gender, as well as laws concerning consent. Students explore reproductive and sexual health. Students analyse the term 'safe sex' and explore ways of ensuring they are safe should they choose to engage in sexual activity, including an evaluation of various contraceptive methods. Students discuss power in relationships and the abuse of power, analysing how to recognise and respond to abuse. Students explore the concept of discrimination as well as how to manage changing relationships.

### Focus areas

- Types of relationships
- Developing respectful relationships
- Power in relationships
- Healthy intimate relationships
- Sexual relationships

# Types of relationships

A relationship is an association between a person and another person or group of people. Relationships enhance overall health and wellbeing and can fulfil a range of physical and emotional needs. We form relationships with those people who we see from day to day or those who share a mutual connection or interest. The most common types of relationships for adolescents include those shared with friends, parents, siblings, teachers and coaches. A relationship that fosters healthy, supportive and respectful qualities can be very beneficial. However, relationships can sometimes turn stressful and unhelpful, causing a negative effect on wellbeing.

Relationships are constantly changing during adolescence, particularly with a newfound search for identity and independence. Family and sibling connections can change as there may be a shift to strengthening the relationships between friends and peers. Adolescence is also a time when teenagers start to explore and experiment with intimate relationships. These relationships allow teenagers to become familiar with feelings such

There are many different types of relationships and connection that can form between two people. These are grouped into the following categories:

- **Family:** Family is defined by a group of people who consider themselves to have familial ties. Most commonly it involves people related by adoption, marriage, de facto relationships, blended families or carer situations.
- **Friendships:** Friendship relationships are those where individuals agree to begin the relationship by their own will and choice. They usually involve an individual's closest friends. These relationships are commonly formed due to mutual interests or activities that each person will enjoy the other's company.
- **Romantic:** A romantic relationship is one shared between a boyfriend, girlfriend, de facto or married couple. These relationships are formed on the basis of mutual intimacy, trust, passion and desire. There is a strong and intimate attachment to one another.
- **Professional:** Professional relationships are those that develop between people who interact in the workplace or everyday work. This can include the connections between teachers, peers or work colleagues.



**Figure 3.1:** Family and sibling connections can change during adolescence.



**Figure 3.2:**

Relationships that foster healthy, supportive and respectful qualities can be very beneficial.

## Developing respectful relationships

Relationships place people in social situations where they develop skills with decision making, negotiation, effective communication and empathy. Dating relationships can influence the confidence levels and the self-esteem of people. Healthy relationships involve support, effective communication, consideration, respect and an appreciation for shared core values.

Sometimes, making important decisions that are necessary takes courage. The support from healthy relationships can reduce fear and anxiety that may be experienced with decision making. Fear and anxiety can lead to poor choices or possible risk behaviours for adolescents. Positive support can provide a valuable influence in people's lives and may come from healthy relationships with peers, parents, grandparents, adults in authority or dating partners.

In order to establish a positive relationship, both parties must be committed to understanding and maintaining the criteria for healthy and respectful relationships. Healthy relationships provide many benefits for an individual's health and wellbeing. They can increase the sense of belonging and self-worth, increase confidence, provide support and foster feelings such as understanding, trust, care and respect.

Healthy and respectful relationships are built upon the concepts of:

- honesty
- trust
- respect
- safety
- security
- support
- communication
- equality
- loyalty
- empathy
- shared values.

### Internet activity

Log on to TitanOnline to complete Activity 3.1 to devise your own positive strategies to enhance respectful relationships.

### Learning activity

1. Discuss the importance of relationships in the adolescent years.
2. Identify five people with whom you share a relationship and outline which type of relationship it is.
3. Determine the differences between a friendship and a professional relationship.
4. Choose four qualities of a healthy and respectful relationship and analyse why these qualities are an important part of a relationship.

## Skills for respectful relationships

Everyone needs equal and respectful relationships. New relationships should have ground rules and boundaries so that both people feel safe, emotionally and physically, and are able to express their thoughts, beliefs and opinions.

A person in a relationship should develop skills to acquire an equal and respectful relationship. There are many skills required to build caring and respectful relationships, some of which are explained below.

- **Active listening:** This involves skills such as maintaining eye contact, showing interest in what is being said and positive body language. It improves communication and enhances a relationship.
- **Arguing constructively:** This is an important skill that needs to be learnt in order to argue a belief without letting emotions get out of hand. If this does happen, often an argument deteriorates into physical and/or verbal abuse. Someone who can argue constructively is able to express the facts or their opinion, is able to control their emotions (such as their anger) and can consider both sides of the argument.
- **Negotiation and compromise:** As young people develop independence, this plays an important role. These skills are specifically important in factors such as driving your parent's car, extending curfew and going to parties. If both people are able to negotiate and compromise successfully then it should be a 'win-win' outcome.
- **Being empathetic:** An important skill for young people to develop is empathy. Being empathetic means that a person is able to respect the rights, feelings, beliefs and opinions of another person.



**Figure 3.3:** Active listening improves communication and enhances a relationship.



**Figure 3.4:** Negotiation and compromise are important skills to learn when developing independence.

## Conflict resolution

Conflict is a state of tension caused by incompatible feeling or an opposition between ideas, values or interests. Conflict is a normal, inevitable part of relationships, as everyone has different values, goals and opinions. Resolving conflict and effective communication are important in establishing and maintaining positive relationships. There are many things that could cause conflict in a relationship. These include:

- dishonesty or lying
- lack of trust
- infidelity
- not listening
- lack of respect
- abuse
- different values, opinions and beliefs.

When in a conflict, it is important to understand the skill of conflict resolution so that both parties are able to maintain a healthy relationship and feel they are respected. Conflict resolution is the act of settling differences of belief or opinion. It is the process of attempting to find a solution to a dispute. Conflict resolution may be needed when negotiating and compromise fails. An important skill of conflict resolution is respecting what the other person has to say and what they are feeling. Conflict resolution involves people practising the following behaviours:

- Explaining their thoughts and feelings.
- Trying to understand the conflict from the other person's point of view.
- Apologising and admitting their mistakes.
- Accepting apologies.
- Resolves to alter a behaviour or attitude.
- Taking a step back from the situation and trying to put things into perspective.

## Managing changing relat

Relationships are complex and unique and are always changing. Relationships are always changing when teenagers are maturing, developing independence and forming their own identities. This can cause difficulty and tension with parents. There may also be breakdowns in relationships or a romantic relationship. It is important for teenagers to understand that changes may be inevitable, although there are many ways to manage these changes in a positive, healthy way.

Young people may be spending more of their time with friends and experiencing new freedoms. Changes to family rules that have been previously established may need to be reviewed. Sometimes these changes can lead to conflict. It is important to remember that change is a natural part of life for teenagers and parents alike, and the stress and worry for both. While teenagers might feel that family rules are unfair or restrictive, parents have the benefit of experience and can find a balance between keeping their children safe and providing opportunities to be independent.

**Figure 3.5:** Individuals should be willing to apologise and admit their mistakes.



## Case study

Sophie is 17 years old and has just started Year 12. She goes to a good school and performs well in all of her academic and extracurricular pursuits. Sophie lives at home with her nine-year-old brother and her dad. Her mum passed away when she was 10 and since then it has always just been the three of them.

Sophie got a part-time job late last year to gain some independence and to help her dad out financially. She works two shifts per week at the local surf shop. She has been getting close to Ben, one of her colleagues, over the past few months and she really likes him; he seems to really like her.

Sophie is close to her dad and they spend a lot of time together, but dating is a difficult topic of conversation. Since her mum passed, Sophie's dad has not dated or even looked at another woman, so going to him for advice is not easy. Especially because he doesn't want Sophie dating – he wants her to focus on her HSC.

One night, Sophie's dad sees Ben drop her off home after a shift at work and they kiss goodbye. She had planned on telling her dad all about Ben that night, and asking his advice. However, much to her dismay, her father started yelling at her as soon as she walked in, saying that she was going to fail her school work, that she would get fired from her job for dating an employee and that Ben is too old for her and is a bad influence. Of course, Sophie yells back and the pair both go to bed angry and upset with each other, with nothing resolved.

Sophie is devastated. She really likes Ben and he has really been helping her out lately. And not just her, her little brother and dad too. Ben has picked both her and her brother up from school several times a week for the last month, which means Sophie's dad can work later. Ben has also been helping her with her study and has given her all his notes. But her dad thinks Ben is bad news and will get in the way of her schooling. Sophie really wants to date Ben, but doesn't know how to discuss it with her dad again, because she fears it will lead to an even bigger fight.



**Figure 3.6:**

It is important to remember that adolescence is a time of change for teenagers and parents alike.

1. Identify the feelings Sophie, her dad and Ben may be feeling due to this conflict.
2. Analyse how Sophie and her dad could have handled the situation differently.
3. Suggest who Sophie could turn to for advice on how to handle the situation.
4. Propose how Sophie could bring the issue up with her father again in order to reach a better solution.
5. Create an advice page for teens who are just beginning to date. Include safety tips, communication advice and frequently asked questions concerning dating.



**Figure 3.7:**

The misuse of power in relationships means that the relationship is not based on equality and respect.

## Power in relationships

Power in a relationship can result from many factors including age, maturation, gender, intelligence, physical size and popularity. The misuse of power in relationships means that the relationship is not based on equality and respect. When one person in the relationship uses strategies to control and dominate the other person, it can be extremely harmful to their wellbeing. These controlling tactics may include abuse, sexual assault and harassment or discrimination.

## Abuse

Abuse in relationships refers to patterns of abusive behaviours in order to achieve power or control over the other person. It can be used to get someone to do something that they don't want to do. Abuse can be experienced in different forms, such as physical, verbal, social, economic and sexual. Abuse can happen to anyone, but when abuse occurs in the family unit, it is referred to as domestic violence.

## Domestic violence

Domestic violence is a term used to define any abusive, aggressive or violent behaviour used in the home or between family members. Any individual can become the victim of domestic violence just as any individual can become the perpetrator of domestic violence. Violence can occur in a number of different shapes and forms, as outlined in Table 3.1 on the following page.

### Did you know?

Most victims of sexual assault know the perpetrator.

**Table 3.1:** Various forms of domestic violence.

Form	Definition	Example
<b>Physical</b>	Physical violence involves any behaviour that incorporates touching another person in a violent or aggressive nature.	Kicking, hitting, striking, pushing, spitting, shoving, strangling, slapping, punching, using a weapon, burning, choking.
<b>Verbal</b>	Verbal violence involves using words and speech to hurt, offend, insult or belittle another individual or group of individuals in order to make them feel inferior or scared to leave an unhealthy situation.	Yelling, taunting, inappropriate jokes, rumours, lies, threatening, swearing, tormenting.
<b>Social</b>	Social violence may be less easily noticeable but is becoming more and more common. It involves any act or behaviour that impacts on an individual's ability to socialise freely and with whom they wish. Social abuse often involves lying or manipulating individual/s in order to get an individual's own way or to gain control over a situation or partner.	Preventing another from seeing their family or friends, choosing who an individual can or cannot socialise with, reading another's text messages or invading another's privacy on social media sites, teasing or mocking partner in front of others, posing as someone else on social media to attain information an individual wouldn't otherwise be able to attain, reading partner's messages or emails, making up lies to prevent an individual from seeing their family or friends.
<b>Economic</b>	Economic abuse involves using money or material goods in order to hold power in a relationship.	Lying about spending, lying about savings, spending another's money or using their property without permission, stealing, fraud, withholding money.
<b>Sexual</b>	Sexual abuse involves using sex or sexual advances in order to exert power, make the victim feel scared, insecure or worthless and embarrass the victim.	Touching, groping, rape, inappropriate jokes or innuendos, gestures, blackmails using sex, threats, withholding something until an individual offers sexual favours.

**Internet activity**

Log on to TitanOnline to complete Activity 3.2 to analyse the issue of teen dating abuse.

**Internet activity**

Log on to TitanOnline to complete Activity 3.3 to propose strategies to assist a friend experiencing relationship abuse.

While anyone can fall victim to domestic violence, it is a gendered issue, with more women and children being victims than men and more male perpetrators than females. Other facts about domestic violence are detailed below.

- Research suggests that there is a correlation between low socioeconomic household status and increased risk of interpersonal violence. Aspects of disadvantage that may affect the likelihood of an individual's propensity to use violence include unemployment, homelessness, poverty and marital relationship status.
- The presence of substance use or abuse has been linked to family, domestic and sexual violence.
- Experience of sexual abuse as a child can affect later adult offending and victimisation. Experiencing sexual abuse impacts negatively on mental health outcomes, increases the risk of suicide and increases rates of re-victimisation.
- Families with one parent are more than three times more likely to experience domestic violence by a partner than all other family structures.



**Figure 3.8:**  
Anyone can fall victim to domestic violence.

Source: Defining the data challenge for family, domestic and sexual violence, Australia 2020, ABS.

While each domestic violence situation is different, there are a number of general strategies that individuals may find effective in order to gain support or advice:

- If providing support, never judge the victim, question or blame them.
- Talk to a trusted adult. This could be an older sibling or cousin, a teacher, a coach or a trusted friend. Be aware that if you tell someone in an official position, such as a teacher or sport coach, they are obligated to pass on whatever information you tell them to someone in a higher position of power than them (such as the police).
- Look after any injuries and seek medical attention if necessary.
- Document or keep a record of what has occurred and when.
- Be prepared to leave a situation if personal safety or the safety of others in the situation is in jeopardy.

Help and advice is also available online from websites such as ReachOut and Lifeline.

### Learning activity

1. Outline how you would know if you are being emotionally abused.
2. Examine the impact of power and conflict in different settings including school, friendship groups, home and workplace.
3. Create a multimedia health promotion campaign to reduce the risk of young people being abused in relationships.
4. Create a contact list for young people who have experienced harassment or abuse in a relationship.
5. Propose protective strategies for a range of neglect and abuse situations.

## Case study

Hannah Clarke, 31, was a Brisbane mother who was previously married to Rowan Baxter, 42. The former Warriors rugby league player was the father to her three children: Aaliyah, 6, Laianah, 4 and Trey, 3.

Hannah and Mr Baxter ran a fitness business at Capalaba for about five years, but when its doors closed at the end of 2019, their marriage began to show signs of unravelling. Friends said problems in the marriage had been visible for some time. Mr Baxter had a history of violence, misogyny, and had been subjected to a domestic violence order (DVO) as well as child custody orders.

Hannah moved out of their Carindale home with the children, leaving Mr Baxter living alone. For the months after the separation, Mr Baxter peppered Facebook with messages wishing his children goodnight, posting pictures of them cuddling together, and telling them he missed them.

On February 19, 2020, Hannah was doing a routine school drop off, when at 8.30am on a Camp Hill Street, her car was set alight. Hannah was in the driver's seat, Mr Baxter in the passenger seat, and the three children were in the back seat.

Mr Baxter set fire to the interior of the car with petrol as the fuel to ignite the flame. The flames quickly burnt the children restrained by seat belts in the back seat, who lost their young lives on the scene. Hannah was able to make it out of the car and allegedly told witnesses that Mr Baxter had poured petrol on her. While the car was burning, Mr Baxter attempted to stop bystanders from putting out the fire before he stabbed himself to death on the footpath. Hannah was rushed to the Royal Brisbane Hospital with burns to 97 per cent of her body, but unfortunately died there that evening.

Friend Caitlin Langford said Hannah was “just the most beautiful woman” who “was kind, and strong, and lit up any room”. An inspirational role model and loving mother to her children was murdered as a result of domestic violence.

1. Discuss what could have been done differently to better help Hannah and her children.
2. Analyse how the bystanders and wider community were impacted by the attack.
3. Propose a range of changes to reduce the likelihood of future attacks like this occurring.
4. Research what is currently being done across Australia in relation to domestic violence.
5. Research and note details of two organisations that work towards ending domestic violence.

## Bullying

There are many different types of bullying. Essentially, bullying is any action (or inaction) by another individual or group that makes a person question their self-worth or feel as though they are not worthy of feeling comfortable or happy, puts their safety at risk and generally makes them feel bad about themselves. For a child or younger teenager, bullying may occur at school, in sporting groups and among brothers and sisters. When an individual is older, bullying can occur in all these places, as well as social media, at places of employment, or even in public places by strangers.

It is important for a person to know their rights in these situations and to stand up for themselves if their rights are being violated. Some individuals may be very resilient and not be hurt by what is happening to them, but the perpetrators must be held accountable to ensure that they do not bully them, or anyone else, in the future.

Rights that could be violated by bullying include:

- **The right to be free from mental, emotional and physical violence:** Bullying is a form of violence. Everyone has the right to be in a supportive environment (be that at school, work or online) that is respectful, safe and free from violence.
- **The right to the highest attainable standard of physical and mental health:** Bullying can cause physical injuries, depression
- **The right to survival and develop:** Bullying can have a negative impact on a person's physical, mental, spiritual and emotional health.
- **The right to work and have a fair work environment:** Bullying in the workplace can lead to physical and mental health problems, prevent an individual working to their full potential and result in days off work.
- **The right to leisure and play:** Bullying in a person's social life such as at school or work can impact on a person's ability to enjoy their leisure time.
- **The right to education:** Bullying in a school or workplace is unsafe and unwelcome. It can impact on a person's physical and mental health. This may affect their ability to learn or work.
- **The right to participate and have their views taken seriously:** Bullying can prevent someone from expressing their views, to have their views taken seriously and to participate in decisions that directly affect them.
- **The right to privacy:** Bullying, in particular cyberbullying, can make things that are private public. Everyone has the right to have their privacy respected by others.

Source: ReachOut.

**Figure 3.9:**

Everyone has the right to be in a supportive environment (be that at school, work or online) that is respectful, safe and free from violence.



## Discrimination

Discrimination is the unfavourable treatment of an individual due to a personal characteristic. It refers to a person treating someone in a lesser manner than they would treat any other person, based on prejudice. Personal characteristics that are protected under anti-discrimination laws include:

- age
- disability
- gender
- sexual orientation
- race
- religion
- employment.

The law makes it illegal for a person to be discriminated against under these characteristics in a public place such as school, the workplace or at the shops. There are many different types of discrimination including:

- **Direct:** Direct discrimination occurs when a person is discriminated against due to a characteristic that is protected by law. It often occurs because of prejudice or stereotypes where a person is making unfair assumptions about what people can and cannot do and how they should be acting.
- **Indirect:** Indirect discrimination occurs when an irrational requirement or condition is put in place that significantly creates disadvantages due to a personal characteristic. Behaviours that discriminate against a person or a group of people with the characteristic can cause a 'domino effect' where these behaviours catch onto other people. These actions can often become part of a culture and create stigmas or stereotypes.
- **Victimisation:** Victimisation occurs when someone is punished, threatened or disadvantaged as a result of making a complaint, asserted their legal rights, refusing to engage in unethical behaviour or whistle blowing. It is unlawful to victimise a person.

In Australia, it is unlawful to discriminate on the basis of a number of protected attributes in certain areas of public life, including education and employment. Laws are enacted by both federal and state/territory governments to protect people from the following types of discrimination:

- **Sex discrimination:** When an individual is treated unfairly or harassed because they are a woman or because they are a man.
- **Pregnancy discrimination:** When an individual is treated unfairly, harassed or not given the same opportunities because they are pregnant.



**Figure 3.10:** Unwanted sexually-related behaviour is sexual harassment.



**Figure 3.11:** People with disability may find themselves affected by indirect discrimination.

### Internet activity

Log on to TitanOnline to complete Activity 3.4 and propose the challenges faced when identifying discrimination.

### Internet activity

Log on to TitanOnline to complete Activity 3.5 and explain the detrimental health effects of stereotyping.

- **Race discrimination:** When an individual is treated unfairly or harassed because of their ethnic background, race, colour, ethno-religious background or nationality.
- **Age discrimination:** When an individual is treated unfairly or harassed because of their age, for example, people think they are too old, too young or middle aged.
- **Homosexual discrimination:** When an individual is treated unfairly or harassed because they are lesbian or gay, or someone thinks they are lesbian or gay.
- **Disability discrimination:** When an individual is treated unfairly or harassed because they have a disability, or someone thinks they have a disability. It is also against the law to treat people unfairly or harass them because they had a disability in the past, or because they will or may get one in the future. Disability includes physical, intellectual and psychiatric disabilities, learning and emotional disorders, and any organism capable of causing disease (for example, HIV).
- **Transgender discrimination:** When an individual is treated unfairly or harassed because they are transgender or others think they are transgender.
- **Harassment:** When an individual is subjected to behaviour that they do not want, that offends, humiliates, intimidates or targets them because of their sex, pregnancy, race, age, marital status, homosexuality, disability, transgender status or carers' responsibilities.
- **Sexual harassment:** When an individual is subjected to sexually-related behaviour that they do not want, and a reasonable person would expect them to be offended, humiliated or intimidated.

### Case study – #MeToo

The 'Me Too' movement originally began through the voice of Tarana Burke in 2006. The primary role of the Me Too phrase and #MeToo social media campaign was to increase awareness of sexual violence and abuse towards women. In 2017, the phrase resurfaced after Alyssa Milano broke her silence towards her experience of abuse and sexual assault by Harvey Weinstein, a famous Hollywood producer.

The aim of the movement is to heighten awareness for all victims, not just celebrities, in bringing justice to those who have abused power in various forms of relationships towards another gender. It is also aimed at working towards a fairer and more equitable justice system, challenging the protection that wealth and power has traditionally provided. The movement exposed many people with great wealth who used their power to manipulate, harass, assault and silence women who needed them to follow their career paths. Many women who experienced sexual harassment began to disclose their treatment after Milano's tweet started to become viral. As a result of the Me Too movement, many states in America established or changed their laws that protect victims' rights for those who experience sexual misconduct/harassment.

1. Research the history of Harvey Weinstein's sexual harassment and the subsequent court verdict.
2. Report how the Me Too movement spread worldwide, citing examples from a variety of countries including Australia.
3. Explain why instances of sexual harassment were not exposed earlier and how the Me Too movement empowered people to come forward and report their own experiences.

## Case study

Jacky's mum would never listen to him when he would beg to be allowed to play more soccer. He was an excellent athlete, and in his old town he captained both the school team and the weekend team. Jacky was the eldest of three and was part of a very close family. His parents were fairly strict with him and his siblings, and they made sure they always provided the best they could for their children. They both migrated from China and knew that creating a good future meant working hard every day. Half way through Year 9, Jacky's father got offered a great job that would create financial stability for the family, but it also meant moving schools and leaving their friends.

At his new school, Jacky tried not to stand out. He didn't try out for the soccer team and he didn't participate in any extracurricular activities. After one of his PE lessons, Jacky's teacher approached him and said that he had been approached by Jacky's mother and that there was a spot for Jacky on the senior boys' soccer team. Jacky was extremely excited and couldn't wait to join the team. He had settled in at his new school and had made a few really good friends.

After three games, the coach quickly realised his talent and made Jacky captain of the team, which was a huge accomplishment for him. However, some of the boys in the team became agitated. It started with some subtle put-downs at training, laughing and bumping into Jacky. He thought the boys would get over it and would calm down eventually. However, this was not the case. The subtle put-downs turned into racial slurs, and soon the boys who originally befriended Jacky even joined in, making his life unbearable. Around school, students from other grades even joined in. The boy who lost the captaincy to Jacky started vicious rumours about him that related to his culture. The rumours were not just about Jacky but also his family.

Jacky quit the soccer team, and all his other school commitments. Although the teachers could sense something was going on, Jacky would not speak to anyone about what the other students were putting him through because they had already made him feel so alienated that he no longer felt safe or that he could approach anyone from the school for help. Jacky is slowly withdrawing from all aspects of life; he is moody and upset, he doesn't play with his brother or sister anymore, and he is quick to snap and lose his cool with his parents.

Jacky is losing his confidence and self-esteem.

1. Discuss the changes that led to Jacky becoming withdrawn.
2. Identify the type of discrimination present in this situation.
3. Research current laws and regulations about this type of situation in your state/territory.
4. Discuss how discrimination can impact all aspects of an individual's health and wellbeing.
5. Describe the support services available in the school and local community for someone dealing with a situation similar to Jacky.

### Learning activity

1. Discuss two different types of discrimination and give an example of each.
2. Create a pamphlet that is designed to teach younger students about the importance of diversity and how to minimise discrimination. Include the different ways in which discrimination can occur and the impact it can have on an individual.
3. Analyse some positive things that can get you through a breakdown in a relationship. Discuss why these are the best options.

## Healthy intimate relationships

A healthy relationship is marked by mutual respect, trust, support and effective communication. During adolescence, the ability to feel intimacy develops. Each individual develops feelings of intimacy at different times and in different ways. Some individuals may have a relationship during high school, or middle school. They may find that they don't

Empowerment can be experienced through a feeling of being strengthened and supported in challenging circumstances. A healthy relationship is empowering rather than intimidating. Mutual respect and control are found in healthy relationships, rather than fear and control.

An individual should think about how they care about and the ways they care for others. They should feel empowered in situations that they care about. A caring approach in dating relationships includes compassion, consideration and kindness.

Dating someone with similar core values should feel more understood. Decisions should be based on core values. These are the principles most important to an individual. If an individual values achievement but they are more value on leisure time with a partner, it is likely that conflict will result and miscommunication will occur.

More intense conflict could arise from differences in values related to trust, loyalty and communication. Dating someone with similar core values can lead to an increase in happiness and a sense of well-being.



**Figure 3.12:**

Equality, kindness and respect are found in



**Figure 3.13:**

Sexuality is unique to each individual.

## Sexual relationships

Adolescence is a time when hormonal and physical changes cause increasing thoughts about sexuality and sexual identity, as well as being aware of sexual feelings and attractions. Teenagers may begin to think about sexual relationships or sexual experimentation. Having these thoughts and feelings can be confusing and frustrating at times, but it's important to remember that it is a normal part of the puberty process. Sexuality is unique to each individual and comprises various factors including a person's physical body, hormones, emotions and identity, as well as social and cultural factors.

Romantic relationships can form during this stage and attraction towards one another may occur. Becoming involved in an intimate relationship poses many difficult decisions and choices. An intimate relationship often features the following characteristics:

- Individuals have confidential knowledge of one another.
- Individuals feel affection for one another.
- Individuals trust and respect one another.
- Individuals are committed to the relationship and expect it to continue.

When deciding about entering into a sexual relationship, consideration should be whether this is the right time, the consequences of having sex and whether it feels right. The decision to have sex should be made without pressure from partners or friends, and if in doubt, always wait.

Exploring one's own sexual identity can be confusing and sometimes daunting, but it is a normal process and helps a person discover their feelings. Some people do not discover their sexual orientation and identity until later in life, while others know from an early age. Common terms used to describe different types of sexual identities and orientations are:

- **Heterosexual:** A person who is emotionally and sexually attracted to a person of the opposite sex, i.e. a heterosexual relationship is between a man and a woman.
- **Gay:** A person whose primary emotional and sexual attraction is towards people of the same sex. The term is most commonly applied to men, although some women use this term.
- **Lesbian:** A woman who is same sex attracted and whose primary emotional and sexual attraction is towards other women of the same sex.
- **Bisexual:** A person who is emotionally and sexually attracted to persons of the same and opposite sex.
- **Transgender:** This is an umbrella term used to describe a wide range of gender identities that differ from the perceived 'norms' aligned to biological sex. Transgender is a term that may be used to describe someone whose gender identity does not match their birth gender, someone who identifies as both genders, neither gender or a third gender. Some transgender people seek surgery or take hormones to bring their body into alignment with their gender identity; many do not. Some transgender people change their gender expression to match their affirmed gender, many do not.
- **Intersex:** People with intersex variations are born with physical, biological or chromosomal sex characteristics that do not fit the typical expectations for male or female bodies.

Source: Rainbow eQuality guide definitions and inclusive language, Victorian Government Department of Health and Human Services, 2020.



**Figure 3.14:**  
Dating someone with similar core values can lead to an increase in happiness and a sense of unity.



**Figure 3.15:**  
Some people do not discover their sexual orientation and identity until later in life.

## Sex and the law

In any sexual relationship there are many rights, responsibilities and laws that must be followed. A person must be aware of these before entering into any kind of sexual relationship. These involve being aware of the risks involved and knowing how to reduce these risks. Consent and the legal age for sexual activity are also important responsibilities that have to be understood.

### Internet activity

Log on to TitanOnline to complete Activity 3.6 to become familiar with the requirements of consent.

**Table 3.2:** Rights and responsibilities in relationships.

Rights	Responsibilities
<ul style="list-style-type: none"> <li>▪ To participate if you want to, when you want to, where you want to and with whom you choose.</li> <li>▪ To say no.</li> <li>▪ To stop at any time.</li> <li>▪ To be free from violence, bullying and harassment.</li> <li>▪ To be safe and healthy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ To respect other's sexual choices.</li> <li>▪ To listen to other's needs and take physical cues if they want to stop.</li> <li>▪ To abide by laws regarding sexual activity.</li> <li>▪ To not misuse or abuse power over another person.</li> <li>▪ To speak out against harmful sexual activity.</li> </ul>

In every relationship, individuals also have the following rights:

- The right to be free from mental, emotional and physical violence.
- The right to the highest attainable standard of physical and mental health.
- The right to survival and development.
- The right to leisure and play.
- The right participate and have their voice heard.
- The right to privacy.

Sexual consent refers to the full agreement to participate in sexual activities or sexual intercourse. Everyone has the right to say no to sexual activity. Communicating to a person to stop or slow down sexual advances can be made through both verbal and physical signals.

An important part of any intimate relationship is both parties involved acknowledging and understanding consent. Consent involves individuals acknowledging that they agree to various behaviours in a relationship and involves respect for all individuals' opinions and beliefs.



**Figure 3.16:**

In a relationship, individuals have the right to be free from physical violence.

FRIES is a helpful acronym to remember what consent is:

- **Freely given:** consent cannot be given when an individual is coerced into a situation.
- **Reversible:** change of mind is okay at any given time.
- **Informed:** the situation is overt to all involved.
- **Enthusiastic:** both individuals want to participate.
- **Specific:** individuals need to communicate exactly what is to occur, so consent is given. Consent to one thing does not consent to anything else.

Consent is not given through:

- silence
- an individual being intoxicated or under the influence of drugs
- non-verbal communication
- the physical appearance of an individual.

There are many rules and regulations around consent. The law states that any individual who agrees to sexual acts because they are under the influence of drugs or alcohol, unconscious, forced, afraid of harm or unaware of what they are agreeing to, is not consenting. It is important to note that the laws concerning age of consent vary between the states and territories. The age of consent is 16 in the Australian Capital Territory, New South Wales, Northern Territory, Queensland, Victoria and Western Australia. In Tasmania and South Australia, the age of consent is 17. In addition to age of consent laws, it is also an offence for someone to have sex with a person under 18 years of age if they are in a position of authority (such as teachers, foster carers, religious instructors or sports coaches). Breaches of these laws can result in criminal charges, criminal records, imprisonment and placement on the sex offenders list.



**Figure 3.17:**  
Consent must be freely given, reversible, informed, enthusiastic and specific.



**Figure 3.18:**  
Consent is not given through an individual being intoxicated.

### Learning activity

1. Describe the term 'sexuality' in your own words.
2. Define what is meant by the term 'consent'.
3. Analyse the factors that have influenced your opinion on sexual health.
4. In a sexual relationship, distinguish three rights and their corresponding responsibilities.
5. Justify the importance of respect in any type of relationship.

## Sexual choices and consequences

Unsafe sex is the second highest risk factor for death and disability in developing countries and remains a significant risk factor in developed countries. There are a range of safe interventions that can facilitate sexual health, avoid unplanned pregnancies and avoid sexually transmitted infections (STIs).

### Making decisions about sex

There are physical and emotional risks associated with entering a sexual relationship and these risks must be considered and evaluated before making a decision. Everyone is different, and the right time for one person does not mean it is the right time for others in their peer group. The decision to be sexually active can be confusing and filled with emotion, but there are a few ground rules that might help. No one should be pressured into sex, and alcohol and drugs are definitely not going to help make the right decision. Talking to a trusted adult or friend can help and it is essential to know about issues surrounding sexual health. It is important to consider the possibility of catching a sexually transmitted infection. STIs can be transferred through bodily fluids or skin-to-skin contact during sexual intercourse. Some are more serious than others.

A person must also think about the possibility of an unplanned pregnancy. Unprotected sexual intercourse carries a high risk of conception. An unplanned pregnancy can be extremely stressful and confusing for a teenager to handle. It can have a major impact on their lives and force them to question their plans for the future, careers and financial status.

These risks can be reduced through the practice of safe sex and contraception. There are many different types of contraception for different people; some forms protect against both STIs and unplanned pregnancy while others just protect against unplanned pregnancy. It is important to know the risks associated with starting a sexual relationship and how to reduce these risks. The most effective way to reduce the risks of sexual relationships is to remain abstinent.

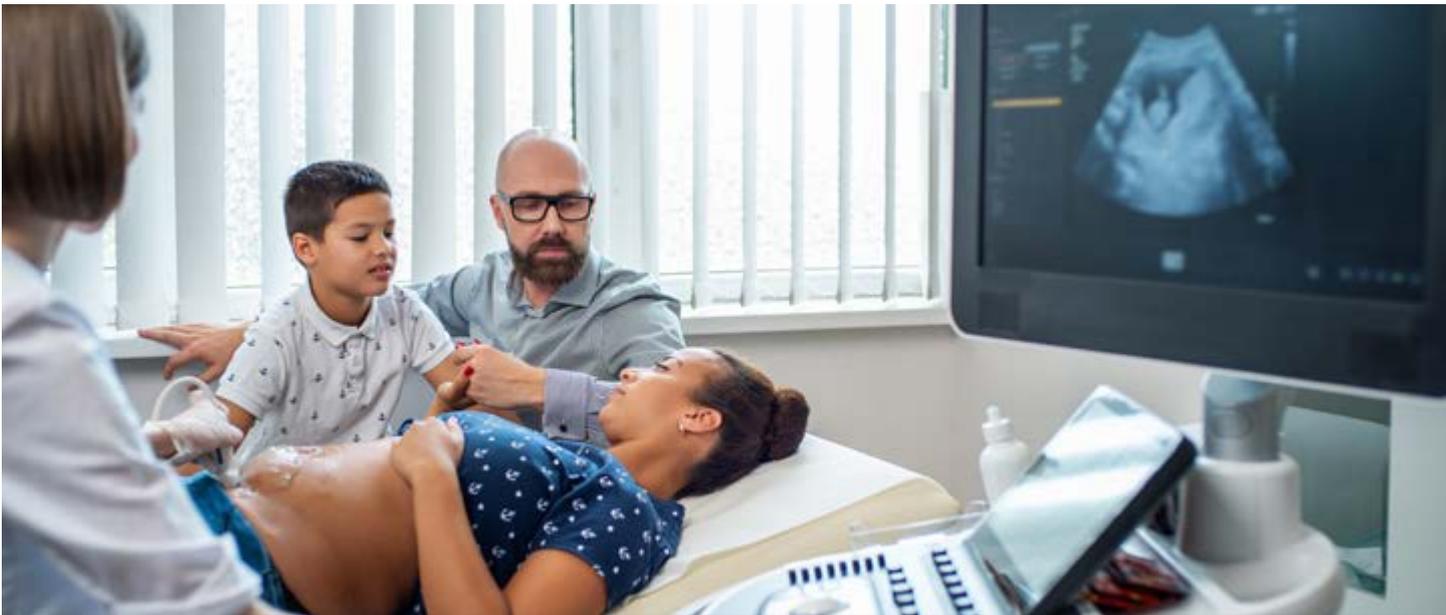
### Abstinence

Abstinence is the only way to avoid both unplanned pregnancy and STIs. The choice to remain abstinent reduces the risks that are associated with sex until the individual is ready to have sex and take the required steps to protect themselves.

Practising abstinence while in a relationship can't be in a relationship like. It involves the individual making the choice to look after their own needs. A person who practises abstinence while in a relationship will not have any risk of catching a STI.



**Figure 3.19:**  
Practising abstinence while in a relationship or deciding not to be in a relationship or d



**Figure 3.20:**  
Nutrition and prenatal care are crucial during pregnancy.

## Pregnancy

Pregnancy is when a woman is expecting a child. The woman has a foetus or embryo developing inside their body, in the uterus. Pregnancy can occur from unprotected sexual intercourse where a male's sperm enters the female's body, or through assisted reproductive technologies such as IVF, GIFT and surrogacy.

The cycle of pregnancy begins with ovulation. Ovulation refers to the release of an egg from the ovaries. It occurs approximately half way through the menstrual cycle. The released egg travels down the fallopian tube where fertilisation can occur if sperm meets the egg and finds its way to the core of the ovum, which then becomes the embryo. For the process to be successful, implantation needs to occur, whereby the embryo implants in the endometrium (the uterine lining). Once the embryo is implanted into the endometrium, a membrane forms around the embryo called the chorion, which connects the womb and the embryo and develops the placental tissues.

Once a woman has ovulated, conceived and the embryo has been implanted, the foetus develops over approximately 40 weeks (9 months), which is split into trimesters. The first trimester relates to the period between conception and 12 weeks. Nutrition and prenatal care are crucial within this period. The second trimester relates to the period between 13 and 27 weeks. The third trimester is from 29 weeks until the birth of the baby.

The rate of teenage pregnancies in Australia has declined significantly over a number of years and has been stable in recent years. Only five per cent of children are now born to women aged 19 years and under. Estimates vary, but it is believed that around one in four sexually active teenage women may become pregnant by mistake. About half of these unwanted pregnancies are terminated. One in six women aged 20 to 29, who are asked about pregnancy, will have experienced a pregnancy as a teenager.

Some pregnant teenagers are so shocked and frightened that they try to cope by ignoring or denying the pregnancy. This means they don't receive proper antenatal care or miss the safest window of opportunity for abortion. Research indicates that sex education and access to effective contraception are essential in preventing unplanned pregnancy in the teenage population. Teenage women generally encounter more problems during pregnancy and childbirth than older women. Reasons for the higher complication rate include the following factors:

- Physical immaturity.
- Lack of healthcare knowledge.
- Cigarette smoking, alcohol consumption and the use of other social drugs.
- Poor diet.
- Inadequate antenatal care.
- Teenage mothers are more likely to be single, to be smokers, and to be socioeconomically disadvantaged.
- High levels of emotional distress.
- Pregnant teenagers are more likely to experience high levels of substance use and domestic violence.
- Births to young teenagers carry a higher risk of medical complications, including prematurity, low birthweight, the need for neonatal intensive care, and neonatal death.

The social stigma of being a single parent no longer exists in most parts of the Australian community, and the availability of welfare means that parenting is a viable option. Many teenagers believe looking after a baby will be the happiest time of their lives. This is true for some, but keeping the child may have unforeseen consequences, such as:

- fewer education and employment opportunities
- alienation from family and friends
- poverty
- increased risk of mental health issues
- increased risk of child abuse and neglect
- the child may not receive adequate guidance due to parental life inexperience
- the child is more likely to become a teenage parent themselves.



**Figure 3.21:** Sex education and access to effective contraception are essential in preventing unplanned pregnancy in teenagers.



**Figure 3.22:** Teenage parents may have fewer education and employment opportunities.

## Influences on values and decision making

The decisions that teenagers make about sexual activities can impact on their overall wellbeing. The decisions made – about relationships, participating in sexual activities and abstaining from sex – are influenced by numerous factors. Understanding the influences of these factors can allow individuals to make positive and responsible choices.

- **Parents and family:** A parent’s influence is large for teenagers and their decision-making processes. Even though teenagers have now developed a degree of independence from their family, they have grown up with the views and beliefs of their parents. Many teenagers will turn to their friends and peers before turning to their parents for advice about sexuality. However, the morals, values and ideals of their parents will usually be taken into consideration.
- **Friends and peers:** A teenager’s friends are one of the main influences in their life during the developmental stage. Teens have familiarity and understanding with their friends and may feel more comfortable having personal conversations about sexuality. There may be increased pressure for teenagers to engage in sexual activity if many of their friends are sexually active, or they may be encouraged to resist engaging in sexual activity if their friends strongly believe in abstinence.
- **Culture and religion:** Culture and religion is guided by a set a norms or ideals and beliefs that are held by those who follow them. Different cultures and religions may have strict rules about sexuality such as the Christian religion, which says that a person should not engage in sexual activity before marriage. A person who follows this religion would be largely influenced by its beliefs.
- **The media:** Teenagers are commonly exposed to significant amounts of sexual media content on tele  
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**Figure 3.:**  
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## Safe sex

Participating in safe sex refers to avoiding the exchange of semen, blood and other bodily fluids during sexual contact. Contraception is one of the most common ways to prevent unplanned pregnancy and STIs. It refers to the action that a person will take in order to ensure safe sex by taking responsibility.

## Contraception

There are many different options for contraception in Australia that include barrier methods and hormonal methods. Choosing a method for an individual to use should involve communication with their partner, collecting a wide variety of accurate information, evaluation of general health, the type of relationship that they are in, convenience and availability of contraception choice, and their values and morals. It is important to assess the pros and cons of each method and consider how they meet the needs of the individual.

## Condoms

Condoms are available for both males and females. For condoms to be used effectively, they must be worn correctly and stored carefully (for example, not kept in a back pocket or in a hot car). Condoms are recommended for use every time an individual engages in sexual intercourse. Each condom should only be used once.

- A male condom is a thin rubber sheath that cover an erect penis. They are made of latex or polyurethane. Male condoms work by blocking bodily fluids from being exchanged with the sexual partner. They are a popular and effective form of contraception that protect against both pregnancy and STIs. Male condoms are small, affordable and easily accessible from supermarkets, chemists, petrol stations and even some public toilets.
- A female condom is a plastic pouch made from polyurethane that fits loosely inside the vagina. It has a soft, flexible ring on each end of the pouch, an inside ring and an outside ring. The inner ring gets inserted into the vagina near the cervix and the outside ring stays on the outside of the vagina, partly covering the genitals. A female condom works to block bodily fluids from entering the vagina by lining the vaginal walls. It is designed to fit women of all sizes and ages and is proven to be 95 per cent effective for preventing pregnancy and STIs when used properly.



**Figure 3.24:**

It is important to consider the possibility of catching a sexually transmitted infection before engaging in sexual activity.



**Figure 3.25:**

Female and male condoms are barrier methods of contraception.

### Did you know?

The use of condoms is believed to have started around 3000 BC.

## Contraceptive pill

Oral hormonal contraception is available in two different types:

- The combined pill, known as ‘the pill’.
- The progesterone-only pill, known as ‘the mini pill’.

They are very effective in preventing unplanned pregnancy when used correctly, but do not prevent against STIs. The contraceptive pill works by preventing the release of an ovum during ovulation, thickening the lining of the uterus to make it unsuitable for a fertilised egg to implant and thickening vaginal discharge to make it difficult for sperm to reach the uterus.

The pill must be taken every day at the same time for it to work efficiently. When used correctly, the pill is up to 99.9 per cent effective in preventing pregnancy. To obtain contraceptive pills, an individual must get a prescription from a doctor before purchasing them at a pharmacy.

## Emergency contraceptive pill

The emergency contraceptive pill, also known as ‘the morning after pill’, is taken by a woman to reduce the chance of pregnancy after unprotected sexual intercourse. The pill works by releasing the hormone levonorgestrel to stop the process of ovulation or may stop the ovum and sperm from fertilising. It is important to take the emergency pill as soon as possible after unprotected sex.

In the first 24 hours after unprotected sex, the morning after pill will be 95 per cent effective. It can be taken up to five days after unprotected sex, but becomes less effective each day.

## Vaginal ring

The NuvaRing is a soft, plastic ring that is inserted into the vagina to prevent pregnancy. The ring contains the hormones oestrogen and progesterone, which are released into the body and prevent the release of an egg during ovulation. The NuvaRing is worn inside the vagina for three weeks out of every four weeks, giving the body a break week for withdrawal bleeding to take place. This works in a similar way to the contraceptive pill.

This method is about 99 per cent effective in preventing unplanned pregnancy when correctly used. It does not protect against STIs.

### Did you know?

The use of contraceptive pills can have an impact on a person’s sense of smell.

### Internet activity

Log on to TitanOnline to complete Activity 3.7 to investigate misconceptions and truths about the oral contraceptive pill.



**Figure 3.26:**

The contraceptive pill must be taken at the same time every day for it to work efficiently.



**Figure 3.27:**

A vaginal ring contains hormones that are released into the body to prevent pregnancy.

## Intrauterine device (IUD)

An intrauterine device (IUD) is a small contraceptive device that is put into the uterus (womb) to prevent pregnancy. The two types available in Australia are the copper IUD and the hormonal IUD.

- The copper IUD is a small, T-shaped, plastic and copper device designed to stay in place for up to 10 years. It constantly releases a small amount of copper into the uterus. The copper IUD can also be used for emergency contraception instead of the emergency contraceptive pill.
- The hormonal IUD is a small, T-shaped, plastic device, sold as Mirena in Australia. It slowly releases a hormone (progestogen) into the uterus, and can stay in place for up to five years.

An IUD is inserted inside the uterus by a trained doctor or nurse, and can be removed 'early' if required. It has a fine nylon thread attached to it, which comes out through the cervix. Users can check whether their IUD is still in place by feeling high up in the vagina and locating the thread. Because it is high up in the vagina, the thread cannot be seen.

Both copper and hormonal IUDs are more than 99 per cent effective at preventing pregnancy. They do not prevent against STIs.

Source: Better Health Channel.

## Implants

The Implanon is a small, flexible, plastic rod that is inserted under the skin of a woman's inner, upper arm. The rod releases small amounts of etonogestrel into the bloodstream, protecting against pregnancy for up to three years. The medication in the rod stops the release of the egg from the ovaries during ovulation, as well as thickening the cervical mucus to stop the sperm from reaching the eggs. Implanon rods are inserted by a doctor and must be replaced every three years. They are more than 99 per cent effective for protecting against unplanned pregnancy. They do not protect against STIs.

## Injections

Depo Provera is an artificial hormone that is injected into a woman to prevent pregnancy. It is injected into the arm or upper thigh and must be renewed every three months. It works by preventing the release of an egg from the ovaries every month, thins the lining of the uterus to prevent the attachment of a fertilised egg to the womb walls and thickens the discharge from the cervix to help block the passage of sperm to the egg.

## Withdrawal

Withdrawal is the least effective and most dangerous form of contraception to prevent an unplanned pregnancy. It involves a male removing his penis when he feels as though he is going to ejaculate (release sperm). When using this method, a male must be able to predict the moment that he is going to ejaculate, which can be difficult for any person to determine. There is also a risk of a female becoming pregnant from pre-ejaculate. This is liquid that leaks out of the tip of the penis before a man ejaculates. Withdrawal is not a recommended form of contraception due to the high risk of unplanned pregnancy if not performed properly. Withdrawal does not protect against the transmission of STIs.

### Internet activity

Log on to TitanOnline to complete Activity 3.8 to compare various contraceptive choices.

### Learning activity

1. Define the term 'contraception'.
2. Analyse the advantages and disadvantages of using male and female condoms.
3. Create a campaign urging young people to take care of their sexual health. Include ways of practising safe sex.
4. Discuss the differences between barrier contraceptive methods (such as condoms) and hormonal contraceptive methods (such as the contraceptive pill).
5. Explain why the withdrawal method is the least effective form of contraception.
6. Discuss the advantages of abstinence.

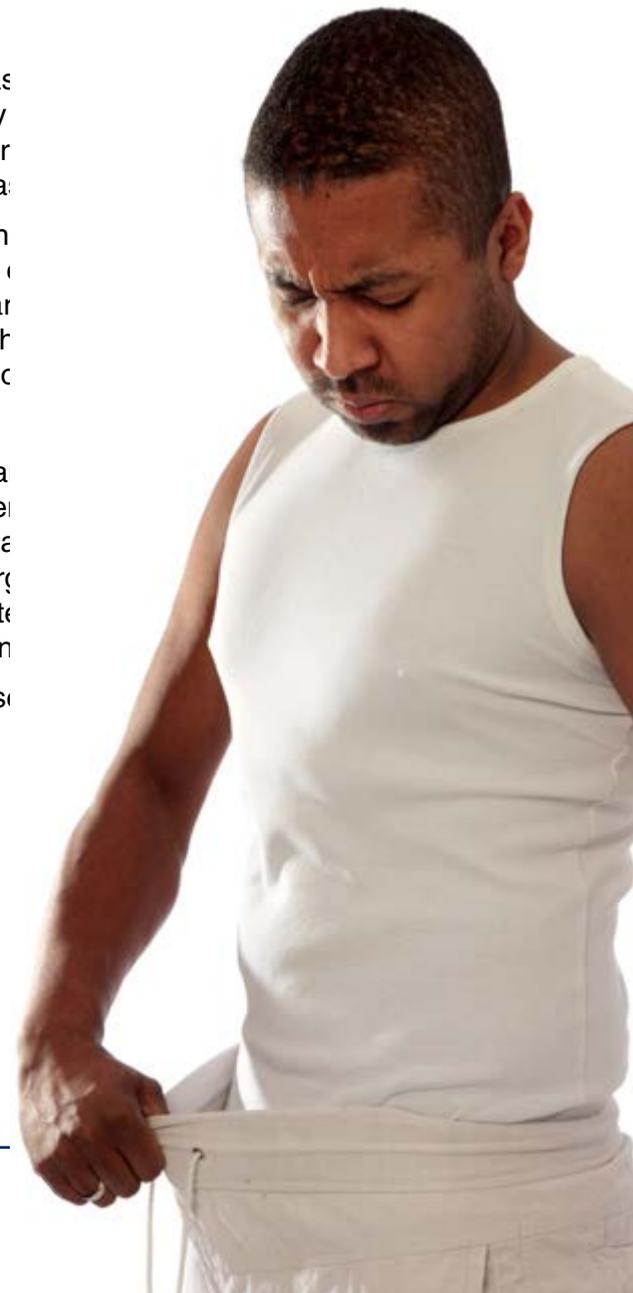
## Sexually transmitted infections

Sexually transmitted infections (STIs) are infections that are passed through skin-to-skin contact and the exchange of infected body fluids. They are commonly spread during sexual contact and intercourse. There are three different types of STIs: bacteria, virus and parasites. STIs can sometimes go unnoticed as there may be no signs and symptoms of the infection. If they are left untreated they can have serious effects on physical and sexual health and can cause infertility. STI tests are available from a doctor or health clinic and should be used for anyone who has had unprotected sex. Most infections are easily treated when diagnosed.

### Chlamydia

Chlamydia is one of the most common STIs in Australia. Men and women aged 15–29 have the highest rates, with over 80 per cent of cases. Symptoms are often not noticeable, although women may experience a burning sensation while urinating, vaginal discharge and abdominal pain. Men may experience pain while urinating, white or yellow penile discharge and pain around the opening of the penis.

Chlamydia is transferred through unprotected sexual intercourse where infected body fluids are transferred from one person to the other. If left untreated, the infection can cause pelvic inflammatory disease (PID) in women, causing the infection to spread to the reproductive organs and cause infertility. In males, it can cause the inflammation of the epididymis and the testes, resulting in infertility. Testing is performed through a urine sample or a swab test. Once diagnosed, chlamydia is easily treatable with antibiotics from the doctor.



**Figure 3.28:** STIs can cause serious physical and sexual health issues if left untreated.

## Genital herpes

Genital herpes is the development of blisters or sores on the genitals and anus. These are caused by the herpes simplex virus (HSV). There are two types of HSV – type 1 usually causes cold sores on the mouth, and type 2 causes sores mostly on the genitals. When the infection begins, sores may not be present. They may appear months or even years after a person is infected. The first reaction can cause a person to feel unwell with a fever, headache or aching muscles. Other symptoms can include a stinging, tingling or itching in the genitals and blisters or ulcers around the genital region. The infection stays in the body, causing recurrent symptoms. Outbreaks should happen less often and be less painful. Symptoms usually arise when the immune system is weak.

Herpes is transferred through skin-to-skin contact with an infected person, during sexual contact or unprotected sexual intercourse. Cold sores on the mouth can also be spread through kissing. The HSV viruses can be detected through a swab of a blister or sore, or through a blood test. There is no cure for genital herpes as it stays in the nerves of the infection area. However, the symptoms can be controlled through medication that can reduce the severity of the outbreak.

### Learning activity

1. Outline five common myths about sexually transmitted diseases and explain the facts.
2. Create an information booklet for someone affected by chlamydia or genital herpes.
3. Distinguish how chlamydia and genital herpes are contracted and how they can be tested.

## Genital warts

Genital warts are small lumps that form on the genitals. They are caused by the human papillomavirus (HPV). Genital warts can be found on the vagina, vulva, penis, cervix or anus. They are typically painless and can be small or large and some may clump together. There may also be irritation and itching on and around the genital region.

The virus is highly contagious and is spread through skin-to-skin contact during sexual intercourse. It can also be transmitted through direct contact with a wart or skin that is infected. If left untreated, the warts can multiply and spread. Genital warts can be treated with creams, laser treatments, freezing the warts and surgical removal. Although the symptoms are treated, the virus remains in the body and cannot be cured.

## Scabies

Scabies is a highly contagious skin disease that is caused by *Sarcoptes scabiei*. This is a mite that lives in the genital region and lays its eggs underneath the surface of the skin. The signs and symptoms of a scabies parasite include the intense itching of the area – especially at night, a skin rash of small red bumps or welts and silver coloured lines where the mite has burrowed in the skin.

The parasite is transmitted by direct skin-to-skin contact, usually during sexual intercourse, although there are some cases where they have been transmitted without sexual contact. Anti-scabies lotion can be prescribed by a doctor or bought over-the-counter at a pharmacist.

## Gonorrhoea

Gonorrhoea, also known as ‘the clap’, is a bacterial infection. It affects the genital area including the urethra, cervix and anus, and can also affect the throat or eyes. The infection can affect both men and women. Most people have no symptoms. If symptoms do occur, gonorrhoea can cause pain while urinating, unusual discharge and pain during sexual intercourse, specifically in the pelvic region.

Gonorrhoea is transmitted through unprotected sexual intercourse due to the transfer of infected body fluids. It can also be passed on to a baby during birth from an infected mother. If left untreated, the infection can cause pelvic inflammatory disease (PID) in females, which can lead to infertility. The infection can also lead to infertility in males. Testing for gonorrhoea is performed through a swab of the cervix for women and the urethra for men. Urine samples can also be used for testing. Once diagnosed, gonorrhoea can be treated through the use of antibiotics that are prescribed by a doctor.

### Internet activity

Log on to TitanOnline to complete Activity 3.9 to evaluate signs and symptoms of various STIs.

## Hepatitis B

Hepatitis is the inflammation of the liver and hepatitis B is a blood-borne virus that affects the liver cells. It can lead to serious illness or death. The virus is mostly present in the blood, but can also be found in genital fluids. Most people don’t develop symptoms when infected, although people who do notice symptoms can experience darkening of urine, extreme fatigue, nausea, vomiting and the yellowing of the skin and eyes, known as jaundice.

Hepatitis B can be transmitted from contact with infectious blood and bodily fluids. These situations can occur from any of the following:

- Having unprotected sexual intercourse.
- Sharing needles, syringes and other injecting drug equipment.
- Unsterilised tattoo needles and piercing equipment.
- Through childbirth, from an infected mother passed on to her baby.
- Accidental contact with infected blood.
- Blood transfusions, although extremely rare in Australia due to hepatitis B screening.

The effects of hepatitis B depend on the person’s age when the infection is transmitted. If a person is infected from birth, they can develop a long-term liver infection, which can cause liver scarring or liver cancer. A person who is infected as a teenager or adult may become unwell or may not show any symptoms. The infection can usually clear the body within about six months but if the infection doesn’t clear, the result can be liver cirrhosis or cancer. Vaccines are available for immunisation and protection against hepatitis B. These are usually implemented as three vaccinations over six months and are available from a doctor. Immunisation can greatly decrease the risk of catching the infection. Hepatitis B can be diagnosed through a variety of blood tests. Many people who have the infection are not aware of it due to the lack of symptoms. A person with long-term hepatitis B can be treated through anti-viral medications, which can help reduce the risk of developing liver disease. Although there are some treatments that are available from the doctor, hepatitis B cannot be cured.

## Pubic lice

Pubic lice, also known as crabs, are parasites that are found in pubic hair. They are small, brown and flat lice that grip to pubic hair and suck blood from the skin. The parasites cause itching and irritation in the genital area and blood spots can form in areas where lice may be underneath the skin. There may also be visible lice or eggs in pubic hair.

Pubic lice are transmitted from skin-to-skin contact during sexual activity or intercourse. They can also be spread through the use of an infected person's clothing, towels and bed sheets. The STI can be diagnosed by a doctor, who will examine the area for lice. The lice can be seen with the eye, but more clearly with a magnifying glass. Treatment is available from a doctor or over-the-counter from a pharmacist. It includes insecticidal creams and lotions that are used over a set period of time. It is also important to wash all clothes, towels and bed sheets in hot, soapy water.

## Syphilis

Syphilis is a serious bacterial infection that can affect the brain and other major organs. The infection is rare in Australia and it is about seven times more likely to occur in men than women.

Source: [www.healthdirect.gov.au/syphilis](http://www.healthdirect.gov.au/syphilis)

There are three stages of the infection, which differ in signs and symptoms. The first stage of syphilis is the development of painless sores where the infection entered the body, which can include the vagina, penis, cervix, mouth or anus. In the first stage, swollen lymph nodes may also appear. This stage begins at one to 12 weeks after the infection is transmitted. The second stage begins about six to 12 months after the infection has been transmitted. Symptoms include red rashes forming on the body, fever, hair loss, ulcers forming on the genitals or mouth, headaches, tiredness and muscular pain. The third stage occurs around two years after the infection first entered the body. At this stage, the infection can damage the brain and many other organs in the body. It can cause heart disease, paralysis, mental illness, blindness and deafness.

Syphilis is transmitted through skin-to-skin contact during sexual intercourse. It can also spread by kissing or by being in direct contact with an open sore. The infection is usually tested through a blood test, which may be repeated several times due to the late development of antibodies. Once diagnosed, syphilis is treated with penicillin and antibiotics.

### Learning activity

1. Outline the process in the three stages of syphilis infection.
2. Describe the STIs pubic lice and scabies and discuss how they are transmitted.
3. Identify the ways in which hepatitis B can be transmitted.
4. Discuss the testing and treatments for hepatitis B.
5. Create an information booklet to educate people about gonorrhoea, syphilis, genital warts and hepatitis B.

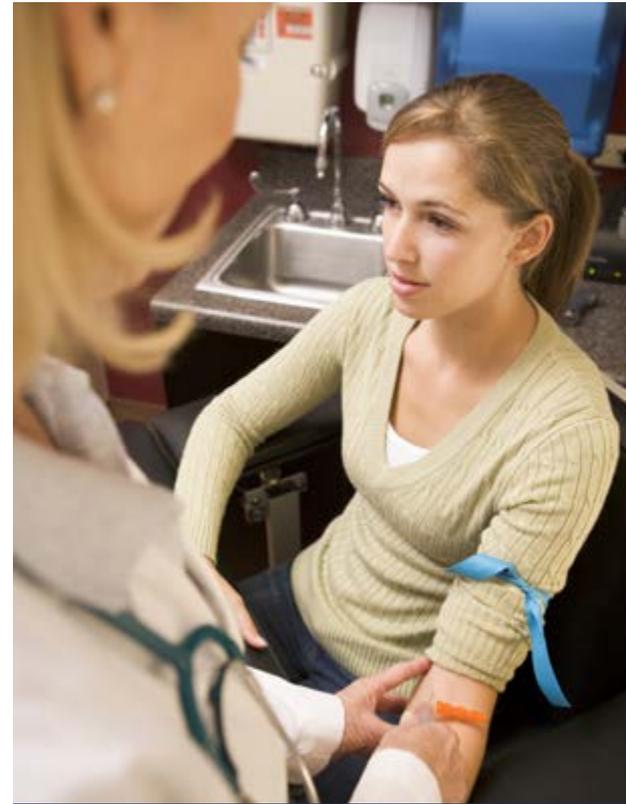
## HIV/AIDS

The human immunodeficiency virus (HIV) attacks and weakens the immune system's ability to fight off infections in the body. This can cause acquired immune deficiency syndrome (AIDS). When the infection has been transmitted, a person can have flu-like symptoms with a fever, headache and constant tiredness. Other symptoms can include rapid weight loss, unusual marks or bumps on the skin, constant coughing and swollen lymph glands in the neck. A person who has contracted HIV may also feel like they are healthy and notice no symptoms at all.

HIV can be contracted through any of the following scenarios:

- Unprotected sexual intercourse.
- Sharing needles, syringes or other drug injecting equipment.
- Blood-to-blood contact with an infected person.
- From an infected mother to her baby during childbirth.
- Blood transfusions (extremely rare in Australia).

Getting tested for HIV is important, especially if a person is at risk of becoming infected. HIV can be detected through a blood test, which will check for antibodies to the virus. Early detection can help a person deal with HIV and suspend the onset of other problems such as AIDS. Without any treatment of the infection, the virus will multiply and destroy immune cells. The immune system becomes weak and can't fight off diseases, illnesses, infections and cancers. This is the onset of AIDS. There is no cure for HIV, although there are treatments to reduce the symptoms and delay the virus from spreading. These are known as antiretroviral medications.



**Figure 3.29:**  
HIV can be detected through a blood test.

### Internet activity

Log on to TitanOnline to complete Activity 3.10 and create an interactive quiz on HIV.

### Learning activity

1. Describe the symptoms and effects on the body of HIV/AIDS.
2. Create a multimedia health promotion campaign to reduce the risk for young people of contracting an STI.
3. Research the history of HIV/AIDS.
4. Explain the treatment to reduce the symptoms of HIV.



**Figure 3.30:**  
A variety of support services are available online.

## Support services

There are many support organisations that can be helpful for specific population groups. These provide a range of services and can be accessed via telephone, online or face to face. Examples of support services are listed in the following tables.

**Table 3.3:** Pregnancy support services.

Organisation	Support services
<b>Birth line:</b> <a href="http://www.birthline.org.au">www.birthline.org.au</a>	Counselling service for pregnant women providing information and choices to women.
<b>Pregnancy Help Australia:</b> <a href="http://www.pregnancysupport.com.au">www.pregnancysupport.com.au</a>	Pregnancy Help Australia is a national body which provides support, education and resources to life-affirming pregnancy support centres throughout Australia. There are centres in many major cities in Australia. Visit the website to find out more.
<b>Pregnancy, Birth and Baby:</b> <a href="http://www.pregnancybirthbaby.org.au">www.pregnancybirthbaby.org.au</a>	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, and a baby's development and sleeping habits, as well as direction to maternity-related services including specialist and support services.
<b>Sexual Health and Family Planning ACT (SHFPACT):</b> <a href="http://www.shfpact.org.au">www.shfpact.org.au</a>	SHFPACT offers a free counselling service for women experiencing an unplanned pregnancy. The counselling service aims to provide accurate information and support for women and their partners and/or families who are in these situations. All options are explored and discussed in a safe environment as needed by the individual woman.

**Table 3.4:** Sexual health services.

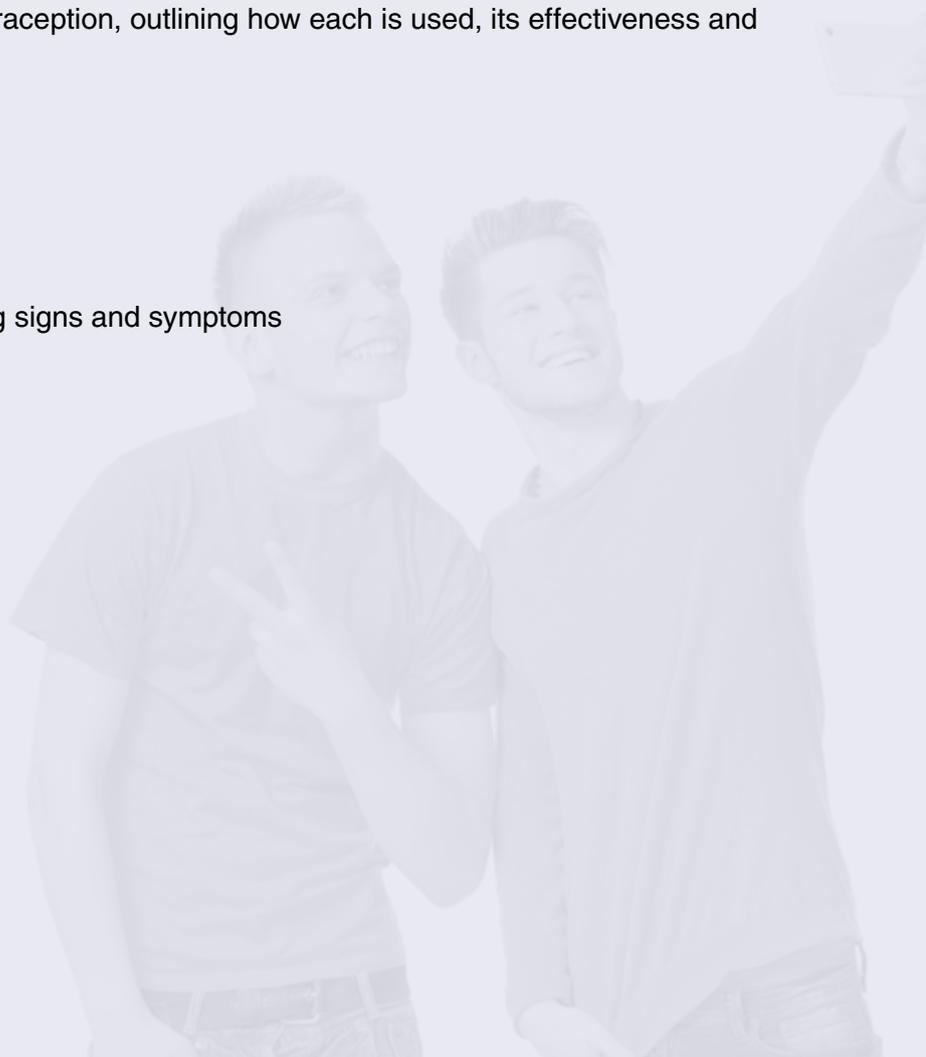
Resource	What they do
<b>GenQ:</b> <a href="http://ryss.com.au/gen-q.html">http://ryss.com.au/gen-q.html</a>	A place for adolescents who identify as lesbian, gay, bisexual or transsexual. GenQ runs workshops on various areas of concern including coming out, dealing with homophobia, self-esteem and cybersafety.
<b>Dr Marie:</b> <a href="http://www.drmarie.org.au">www.drmarie.org.au</a>	An organisation that provides services for women who fall pregnant. The website has an extensive 'Ask Dr Marie' section, which has many FAQs listed as well as an area to ask your own questions.
<b>Love: The good, the bad and the ugly:</b> <a href="http://lovegoodbadugly.com">http://lovegoodbadugly.com</a>	Includes stories and advice on dating, relationships, breaking up, sex, and love versus control, abuse and getting help.
<b>ReachOut:</b> <a href="http://au.reachout.com">http://au.reachout.com</a>	An organisation that provides lots of support and advice on a range of topics, including sex, relationships, abuse and violence.
<b>Tune In Not Out:</b> <a href="http://www.tuneinnotout.com">www.tuneinnotout.com</a>	Australia's multi-award-winning youth health portal. Provides a range of videos and resources on issues experienced throughout adolescence, including sexuality and relationships.
<b>Scarleteen:</b> <a href="http://www.scarleteen.com">www.scarleteen.com</a>	Deals with and provides information on many areas including bodies, gender, sexual identity, relationships, sex and sexuality.
<b>Safe Sex. No Regrets.</b> <a href="http://safesexnoregrets.com.au">http://safesexnoregrets.com.au</a>	Provides information and advice on safe sex, condoms, STIs and getting tested. Provides resources for individuals to engage in sex and sexual relationships safely.
<b>Dr Yes:</b> <a href="http://dryes.com.au">http://dryes.com.au</a>	A program operated by the Australian Medical Association, providing information on sexual, mental and general health for students and teachers.

### Internet activity

Log on to TitanOnline to complete Activity 3.11 by reviewing the video on sexual health.

## Revision questions

1. What is your understanding of the term 'healthy relationship'?
2. Compare and contrast two of your current relationships.
3. Analyse how relationships might change as you get older.
4. Select two different types of relationship you have at the moment. Evaluate how your rights and responsibilities differ in these two relationships.
5. Identify three types of sexual relationships.
6. Distinguish between rights and responsibilities in regards to intimate relationships.
7. Write a letter of advice to a friend who is in an abusive relationship but is too scared to leave.
8. Discuss what could happen if a 17-year-old person were to have sex with a 15-year-old person, even if they were in a relationship and both consented.
9. Outline your understanding of the term 'sexual orientation'.
10. Discuss how discrimination could impact on a teenager who does not identify as heterosexual.
11. Describe the following forms of contraception, outlining how each is used, its effectiveness and whether it prevents STIs:
  - a. contraceptive pill
  - b. male condom
  - c. IUD
  - d. withdrawal.
12. Examine the following STIs, outlining signs and symptoms and treatment methods:
  - a. gonorrhoea
  - b. chlamydia
  - c. syphilis
  - d. herpes.





## CHAPTER 4

# Health and young people

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Young Australians have a unique relationship to health, safety and wellbeing. Freedom increases and young people begin to establish who they are and what their future may hold. The decisions young people make during this time, can however, have serious implications on their immediate and future health. This chapter will explore the health of Australians, particularly young Australians, by addressing many aspects relating to young people's health. These will include aspects that influence young people, common stereotypes impacting young people, body image issues, the common risks that young people face and issues that are linked to gender.

### Focus areas

- Health of Australians
- Influences on young people
- Young people and risk
- Gendered health issues



**Figure 4.1:**

The overall health of Australians is relatively good.

## Health of Australians

The overall health of Australians is relatively good, with four in five Australians over 15 rating their health as ‘good’ to ‘excellent’. Australians are also living longer than ever before. According to the Australia’s Health 2020 report, with life expectancy rates increasing to 80.7 for males and 84.9 for females. Over half of all Australians are living with at least one chronic condition, such as cancer, diabetes and heart disease that requires ongoing medical attention. Sufferers of chronic conditions can experience significant impacts on the quality of their individual lives and the lives of their families and carers. Many chronic conditions in Australia are linked to lifestyle factors such as being overweight or obese, insufficient physical activity, smoking tobacco and alcohol use. In fact, 63 per cent of Australians over the age of 18 are overweight or obese and around 45 per cent of Australians aged 16–85 will experience a mental illness in their life.

Source: Australia’s Health 2020, AIHW.

Young Australians in particular are especially susceptible to mental health and social impacts on their health. According to the Australian Bureau of Statistics, suicide and self-inflicted injuries are the leading case of burden for young people. This is followed by anxiety disorders, depressive disorders, alcohol use disorder and asthma. Due to the developmental period young people find themselves in by moving from childhood into adulthood, young people have to deal with many physical, emotional and social changes. Young people are also in a period of identity exploration and experimentation, which can be exciting but also puts young people at risk of several problems, which will be addressed within this chapter.

# Influences on young people

There are many influences and social determinants that impact the development of young people. Family relationships, friendships, connectedness with community and socio economic status are key influences that have been covered in other chapters of this textbook. Other important factors that influence decision-making and behaviours that impact a young person's health status include society's stereotypes, body image issues and the media.

## Stereotypes

Young people suffer from several stereotypes that can impact their overall health and wellbeing. Often young people are stereotyped as being lazy and moody. Despite this being a common symptom for many young people, this can often be a result of many different conditions. Some of which may include stress, challenges of adolescence, chronic fatigue, adrenal fatigue, glandular fever and mental health conditions. These cause extreme tiredness and illnesses such as glandular fever. When these symptoms are not taken seriously, the correct care for their conditions.

Young females are also susceptible to having gynaecological and health concerns not taken seriously. Young women may have concerns about excessive period pain and other menstrual issues dismissed by a less knowledgeable doctor and passed off as being normal. This can result in serious health implications and misdiagnosis/non-diagnosis of painful conditions such as polycystic ovary syndrome (PCOS), endometriosis or ovarian cysts which in turn can lead to fertility issues in the future. In situations like these, it is best to get a second opinion from a different doctor. Another stereotype that affects young women involves old-fashioned opinions of the contraceptive pill and morning after pill, and people who take them. Rather than facing stigma, young women should feel empowered to make their own choices and decisions that are best for their health.

Mental health is also a significant concern for young people. With just under 40 per cent of Australian young people citing mental health as an important issue in Mission Australia's 2019 Youth Survey. When young people's symptoms are moodiness, tiredness, irritability, anger and withdrawal, there is a risk that they may be suffering from depressive, anxious and other mental health conditions including eating disorders. In addition, young people may deal with trauma under the assumption that they are resilient and strong and able to cope. Many young Australians have reported feeling that people in power are not listening to what young people have to say about their issues, and as a result, they begin to feel powerless and hopeless.



**Figure 4.2:**

Young females are susceptible to having gynaecological concerns not taken seriously.

## Body image

Body image is an increasingly significant issue for Australian young people. Concern about body image was ranked in the top four personal concerns for Australian young people in the Mission Australia 2019 Youth Survey. Despite being a top concern for both males and females, serious body image concerns were higher for females, and even higher for Aboriginal females. Although not addressed in the survey, members of the LGBTQI community are also at a high risk of body image issues, particularly people who are intersex and transgender (who may feel uncomfortable with the body they have had from birth).

With body image referring to how and what an individual feels about their body, positive body image is very important. People with a negative body image will feel unhappy with the way they look, or think they look. Alternatively, a person with healthy body image will feel happy and satisfied with their appearance, and comfortable and accepting of their body size and shape. Body image is not necessarily either good or bad, but many people are not comfortable 'in their own skin'. The important thing is knowing it is okay for someone to not love every single thing about them and their body, but being okay with who they are and appreciating what their body can allow them to do. Body image has links with mental health and wellbeing, because a person with positive body image is more likely to have good self-esteem and mental health. They will also implement positive lifestyle choices including eating a balanced, healthy diet, exercising and socialising. Similarly, people who implement positive lifestyle choices and have a good mental health are more likely to have positive body image.



**Figure 4.3:** Members of the LGBTQI community are at a high risk of body image issues.



**Figure 4.4:** Poor body image can impact a person's mental health.

As young Australians are in a period of growth, development and exploration, they are particularly impressionable and their perceptions of themselves and their body image can be influenced by a range of factors. Some of these factors include the family environment, ability or disability, peers, social media and cultural backgrounds. These factors may influence the types of discussions about bodies and appearances being positive or negative, weight loss and diets, all of which can be harmful and damaging to a young person as they develop their own identity, morals and values. Young people will also experience significant physical changes when going through puberty, which will cause their body shape to change and develop. These changes make it very easy for young people to become self-critical of their physical appearance, especially when comparing themselves to stereotypical societal ideals of what is attractive. Having poor body image can lead to depression, anxiety, alcohol and other drug abuse, and disordered eating behaviours.

### Learning activity

1. Analyse how norms, stereotypes and expectations can influence an individual's identity.
2. Write a report challenging unrealistic standards of behaviour and appearance often portrayed in various forms of media.
3. Research positive body image campaigns. Evaluate their effectiveness for young people.

## The media

Young people's behaviours are influenced by those around them that aid in shaping their values and beliefs. Young people may be influenced directly by the media, such as advertisements, television, radio, and social media. They may also be influenced by the content they are exposed to on news media, sports, movies, television, and music. With increased exposure to digital platforms from younger ages, young people are increasingly influenced by people and content. Despite many young people being influenced by the media, the direct or indirect influence of media on young people through the media decisions they make in relation to their health and wellbeing. These decisions ultimately affect their health and wellbeing.

### Internet activity

Log on to TitanOnline to complete Activity 4.1 researching examples of



**Figure 4.5:**

Young people are influenced by the content they are exposed to on social media platforms.

## The sporting environment in the media

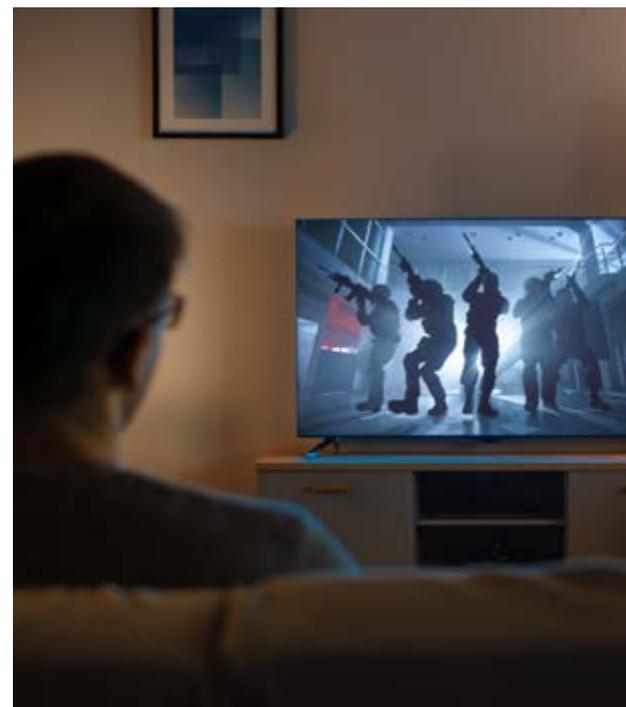
Many Australians are extremely passionate about sport, the sporting teams they follow, and the people who play the sport. Sporting stars are often viewed as role models for young Australians, and their behaviours and social commentary are commonly relayed in the media. Sports stars and athletes can be very influential for young people, and this is why their actions are so important. The actions of high level athletes demonstrate to young people what is, and what is not acceptable. This is where issues arise, when well-known athletes find themselves in situations involving violence, drugs and poor sportsmanship. When athletes continue to act inappropriately or don't receive appropriate punishment, it sends a message to young people that these actions are okay, and are justifiable. Additionally, sports people are in the position to promote positive work ethic to achieve success, as well as demonstrate what positive sportsmanship looks like. Sports people are able to promote participation of young people in sport and physical activity, whether it be in their chosen sport or something entirely different.

## Violence, drugs and alcohol portrayed in the media

The media can also influence young people's health and wellbeing in relation to their decision to engage in risky behaviour that may or may not include violence, drugs and alcohol. The way these themes are presented in the media, will normalise engagement or non-engagement in these activities. For example, movies and television shows may show scenes of young people engaging in extremely dangerous activities involving violence, drugs and alcohol. If these scenes demonstrate these activities as being 'cool', it may send messages to young viewers encouraging these behaviours. Violence is often used in movies and television shows, particularly by male characters. This may add to the issues of male violence, by promoting an ineffective way to deal with conflict and disagreements. Alternatively, when other young people in the media, such as social media influencers talk about their stance against drugs use, and drinking responsibly, they can have a huge positive influence on their young audiences.



**Figure 4.6:** Sports stars and athletes can be very influential for young people.

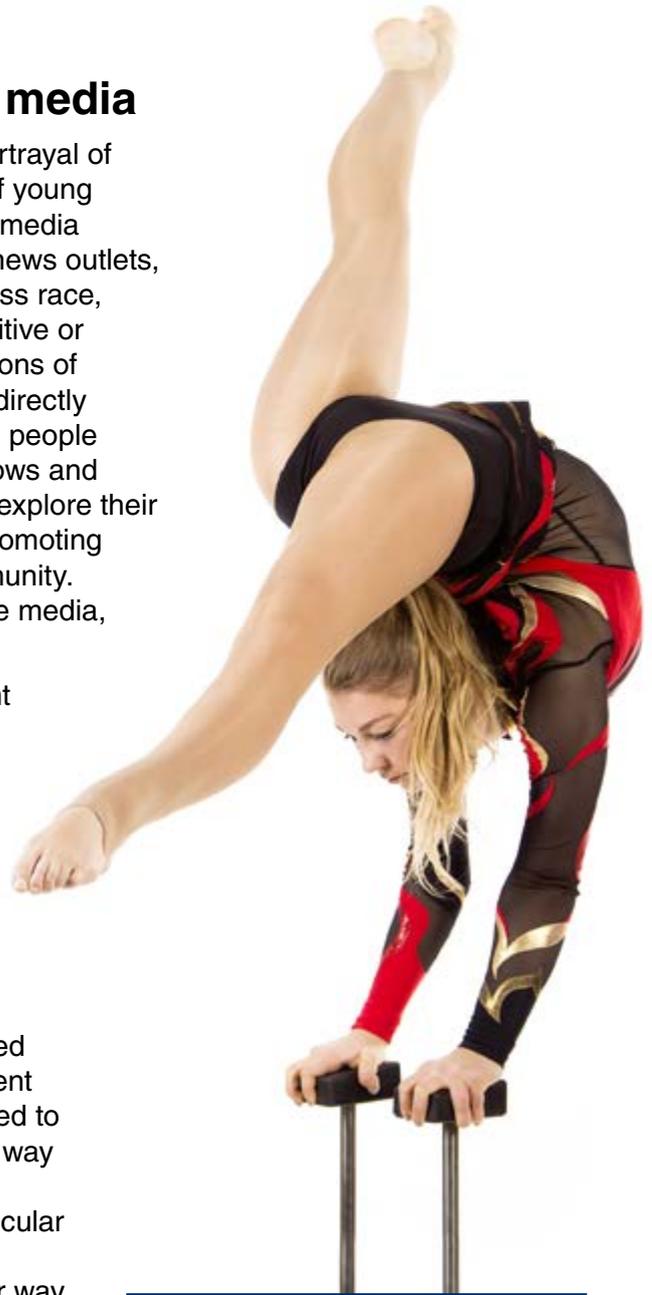


**Figure 4.7:** Violence on television may promote ineffective ways of dealing with conflict.

## Race, gender and females in the media

The way conversations regarding race, gender and portrayal of women in the media are also important to the health of young Australians. These conversations may occur on many media platforms, such as sports commentary, social media, news outlets, movies and television shows. These outlets may discuss race, gender and portrayal of females in the media, in a positive or negative light and will influence the thoughts and opinions of their viewers. Societal views on these areas can both directly and indirectly influence the health and wellbeing of the people belonging to these groups. For example, television shows and movies that promote racial and gender inclusivity and explore their experiences in a realistic way, may be successful in promoting thought provoking discussion and change in the community. However, when negative stereotypes are present in the media, these groups may become even more marginalised.

The portrayal of females in the media is also significant and has shifted significantly over recent years. Many females have fought to be in control of their own narrative within the media, such as female social media influencers, sports stars, actresses, performers and artists, and media personnel. However, the sexualisation of females in the media is still a prominent issue. The sexualisation of females in the media refers to making a person or character to be sexual in nature or objectified. Young females in particular are influenced by societal expectations, social media and entertainment media to dress and act a particular way and encouraged to focus on their physical appearance and sexuality. The way a woman looks is often a focal point in any discussion relating to them, even if it has no relevance to the particular discussion. The sexualisation of females in the media places pressures on young females to look a particular way, and that their appearance is reflective of their self-worth, which is not true. These pressures and objectification can cause negative psychological outcomes including disordered eating, anxiety and depression.



**Figure 4.8:** The sexualisation of females in the media places pressures on young females to look a particular way.

### Learning activity

1. Describe the self-management and interpersonal skills that a person could develop to manage and respond to a variety of challenging or unsafe situations.
2. Report on examples where the media normalises violence and drug use.
3. Explain how the media's sexualisation of females impacts adolescent girls' self-image.



**Figure 4.9:**  
Young people are more likely to participate in risk-taking behaviours.

## Young people and risk

Taking risks is a normal part of a young person's life, and is an important aspect of them finding their identity and becoming independent adults. Young people are more likely to take risks as a result of several reasons. The part of the brain that handles impulse control, logic and planning do not fully develop until around 25, with females commonly developing faster than males. In addition to this, the consequences of potential risks a young person may take are often outweighed by the perception of the reward they feel from taking the risk, including social admiration and inclusion of friends. Due to this, peers and friendship groups have significant influence over the decisions and behaviours of young people, and they may be inclined to take more risks in social situations. This relates to peer pressure, however may not always appear stereotypically. For example, peer pressure is often thought to be continuous pressure to take part in a risky behaviour. However, peer pressure can be present for a young person simply by being in a group of young people taking part in the risky behaviour and feeling like they should be engaging as well.

It is important to note that not all risks taken by young people are negative, with some offering positives such as personal growth and success. These positive risks may involve trying a new sport, getting a driver's license and starting work. It is important to know of the possible risks and consequences that may occur during adolescence and young adulthood to ensure young people are able to make educated and informed decisions to stay safe in differing contexts.

## Smoking

The rates of tobacco smoking among young people is declining, with numbers becoming very low. Along with this, the initiation age of smoking among young people continues to increase. Abstaining from smoking is increasing among young Indigenous Australians, although still remains higher than non-Indigenous Australians.

Despite smoking rates decreasing, vaping is becoming an increasingly prominent issue, with most young people experimenting with vaping having never smoked tobacco cigarettes before. Due to vaping's relatively recent development, the health effects are yet to be comprehensively studied. However, there are several potential issues related to vaping including the ingestion of toxic vapour ingredients, the development of cancer and other lung diseases, impacts on reproductive health, addiction to nicotine based vapour, burns and explosions of defective batteries. There are also concerns that vaping among young people may entice them to take up smoking.

## Alcohol

Drinking alcohol during adolescence can be particularly harmful to a young person's physical and psychosocial development, but there have been some positive trends regarding young people's use of alcohol in recent years. Mission Australia's 2019 Youth Survey found that the rates of Australian young people drinking at dangerous levels have significantly decreased. Young people are more often opting to follow the health and safety advice of not drinking under the age of 18, with the initiation age of drinking alcohol and abstaining until the legal age increasingly positively. Importantly, according to the National Drug Strategy Household Survey 2019, young Indigenous Australians were more likely to abstain from drinking alcohol compared to their non-Indigenous peers.

Binge drinking (drinking more than six drinks for males and four drinks for females in one sitting) is of particular concern for young people, although young people who binge drink do not often drink daily. Risks associated with drinking binges include injuries that require hospitalisation, exposure to unwanted sexual encounters, and decreased decision-making capacities in relation to illicit drugs, violence, risky driving and personal safety.



**Figure 4.10:**  
Vaping rates among young people is increasing.



**Figure 4.11:**  
Binge drinking is of particular concern for young people.

### Did you know?

That it takes only six minutes for the brain to react to alcohol.

## Illicit drug use

Overall, illicit drug use among young people is decreasing, however it is still an issue for several reasons. As illicit drugs are illegal, they are not regulated and therefore it is impossible to know the exact ingredients within any given drug. In addition to the given risks of illicit drugs, it is important for young people to understand that there is no safe level of illicit drug use, with the possibility that even a one-off use could result in lifelong injury or death.

All young people are at risk of exposure to illicit drugs. However, young people who have had exposure throughout their childhood to these products may see using them as normal, and engage in the behaviour of their friends and family. Young people need to be very aware of the risks involved with these products, as well as when they may come into contact with them. Young people will then be empowered to make decisions that serve them best, and have the skills to make positive, informed and educated choices to protect their immediate and lifelong health, safety and wellbeing.



**Figure 4.12:**  
Illicit drug use among young people is decreasing.

### Learning activity

1. Propose reasons for the changing attitudes of young people toward alcohol, tobacco smoking/vaping and drugs.
2. Research and report on health promotion strategies aimed to reduce the impact that illicit drugs have on young people.

## Youth suicide

Youth suicide is the leading cause of death for young people, with more young people dying by suicide than on roads each year. In addition, for every youth suicide, there are hundreds of additional attempts. Suicide can be a particularly hard topic to discuss, and it is important to note discussing thoughts and feelings related to the topic with a trusted person is important. There are organisations available to help including Lifeline, Beyond Blue and Kids Helpline.

Of all Australians who die by suicide, 75 per cent of are male, however females are more likely to attempt suicide. Suicide has an increased incidence among people who identify as members of the LGBTQI community, who have the highest rates of suicidality of any population in Australia. According to the National LGBTI Health Alliance, the average age of a first suicide attempt among non-heterosexual and gender-diverse youth is 16 years old, and is often before they 'come out'. The higher incidence of suicide and distress among the LGBTQI community is not due to their sexual orientation or gender identity, but is related to the discrimination, exclusion, homophobia, transphobia and harassment people in this community face. Aboriginal and Torres Strait Islander young people and those who live rural and remote are also twice as likely to die by suicide than their non-Indigenous and city-living peers.

Adapted from: Lifeline Data and Statistics ([www.lifeline.org.au/resources/data-and-statistics](http://www.lifeline.org.au/resources/data-and-statistics)).

## Contributing factors

A combination of individual, relationship, community and societal factors may act as risk factors of youth suicide. Anyone, of any race, age, gender, income or family background, can be at risk of suicide, but young people are at an increased risk. The most common risk factor of suicide is having depression or another mental health condition. Other risk factors of youth suicide include:

- previous suicide attempts
- family history of suicide
- local epidemics of suicide
- loss of a loved one
- problems with family or romantic relationships
- previous trauma from traumatic experiences
- being bullied
- feelings of isolation
- access to potentially dangerous medications, weapons and implements
- illness or disability
- being a gay, lesbian, bisexual, transgender, queer, intersex or asexual person
- being an Aboriginal or Torres Strait Islander Australian
- limited access to mental health services



**Figure 4.13:**

Suicide has an increased incidence among people who identify as members of the LGBTQI community.

Importantly, when outside pressures such as bullying are continual, they significantly impact the lives of the young person who may already be struggling. Often suicide is talked about after it has occurred and the events leading up to it are not dealt with appropriately. This includes bullies not being held accountable for their actions immediately, before a young person is pushed to their limits. Although bullying is not the single cause for young people to suicide, it can have a significant impact on their final decision. Bullying and suicide is often linked in many cases, such as that of Dolly Everett.

### Case study – Do it for Dolly

In early 2018, the lives of parents Kate and Tick Everett and their daughter Meg turned upside down. On a seemingly normal night on the family's cattle station in the Northern Territory, 14-year-old Amy Jayne 'Dolly' Everett made her signature dinner of potato salad, steak and coleslaw. The girls played cards after dinner, and went to bed at around 9 pm. It was about half an hour later that Dolly was found. Tragically, she passed away, and her horrified parents laid with her for hours until help could arrive at their isolated property.

The driving force for her death was relentless bullying at the boarding school she had attended from age 12. Dolly found it difficult to fit in and she found herself being picked on. Dolly was convinced to send photos of herself to a male student, and the photos were used against her, fuelling further bullying and name-calling. Dolly told her parents about the problems she faced, who informed the school. However, no significant consequences for the bullies were pursued. Dolly was suspended several times and her version of the situations questioned. One time, she was suspended due to her physical retaliation to a male student who was verbally and physically assaulting her. Dolly's parents had attempted to work with the school and considered pulling Dolly out. But Dolly insisted she wanted to return, to show them she was strong and was tough enough. Despite her parents efforts, Dolly continued to struggle, was provided minimal support from the school and the bullying from her peers continued.

After Dolly's death, her parents vowed to not let her death be in vain. A foundation called Dolly's Dream was established to create awareness about bullying and cyberbullying. Dolly's Dream tells Dolly's story to help prevent lives being lost to bullying. The foundation focuses on educating young people and parents on bullying and cyberbullying, empowering young people to stand up to bullying and support those affected.

May 10th is 'Do it for Dolly' Day, when the nation says no to bullying by wearing blue. Dolly's passing also ignited the 'Speak, even if your voice shakes' movement, a statement that Dolly had used as caption on a drawing she created.

1. Discuss what more could have been done for Dolly.
2. Analyse the factors that contributed to Dolly's death.
3. Propose actions that could be taken to prevent youth suicide.
4. Watch 'The Project' video 'Speak even if your voice shakes', and describe the impact Dolly's death and this message can have on other young Australians.

## Warning signs

It is important to understand that a young person who is thinking about suicide may or may not actually want to die. They may believe that their death will fix whatever problem they are facing, and that the lives of everyone around them would be better off without them. This is a very worrying thought, and young people should try to check in on their friends and be aware of the warning signs of youth suicide. The warning signs of youth suicide may differ among different individuals, however there are several common signs that should never be ignored. Common warning signs, behaviours and feelings include:

- feelings of hopelessness
- feelings of worthlessness
- feelings of no one understanding and being alone
- drastic mood and/or behaviour changes
- unusual aggression or irritability
- obtaining weapons or medications
- continual discussions or comments about dying arrangements for after death
- self-harming
- increased involvement in risky or reckless behaviour
- increased use of alcohol and/or illicit drugs.

It is important to understand that a young person thinking about suicide may lose interest in their friends, social activities and activities they previously enjoyed. This may be in conjunction with decreases in their school or work performances, and they may even have problems with the law, run away from home, or be over-tired. While some young people may show some of these warning signs, behaviours and feelings, some young people may never give any indication of their suicidal thoughts, which can make it difficult to provide help.



**Figure 4.14:**  
Self-harming is a warning sign that someone may be thinking about suicide.

## Providing support

A young person may not experience any of the common risk factors, and appear as though they have everything they could ever want, yet still experience mental health issues and be susceptible to suicide. People who have suicidal thoughts or actions are not weak minded, they are ill, and require help and assistance as one would if they were to experience a physical illness.

Young people can build their mental health and resilience by having strong supportive social networks such as family, friends, teachers and coaches. When young people feel safe, supported and valued within their community, they have more potential to develop positive self-worth and be protected from suicide. Continual awareness raising of youth suicide and prevention, as well as supported encouragement of young people to talk about their issues and concerns is important. Alternatively, young people can contact support services if they need someone to talk to. Sometimes a person just needs one person to remind them of how important they are to them, while others need professional help.

Always check in on loved ones, as there may be no signs of struggle. Never be afraid to ask questions of someone who may be struggling, but be prepared to deal with and support their responses. As a young person, it can be extremely difficult to navigate and support another struggling young person. If someone confides sensitive information regarding suicidal thoughts, never promise to keep their information a secret. It is very important to tell another trusted adult, refer to professional help or contact a support service. Always listen and encourage the person to talk about what they are going through, as this can be a step to getting the help needed.



**Figure 4.15:** Young people can build resilience by having strong supportive social networks.

### Internet activity

Log on to TitanOnline to complete Activity 4.2 to identify the best way to be supportive to another young person feeling low or suicidal.

### Learning activity

1. Develop criteria to assess health information and services that a person would be considering if they required formal support for mental health or self-harm issues.
2. Provide a list of tips or advice for a person who wants to provide emotional support for a friend who has reached out and divulged sensitive personal information about their intention to self-harm.



**Figure 4.16:**

Increasing the space between individuals when in public areas can reduce the spread of infectious diseases.

## Infectious diseases

Diseases occur when a living organism is negatively affected by an abnormal condition. Most diseases have a range of specific symptoms that are experienced when the disease is present in the living organism. There are many different types of disease classifications. For example, diseases can be classified according to their ability to spread, that is, if they are communicable (infectious) or non-communicable. Other diseases are classified according to their physical structure, for example multicellular (fungi), single cellular (bacterial) and others that are smaller than one complete cell (viral). Viruses are small living parasites and require a living host to continue to develop and cause infection.

Diseases are classified as infectious when they can be spread from one individual to another. Well known examples of infectious diseases include:

- **Hepatitis C** is a disease that infects the liver. Liver cancer is commonly the disease caused by the Hepatitis C virus, which can be transmitted with contact to infected blood. Approximately 71 million people across the globe are infected with the virus. The greatest proportion of burden and deaths resulting from the virus are due to sharing unsanitary drug injection equipment. There is no current vaccine for Hepatitis C virus, but some other antiviral medications are used as an effective treatment.
- **Rubella** is a viral infection that is extremely contagious. When contracted, the virus can cause fever, headaches, joint pain, rashes and birth defects. The virus is transmitted by bodily fluids expelled by talking, coughing and/or sneezing. A vaccine is available and is very effective in controlling the virus.
- **Malaria** is also an infectious disease, transferred to humans by female mosquitoes. Malaria is preventable by limiting exposure to mosquitoes as well as the consumption of antimalarial medication. A relatively new vaccine is slowly being implemented throughout high-risk regions in Africa and South-East Asian countries. More than 200 million individuals were infected with Malaria in 2018.

The World Health Organization (WHO) is the international governing body to promote and protect health, wellbeing and safety on a global scale. According to WHO, more than 17 million individuals across the world die from infectious diseases each year, with Tuberculosis, HIV/AIDS, Malaria and Hepatitis C being some of the most prevalent infectious diseases causing death. Despite this alarming statistic, death from non-communicable diseases remains the greater threat to world health, accounting for approximately 70 per cent of all deaths. Approximately 41 million people die each year from non-communicable diseases and health promotion has largely focused on these diseases in preference to infectious disease. The focus on lifestyle modification, education and prevention of non-communicable diseases has been effective, but this focus has left many countries across the world completely unprepared for dealing with the emergence of new infectious diseases in more recent times.

The most recent infectious disease outbreaks include the following:

- **The Zika virus** epidemic spread rapidly in 2015 and 2016 and is transmitted primarily through the bite of an infected *Aedes* mosquito. This virus was declared as a global public health emergency by WHO. Although first originating in 1947, the virus flared in the months leading up to the 2016 Summer Olympic Games, held in Rio de Janeiro. This caused many athletes and spectators to question their attendance, especially pregnant women, as the virus was linked to abnormal head and brain development in unborn children.
- **Ebola virus disease** developed in 2014 after the original Ebola virus originated in 1976. The most recent outbreak occurred among central African communities where the mortality rate averaged at 50 per cent, but peaked at 90 per cent in some communities. Trial vaccines have proven effective in controlling further Ebola outbreaks.
- **Severe Acute Respiratory Syndrome coronavirus (SARS-CoV)** originated in Asia in 2003. It was transmitted by close contact with an infected individual's respiratory droplets, primarily exiting the body via coughs and sneezes. In 2003, it was recorded that more than 8,000 people contracted SARS and just under 10 per cent of those died.
- **Middle Eastern Respiratory Syndrome coronavirus (MERS-CoV)** was traced to originate in Saudi Arabia in 2012. It is a viral infection that can be transmitted between humans and animals. The mortality rate for MERS-CoV is estimated to be 35 per cent. The appropriate storage, preparation and cooking of animal products for consumption reduces the risk of contracting MERS-CoV. There is currently no vaccine.



**Figure 4.17:**

One of the most effective ways to reduce the burden of disease is vaccination.

## COVID-19

COVID-19 is the name given to the disease caused by the Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2). The first human cases of COVID-19 were reported by officials in Wuhan City, China, in December 2019. The earliest known cases had a link to a wholesale food market in Wuhan. Many of the initial patients were either stall owners, market employees, or regular visitors to this market. The first case of an individual in Australia testing positive for COVID-19 was recorded on January 25, 2020.

Due to not having a vaccine for the virus and its quick-spreading nature, information relating to COVID-19 quickly saturated most media platforms. Scientists are yet to determine how the COVID-19 virus originated, but understand its ability to spread in a very quick manner. COVID-19 is spread by the tiny droplets that exit the body when an individual coughs or sneezes.

On January 30, 2020, WHO declared COVID-19 an International Public Health Emergency. COVID-19 was officially declared a pandemic on March 11, 2020. For a disease to be classified as a pandemic, it must be a risk on an international level.

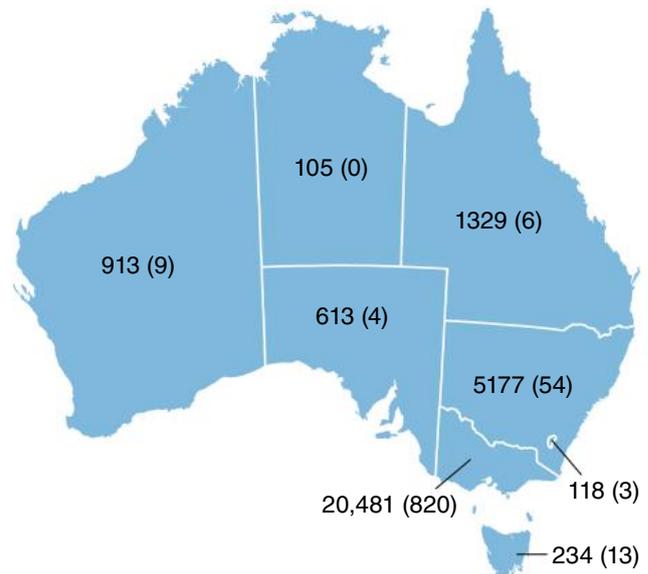
Compared to figures from around the world, the number of cases and deaths in Australia in the first year of the pandemic was low. Globally, there was over 113,000,000 cases and over 2,500,000 deaths (32.3 deaths per 100,000 population) by February 28, 2021. Australia had 28,965 cases and 909 deaths (3.6 deaths per 100,000 population) in the same time period, compared to:

- 28,174,978 cases and 506,760 deaths in the USA (153.1 deaths/100,000 population)
- 11,096,731 cases and 157,051 deaths in India (11.4 deaths per 100,000 population)
- 4,170,523 cases and 122,705 deaths in the UK (180.8 deaths per 100,000 population).

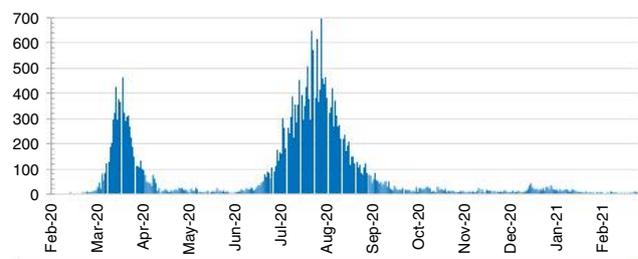
Source: WHO Weekly epidemiological update, March 2, 2021.



**Figure 4.18:**  
Testing for COVID-19 usually involves a nasal swab.



**Figure 4.19:**  
Number of COVID-19 cases (and deaths) in Australian states and territories, to end of February 2021.



**Figure 4.20:**  
Daily numbers of reported COVID-19 cases in Australia, February 2020 to February 2021.

**Table 4.1:** Timeline of COVID-19 in Australia.

<b>January 2020</b>	<ul style="list-style-type: none"> <li>On January 25, a traveller from Wuhan tested positive for COVID-19 in Melbourne.</li> </ul>
<b>February 2020</b>	<ul style="list-style-type: none"> <li>Prime Minister Scott Morrison closed flights between Australia and China and the Australian Government started evacuating Australian citizens from Wuhan. They quarantined on Christmas Island.</li> </ul>
<b>March 2020</b>	<ul style="list-style-type: none"> <li>March 11, WHO declared COVID-19 a pandemic.</li> <li>Panic buying occurred in supermarkets, and there were shortages of many items including toilet paper.</li> <li>Australia announced anyone arriving from overseas would be forced to self-isolate.</li> <li>There were 300 confirmed cases in Australia. Victoria and Western Australia declared a state of emergency.</li> <li>On March 17, a ban was placed on Australia travelling abroad.</li> <li>On March 20, Australia shut its borders to overseas travellers.</li> <li>On March 25, bars, cafés, cinemas, casinos and gyms were closed and there were restrictions on funerals and weddings.</li> </ul>
<b>April 2020</b>	<ul style="list-style-type: none"> <li>As Dawn Services had been banned, people stood at their front gates with a candle to mark Anzac Day.</li> <li>By April 30, Australia had a total of 6,753 COVID-19 cases and 91 deaths.</li> </ul>
<b>May 2020</b>	<ul style="list-style-type: none"> <li>By mid-May, lockdown restrictions across Australia had started to ease.</li> </ul>
<b>June 2020</b>	<ul style="list-style-type: none"> <li>Early June saw several outbreaks in Victoria's hotel quarantine system.</li> <li>On June 17, the state recorded 21 new COVID-19 cases, the highest in a month.</li> <li>On June 29, hot spot suburbs in Melbourne's north and north-west were returned to lockdown and all international flights into the city were banned for two weeks.</li> </ul>
<b>July 2020</b>	<ul style="list-style-type: none"> <li>On July 4, about 3,000 public housing residents were placed in lockdown with no notice.</li> <li>On July 6, the NSW-Victoria border was closed for the first time.</li> <li>On July 8, Melbourne was sent back into a lockdown that lasted until mid-October – 112 days in total.</li> </ul>
<b>August 2020</b>	<ul style="list-style-type: none"> <li>On August 4, an easing of internal WA restrictions was deferred to at least August 29, due to the outbreak in Victoria.</li> </ul>
<b>September 2020</b>	<ul style="list-style-type: none"> <li>By mid-September, restrictions had started to ease in Victoria.</li> </ul>
<b>October 2020</b>	<ul style="list-style-type: none"> <li>On October 16, a trans-Tasman travel bubble commenced. Travellers from New Zealand were able to go to NSW, the Australian Capital Territory and the Northern Territory without having to quarantine upon arrival.</li> <li>On October 26, the 'second wave' ended when Victoria recorded zero new cases and zero deaths state wide for the first time since June 9 (139 days).</li> </ul>

**Table 4.1:** Timeline of COVID-19 in Australia.*(continued)*

<b>November 2020</b>	<ul style="list-style-type: none"> <li>▪ On November 1, Australia recorded zero cases of community transmission nationwide for the first time since June 9.</li> <li>▪ On November 16, South Australia reintroduced a number of significant restrictions after an outbreak of COVID-19 in the northern suburbs of Adelaide.</li> </ul>
<b>December 2020</b>	<ul style="list-style-type: none"> <li>▪ On December 18, Sydney's Northern Beaches area was declared a hot spot following an outbreak linked to 28 cases.</li> <li>▪ By New Year's Eve, restrictions were in place in Victoria and NSW. South Australia and Victoria shut their borders to NSW.</li> </ul>
<b>January 2021</b>	<ul style="list-style-type: none"> <li>▪ On January 2, NSW announce that face masks would become mandatory in many indoor venues in the Greater Sydney, Central Coast and Wollongong areas, including supermarkets, places of worship and public transport.</li> <li>▪ On January 31, a quarantine hotel security guard in Perth tested positive. A five-day lockdown was declared from 6pm that night.</li> </ul>
<b>February 2021</b>	<ul style="list-style-type: none"> <li>▪ On February 1, Queensland opened its border to all states except Western Australia.</li> <li>▪ On February 12, Victoria entered lockdown across the entire state for five days from 11.59pm that night. This was in response to a quarantine hotel outbreak.</li> <li>▪ On February 21, 84-year-old WWII survivor Jane Malysiak became the first person in Australia to receive the COVID-19 vaccine.</li> </ul>

### Learning activity

1. Visit [www.healthdirect.gov.au/coronavirus-covid-19-information-by-state-and-territory](http://www.healthdirect.gov.au/coronavirus-covid-19-information-by-state-and-territory) and describe the different measures the Australian states and territories implemented to prevent the spread of COVID-19.
2. Explain how Australia's COVID-19 infection and death rates have compared to other countries. Identify what restrictions you think have been most beneficial.
3. Propose how Australian governments (both federal and state/territory) could have handled the pandemic differently. Provide explanations for changes to restrictions that you would/would not impose.

## Infectious disease prevention

### Vaccinations

One of the most effective ways to reduce the burden of disease is vaccination. Vaccinations work in conjunction with the body's immune system to prevent bacterial and viral infections from infecting an individual. Vaccinations work to provide additional assistance towards infectious pathogens that the body's immune system cannot protect itself against, by encouraging the development of antibodies towards the particular living organism. Many vaccines are given to children at an early age and then booster shots are administered in later adolescence. Some people may experience short term side-effects when a vaccination is administered, but the long-term effectiveness far outweighs any negative experiences.

The eradication of smallpox and reduction in the number of polio cases demonstrates the effectiveness of vaccinations and potential harm and mortality that can occur when not administered. Forty years ago, more than 350,000 polio cases were reported worldwide, primarily affecting young children. It is now estimated that less than 30 polio cases exist worldwide. Measles is another disease that has almost been eradicated from Australia, however a few cases still result in Australia due to the five per cent non-vaccination rate.

Vaccination is not only for personal safety, but for the benefit of all communities. Because they are important in protecting the safety of all individuals, some Government organisations have a 'no jab, no pay' policy. This policy was devised to encourage families to vaccinate their children in order to receive subsidised child care. Some people still choose not to vaccinate their children. All vaccinations have been clinically tested and are Government approved and registered. However, being vaccinated against infectious diseases remains voluntary. Certain religious beliefs, medical concerns and distrust towards medical technology are just some of the reasons parents and other individuals choose not to vaccinate. Infectious diseases continue to challenge current vaccinations. New strains of viruses require new vaccinations.

By the end of February 2021, two COVID-19 vaccines had been approved in Australia. They were the Pfizer/BioNTech vaccine and Oxford/AstraZeneca vaccine. The Australian Government hoped to have all eligible Australians vaccinated by October 21.

### Social distancing

Social distancing is a term that has erupted throughout the media since the outbreak of the COVID-19 pandemic. It involves increasing the space between individuals when in public areas in an attempt to reduce the spread of infectious diseases. There are various strategies implemented for social distancing to occur depending on the specific environment.

#### Learning activity

1. Describe what social distancing may involve in the following environments.
  - a. School.
  - b. Workplace.
  - c. Public transport.
2. Why is keeping 1.5 metres apart from other people important in reducing the transmission of infectious diseases?
3. Propose how individuals can greet others and socially interact while maintaining social distance.



**Figure 4.21:**

There are many influences and social determinants that impact the development of young people.

## Gendered health issues

Mortality and morbidity rates for some health issues are different for males and females. For example, depression, arthritis and dementia are more common in women, while heart disease, melanoma, lung cancer, bowel cancer and suicide are more common in men. Other issues related to wellbeing such as problem gambling, violence and participation in sport have different health outcomes based on gender.

### Problem gambling

Gambling is often viewed as a common activity for Australians, with research consistently finding that 60–80 per cent of young Australians have gambled in their lifetime. It is important to note however, that very few young people gamble on a regular basis and it is illegal for those under 18 to gamble or place bets. There are many different ways to gamble, ranging from scratch tickets that may be bought, given as presents or prizes, bingo, casino table games, poker machines, sports/race betting, lotteries, internet gambling and card games at home for money. Gambling is especially problematic for young people, due to their increased likelihood to develop unhealthy addictive behaviours, and act impulsively and take greater risks. In relation to this, with boys more likely to engage in risky behaviour overall, they are more likely to gamble than females, and participation increases in older adolescence.

## Influencing factors

Family and friends are undoubtedly the most influential factors in a young person's involvement in gambling. When young people see their family and friends gamble, and are exposed to their gambling behaviours, attitudes and beliefs, and receive no negative feedback about gambling, they are more likely to gamble themselves. This also means gambling is normalised, especially when gambling is facilitated by family and friends, such as buying lottery or scratch tickets for a young person, or illegally placing bets on their behalf. Gambling behaviour is also linked to alcohol consumption, smoking and social environments. Young people who engage in these risky behaviours, or have friends who do, are more likely to gamble.

## Marketing and the online environment

Another significant influence on young people's participation and exposure to gambling is a result of young people's use of mobile phones and access to social media and apps. With the majority of young people having access to smart phones and devices, there is an increased opportunity to watch live sport and download and engage with apps and online games that simulate those available in casinos and pubs. Both of these allow for young people to place bets and gamble on a wide variety of games and sports anytime and anywhere, increasing appeal, opportunity and access. With the increased presence of young people online, advertisements have shifted to be available on the apps and websites young people use, which can blend in and encourage participation. Betting and gambling advertisements also target young people, by utilising humour, funny videos and the presence of well-known celebrities or athletes to depict betting and gambling as a natural part of life. Betting and gambling behaviour is also often marketed as being low risk and high return, to increase the appeal for young people to engage. However, often the lowest risk betting and gambling can generate addictive behaviours to harmful betting practices.



**Figure 4.22:** Gambling behaviour is linked to alcohol consumption.



**Figure 4.23:** Gambling is often marketed as low risk and high return.

### Did you know?

Problem gamblers contribute 40 per cent of the money that is put into poker machines.

## Identifying gambling problems

Although most school-aged people's involvement in gambling is usually limited, statistics indicate that, on average one Australian teenager in every high school class has an issue with gambling. This is concerning, as betting and gambling is illegal for those under 18. Something that may seem like harmless fun, can become a serious problem. Regular involvement in gambling during the period of adolescence can lead to many issues with relationships, criminal behaviour, mental health issues, poor academic outcomes and future employment issues. Young people's gambling experiences will be individualised and specific to their circumstances, however, there are common behaviours of problem gamblers. Problem gamblers are people who cannot stop gambling, despite negative consequences, including the loss of money, friends and family. A young person may have a gambling problem if they:

- continue to increase their spending on gambling
- use money for life expenses such as rent, food or transport on gambling
- have an unexplained debt
- spend large quantities of time on gambling and betting apps and websites
- gamble when they are anxious or stressed
- discuss and brag about their gambling wins and minimise their reports on losses
- lie about their time and money spent gambling
- lose interest in activities they usually enjoy
- obsessively think about gambling and losses of money and time
- are unable to stop gambling
- receive negative feedback from family and friends
- have a history of gambling-related problems
- have a history of gambling-related problems
- have a history of gambling-related problems



**Figure 4.24:**

A person may have a gambling problem if they spend large amounts of time on gambling and betting apps and websites.

## Gambling support services

For a young person, quitting gambling is not easy as it can be just as addictive as some illicit drugs. The good news is that there are many support services available for those with gambling problems, no matter how small or large the individual's problem may be. When helping another young person with a gambling problem, it is important to talk to the young person, avoid judgement and direct them to a service. It is crucial to remain calm, listen to what they have to say and understand the addictive nature of gambling. Directing the young person to the services outlined below may also be useful to assist them overcoming their gambling problem sooner rather than later. Some of the help services available for young people are detailed in the following text:

- **Gambling Helpline:** free 24/7 telephone counselling is available by calling 1800 858 858. There is also useful information available at their website [www.gamblinghelponline.org.au](http://www.gamblinghelponline.org.au).
- **National Debt Helpline:** assistance with financial difficulties is available by calling 1800 007 007 or visiting <https://ndh.org.au>.
- **Lifeline:** for 24/7 support with any personal difficulties or distress, speak to a telephone counsellor by calling 13 11 14. There is also online help available at [www.lifeline.org.au](http://www.lifeline.org.au).
- **Gamblers Anonymous:** share experiences and work towards recovery from a gambling addiction with others by joining a meeting. Details available at <https://gaaaustralia.org.au>.
- **SMART Recovery:** details on self-management and recovery training are available at <https://smartrecoveryaustralia.com.au>.



**Figure 4.25:**

A gambling addiction is difficult to break without the availability of support services.

### Internet activity

Log on to TitanOnline to complete Activity 4.3 to create a resource about young people and responsible gambling.

### Learning activity

1. Examine marketing strategies to determine the influence they have on young people's attitudes, behaviour and perceptions in relation to gambling.
2. What gender-based messages do these marketing strategies employ to target males and females?

# Violence

Young people in Australia may experience, witness or be perpetrators of violence.

These experiences can have significant impacts on a young person's quality of life, mental health and safety. Violence in Australia is often linked to other risky behaviours, such as involvement in illicit drugs, smoking, alcohol and reckless behaviour. Although violence is often associated with physical abuse, violence may be emotional, sexual, financial and/or physical. People all of ages, races, genders and religions may be at risk of violence. However, there are several groups that experience violence more than others. Young women and young men may be at significant risk of violence. Young women are most likely to experience physical violence in their own home, while men often experience physical violence in public places. Those who are Aboriginal or Torres Strait Islander, culturally and linguistically diverse, have a disability or identify as a part of the LGBTQI community, may also be at risk of experiencing particular types of violence within the community.

## Violence against women

Violence against women has been a factor in Australian history and culture. The UN refers to violence against women as “any act of gender-based violence that causes or could cause physical, sexual or psychological harm or suffering to women, including threats of harm or coercion, in public or in private life”. Women are more likely to be victimised by men who they know, such as their current or previous intimate partners, boyfriends or dating partners. However, the statistics of violence against women in Australia overall are alarming. Since age 15, one in three Australian women have experienced physical violence and one in five have experienced sexual violence. Stranger violence against women is also high, with one in ten having experienced violence by a stranger and one in six females have reported being stalked by a man. Sexual harassment and sexual assault may therefore be experienced by many young females. Sexual harassment and assault involves any unwanted sexual behaviour that is offensive, humiliating or intimidating, which may include any action inappropriate staring and/or in or assault. Both sexual harassment and sexual assault are illegal and not okay or justifiable. The historic imbalances of power in society has often resulted in females feeling guilty or ashamed for experiencing violence. There is no excuse for violence against women, and it is important for any victimised female to talk to a trusted source and seek out to other support networks for further help.



**Figure 4.26:**

There is no excuse for violence against women.

## Domestic violence

Family, domestic and sexual violence is a huge health and welfare issue within Australia. Domestic violence can take place in many different forms and can have significant lifelong impacts for victims and dependants such as children and perpetrators. For children in particular, exposure to domestic violence can have a huge negative impact on the child's capacity to learn, engage in positive future relationships, overall health and wellbeing and engagement in the community and work. Domestic violence is an ongoing pattern of abusive behaviour, where a person seeks to control and dominate another person such as a partner or child. The abuse from a domestically violent perpetrator may be physical, however it may also include or be combined with other forms of abuse. These other forms include sexual, emotional, social and financial, which can be even more difficult to recognise and identify. The continual abusive behaviour undermines the victim's confidence in their daily life, as well as their ability to leave the violent person. It is also common for the abuse to progressively get worse over time, and for the relationships to be filled with extreme highs and extreme lows.

Examples of domestic violence may include:

- isolating a victim from family and friends
- controlling their access to money and purchases
- diminishing their self-esteem
- preventing them from practising their religious beliefs
- intimidating them
- threatening them
- name calling and belittling
- physically slapping, hitting, grabbing, scratching or throwing objects to cause harm.

Any person, may be a victim or perpetrator of domestic violence. Females and children are most often the victims of domestic violence at the hands of a male, with on average, one woman per week murdered by a current or former partner in Australia. According to AIHW, domestic violence is the leading cause of women and children's homelessness in Australia. However, it is important to consider the common types of violence prevalent in Australian society and provide support and services for all victims. People all of genders may experience domestic violence, however Australian women are nearly three times more likely than men, to experience violence from an intimate partner. Indigenous Australian women in particular are 32 times more likely to be hospitalised for family violence than non-Indigenous people. For those in LGBTQI relationships, the data on domestic violence is minimal, however there are suggestions that it occurs at relatively similar levels to heterosexual relationships.

Despite the hurt and pain domestic violence can cause, young people experiencing domestic violence may not leave abusive situations. There are many reasons for this. Young people in these situations may not have the support and the financial means to leave, they may not recognise early warning signs or they may want to protect others in the household. The abuser may make threats that if they do leave they will hurt them, their family or themselves, and the young person may feel like the abuse is their fault.

## Violence among young males

Despite also being at risk of domestic and family violence, young men in Australia are at most risk of violence from other men. Often this is in public, with crowds and friends in the vicinity and from men who are unknown to them. Similar to other risks discussed in this chapter, some believe that violence among young men is linked with the adolescent brain still developing. The sections of the brain that control impulsive actions, risk taking and decision making are not fully developed. Often violence among young men is a result of a twisted view of masculinity, whereby violence and aggression are considered normal. This can be seen by reflecting on the types of messages young men receive and are exposed to every day from movies, television shows, sporting cultures, video games and porn. All of these tend to focus on male physical dominance, control and power.

Violence among young males in Australia is often enabled by alcohol and peer pressure. Violence tends to occur or be escalated with increased intoxication later at night. Relatively innocent actions such as a bump, talking to someone's partner, or telling someone to calm down, can be perceived as an action with negative intentions. This can quickly lead to verbal and physical altercations and fights.

The most significant and concerning aspect of violence among young Australian men is the coward punch, with 94 per cent of coward-punch victims being male. A coward punch is a deadly knock to the head, usually from behind. The victim doesn't see the punch coming, and therefore has no time to defend themselves. Since 2000, over 130 people have died from a coward punch, with many others left injured. Coward punches usually occur on weekends, at homes, pubs and clubs with alcohol involved.



**Figure 4.27:**

Violence against young males is often enabled by alcohol and peer pressure.

### Internet activity

Log on to TitanOnline to complete Activity 4.4 to create a health promotion campaign against violence among young people.

### Learning activity

1. Discuss why it can be difficult for a person experiencing domestic violence to leave a violent relationship.
2. Explain the difference between sexual harassment and sexual assault.
3. Outline the actions that can be taken to address issues of sexual harassment in the workplace.
4. Research and identify the support services available for young people experiencing violence.
5. Select a group of young people at risk of experiencing violence. Describe ways to increase their safety, health and wellbeing.

## Case study – Coward punch

At 3.29 am on a Sunday morning, Nick Pace dialled triple zero while his best friend laid next to him, dying. At only 18 years old, Cole Miller was a victim of an unprovoked coward punch attack in Brisbane.

Nick and Cole had been enjoying themselves bar-hopping for most of the night when, just after 3 am, they realised they wouldn't be able to get back into the club due to local lockout laws. Instead, they decided to take a seat to figure out whether they would find somewhere still open or work out a way home. This is when a group of six young men approached them.

This group had also been drinking, and were highly intoxicated. They had visited multiple bars and were kicked out of several. One man in particular, named 21-year-old Daniel Maxwell, had arguments with security guards, became increasingly aggressive and picked fights with strangers.

Reportedly, Maxwell asked his mates, "Do you want to see something funny?"

He then proceeded to ask Nick and Cole if either of them were keen for a clean one-on-one fight. Nick later told police that he wasn't sure if Maxwell was joking or being serious. Neither of them responded, and instead tried to ignore the group and move on. Unfortunately, this tactic was not successful.

Maxwell punched Cole in the chest and turned to face Nick. Nick reported that he was shocked and didn't fight back. A second member of the group, Armstrong Renata, circled around and coward-punched Cole in the head, so hard and unexpectedly that he was completely knocked out. Cole's head hit the concrete and began bleeding intensely. One of the other men from the group tried to help Nick, with other first responders and paramedics arriving swiftly.

Despite the medical team's best efforts, there was nothing that could be done for Cole. He had suffered massive brain trauma, and the Miller family made the difficult decision to turn off his life support. Cole was described by his family as a beautiful, brave young man with his whole life yet to be lived. He had been a successful water polo athlete, who was following the footsteps of his older brother and working towards making the Olympic team.

After Cole's death, Maxwell pleaded guilty to assault and affray, and was given an 18-month prison sentence. As he had been visiting Australia on a visa, he was also deported back to New Zealand. Renata pleaded guilty to unlawful striking causing death, and sentenced to seven years in prison.

1. The attack that happened to Cole is unfortunately not uncommon among Australian youth. Discuss possible reasons for these events occurring.
2. Identify any actions that could have prevented the attack from happening.
3. Propose strategies that could help address the issue or reduce rates of unprovoked violence.



**Figure 4.28:**  
Cancer can affect all age groups.

## Cancer

Cancer is a disease involving growth of abnormal cells and the uncontrollable cell growth in the body. The abnormal cells can cause serious damage or invade surrounding tissues. While cancer affects all age groups, the important message for young people is they need to develop knowledge and behaviours that best promotes cancer prevention. For young people in Australia, receiving a cancer diagnosis is rare and cancer survival is high. However, if cancer does occur, it has huge impacts on a young person's life, as it may cause death, disability or impact ongoing quality of life for the young person, their friends and family. Those who have cancer at a younger age are also at a higher risk of developing a second cancer later in life than those who have never had cancer.

There are several different risk factors that differ for certain types of cancers. Some risk factors for cancer are related to lifestyle or environment, while others are related to family history, inherited factors and genetics. It is important to focus on the controllable aspects of preventing cancer, which include living a health and balanced lifestyle. Avoiding tobacco use, heavy alcohol consumption and excessive UV radiation is recommended, in addition to a healthy diet and physical activity. It is very important to check in with a doctor regularly, particularly if a young person has any signs or symptoms of cancer. Having regular checks by health professionals, such as cervical screening tests, bowel checks and skin cancer checks, as well as self-examination for breast and testicular lumps, lead to early diagnosis and improved survival rates.

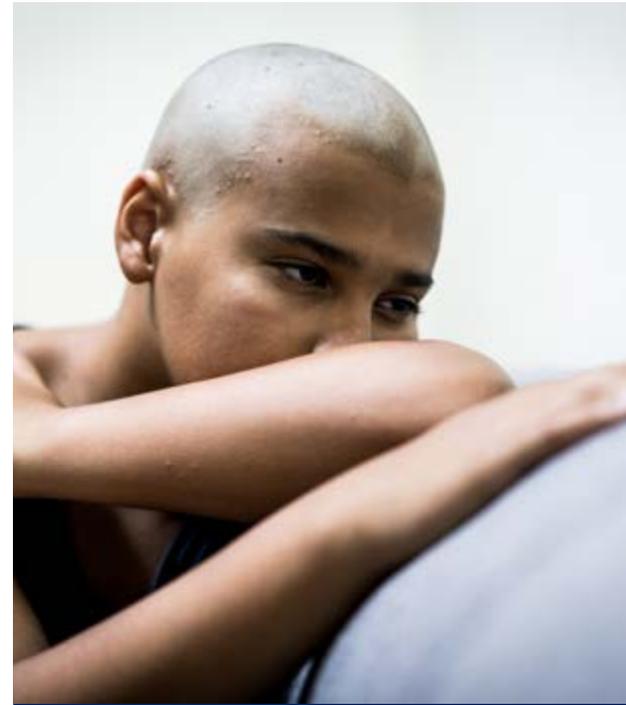
## Gender factors related to cancer

The incidence and types of cancer affecting Australians differ for males and females. In 2019, an estimated average of 396 cancer cases were diagnosed each day and an estimated 136 people died from cancer each day. The rate for survival at least five years after diagnosis continues to increase dramatically and mortality rates of those with cancer is declining. However, cancer still accounts for three in every 10 deaths in Australia. Aboriginal and Torres Strait Islander people and people in lower socioeconomic groups both have lower cancer survival rates than other Australians. To give the best chance of survival of cancer, early detection is crucial. This allows for treatment to be implemented in the early stages of cancer development, before it spreads throughout the body.

When the statistics of cancer prevalence and mortality are addressed, most often the data for males is higher than females. This does not include breast cancer, which is much higher for females. For the three most common cancers for men and women; bowel cancer, melanoma and lung cancer, men are considerably more likely to be diagnosed and die from these cancers.

- **Bowel cancer:** 55 per cent of people diagnosed are male.
- **Melanoma:** over 65 per cent of deaths for were male in 2018.
- **Lung cancer:** approximately 60 per cent of deaths were males in 2019.

While these cancers are the most common, they are actually among the most preventable. Prevention is key when identifying reasons for rates being higher for men than they are for females. This increased likelihood of cancer in males may be due to poor lifestyle choices such as smoking, being overweight or obese and/or excessive drinking. The Cancer Council Australia also found that males are much more likely to neglect sun protection, compared to women. These risky behaviours can contribute to an increase risk of a cancer diagnosis for males, who are then more likely to avoid engaging in medical check-ups and tests that can detect early abnormalities. When these checks are regularly completed by Australians they are more likely to avoid a possible diagnosis later in the development of the disease, and therefore have a higher chance of survival.



**Figure 4.29:**  
An average of 396 cancer cases are diagnosed in Australia each day.



**Figure 4.30:**  
Early detection of cancer increases the chance of survival.

## Skin cancer

Australia has some of the highest rates of melanoma in the world. Melanoma is often referred to as 'Australia's national cancer'. Skin cancer is the most common cancer affecting Australian young people, with suggestions that there is roughly one skin cancer diagnosis every half an hour in Australia.

In 2019, Australian women were estimated to have a one in 21 chance of being diagnosed with melanoma before the age of 85, whereas men were estimated to have a one in 14 risk. There is also a more marked increase in melanoma for men than women over the past 40 years. Men also have double the mortality rate for melanoma than women.

Skin cancer occurs when the skin cells are damaged by overexposure to ultraviolet (UV) radiation from the sun. There are three types of skin cancers, two of which are non-melanoma and are less dangerous, these are called basal cells carcinoma and squamous cell carcinoma. Melanoma is the third type of skin cancer and is much more deadly. Each form of skin cancer may have different symptoms, but often involve changes to an existing mole or the appearance of a new spot. These changes may include, a change in colour of the mole, increased size of the mole, irregular shape of the mole, raising of the mole and/or itching and bleeding of the mole. If a mole or spot is of concern, a biopsy will need to be taken, and it may need to be surgically removed.

### Risk factors for skin cancer

The cause of skin cancer is almost always due to risky behaviour in relation to sun exposure. Some of the most common risk factors of skin cancer include unprotected sun exposure and a history of childhood tanning and sunburn. Young people are often ignorant to the potential risks of sun exposure in their youth, and may create negative sun-related habits in their adulthood.

The ways many young Australians to sun exposure is often reflected in stereotypical beauty views. Many young people deliberately spend hours in the sun to develop a tanned complexion. Extended exposure to the sun increases the risk of developing skin cancer. Many young people are often under the false impression that tanning beds or tanning products that contain a SPF will protect them from skin damage. In addition, because skin cancer and aging skin are often associated with older people, so young people do not appreciate the risks of sun exposure. The Australian outdoor lifestyle also increases the risk of skin cancer in a warm climate.

### Did you know?

Two in three Australians will be diagnosed with skin cancer by the age of 70.



**Figure 4.31:**

The cause of skin cancer is almost always due to risky behaviour in relation to sun exposure.

### Protective factors for skin cancer

Young people must protect their skin and eyes as much as possible in order to avoid developing skin cancer. There are many ways for young people to protect their skin and eyes, and it is recommended to make these protective factors habits every day. The cancer council recommends combining several sun protection measures, particularly when the UV level is 3 or above. Some of the best sun protection tips include:

- Slipping on sun-protective clothing to cover as much skin as possible.
- Slapping on broad spectrum, water resistant SPF50+ sunscreen, 20 minutes before going outdoors and reapplying every two hours.
- Slapping on a hat to protect the face, head, neck and ears.
- Seeking shade when possible.
- Sliding on UV protective sunglasses.
- Avoiding being out in the middle of the day when UV levels are most intense.



**Figure 4.32:** Wearing sun-protective clothing and sunscreen helps protect against skin cancer.

### Learning activity

1. Explain the high rates of skin cancer in Australia.
2. Reflect on a day outdoors during warm weather and what the typical activities may look like. Identify and discuss the protective factors for sun exposure that could be taken.
3. Create a catchy jingle or slogan to remind young people about sun exposure and skin cancer.
4. Create a device, piece of technology or other creative object that can assist young people with sun protection and prevention of skin cancer. Sketch the creation and describe how it would be used.

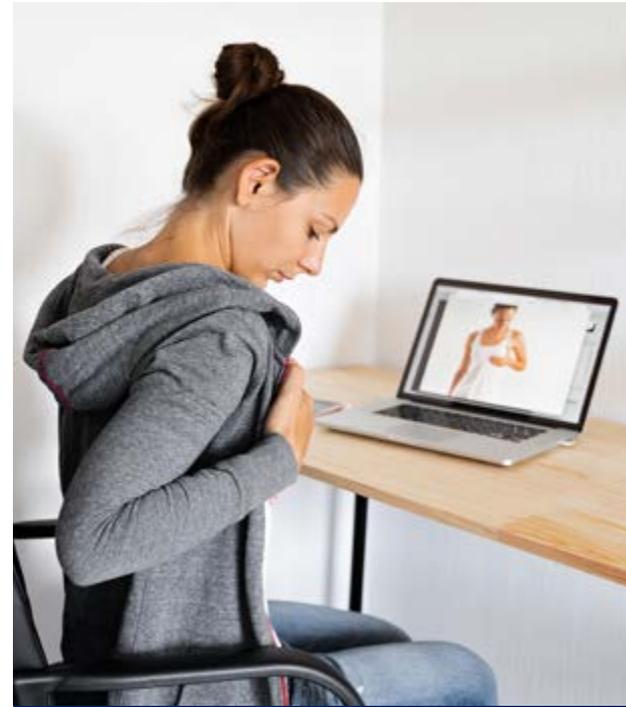
## Breast cancer

Breast cancer is the most common cancer diagnosed in Australian women. On average, 53 people are diagnosed with breast cancer every day. Both males and females can develop breast cancer, however it is more common among women. For young Australian women, a breast cancer diagnosis is relatively rare, however breast cancer is the second leading cause of cancer death in Australian women. Young women who are diagnosed with breast cancer may experience different characteristics of the cancer and different survival outcomes than older women. The survival rates of five to 10 years of those who have had breast cancer continues to increase, however younger women are more likely to have poorer survival outcomes.

There are several risk factors for breast cancer, some of which can be modified, while others cannot be changed. The risk of developing breast cancer increases with age. Approximately 80 per cent of new breast cancer cases are in women over 50 years of age. Those who have had close, direct family relatives may have an increased risk of developing breast cancer, or inheriting a faulty gene that is linked to breast cancer. Other significant risk factors for breast cancer include the following:

- **Pregnancy:** women who have not had a full-term pregnancy or who have their first child after age 30 have a higher risk of developing breast cancer than those who gave birth under 30 years of age.
- **Menstrual history:** women who begin menstruation under 12 years of age have a higher risk of breast cancer.
- **Contraceptive pill:** there may be a risk of the oral contraceptive pill increasing the risk of breast cancer. For young women, this risk is considered small.
- **Dense breasts:** women with dense breasts have a greater chance of developing breast cancer. Having dense breasts means that the breasts are made up mostly of glandular and fibrous tissue, and less fatty tissue.
- **Lifestyle factors:** including being overweight and obese, drinking alcohol and smoking.

Females can protect themselves from an increased risk of developing breast cancer by focusing on living a healthy and balanced lifestyle, including moderate intensity exercise. For young women who give birth, breastfeeding can also lower the risk of breast cancer. For young women who are at an increased risk of breast cancer, there are medical options available to reduce risk.



**Figure 4.33:**  
On average, 53 people are diagnosed with breast cancer everyday.



**Figure 4.34:**  
The risk of breast cancer increases with age.

## Ovarian cancer

The ovaries are part of the female reproductive system and contain the cells to create eggs, as well as produce the hormones oestrogen and progesterone that regulate the menstrual cycle. Approximately 1580 Australian women are diagnosed with ovarian cancer each year, most over the age of 50 years. However, there are cases diagnosed in younger women. The five year survival rate of ovarian cancer sits at 46 per cent. Research and fundraising continues for a screening process and improved treatment options.

Ovarian cancer has many symptoms, some of which include abdominal bloating, feeling full quickly after eating, frequent need to urinate, and back, abdominal and pelvic pain. Hereditary factors account for approximately 20 per cent of ovarian cancers. These hereditary factors may include inheriting the faulty BRCA1 or BRCA2 gene, being of Ashkenazi Jewish descent, having an early onset of periods (before 12 years), late menopause and not having had children or had their first child after the age of 35.

Women may be able to reduce their risk of ovarian cancer by giving birth, having their ovaries and fallopian tubes surgically removed, having, or using oral contraceptives. However, these methods are understandably not suitable for all women. Women can have tests and scans done to identify cysts and tumours. These may include physical examinations, blood tests, pelvis ultrasounds, CT scans, PET scans and colonoscopy.

## Cervical cancer

The cervix is the lower part of the female uterus, connecting the vagina to the uterine cavity. Importantly, cervical cancer is one of the most preventable cancers and the five year survival rate for cervical cancer is much higher than ovarian cancer, sitting at 74 per cent. Cervical cancer is increasingly preventable due to the Cervical Screening Test. The Cervical Screening Test detects human papillomavirus (HPV), which is a common infection that can cause damage and changes to cervical cells that may lead to cervical cancer. The test is more effective than pap smears at preventing cervical cancer, as pap smears only look for changes in the cervix that have already occurred. In fact, the cervical cancer death rates in Australia have halved since the National Cervical Screening Program began in 1991.

The symptoms of cervical cancer commonly include vaginal bleeding between periods, heavier or longer menstrual bleeding, unusual vaginal discharge, bleeding after intercourse and/or pain during intercourse. As discussed previously, HPV is the biggest risk factor for cervical cancer. Around eight in 10 women will become infected with genital HPV in their lifetime, however most women who have HPV will not develop cervical cancer. Another main risk factor for cervical cancer is smoking, with factors such as a weakened immune system being related to cervical cancer.

It is very important for young women to be aware of when they need to have a cervical screening. The cervical screening routine commences for women at age 25, and should be repeated every five years.

## Prostate cancer

Prostate cancer is the most common cancer diagnosed in Australian men. Prostate cancer occurs when abnormal cells develop and multiply in the prostate, a small gland that sits below the bladder. The prostate is responsible for producing most of the fluid that makes up semen. Prostate cancer can be a slow growing disease, and many men may live years before realising they have it. This form of cancer remains a significant health risk to men however, with approximately 3,500 men dying from prostate cancer each year, more than the amount of females that die of breast cancer.

Young males may not experience any symptoms of prostate cancer in the early stages of the disease, however some symptoms may include:

- frequent need to urinate
- difficulty, discomfort or pain when urinating
- blood in urine or semen
- lower back, upper thigh or hip pain.

Similar to other health conditions and cancers, there are both risk and protective factors for prostate cancer. The risk factors include the following:

- **Age:** males over 65 years of age are most likely to be diagnosed with prostate cancer.
- **Diet:** a diet of highly processed meat and foods can increase risk of prostate cancer.
- **Lifestyle:** stress and an inactive lifestyle, as well as obesity, can contribute to the risk of prostate cancer.
- **Family history:** having a first-degree male relative with prostate cancer may mean an individual has a higher chance of developing it.
- **Genetics:** research suggests that changes to certain chromosomes may be linked to prostate cancer.

There are no proven measures to prevent prostate cancer. However, engaging in positive and healthy lifestyle choices and behaviours relating to diet, exercise and minimisation of drugs and alcohol, will promote overall health and wellbeing and increase the body's ability to possibly reduce risks of illness.

## Testicular cancer

For young Australian males, testicular cancer is the second most common cancer. The rate of men diagnosed with testicular cancer has grown by more than 50 per cent over the past 30 years and the reason is unknown. Importantly though, the five year survival rate for testicular cancer is 98 per cent and testicular cancer is highly treatable and curable.

The most common symptoms of testicular cancer is a painless swelling or lump in the testicle. Other symptoms may include feeling of heaviness in the scrotum, change in shape or size of the testicle and back pain. Factors such as an undescended testicle (testicle has not moved into its proper position) as an infant and a family history of testicular cancer may increase the risk of the cancer. There is also no link between testicular cancer and injury to the testicles, sporting strains, hot baths or wearing tight clothes.

### Internet activity

Log on to TitanOnline to complete Activity 4.5 to research the issues surrounding testicular cancer and young men.

## Gender issues and sport

Women stand to experience all the benefits from participation in sport that men do. Better physical and social health, as well as improved confidence, self-esteem and mental health, all flow from engaging in an active, sporting lifestyle. Unfortunately, a range of factors impact upon the decisions that females make about engaging in sport, resulting in reduced rates of participation and representation. There has been recent positive changes in community attitudes, remuneration and media coverage of women's sport, which in turn is resulting in more opportunities available for women in Australia.

### Female participation in sport

Sport participation is an important protective factor for the health of young Australians. Participation in sports provides opportunities to increase physical, social, emotional and mental health. Traditionally, females have been limited in their choices of sports and participation has been statistically lower than men's participation. However, despite many common perceptions of girls' physical activity participation being less than boys, the AusPlay Focus Survey has found that Australian girls are just as active as boys.

Females are more likely to be involved in non-sport based activities such as walking, swimming, gym, Pilates and yoga, and/or stereotypically feminine sports such as netball, dance and gymnastics. Female participation in physical activity is therefore more likely to be less intense and shorter in duration when compared to the types of physical activity males participate in. Female participation in sport is increasingly significantly due to significant societal changes in gender norms, along with the development of female participation initiatives, programs, competitions, and encouragement for young girls.



**Figure 4.35:** Female representation in sports such as Australian football is increasing.



**Figure 4.36:** Females are more likely to be involved in stereotypically feminine sports such as netball.

There are several reasons for the lower participation rates of females in sport. Some of which include the increasing commitment to academics and work-related activities as girls age, which reduces the time available for participation. Many females also begin dropping out of sport or choosing to participate less in sport due to body image and decreased confidence in sporting ability and competence. Social stereotypes are also a negative barrier preventing the participation of girls. This is due to the stereotyping of feminine and masculine behaviours and sports. Females have traditionally been encouraged to participate in different sports and activities to boys, who are encouraged to participate in a wider range of sports, such as those involving more risk and contact. These sports such as cricket, Australian football, rugby, and even extreme sports such as motocross, have been viewed as too risky and dangerous for females.

Females require strong social support and encouragement to participate, and having strong female sporting role models is a very important aspect of encouraging sport participation. This need for female representation is present in sports such as Australian football, where since the initiation of the NAB AFL Women's Competition in 2017, participation levels of females in the sport skyrocketed, so much so that females now make up 30 per cent of all participation in Australian football. In addition, the announcement of the Women's Soccer World Cup being hosted by Australia and New Zealand, is predicted to significantly increase the participation rates of young girls in soccer within Australia.

## Equity in professional sport

Despite significant increases in female sport participation, professional female athletes still experience significant inequality. The coverage of women's professional sport receives less air time, especially peak viewing time. Female athletes do not often receive equal pay, compared to male athletes. This is significant, as the lower pay rates may require female athletes to engage in secondary employment, thereby minimising the available time for training. This in turn impacts the level of performance they are able to achieve. Even in sports such as netball, where Australian women have had a high profile and a strong history of international success, athletes are still paid at lower levels. When female athletes are paid less, it becomes more difficult for them to participate at higher levels, resulting in less role models to encourage and motivate young girls. Both the lower coverage and lower pay for female athletes creates a cycle where there may be less participation of female athletes in junior levels, which in turn leads to lower participation in adult years.

### Learning activity

1. Report on professional sport coverage where there has been recent progress in terms of equity.
2. Explain the impact that female role models can have on young female athletes.
3. Suggest reasons for the inequity experienced by women in sport and why that is representative of other inequalities in society.

## Revision questions

1. Describe three key points about the health of young Australians.
2. Explain the impact of stereotypes on the health of young people, as presented in the media.
3. Describe how body image impacts a young person's self-esteem and general wellbeing, even more so that later in life.
4. Describe the different rates of participation in sport for young people and suggest reasons for the differences.
5. Outline a range of strategies that young people could follow to reduce the chances of becoming a victim of street violence.
6. Describe five different examples of behaviours that could be defined as domestic violence.
7. Explain how advances in technology have contributed to the incidence of problem gambling.
8. Outline behaviours that lead to the early diagnosis of cancers that can impact young people.
9. Suggest strategies that you believe might be effective to address stress, mental health or self-harm issues.
10. Explain the warning signs of self-harm and outline what friends and family can do if they observe these signs.
11. Research the COVID-19 infection and death rates for Australia.



## CHAPTER 5

# Mental health and wellbeing

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Mental health issues impact a significant sector of Australian society. This unit includes information and relevant statistics surrounding a range of mental health issues, including eating disorders, depression, anxiety disorders, bipolar mood disorder, schizophrenia and stress. It addresses the nature of each illness, signs and symptoms and treatments that are available. It also discusses aspects of body image, self-concept and self-esteem and how they impact mental health status. Students will become familiar with networks of support and resources there to help people battling with mental illness. They will explore a range of strategies that enable them to look after their mental health and appreciate the importance of resilience. It addresses the issue of mental illness stereotyping in the community and how to destigmatise mental health issues.

### Focus areas

- Understanding mental health
- Looking after your own mental health
- Support for mental health issues



**Figure 5.1:**

A person with positive mental health will be able to deal with everyday activities such as interacting with friends.

## Understanding mental health

Mental health involves the state of mind, referring to how a person thinks or feels and their ability to cope with the world around them. A person with positive mental health will be able to deal with everyday activities such as completing school work and positively interacting with friends and family. Someone with a mental health issue may have difficulty with these processes.

Mental health issues are particularly common in Australia, with about one in five people experiencing an illness in any 12 month period. There are a range of influences that contribute to the cause of mental health issues including biological factors, early life factors, recent life events, internal factors and the misuse of drugs. These can include:

- genes that are passed on from parents
- recurrent recollections of a traumatic event
- persistent stress or worry
- negative thoughts and feelings
- side effects from alcohol or drug abuse.

### Internet activity

Log on to TitanOnline to complete Activity 5.1 and explore recent statistics and trends of mental health issues throughout Australia.

Over the past 20 years, mental health issues have become more prominent. However, it has only been in recent years that people have started to take notice and appreciate mental health issues as a significant impact on the health of many Australians.

The stigma around mental illness has been that if a person is suffering from mental health issues, somehow they are weak, drug addicted or attention seekers, which is not necessarily the case. Some people look down on sufferers and may have an ‘it could never happen to me’ attitude. In fact, mental health issues are much more common than people probably think. There are a number of different mental health issues that affect the health and wellbeing for individuals. More common examples are depression, anxiety, bipolar mood disorders, schizophrenia and eating disorders. The various types of mental health issues can be classified as psychotic or non-psychotic, depending on the presented symptoms. Mental health issues most commonly affect an individual’s thoughts, feelings, behaviours and attitudes to various experiences and circumstances.

A psychotic illness is a severe mental disorder that causes abnormal thinking and perceptions. People with psychosis lose touch with reality. They can experience distortions, hallucinations and confusing thoughts that may cause them to see or hear things that aren’t actually there. The cause of this illness is not known, although some people may be born with a genetic predisposition to develop psychosis, which can be triggered by a variety of factors such as stress, other mental illnesses, puberty or alcohol and drug use.

Psychosis is more likely to occur in teenage years and usually only lasts for a brief time, but some may suffer with psychosis as a long-term illness. The illnesses that are categorised as psychosis include schizophrenia, bipolar disorder, delusional disorder and depression with psychotic features.

The symptoms of a psychotic illness include:

- delusions
- hallucinations
- confused thinking
- mood swings.

Non-psychotic illnesses are conditions of the mind that influence how a person thinks, feels and acts. Sufferers can experience problems with anxiety, stress and depression.

Non-psychotic illnesses are usually triggered by traumatic experiences. The types of non-psychotic illnesses are categorised as non-psychotic including anxiety, obsessive compulsive disorder and eating disorders.

The symptoms of a non-psychotic illness include:

- excessive worrying
- social withdrawal
- loss of concentration
- withdrawal
- restlessness
- irritability
- feelings of worthlessness

### Internet activity

Log on to TitanOnline to complete Activity 5.2 to explore the available health services for those suffering



**Figure 5.2:**

Anxiety and phobias are categorised as non-

# Depression

Depression is a mental illness that affects the way a person feels. Sufferers usually experience low moods for long periods of time and these periods of sadness are sometimes without any apparent reason. A person who has depression may experience feeling persisting sadness, loss of motivation, withdrawal from normal activities, feelings of worthlessness and impaired thinking and concentration.

There are different types of depression including major depression, melancholia, psychotic depression and postnatal depression.

- **Major depression**, or clinical depression, is categorised as a mental disorder of frequent low moods and loss of interest in activities. This form of depression interferes with functioning in everyday life, including social relationships and educational performance. Episodes can last for days or weeks.
- **Melancholia depression** is categorised as severe depression that causes a complete loss of interest in almost everything. One of the major differences in this type of depression is the observable physical symptoms that are present. A person with melancholia may have poor cognitive skills. They lack concentration and have problems with motor skills.
- **Psychotic depression** is categorised as severe depression with psychotic features such as delusions or hallucinations. A person may believe that they are a bad or evil person or that someone is watching and following them. A person with psychotic depression could also suffer from severe social impairment and poor cognitive processing.
- **Postnatal depression** affects women, who have an increased chance of developing depression throughout pregnancy and in the first year after birth. While adjusting to their newborn, many women experience 'baby blues' where they feel more stress, have mood swings and are more tired. However, for some women, this develops into a more severe and prolonged depression known as postnatal depression. These symptoms of depression will last more than a week or two and can affect the ability to care for a baby and the relationship that the mother has with the baby.

The signs and symptoms of the various types of depression can be categorised as psychological, behavioural and physical, as outlined in Table 5.1 on the following page.



**Figure 5.3:**  
People with depression usually experience low moods for long periods of time.

## Internet activity

Log on to TitanOnline to complete Activity 5.3 by investigating depression and proposing positive strategies to help individuals.

## Internet activity

Log on to TitanOnline to complete Activity 5.4 and evaluate the medical treatments used to treat depression.

**Table 5.1:** Signs and symptoms of depression.

<b>Psychological</b>	<ul style="list-style-type: none"> <li>▪ Feeling overwhelmed.</li> <li>▪ Irritability.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Low confidence.</li> <li>▪ Feeling of worthlessness.</li> </ul>
<b>Behavioural</b>	<ul style="list-style-type: none"> <li>▪ Withdrawing from friends and family.</li> <li>▪ Acting anti-socially.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lower academic performance.</li> <li>▪ Giving up usual activities.</li> </ul>
<b>Physical</b>	<ul style="list-style-type: none"> <li>▪ Lower energy, fatigue.</li> <li>▪ Insomnia.</li> <li>▪ Difficulty concentrating.</li> <li>▪ Slowed bodily functions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Headaches and muscle pains.</li> <li>▪ Feeling sick or run-down.</li> <li>▪ Significant weight loss or gain.</li> </ul>

## Causes of depression

There are a range of factors associated with the development of depression, including life events, personal factors and changes in the brain, as outlined in Table 5.2.

**Table 5.2:** Causes of depression.

<b>Life events</b>	<ul style="list-style-type: none"> <li>▪ Losing a job.</li> <li>▪ Long-term unemployment.</li> <li>▪ Bad news, e.g. death of a loved one.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stress.</li> <li>▪ Abusive relationship.</li> <li>▪ Isolation or loneliness.</li> </ul>
<b>Personal factors</b>	<ul style="list-style-type: none"> <li>▪ Heredity.</li> <li>▪ Personality, e.g. perfectionism, low self-esteem.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Medical illness.</li> <li>▪ Drug and alcohol abuse.</li> </ul>
<b>Changes in the brain</b>	Changes can occur in the level and activity of the chemicals in the brain that affect both mood and motivation. These changes can affect brain chemistry and cause severe depression.	

### Learning activity

1. Summarise recent statistics on depression.
2. Research and report on celebrities who have recovered from mental health issues and have gone on to lead successful, healthy lives.
3. Compare and contrast media representations of mental health issues. Refer to specific examples in your response.
4. Create a poster to remind people who are experiencing mental health issues that they are valuable and not alone. Include contact details for professional and community support services on the poster.

## Treatment of depression

There are many effective treatments that are available for depression, including psychological treatment, medication and lifestyle alterations. Treatments are different for each person and circumstances should be assessed through a health practitioner.

Psychological therapy is usually the first source of treatment for a person suffering depression. This type of therapy includes psychologists and psychiatrists.

- **Cognitive behaviour therapy (CBT)** is a psychological treatment that works on altering negative thinking and behavioural patterns for people with depression. It also helps to recognise how negative thoughts and behavioural patterns can have an effect on how people feel. This treatment is effective for a wide range of people, in all age groups. It involves working with a therapist to understand and identify their lifestyle patterns that are likely to contribute to their depression. It puts importance on shifting the way of thinking and behaviour to a positive, healthy and problem-solving perspective.
- **Interpersonal therapy** focuses on personal relationships and developing the skills to resolve and cope with relationship problems. It recognises that a person's relationships have a significant impact on them and their mood. It works to help people identify the patterns in relationships that tend to enhance or decrease depression. Therapists provide techniques to resolve conflicts and increase support.
- **Mindfulness** involves working in collaboration with a therapist to focus on the current moment and thoughts to manage negative feelings.
- **Behaviour therapy** involves working with a therapist to identify the patterns in which their behaviour and feelings are linked. Therapists can suggest strategies to manage specific situations.

Medicinal treatment is usually moderate to severe depression. Medication can also be prescribed for mild depression. It is not always effective or not.

There are many different results from anti-depressant medication. Some will make a person feel better, some will not. A person's age, mood, and other factors can affect the results. While anti-depressant medication can help, they will not change the underlying causes. Side effects can include weight gain and



**Figure 5.4:**  
There are many treatments for depression.



**Figure 5.5:**  
Anxiety can interfere with daily life and make it hard for a person to cope.

## Anxiety disorders

While it is perfectly normal to be anxious occasionally, when the anxiety and fear is overwhelming and constant, it is classified as a disorder. These feelings can be ongoing and may continue without any particular cause, making them hard to control. Anxiety can interfere with daily life and make it hard for a person to cope.

A person suffering anxiety may experience:

- increased heart and breathing rate
- inability to relax or sit still
- muscle tension
- sweating
- shaking
- difficulty concentrating
- jittery feelings.

People experience anxiety disorders in many different ways. For some individuals, there are specific situations and experiences that directly cause an onset of many symptoms of anxiety disorders. For others, the occurrence of worry, tension and panic attacks are spontaneous. Specific types of anxiety disorders are outlined on the following page.

- **Generalised anxiety disorder** is categorised by excessive worrying and tension. Sufferers will feel stressed and anxious on most days, not just at certain times. Their worries may relate to aspects in their life such as work, family and money. It is also not uncommon for people with generalised anxiety disorder to feel worry for no apparent reason. These feelings affect their normal lives and ability to function.
- **Social phobias** develop from a fear of being judged by others and being embarrassed, criticised or humiliated in a social setting. People with social phobias may fear situations such as a performance situation where they may be required to give a speech, or a social interaction situation where they may be eating in a restaurant with friends.
- **Specific phobias** refer to a person having fear towards a specific situation or thing and avoiding situations where they may have to face the stimulus. They may be fearful of things such as thunder or travelling on an aeroplane. They react to these objects and situations by exaggerating the danger that is present to them. The fear that they feel is not balanced with the actual danger of the threat. People with a specific phobia usually know that their concerns are exaggerated, but believe that the anxiety they feel towards it is involuntary. When a person is faced with their phobia, they may have a panic attack. Panic attacks can cause strong sensations such as a racing heart, hot or cold flushes, shaking/trembling, sweating and/or fainting.
- **Obsessive compulsive disorder** is an anxiety disorder where a person has unwanted anxious thoughts that cause them to carry out certain behaviours or rituals. These are carried out to help control or get rid of the persistent thoughts. For example, a person may keep experiencing thoughts that they did not turn off their light and can cause them to repeatedly check even though they know it is off. These rituals may be time consuming and get in the way of performing everyday activities.
- **Post-traumatic stress disorder** is a reaction that a person can have after they experience or witness a traumatic event. They may have been in a situation where there were life-threatening circumstances that have made them feel fearful or helpless.
- **Panic disorders** is categorised as having repeated panic attacks. Panic attacks are moments of sudden fear causing intense anxiety, along with a strong physical reaction. A person with a panic disorder has persistent fear and is constantly worried about having a panic attack.



**Figure 5.6:**

Agoraphobia is specific phobia where a person afraid to leave environments they know for fear of having a panic attack.



**Figure 5.7:**

People with social phobias develop from a fear of being judged by others.

## Causes of anxiety disorders

There are a number of factors that can lead to the onset of anxiety. These include genetics, stressful events, health issues, personality factors and drug and alcohol use. Anxiety is commonly triggered by stress, although it is often a combination of these factors that lead to anxiety.

- **Genetics:** Family history and genetic predisposition can increase the likelihood of developing anxiety.
- **Stressful events:** Ongoing stressful events such as work stress, pregnancy, relationship issues, abuse and trauma or death can trigger the onset of anxiety.
- **Health issues:** Physical illness and medical conditions such as diabetes, asthma, anaemia and heart conditions can produce symptoms of anxiety.
- **Substance use:** The abuse of alcohol and drugs can cause many anxiety disorders, especially when someone is withdrawing from these substances.
- **Personality:** People with specific personality traits such as low self-esteem, a need for control and perfectionism can be more likely to develop anxiety.

## Treatments for anxiety

There are many types of psychological treatments that effectively treat anxiety. These treatments are the most successful as they help with recovery and also help to prevent the recurrence of the anxiety disorder. The most common type of psychological therapy is Cognitive Behavioural Therapy (CBT). The techniques used will help the patient differentiate between helpful and unhelpful stresses, learn how to manage worries, solve problems and practise relaxation and breathing techniques. They may also undergo behaviour therapy.



**Figure 5.8:**

People with low self-esteem can be more likely to develop anxiety.

### Internet activity

Log on to TitanOnline to complete Activity 5.5 and create an informative presentation that would benefit parents assisting their child to effectively manage anxiety.

### Learning activity

1. Distinguish between social phobias and specific phobias. Provide examples of each.
2. Describe how you could support a friend who is suffering one of the specific phobias.
3. Summarise recent statistics on anxiety disorders.

## Bipolar mood disorder

Bipolar disorder, also known as manic depression, describes an illness that causes extreme 'mood swings', from high and hyperactive to low and depressed. There are two major forms of bipolar that are separately diagnosed and have different symptoms, known as bipolar 1 and 2.

Bipolar disorder 1 involves a more severe mood episode, in which people experience mania. People with bipolar 1 have a longer-lasting 'high', abnormal behaviour and may have psychotic episodes. Bipolar disorder 2 gives milder symptoms, called hypomania. A person with bipolar 2 has a sustained mood that is high or low and does not have any psychotic symptoms.

The signs and symptoms of bipolar include:

- positive moods, feelings of confidence and energy
- energetic feelings, not wanting to sleep, racing thoughts
- rapid talking
- irritability, impatience
- inappropriate behaviour, reckless behaviour, saying shocking things, impulsiveness
- inability to concentrate
- racing thoughts, jumping ideas.

### Causes of bipolar mood disorder

The causes of bipolar mood disorder include genetic factors, brain chemicals and environmental factors.

- **Genetics:** Genetic factors are one of the causes of the condition, with bipolar disorder being inherited from parents.
- **Brain chemicals:** Bipolar disorder relates to an imbalance of neurotransmitters in the brain. It is thought that abnormal serotonin chemistry can cause mood swings.
- **Environmental factors:** Stress can cause bipolar symptoms. This can include stress, drug abuse, trauma and death.



**Figure 5.9:**

Bipolar mood disorder causes extreme 'mood swings' from high and hyperactive to low and depressed.



**Figure 5.10:**

Medication for bipolar mood disorder aims to stabilise an individual's mood and control their mood swings.

## Treatment of bipolar mood disorder

The main treatments for bipolar mood disorder are primarily medication and cognitive therapy. However, a suitable medication and treatment regime will vary from one individual to the next. The aim of using medication as a treatment is to stabilise an individual's mood so that they can live a 'normal' life that is not interrupted by manic or depressive episodes. The medication aims to control mood swings.

It is important that anyone taking medication for bipolar mood disorder regularly visits their doctor to have their treatment monitored. The Black Dog Institute identifies a number of strategies individuals suffering from bipolar mood disorder can use, regardless of whether they are on a medication plan or not. These include:

- **Daily mood graph:** recording one's mood and feelings each day in a personal diary.
- **Wellbeing plan:** plan of things that help an individual feel good. Certain things that may help include eating specific foods, forming a sleeping plan or exercise regime.
- **Relapse signature:** being aware of and recognising certain behaviours that indicate a manic or depressive episode is coming on. Examples of these may include:
  - becoming fixated on a specific goal
  - feeling fidgety or restless
  - becoming agitated
  - lacking motivation and focus.
  - not sleeping

### Internet activity

Log on to TitanOnline to complete Activity 5.6 to suggest strategies that would encourage individuals with mental health issues to fully participate in the workplace.

### Learning activity

Review the movie 'Silver Linings Playbook' and outline the way the issue of bipolar mood disorder is portrayed.

# Schizophrenia

Schizophrenia is a mental disorder that affects the brain's normal functioning. Sufferers' ability to act, see, feel and think is disrupted.

Their perception of reality can be altered.

They may develop psychosis and paranoia, seeing or hearing things that aren't actually there or feeling like they are being watched.

There are a number of signs and symptoms of schizophrenia, as detailed in the following text.

- **Delusions:** False beliefs held by a person that are not based on reality. They may think that they are being harassed or assaulted.
- **Hallucinations:** Involves seeing, hearing or feeling things that don't exist.
- **Confused thinking:** Disordered thinking, forming sentences that don't make sense and cannot be understood.
- **Abnormal behaviour:** Behaviour is impulsive, lacks focus or direction and prevents a person from functioning 'normally'.



**Figure 5.11:** People with schizophrenia may develop psychosis and paranoia.

## Causes of schizophrenia

There is no known single cause for schizophrenia, although like other mental disorders, there may be hereditary factors such as a genetic predisposition that contributes to an individual experiencing schizophrenia. It may also be triggered by environmental factors such as stress or drug abuse.

## Treatments of schizophrenia

The best way to treat schizophrenia is through a variety of medications and psychosocial therapy. As is the case for other mental health issues, medications must be prescribed by a doctor or other qualified healthcare professional. The aim of the medication is to restore the brain's natural balance of chemicals. Once psychosis has receded, health professionals can introduce programs that:

- develop social skills
- help to manage thought patterns, stress and recognise signs of relapse through psychotherapy
- support vocational options and training to enable employment
- support and educate the families of people suffering schizophrenia.

### Internet activity

Log on to TitanOnline to complete Activity 5.7 by evaluating the impact of schizophrenia on individuals and their carers.

## Eating disorders

An eating disorder refers to a person having obsessive thoughts about their body weight and food. It leads to unhealthy changes in behaviour, affecting a person both physically and psychologically. These changes can include dieting, limited eating (or not eating at all), avoiding going out with friends and peers, changes in mood and depression. The most common eating disorders, especially among young people, are anorexia nervosa, bulimia nervosa and binge eating disorder. While the exact causes of these disorders is difficult to pinpoint, there are genetic, psychological and social factors involved.

### Binge eating disorder

Binge eating disorder is categorised as frequently eating very large amounts of food within a relatively short time period. During a binge eating episode, a person will feel out of control and unable to stop themselves from eating. This is followed by feelings of guilt or shame. Binge eating disorder is Australia's most common eating disorder and many people with this disorder are overweight or obese.

There are many signs and symptoms of binge eating disorder, including:

- feeling bloated or constipated
- feeling tired
- always thinking about food and body weight
- low self-esteem
- increased sensitivity to comments about food or body weight
- secretive behaviour relating to food
- isolation and withdrawal.

### Bulimia nervosa

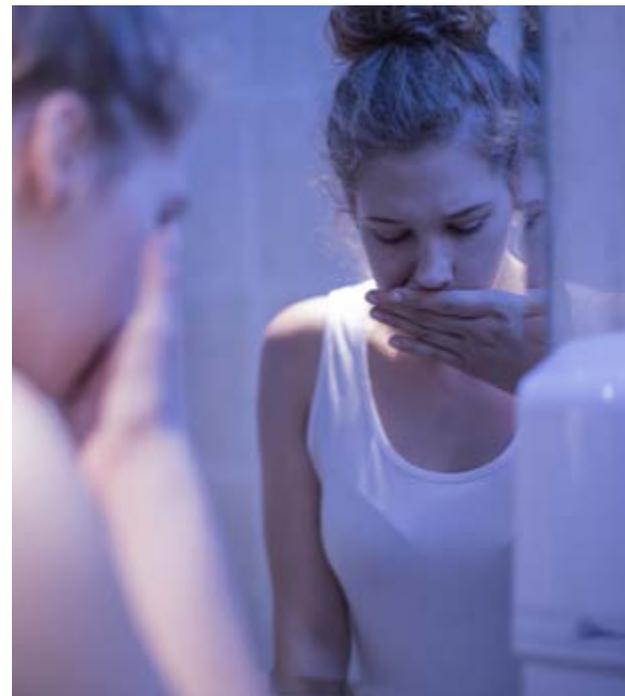
Bulimia nervosa is an eating disorder that involves repeated outbursts of binge eating, directly followed by compensatory, purging behaviours such as vomiting, using laxatives, fasting or excessive exercise. Bulimia can be caused by factors such as genetics, trauma, low self-esteem, stress, or a mental issue. In most cases, a person with bulimia will stay around the same weight.

Some of the symptoms of bulimia are:

- dehydration
- malnutrition
- gastrointestinal problems
- hair loss
- inflamed throat
- fainting.
- tooth decay



**Figure 5.12:** Binge eating disorder is Australia's most common eating disorder.



**Figure 5.13:** Bulimia nervosa involves outbursts of binge eating, followed by purging.

## Anorexia nervosa

Anorexia nervosa is categorised as an illness that restricts the ability to maintain a normal, healthy weight. The desire to be skinny has gone beyond being a lifestyle choice and become a mental health issue.

People suffering anorexia may also have a fear of gaining weight, placing themselves on restrictive diets and excessive exercise classes. Someone with anorexia will place a great deal of attention on their body image and will be constantly thinking about how they look. They may have unrealistic and distorted views of their body, seeing themselves as overweight when they are underweight. Anorexia often has more serious consequences than the other eating disorders, leading to malnutrition and other severe health problems. The causes behind the development and progression are different for each person but psychological influences are one of the main factors. It may also be brought on by stressful events, cultural pressure to be thin, brain chemistry or genetics.



**Figure 5.14:**  
Anorexia can lead to malnutrition and other severe health problems.

**Table 5.3:** Signs and symptoms of anorexia nervosa.

<b>Psychological</b>	<ul style="list-style-type: none"> <li>▪ Low self-esteem and perfectionism.</li> <li>▪ Fear of gaining weight.</li> <li>▪ Distorted body image.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Preoccupation with food, eating and body weight.</li> <li>▪ Depression and anxiety.</li> </ul>
<b>Behavioural</b>	<ul style="list-style-type: none"> <li>▪ Dieting.</li> <li>▪ Obsessive behaviours with food.</li> <li>▪ Excessive exercise.</li> <li>▪ Misuse of laxatives or appetite suppressants.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Secrecy around eating.</li> <li>▪ Avoiding social events.</li> <li>▪ Self-harm or suicide attempts.</li> <li>▪ Substance abuse.</li> </ul>
<b>Physical</b>	<ul style="list-style-type: none"> <li>▪ Rapid weight loss or frequent changes in weight.</li> <li>▪ Bloating, constipation.</li> <li>▪ Fainting.</li> <li>▪ Tired or lethargic.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Brittle hair and nails.</li> <li>▪ Pale skin and sunken eyes.</li> <li>▪ Growth of fine hair on face and body.</li> <li>▪ Easily cold, due to poor circulation.</li> </ul>

Anorexia will affect individuals differently, but the following side effects are what can generally be expected. These are long term and won't be present straight away.

- Anaemia (iron deficiency).
- Kidney problems.
- Loss of, or irregular, menstruation in women.
- Weakened immune system.
- Abdominal pain.
- Dehydration.
- Constipation, diarrhoea.
- Mood swings and depression.
- Heart problems.
- Osteoporosis (weakening of the bones).

## Treatments for eating disorders

The main elements of treatment for eating disorders are adequate nutrition, preventing purging behaviours and decreasing extreme exercise. Treatment plans are altered for individual needs, with psychotherapy (counselling) and medications the most common forms of treatment.

Treatment addresses the eating disorder symptoms, the health repercussions and the psychological, genetic and cultural factors that may cause an eating disorder. Treatment also involves nutritional counselling to educate the patient on choosing the correct foods.

### Learning activity

1. Compile statistics related to the prevalence of eating disorders in Australia.
2. Research and propose effective ways to support people struggling with eating disorders.
3. Write a short story about a teenager who appears to be developing anorexia. In your story, include some warning signs, behavioural changes, possible health issues and a support service or person that helped resolve the issue.
4. Discuss your story with a partner and have them identify the warning signs, behavioural changes and other sources of stress in the scenario.

## Issues impacting eating disorders

There are certain aspects of an individual's life that may contribute to the development of an eating disorder. Often specific causes are not identified, but a combination of genetic, psychological and environmental factors are found to negatively contribute to individual perceptions of their weight and relationships with food.

When individuals experience increased stress and uncertainty throughout their life, they may resort to controlling elements of their life that are within their control, such as exercise regimes and nutritional intake.

Social media platforms where images and videos are primary shared content, such as Instagram, can impact individuals with eating disorders. Social media platforms use images that promote a false representation of reality. Influencers and famous celebrities often share all-inclusive content that does not depict real life. Social media provides opportunities for other individuals to share their personal journeys and raise awareness about eating disorders.



**Figure 5.15:**  
Eating disorders affect males and females.

## Self-concept and self-esteem

Self-concept and self-esteem relate to the way in which we view and value ourselves. Self-concept refers to how people think about and evaluate themselves and self-esteem is the degree to which an individual is happy with and accepting of the way they are. Self-concept and self-esteem involve evaluations people make about themselves and opinions that may be positive or negative.

People who have high self-esteem value themselves and their achievements, have confidence, are optimistic and don't worry about what others think of them. There are times in which everyone has doubts and may lack some confidence but people with low self-esteem will be unhappy with themselves most, if not all, of the time.

A person who has low self-esteem will tend to be very critical and judgemental of themselves, be pessimistic, have negative self-talk and ignore positive qualities that they possess. Factors that can cause poor self-esteem include:

- ongoing stressful events
- poor or critical treatment from parents, peers or partners
- low academic performance
- chronic physical illness or mental health issues
- disability.

Low self-esteem can cause issues in day-to-day life as well as long-term effects that decrease the quality of life. It creates an environment in which negative feelings can persist, relationships suffer, motivation drops and people fail to care for themselves properly. Low self-esteem can also result in self-harming and self-destructive behaviour.

There are many ways in which self-esteem can be built to achieve a positive self-outlook. Some strategies that may improve self-esteem include:

- positive self-talk
- doing activities that increase happiness
- challenging oneself
- exercising and developing physical fitness
- avoiding self-comparison with others.

Other things that can help to build self-esteem include seeking out support networks such as talking to friends or family, searching the internet for support websites, reading pamphlets or books and making an appointment with a GP or psychologist.



**Figure 5.16:**  
A person with low self-esteem will be critical and judgemental of themselves.



**Figure 5.17:**  
People with high self-esteem are confident and optimistic.

### Internet activity

Log on to TitanOnline to complete Activity 5.8 researching how to support a friend with an eating disorder.

## Body image

Body image refers to how a person views their physical self. It relates to how comfortable someone is within their own skin, how they think and feel about the way they look and how they believe others view them. Body image can be influenced by the attitudes and values of those around us, such as family, friends and peer groups, as well as the views of society and the media.

A healthy body image is important for both physical and mental health. Someone with a healthy body image will have a better attitude towards health and value who they are rather than what they look like.

For someone with a negative body image, this is the opposite. They may feel repulsed by their body and be unhappy with who they are. They may feel as though they are not good enough because they believe that how they look determines their value as a person.

This means that a person with a negative body image may be fixated on trying to change their body shape. A negative body image can come from unrealistic views or unattainable goals projected by friends or family, the media, celebrities, advertising and cultural backgrounds.

Individuals have the power to change the way they think and feel about their bodies. Tips that can help someone improve their view of their body and help create a positive body image include:

- choosing to look at media that makes people feel good about themselves and questioning some of the messages that are projected in the media
- not comparing oneself to celebrities or images in the media
- focusing on positive personal qualities
- thinking about talents and skills instead of appearance
- finding clothes to feel confident and comfortable wearing
- eating healthy foods
- avoiding judgement of other people's bodies.

### Internet activity

Log on to TitanOnline to complete Activity 5.9 and analyse strategies to develop a positive body image.

### Learning activity

1. Define body image in your own words and consider the factors that have influenced your own body image.
2. Research and explain why it is important to have a 'healthy body image'. In your response, discuss strategies that can assist in making this possible.
3. Evaluate the impact of teenagers observing digitally enhanced or altered photographs regularly in print and social media.
4. Discuss the pressure that is experienced to measure up to unachievable images of male and female 'perfection'.

## Case study – Eating disorders

Ciara loved playing video games and soccer and she always made friends with the boys. She never really had many female friends and everyone would call her a ‘tomboy’. She had gone to primary school with most of the boys and would hang out with them during break. In the middle of Year 9, the boys started changing and talking about girls a lot of the time, commenting on their appearance. They would say things like “Brianna has really good legs” or “Sarah looks so gross with that new haircut”.

Ciara started to feel really self-conscious and worry that people were judging her. The pressure of being a girl within the group of boys was getting too much for her and she started to lose her self-confidence. The stresses in her life increased when her parents told her that they were splitting up and Ciara was going to have to move houses. After that, everything seemed to go downhill, including her half-yearly assessment results.

Ciara was so frustrated with how she was feeling and wanted to make her life right again. She started to think that if she lost weight, things would get better and she would be happy again. Ciara decided to put herself on a strict diet that cut out sugars, fats and carbohydrates, and started exercising regularly. As she started losing weight, Ciara also started to feel more in control of her life and that everything was falling into place. After a couple of months, she started skipping meals and exercising excessively. A voice began to talk in her ear that wouldn’t stop unless it was satisfied. It was all she could ever hear. She wanted to be perfect. But she still wasn’t happy with how she looked in the mirror.

Ciara ran 10 kilometres every day and would hardly eat anything. She lost 20 kilograms and was extremely thin for a 15-year-old girl. Her hair began falling out, her bones became sore and fragile, her stomach was constantly aching and her menstrual cycle stopped. Her mum became really worried about her, as she was deteriorating at a fast pace and wasn’t the same person she used to be. She had stopped playing video games and dropped out of her local soccer team.

Ciara was on her regular run on a Monday morning when she collapsed to the ground. She went to the GP, who diagnosed her with an eating disorder. She was placed on an eating plan to help her gain weight. Her mum said she would take her to a mental health clinic if she did not improve. Ciara promised her mum that she would start eating again, but lately has been throwing her lunches out at school.

1. Identify the signs and symptoms of what Ciara is going through.
2. Discuss how cultural pressures and physiological influences can impact on eating disorders.
3. Propose what will happen to Ciara if she continues her eating and exercise habits.
4. As a friend of Ciara’s, provide advice that may help her.
5. Outline the kinds of treatments that Ciara could undertake besides what has already been suggested to her.
6. Research a range of medical services available in your local area for someone with similar issues.



**Figure 5.18:**  
Everyone has the responsibility to look after their mental health.

## Looking after your own mental health

Good mental health doesn't happen by chance. Each person has the responsibility to look after and work on their mental health, just like they would for their physical health. This might mean learning how to cope with life's stresses or taking time out for relaxation or developing good sleep habits. It might mean dealing with loss, grief or adversity in a positive way and developing resilience skills. Or it might mean learning to avoid the dangers of substance abuse or learning how to seek support if needed. Regardless of which challenge is to be faced, learning to manage thoughts, beliefs, feelings and behaviours is a skill that empowers a person to have life-long wellbeing.

### Positive mental health

A person's mental health is extremely important for a healthy body and mind. Positive mental health involves having an understanding of wellbeing, self-esteem and confidence. It allows someone to work to their full potential, enjoy life in a satisfying way and cope with any of life's challenges, problems or stresses. A person with good mental health will usually have:

- positive thoughts and emotions
- a sense of fulfilment
- the ability to form and maintain healthy and positive relationships
- involvement and engagement in a range of activities
- resilience
- a sense of meaning and purpose
- a balance between study, play and work
- high self-confidence and self-esteem
- a willingness to try and learn new things.

Positive mental health is something that can be adopted if a person changes their outlook. Life can be difficult at times, creating a whole range of emotions. There are a range strategies that can be adopted in order to help people let go of the things that upset them and enjoy a positive and healthy state of mind. Some of the practical strategies that will help enhance a person's mental health are listed below.

- **Enhancing pleasure:** a person should work to savour their pleasurable experiences and give conscious attention when enjoying a pleasurable experience. An individual can do this by:
  - sharing valuable experiences with others
  - building their memory to be able to reminisce on experiences after they have happened
  - congratulating themselves when they feel proud
  - sharpening their perception to focus on certain elements and block out others
  - absorbing and immersing themselves in the current moment
  - avoiding forming habits that mix up their involvement in pleasurable activities.
- **Increasing engagement:** a person should work to engage and participate in a range of different experiences. An individual can do this by:
  - creating mindful attention to the present moment through meditation and mindfulness-based therapies
  - nurturing and investing time and energy into relationships with friends and family
  - identifying personal strengths and using them throughout everyday life such as at school, work, in family life and in leisure time
  - seeking out 'flow' experiences – experiences create a state of joy, creativity and total involvement
- **Finding meaning:** a person should work to find meaning and purpose within their life. An individual can do this by:
  - keeping a gratitude diary where they write down three things that went well and why
  - writing a letter of thanks to someone to whom they owe gratitude such as a teacher or grandparent
  - learning to forgive people and let go of their anger and resentment towards a person or action
  - taking time out occasionally to consider how aspects of their life are going such as family, school, work, health and play
  - performing small acts of kindness to others.

Adapted from: The Black Dog Institute.

### Internet activity

Log on to TitanOnline to complete Activity 5.10,



**Figure 5.19:**

Mental health is enhanced by identifying personal strengths and using them on a regular basis.

# Stress

Stress is a normal human response to events that make an individual feel pressured, challenged or threatened. The pressure is not only the demand of the situation but also the demand we place on ourselves. The level of stress can depend on the attitude that a person feels towards the situation.

When the body senses a threat, its defences attempt to protect itself in a ‘fight or flight’ response. In small doses, stress can be helpful because it can increase alertness and energy to perform the best in these situations. Stress can become unhelpful when it starts to cause problems with a person’s health, mood, productivity and relationships.

Signs and symptoms that indicates that stress is becoming potentially harmful include:

- always feeling alert and anxious, even when wanting to relax
- stress being caused by small, seemingly insignificant issues
- difficulty concentrating
- aches and pains with no known cause
- withdrawing from activities and relationships
- difficulty sleeping
- changes in dieting and eating patterns
- moodiness
- developing nervous habits, such as biting nails.

## Learning activity

1. Create a list of all the things in your life that bring you stress.
2. Rate each of the items on your list, from most stressful to least stressful.
3. Identify which of your stressors have a significant impact on your wellbeing.
4. Analyse a range of techniques to reduce stress.



**Figure 5.20:**  
Prolonged stress can be harmful.

## Did you know?

A stressful event can cause temporary insomnia, while long-lasting stress can cause chronic insomnia.

## Internet activity

Log on to TitanOnline to complete Activity 5.11 to research and develop a plan to reduce stress.

## Coping skills

When stress has become unhelpful and is causing issues, there are some strategies that can help ease the tension. These include monitoring levels of stress, identifying whether or not the stress is helpful and dealing with unhelpful stresses as they arise (to avoid them building up). Developing positive coping skills can help to relieve stress and work towards solving the issues. There are many ways of coping with stress, which may work differently for each person.

**Table 5.4:** Ways to cope with stress.

<b>Taking time out</b>	People need to give themselves some time out from daily responsibilities to sit down and relax, have some fun and re-energise. A break from a normal routine can help take one's mind away from the problem. Some examples are playing an instrument, listening to music, meditating and going out with friends.
<b>Exercise</b>	Exercise can be one of the most effective ways to deal with stress. It eases muscle tension and removes the chemicals that cause the body to feel agitated. It can also distract a person's mind from problems, giving them the opportunity to rest and recuperate. Exercise can be enjoyable and fun. It can promote social interaction and provides opportunities to develop a sense of connectedness.
<b>Quality sleep and nutrition</b>	Being well rested is important for a developing body. Getting a good night's sleep is not just about the number of hours slept. The quality of sleep can also be improved by activities done before sleeping (such as not consuming a big meal directly before bed), going to the toilet before going to bed (so that sleep is not disrupted) and sleeping in a room without distractions. People need to ensure they are consuming enough nutrients by eating appropriate foods. A well balanced, nutritious diet that meets the needs of a physically active, healthy lifestyle enables the body to better cope with the day to day stressors of modern life.
<b>Relaxation</b>	Relaxation is important for enhancing mental health and wellbeing. It is a helpful coping strategy, especially when stressed. Relaxing can not only make individuals feel happier but can also improve resilience, physical health and decrease the risk of developing serious mental health issues. There are many relaxation techniques that are simple and easy such as walking or lying down. Others can require more time and effort. Some activities can include: <ul style="list-style-type: none"> <li>▪ yoga</li> <li>▪ stretching</li> <li>▪ reading a book</li> <li>▪ playing a sport</li> <li>▪ taking a bath</li> <li>▪ having a massage</li> <li>▪ watching a movie</li> <li>▪ going to a park</li> <li>▪ meditating.</li> </ul>

When someone is stressed, feeling anxious or overwhelmed, their breathing rate increases and becomes shallow. This reduces how much oxygen is reaching the organs in the body and causes the physical symptoms of anxiety or panic attacks. Practising breathing techniques can be a great way to relax and manage stress levels.

### Did you know?

The body's immune system can be improved through relaxation. A build-up of stress hormones over time can have a negative impact, leading to greater risk of infection.

### Practical activity

Follow the steps to learn how to breathe efficiently to reduce stress:

1. Become aware of your breathing pattern. Place one hand on your chest and one hand on your stomach. Feel your stomach expand as you breathe in and fall as you breathe out.
2. Steady your rhythm of breathing so that you are taking in the same amount of air each time you breathe in.
3. Try to slow your breathing rate down and take a short pause after every breath out.
4. Using these breathing techniques may feel uncomfortable at first, but as you practise it will begin to feel easy and natural.

## Substance a

Statistics indicate a greater number of people suffering mental health issues. This suggests that substance abuse issues and evidence to suggest that substance abuse are more likely to use substances to deal with their perceived problems. Both mental health issues and substance abuse contribute to the detriment of an individual's well-being.

It can often be very challenging for individuals with mental health conditions to access services and organisation. The outcomes of individuals with mental health conditions who are abusing drugs. Differentiated treatment regimes can be potentially a result from a long and lengthy process of treatment regimes.



**Figure 5.21:**

Using alcohol to try to deal with stress is detrimental to an individual's mental health.



**Figure 5.22:**  
Resilience is the ability to ‘bounce back’ from challenging times.

## Developing resilience

Resilience describes the quality people possess that allows them to cope with tough times and come back stronger than they were before. It can also be described as being able to ‘bounce back’ from challenging times.

The idea of resilience is based on how we deal with adversity. The more resilience we have, the more able we are to deal with stressful situations.

Everyone is different. Everyone has their own challenges in life, and their own unique ways of coping with them. What might seem like a little issue to one person may be extremely difficult for someone else.

Factors that influence resilience during a challenging situation include:

- personal coping skills
- how traumatic or stressful the event is
- if there are any additional stresses at the time
- support that is available
- the timing and context of the situation.

It is important that people do not judge themselves or others based on how they cope with different life experiences. It can be helpful for individuals to analyse how they are dealing with situations and develop new strategies and skills to develop resilience.

## Factors that support resilient behaviour

Resilience is not something that people are born with, but rather is a skill that is developed while growing up. It is established in behaviour, thoughts and actions that are learnt throughout life. As experience is gained, thinking and self-awareness skills improve, allowing someone to become more resilient.

There are certain factors that promote resilience such as:

- being optimistic
- having a positive sense of self
- having supportive family relationships and healthy friendships
- feeling a sense of belonging
- having personal skills such as communication and problem-solving.

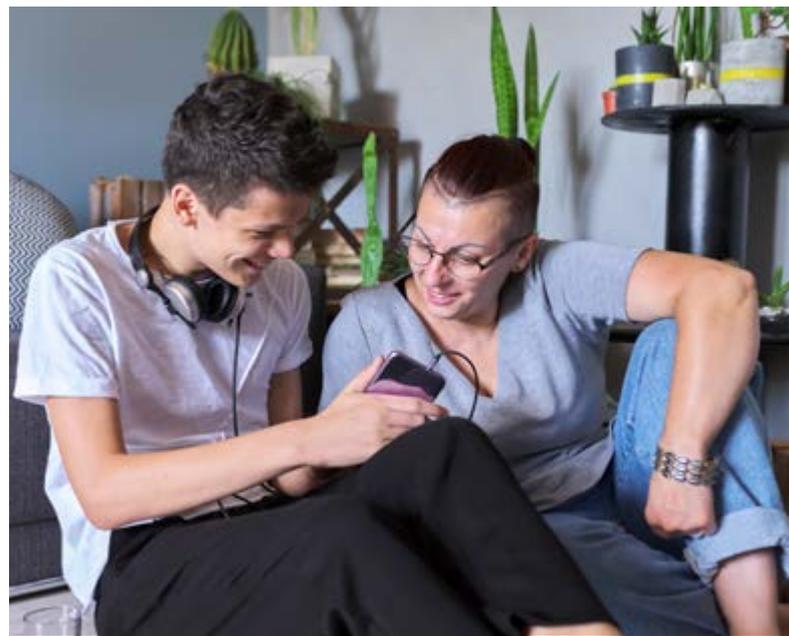
Not all people are able to develop resilience because of their different backgrounds and life experiences. By building self-awareness and the ability to understand one's emotions and behaviours, anyone can develop resilience.

Resilience can be enhanced with certain skills and behaviours. Resilient people:

- are accepting of change
- are flexible and tolerant
- are realistic
- have a positive sense of self
- see opportunities when they arise
- solve problems
- have supportive relationships
- develop relaxation strategies
- maintain healthy lifestyles
- are able to seek help when needed
- work towards goals.



**Figure 5.23:**  
Resilient people are flexible and tolerant.



**Figure 5.24:**  
Having supportive family relationships helps promote resilience.

### Learning activity

Evaluate how an optimistic, resilient person might respond, compared to how a pessimistic person, lacking resilience, might respond to the following scenarios:

1. During the COVID-19 pandemic, a family man returns from an overseas business trip and is forced into quarantine for two weeks.
2. A long-term employee has been identified for redundancy, despite more recently employed people being retained by the company that is laying off staff.

## Loss and grief

Grief is the emotional response that an individual feels when they experience a sudden loss, such as a close friend, partner, relative, pet, job or financial security. Grief can affect a person's emotions, physical health, relationships, thoughts and behaviours. Grief is a natural reaction that can be expressed in many different ways. Some people may feel overwhelmed by feelings of sadness or anger, while others may be less affected or choose to suppress their feelings. Some people have feelings of grief for shorter periods of time, while for others it may last for years.

Grief has no set pattern, but many people experience grief in one of the following stages, albeit not necessarily in this order:

- **Stage 1:** denial and isolation – from the immediate shock.
- **Stage 2:** anger – with the situation, self and other significant people who may be involved.
- **Stage 3:** bargaining – as if the situation can be altered, reversed or some of the grief experienced be removed.
- **Stage 4:** depression – intense worry of the long-term nature of the situation.
- **Stage 5:** acceptance – to the situation and therefore limited frequency of feel.

People experiencing grief need to understand it takes time to get through grief and the feelings experienced are completely normal. Friends, family and support are usually a great source of help. During times of grief it is important to manage stress levels, look after physical health, exercise, get enough sleep and keep contact with friends and family.



**Figure 5.25:**

Friends and family are a great source of support for someone who is grieving.



**Figure 5.26:**

Support services play an important role in overcoming mental health issues.

## Support for mental health issues

It can be difficult to determine when issues become serious and when it is time to seek help from others. There could be worry of judgement by friends and family, or the feeling that the problems will disappear without intervention.

However, as the problems become progressively worse, the likelihood of seeking help decreases. A person may start to find it harder to talk to someone about their problems because they begin to be overwhelmed by them, and feel like they can't be helped. It is important to seek help early and get support from family and friends.

There are some things that can be done to know when a problem is serious enough to seek help:

- Find information on mental health and recognise the signs and symptoms of mental health issues.
- Communicate thoughts and feelings to others, so they can also recognise the signs.
- See a local doctor or GP if emotions are becoming overwhelming.

Apart from friends and family, there are many support services that are available to the community. There are different types of facilities available that can offer a helping hand; these can be face to face, over the phone, or on the internet through message or email.

Doctors, GPs and mental health professionals offer face-to-face help. Young people over the age of 16 can visit without parental involvement. If patients take their Medicare card or know their Medicare number, they can usually obtain this professional help for free through bulk billing.

There are many services that provide support through the phone which are contactable 24 hours a day, seven days per week. Many of them provide free services. They also provide online support with counselling available through instant message or email. Some providers are Lifeline, Kids Helpline and the Suicide Call Back Service.

Along with looking after yourself, it is important to look out for other people who are in need of support. Friends or family members who are stressed or experiencing a challenging time, may appreciate support. Being a good listener and someone that can be confided in is often what people need. If there is concern that a person is in danger of self-harm, but is unwilling to discuss the issues, reach out to a trusted adult, older sibling, parent, teacher or school counsellor. They may provide advice as to how to approach the situation, or take an active role in supporting the person themselves.

There are many different health professionals that can provide a variety of services and support. By assessing the different help services available, it's possible to connect with the right assistance for any situation. Types of professional help include doctors, counsellors, psychologists, psychiatrists, youth workers and social workers.

- **Doctors** are the first place to visit for health-related issues. Doctors recognise health signs and symptoms, diagnose health problems and may refer patients to someone who can better assist their needs.
- **Counsellors** listen to what is bothering their patients and provide a positive and helpful way of approaching these issues. They can also offer their advice, and assist with problem-solving.
- **Psychologists** are mental health experts who have training in diagnosis and treatment of mental health issues. They provide counselling and support to those in need, but cannot prescribe medication.
- **Psychiatrists** are trained doctors who specialise in mental health conditions. They are used for diagnosis and treatment of mental health issues and can also prescribe medication if needed. They treat disorders such as depression, schizophrenia and bipolar disorder.
- **Youth workers** help young people sort out life issues. They are trained to give advice and help figure out tough situations. Youth workers can help with issues in schooling, sexual health, housing, alcohol and drug abuse.
- **Social workers** are trained to help with specific issues. They work in settings such as community centres, hospitals and Centrelink. Social workers provide information and advice about their specific area of expertise.



**Figure 5.27:** Psychologists are mental health experts who have training in diagnosis and treatment of mental health issues.



**Figure 5.28:** Doctors are the first place to visit for health-related issues.

### Did you know?

A survey on the impact of the COVID-19 pandemic reported that women were more likely than men to have experienced high or very high levels of psychological distress (25% compared with 16%).

Source: ABS 2020b. Household Impacts of COVID-19 Survey.

**Learning activity**

Create a contact list of mental health support services available in your local area. Include contact details and the type of support they provide.

## Mental health promotion

Mental health promotion refers to any action that is taken to enhance mental health and wellbeing among individuals and society. It is a sustainable approach to minimising the negative impacts of mental health issues, while creating conditions that promote positive mental health and wellbeing.

The promotion of mental health aims to enhance and address the variables of mental health, in particular social and economic factors such as education, employment, income and access to services. Mental health promotion also works to improve the understanding of individuals towards mental health issues and their impact.

Having access to community support programs is paramount in ensuring all individuals feel they are not alone and can receive guidance and assistance whatever their circumstances may be. Community support resources include various initiatives such as housing and accommodation programs, training and education, employment opportunities, support groups, funding or subsidisation, counselling and medical advice. Some of the more popular health promotion organisations are outlined in Table 5.5.

**Table 5.5:** Popular health promotion organisations.

Organisation	Description
<b>Beyond Blue</b>	Beyond Blue is a national, independent, not-for-profit organisation that works to address issues with mental health, particularly depression and anxiety disorders. Using a public health approach, they aim to improve the health of the whole population and alter their opinions of specific groups.
<b>MindMatters</b>	MindMatters is a mental health framework for young people in Australian secondary schools. It is an initiative that aims to promote mental health, prevent problems and encourage early intervention. It works to create a positive school environment where mental health is supported through practice materials, programs and processes.
<b>Headspace</b>	Headspace is the National Youth Mental Health Foundation for Australia. The service is for young people aged 12 to 25, providing support, information and services on mental health and wellbeing. Headspace offers assistance with general health, mental health, counselling, education, employment and alcohol and other drug services.
<b>SANE</b>	SANE is an Australia wide, national charity service. SANE helps people affected by mental health issues through support services and education programs. It conducts public awareness programs and campaigns, as well as providing extensive information about mental health issues through its website.

**Table 5.5:** Popular health promotion organisations.*(continued)*

Organisation	Description
<b>ReachOut</b>	ReachOut is a popular Australian online mental health service for young people. It provides information, fact sheets, community forums and support resources in order to increase coping skills and encourage help-seeking behaviour.
<b>Black Dog Institute</b>	Black Dog Institute is an Australian organisation that is a world leader in the diagnosis, treatment and prevention of mental health and mood disorders. It works to provide quality research, increased availability of treatment and the implementation of long-term public health solutions.
<b>Man Therapy</b>	Man Therapy is an Australian website that has been developed to provide males with support related to mental health matters. It works to decrease the rates of depression and anxiety in men as well as helping to reduce stigma and challenge perception of masculinity. It provides strategies to enhance wellbeing, guides to treatments and information about support services.

**Learning activity**

1. Critically analyse the effectiveness of two mental health campaigns that have appeared in the media recently.
2. Research the home page of two mental health communities and contrast the information and services they provide.

## Destigmatising mental illness

A stigma is a mark of shame or disgrace that creates a divide between people and represents opinions and judgements by society. While there has been increased knowledge and understanding of mental health issues in society in recent years, there are still many myths and misunderstandings that cause negative opinions and stigmas. A person with a mental health issue may be labelled and stereotyped because of misconceptions around their illness.

Attitudes towards this stereotype generally lead to prejudice and discrimination. These prejudices are sometimes reinforced by misrepresentations in the media and not only impact the individual but also families and carers. Stigma can cause:

- social alienation
- discouragement
- reluctance to seek help
- hindered recovery time
- shame
- hopelessness
- distress.

**Figure 5.29:**

A person with a mental health issue may be labelled and stereotyped.

Common misconceptions of people with mental health issues include:

- they are dangerous and violent
- they are unfit for work
- they are weak or have a character flaw
- all people with mental health issues are the same
- they will not recover fully and will always be affected.

It is important to create a healthy and accepting community that supports recovery from mental health issues and reduces social alienation and discrimination. Some ways to destigmatise mental health in the community involves:

- learning about mental health
- sharing only facts, not myths
- talking openly about mental health issues
- treating people with mental health issues equally and with respect
- offering equal support when they are unwell
- not discriminating
- avoiding judging or labelling people with mental health issues
- speaking up when someone makes a false stereotype.

In today's society, the media is able to quickly spread information and report on incidents involving mental health issues. Some individuals who commit crimes use mental illness as a defence for their behaviour, resulting in the stereotyping of individuals experiencing mental health issues as dangerous and unpredictably violent.

Movies and television shows often promote the stereotype of mental health being associated with crime and violence. The often unrealistic portrayal of mental health issues throughout the onscreen productions can potentially lead to misunderstandings of how the various mental health issues are developed, signs and symptoms of the illnesses and appropriate ways to offer support.

Stigmas and inaccurate representations of mental health issues often lead to individuals with mental illnesses being isolated and even sometimes feared by other community members. Social and other forms of media are in a unique position to share positive and accurate information to a wide audience about mental health and the most appropriate ways to treat and support sufferers.



**Figure 5.30:**

People with mental health issues may be reluctant to seek help due to stigma.



**Figure 5.31:**

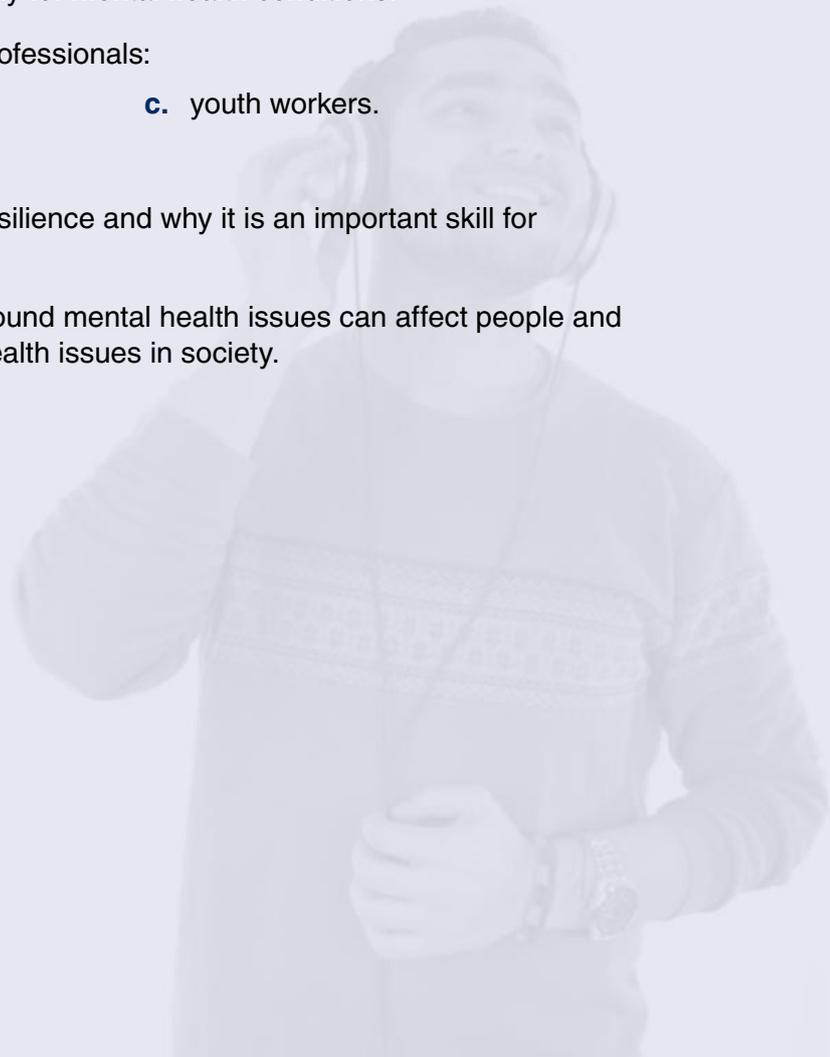
Inaccurate representations in the media can lead to individuals with mental illnesses being isolated.

### Internet activity

Log on to TitanOnline to complete Activity 5.12, to evaluate the impact of socially constructed stigmas.

## Revision questions

1. Define the terms 'mental health' and 'mental health issues'.
2. Distinguish between self-concept and self-esteem.
3. Discuss ways in which you can enhance your body image.
4. Identify the signs and symptoms of one eating disorder and the treatment options for sufferers.
5. Outline the differences between psychotic and non-psychotic illnesses.
6. Describe the following treatments for depression:
  - a. cognitive behaviour therapy
  - b. interpersonal therapy
  - c. medication.
7. Discuss the factors that can potentially cause a person to have anxiety.
8. Identify an example of a situation where stress has become unhelpful or unhealthy for you or someone you know. Explain how the stressors may have been handled more effectively in this situation.
9. Discuss the benefits of seeking help early for mental health conditions.
10. Define the role of the following health professionals:
  - a. counsellors
  - b. psychologists
  - c. youth workers.
11. Explain the importance of developing resilience and why it is an important skill for life-long wellbeing.
12. Discuss how the stigmas that persist around mental health issues can affect people and propose ways to destigmatise mental health issues in society.





## CHAPTER 6

# Safety and risk

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Managing risk and promoting safety is an important aspect of a healthy lifestyle. Adolescence in particular is a time when changes in the brain make young people more concerned with the acceptance and admiration of friends and more likely to engage in risk-taking to gain respect and feelings of inclusion. In this chapter, students will develop an understanding what safety means in a variety of different contexts and how to practise safe behaviours. Students will consider many of the risks associated with socialising and party scenarios. They will investigate risk-taking behaviour, particularly with young people. They will study risks associated with road transport, driver behaviour and the link to substance abuse. Students will learn to recognise unsafe situations and manage their personal safety. They will build on their knowledge of first aid and practise skills in typical first aid scenarios.

### Focus areas

- Risk-taking and young people
- Safety in transport environments
- Managing personal safety
- First aid



**Figure 6.1:**  
Young women are increasingly participating in risk-taking behaviours.

## Risk-taking and young people

Young people are known for taking risks. This is because adolescence is a time when individuals develop both cognitively and socially. This transformation often involves pushing boundaries, trying new things and developing a new sense of identity. The risks that young people take can be either positive or negative risks, and the reasons for taking these risks vary depending on the individual.

Research on risk-taking and young people indicates:

- Health risk-taking is highest during adolescence.
- Young people who participate in multiple risk-taking behaviours increase the likelihood of injury or death.
- Young women are increasingly participating in risk-taking behaviours.
- The prevalence of risk-taking behaviour may be linked to psychological factors such as stress and depression.
- Females are more likely to binge eat, purge themselves and be dissatisfied with their body weight and shape.
- Binge drinking is associated with multiple health-risk factors such as unplanned pregnancy, unsafe sexual activity, drink driving, motor vehicle crashes, violence and antisocial behaviour.
- Young people were more likely to be involved in driver risk-taking if there were stressed or were habitual drinkers.
- Common outcomes of health-risk behaviour are mental health problems.
- Depression is linked to an increased incidence of risk-taking behaviour such as smoking, alcohol and illicit drug use.

## Reasons for taking risks

There are numerous reasons why young people engage in risk-taking behaviours. These reasons are discussed in Table 6.1.

**Table 6.1:** Reasons why young people take risks.

Reason	Explanation
<b>Personal growth</b>	Risk-taking can assist in growing as a person, discovering more about oneself and learning to be resilient. Throughout life, all individuals will face challenges that encourage and sometimes even force personal growth. The key to personal growth lies with finding the right balance between pushing the boundaries, taking on risks, achieving positive results and managing the likelihood of harm.
<b>To rebel</b>	There can be positive and negative consequences of engaging in risk-taking behaviours as an act of rebellion. A positive risk that signifies rebellion could include protesting for a cause such as animal welfare or equal marriage rights. A negative risk that signifies rebellion could include breaking road rules, such as speeding or drink driving.
<b>To fit in</b>	It is common for young people to engage in risk-taking behaviours, both positive and negative, in order to fit in and not upset the status quo. An example of a positive risk individuals could take to fit in is joining a sports team in order to socialise and make new friends. An example of a negative risk individuals could take in order to fit in is engaging in under-age drinking or becoming sexually active before they are ready.
<b>Education/ knowledge</b>	Education plays a large role in whether individuals will take risks and how they interact with situations where risk is present. People who are more informed about situations and have had the opportunity to develop skills are more likely to make wise decisions and manage situations that require good decision making skills.
<b>Challenge and adventure</b>	Individuals often engage in positive and negative risks for challenge and adventure. An example of a positive risk is training and participating in the City2Surf event for the first time. An example of a negative risk is engaging in outdoor recreation without the appropriate preparation, safety equipment, skills or knowledge.

### Internet activity

Log on to TitanOnline to complete Activity 6.1 to explore ways to engage in risks safely.

## Gender and risk taking

There is strong evidence to suggest there are differences in the way that males and females engage in risk and their attitudes to risk.

In general, males are more likely than females to engage in a range of risk-taking behaviours. Rates of illicit drug use and admission to emergency departments for drug overdose are higher for males. Injury and death rates from vehicular accidents are higher for males. Males have a higher incidence of dangerous driving behaviours such as speeding and drink driving. They are more likely to engage in binge drinking and play higher risk sports such as contact and combat sports.

Research suggests that females use and respond to drugs differently to males. For example, women in general smoke fewer cigarettes per day on average and may be more likely to use nicotine for mood regulation. Females also have reduced access to support services in risk situations due to issues such as the availability of child minding services, lack of financial support and the prevalence of domestic violence.

## Risk-taking, peers and family

There is no doubt that peers will have an impact on the risks that an individual chooses to engage in, or not to engage in. Friendships are important for the development of healthy self-esteem and self-identity and individuals with healthy friendships will experience a sense of belonging that will enhance their identity. There are, however, a variety of pressures individuals may experience when part of a specific friendship group. Pressures may result where the values, beliefs and life experiences within a friendship group may differ.



**Figure 6.2:** Males are more likely to engage in higher risk sports, such as contact sports.



**Figure 6.3:** Depression is linked to an increased incidence of risk-taking behaviour such as smoking,

Common behaviours in adolescence that involve taking risks include under-age drinking, becoming sexually active, rebelling against parents or teachers and pressures to conform to a certain style or attitude. Peer pressure specifically involves an individual's peers making that individual feel as though if they don't do a certain thing, there will be negative consequences or exclusion from the group. Peer pressure can influence a person to engage in behaviours they would not otherwise choose, such as shoplifting. In other situations peer pressure can be positive. For example, an individual's friends may know that the individual is shy and doesn't like doing anything outside of their comfort zone. The individual's friends may be concerned and want their friend's confidence to develop, so the friends might pressure the person to join them in registering in a sports team and encouraging them to attend training and games.

Another term to consider when analysing the impact peers can have on an individual's risk-taking is 'peer acceptance'. Peer acceptance differs from peer pressure in that no one is necessarily pressuring or trying to make an individual do something. However, an individual will still take risks they don't really want to because they fear if they don't take the risks, they will become an outcast or a loner. For example, a number of friends may begin to experiment with drugs most times they meet socially. They are not making anyone join in, but an individual might feel that in order to maintain their status and reputation, they should engage in this behaviour.

It is important that young people are empowered to make their own decisions regarding which risks and the level of risk they choose to engage in. The skill of being assertive and having the confidence and ability to deal with peer pressure in an assertive manner, enables a person to retain the respect of their friends, regardless of whether they decide to engage in risk or not.

### Did you know?

Young people aged 15–19 years are most likely to be involved in risky behaviours.



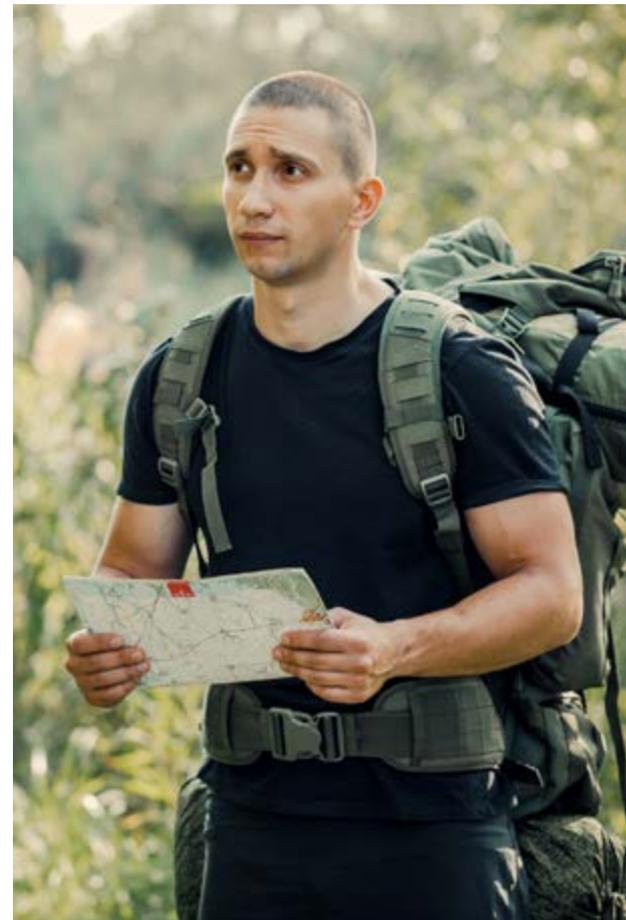
**Figure 6.4:**  
Teenagers are more likely to take risks when rebelling against their parents.

## Consequences of risks gone wrong

All behavioural decisions a person makes each day have the potential for positive or negative risk. Even day-to-day activities such as travelling to school, meeting friends and playing sport, all come with positive and negative risks. The consequences of some risks, should they go wrong, can be far more damaging than others. For this reason, it is important to consider the possible outcomes of engaging in risky behaviours and assess the risk before deciding on a course of action. If an individual does this, they are able to make a more informed decision. There are six steps individuals can use when assessing the consequences associated with a specific risk.

1. What is the problem? What decision has to be made?
2. What options are available?
3. Examine all available options available.
4. Consider the consequences of each option.
5. Select the most appropriate option.
6. Evaluate the decision (was it the right choice?).

It is common for young people to have an ‘it won’t happen to me’ attitude when it comes to considering risk and the likelihood of injury or death. It is vitally important that individuals learn to evaluate the range of possible consequences and manage each risk rather than dismiss or ignore possible dangers to their health.



**Figure 6.5:** Decisions a person makes each day have the potential for positive or negative risk.

### Learning activity

1. Define the term ‘risk’ in your own words and provide examples of behaviours that you engage in, or plan to engage in, that you consider to be risky.
2. Distinguish between positive risks and negative risks, providing examples involving teenagers.
3. Discuss ways to manage the following risks in an assertive manner:
  - a. Your friend wants to drive you home, even though they have been drinking alcohol and are on their provisional licence.
  - b. Your friend asks you to send her your assignment because she hasn’t done it yet.
  - c. You have realised you left your bike helmet at home but if you go back to get it you will be late for school.
  - d. You have dropped a really expensive ring in the pool at a party and you want to get it but you are very intoxicated.
4. Outline a range of risk-taking behaviours caused by peer pressure.



**Figure 6.6:**

There are many distractions young drivers need to be aware of.

## Safety and risk in transport environments

There are many factors to consider when ensuring safety in transport environments. Government officials at local, state and national levels are constantly reviewing statistics in relation to road use and road trauma in order to develop and implement appropriate laws and regulations to ensure there is a high standard of safety for all road users.

Driving is one of the most high risk activities an individual can partake in and despite it being a leading cause of death in young people, it remains one of the most common activities individuals feel safe performing. Driving is often considered a 'rite of passage' when young people receive their licence and gain independence, although the risks associated with driving increase for adolescents and inexperienced drivers.

Road crashes are the second biggest killer of young people in the 15–24 year age group, following suicide (AIHW, 2019). The majority of road crashes involving young drivers occur over the weekend, in the late afternoon and night. This is around the time that young people will be heading to and from parties, a situation that often involves alcohol, peer pressure and many distractions. There is also increased risk of sustaining road injuries for passengers and other vulnerable road users such as motorcyclists and cyclists.

There are different road rules and regulations between the Australian states and territories and they also have varying statistics surrounding road use.

# Speeding

Road users breaking the law by speeding not only put themselves at significant risk of injury, but also all other road users. Speed limits are enforced to maximise safety for users with consideration to key factors such as local environmental conditions, historical accident data, local road users and road conditions. For example, reduced limits are commonly located near schools, aged care facilities and high residential areas. Speeding reduces a person's ability to respond to emergency situations in an appropriate time frame and maximises the impact of collisions. It is a leading cause of accidents, road injury and death.

There have been many strategies implemented in order to limit the rate of and prevent speeding. These strategies include introducing fixed speed cameras and mobile speed cameras, school zones, double demerit fines on certain occasions and car alerts when the speed limit is being breached. Drivers with their full licence are to obey speed limits shown on road signs. Individuals who are new to driving have specific restrictions.

The rules for learner and provisional driver licences are fairly similar across all state and territories in Australia, although some differences do apply. Learner and provisional licence holders in Australia must:

- display L or P plates on both the front and back of the vehicle at all times
- have a blood alcohol concentration of 0 per cent
- not use a mobile phone while driving
- not tow a vehicle
- be supervised by a full licenced driver when learning to drive.

## Learning activity

1. Research statistics in your state or territory regarding recent road crashes or fatalities.
2. Analyse the effectiveness of the various driving restrictions aimed at increasing safety and reducing fatalities on the roads.
3. Propose other ways that fatality rates caused by speeding can be decreased.
4. Design a pamphlet about the risks of speeding that is directed towards young drivers. Include statistics from your state or territory and ways that young drivers can remain safe on the road.
5. In small groups, create a campaign targeting speeding by young drivers. Your campaign will need to include:
  - current statistics surrounding the target area
  - a television, radio or social media commercial
  - a poster/flyer that could appear in public places such as bus stops or public toilets
  - a catchy slogan or jingle
  - how the effectiveness of the campaign will be measured
  - groups will present their campaign to the rest of the class.

## Drink driving

Being under the influence of alcohol or other drugs while driving is extremely dangerous. Drivers with their full licence must not have a blood alcohol concentration (BAC) more than 0.05, with some forms of transport requiring drivers to remain under 0.02. Young drivers on their learner or provisional licence must not have any alcohol in their system if driving. Despite these laws being well known, drink driving is still a contributing factor in many fatal accidents on Australian roads. There have been many campaigns targeting drink and drug driving, yet many individuals still engage in this risk-taking behaviour. It is important to remember that people who do drink drive are not only putting their own life at risk but also the lives of their passengers, other road users and pedestrians.

Random breath testing (RBT) was first introduced in the early 1980s and has resulted in a dramatic decrease in drunk drivers on the road, road-related injuries and fatalities. It involves drivers providing a sample of their breath, which is analysed to determine the level of alcohol in the individual's blood.

## Standard drinks

A standard alcoholic drink in Australia contains 10 grams of alcohol. One standard drink always contains the same amount of alcohol, regardless of container size or alcohol type. Instead of counting glasses or containers, drinkers should count standard drinks as a way of keeping track of how much alcohol they have consumed. Counting standard drinks is a much more reliable measure of how much alcohol is consumed compared to counting glasses, bottles or cans. Table 6.2 identifies average drink servings.

**Table 6.2:** Average drink servings.

Beer	Wine	Spirits
<ul style="list-style-type: none"> <li>▪ 1.5 standard drinks</li> <li>▪ 375 mL full strength beer</li> <li>▪ 4.9% alcohol/volume</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1.8 standard drinks</li> <li>▪ 180 mL average restaurant serve of wine</li> <li>▪ 12% alcohol/volume</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1.5 standard drinks</li> <li>▪ 375 mL pre-mix spirits</li> <li>▪ 35–40% alcohol/volume</li> </ul>



**Figure 6.7:** Being under the influence of alcohol or other drugs while driving is extremely dangerous.

### Internet activity

Log on to TitanOnline to complete Activity 6.2 where you will suggest why different people have varying assumptions about drink driving.

### Did you know?

Individuals who begin drinking alcohol from a young age are more likely to develop alcohol-related problems in later life.

## Effect of alcohol on driving

The laws and regulations pertaining to drink driving have developed over time. The dangers and long-term effects of drink driving have become widely understood. Alcohol has adverse effects on the body, that, when mixed with driving, can have damaging effects.

Consuming alcohol can affect driving skills and ability in the following ways:

- poor concentration
- inability to judge distance
- impaired hazard perception
- drowsiness
- dizziness
- light-headedness
- fatigue
- nausea
- poor coordination
- reduced reaction time
- feeling more reckless and/or invincible.

## Drugs and driving

Consuming drugs while operating a vehicle is extremely dangerous. It is illegal to be affected by any illicit drugs while driving. It is also not advised to be influenced by drugs while driving. Drugs can be influenced by alcohol, which can cause drowsiness.

Police can conduct random breath tests, which involve taking a swab from the driver's tongue. A positive result, which comes with a positive negative result depending on whether they have consumed illicit drugs. The Transport Department has been involved in many campaigns and drug driving

### Internet activity

Log on to TitanOnline to complete Activity 6.3 and investigate the messages conveyed in various drink driving campaigns.

### Internet activity

Log on to TitanOnline to complete Activity 6.4 to evaluate roadside drug testing procedures.

### Did you know?

Driving under the influence of cannabis increases the risk of crashing twofold.



**Figure 6.8:**  
Never let a friend

## Road conditions

Every year in Australia, drivers are injured in car accidents resulting from challenging driving conditions such as driving in snow, fog, rain and mist, driving at night-time and dusk, and driving off-road and on dirt roads. It is important drivers understand the potential risks associated with each condition. The driver must adjust their behaviour to suit the conditions and abide by rules, legal requirements and safe driving practices, especially in relation to adjusting speed. By slowing down in dangerous conditions, drivers increase their ability to judge potential risks and act accordingly by stopping or avoiding collisions.

New drivers, who are less experienced in standard driving conditions, often fail to adapt their driving to suit dangerous conditions. In particular, wet weather accounts for a number of road-related injuries and deaths each year in single-vehicle collisions, as young drivers fail to slow down and abide to the speed limits. Rain decreases braking rates, as the water and oil combine on the road to create a slippery surface. Drivers need to slow down, especially when taking corners, and make sure their tyres are properly inflated.

Night driving also accounts for many accidents and deaths on the roads. Drivers spend 25 per cent of driving time at night. Although there is less traffic, deaths caused by accidents at night happen three times more often than during the day. This is due to poor visibility, fatigue and the use of alcohol. Despite many government campaigns on risk-taking at night, people still make the wrong decisions and drive home after a night out. Because of these risks, accidents are more likely to occur on the weekends after social events.

Many accidents occur on country roads where speed is the major cause of accidents. Many country roads are in a poorer condition than city roads and are often surfaced with gravel or dirt. Country roads and highways often require drivers to travel longer distances, increasing driver fatigue and affecting concentration skills. Drivers must stop to rest every two hours in these conditions, to increase safety.

Dirt roads may be dangerous in wet weather conditions, as roads can become unstable, produce potholes and mud. Country roads often require 4WD vehicles featuring high- and low-range gears and transmission control for grip and control on dirt, snow and rocky roads. In conditions such as snow, cars without 4WD features require chains to assist with grip to reduce sliding.



**Figure 6.9:** Drivers must adjust their behaviour to suit traffic and weather conditions.



**Figure 6.10:** Rain decreases braking rates, as the water and oil combine on the road to create a slippery surface.



**Figure 6.11:**  
Distracted drivers put themselves, and the lives of others, at risk.

## Distracted driving

Becoming distracted while driving is not uncommon and there are many factors that contribute to drivers losing concentration on the road. Some of the reasons for drivers becoming distracted are driving inexperience, fatigue and the presence of passengers and other road users. Other factors such as the consumption of food or drink and the use of mobile phones and entertainment systems are also common distractors.

Inexperience is a major factor in distracted driving. As a new driver, an individual is not equipped with the tools an experienced driver has in relation to being able to remain focused in a number of different driving situations. For instance, an inexperienced driver in heavy rain conditions is more likely to have an accident due to distractions such as operating windscreen wipers and demisters, reduced visibility and reduced road traction.

The use of mobile technological devices while driving has led to countless motor vehicle accidents, many of them with fatal outcomes. The temptation to use a mobile phone may be all it takes to distract a driver. Distracted drivers put themselves and the lives of others at risk. Making smart choices saves lives. Rather than responding to a text message or answering an important call while driving, there are easy life-saving options that can be taken. Drivers can simply pull over to the side of the road, turn off the car and use mobile phones with safety. Mobile phone holders and hands free functions provide other legal options to receiving phone calls while driving.

The entertainment systems in cars are another big distraction drivers must avoid when driving. Taking one's eyes off the road, even just for a few seconds while changing the music, checking navigation maps or adjusting the volume can quickly result in an accident. It is common for vehicles to be involved in rear-end accidents if a driver is distracted, even just for a second. When driving, especially for young people, it is a good idea to have the person sitting in the front passenger seat to be the 'designated DJ', responsible for changing the song and adjusting the volume so that the driver is comfortable and not distracted.

## Carrying passengers

Young drivers are the most dangerous drivers on Australian roads, crashing almost four times more often than older drivers. One of the major risk factors associated with novice drivers and crashes is carrying passengers. Carrying passengers is linked to risk factors such as speeding, hazardous driving, non-seatbelt usage and peer pressure. These risk factors lead to many accidents and fatalities each year. To decrease the risks associated with carrying passengers, most state and territory governments have introduced restrictions on carrying passengers for provisional drivers:

- In the Australian Capital Territory, P1 drivers under 25 are limited to one peer-aged passenger between the hours of 11pm and 5am.
- In Queensland, they must not carry a passenger under 21 between 11pm and 5am, unless it's an immediate family member.
- In South Australia, provisional drivers under the age of 25 must not drive between midnight and 5am, or with more than one passenger aged between 16 and 20.
- In Tasmania, P1 licence holders under 25 are only allowed one passenger aged between 16 and 21.
- In Victoria, they must not carry more than one passenger aged between 16 and 21.

Minimising distractions and developing responsible driver and passenger behaviours are essential for safer driving. Peer influence can have a positive or negative effect on the behaviour of drivers. While passengers are in a position to have a positive influence on driver behaviour, drivers need to take responsibility for their own and their passengers' behaviours.

## Fatigue

Fatigue is a major contributing factor in road crashes. Fatigue accounts for up to 35 per cent of fatal road crashes. Fatigue-related crashes are most likely to occur between midnight and 6 am. Early warning signs of fatigue include yawning, tired eyes, slow reaction times, and oversteering. Once fatigued, the driver should pull over and take a break. Fatigue while driving can lead to microsleeps, which are brief, unintentional sleep lasting for seconds to minutes. Drivers do not even be aware they have had a microsleep. Microsleeps can occur even when a person's eyes are open.

### Internet activity

Log on to TitanOnline to complete Activity 6.5 to evaluate the danger of microsleeps.



**Figure 6.12:**

Fatigue is a major contributing factor in road crashes.

### Learning activity

1. Research statistics surrounding speeding and young people based on your state or territory. Record your findings.
2. Discuss how alcohol can impair driving skills.
3. Compare the fines for speeding offences in various states and territories. Discuss the differences.
4. Brainstorm two further restrictions that could be placed on learner and provisional drivers to minimise injuries and fatalities.
5. Discuss the term 'distracted driver distraction'.

## Consequences of unsafe road use

Any action an individual takes on the road has repercussions. Often the consequences of unsafe road use can be life changing and dramatically interfere with the way an individual has lived their life before the unsafe road use. There are numerous unsafe road use offences including speeding, drink driving, using a mobile phone and breaking the road rules.

Using the road in an unsafe manner can result in:

- stress
- guilt
- loss of licence
- fines
- loss of independence
- criminal record
- loss of employment due to loss of licence
- disability
- loss of life
- jail time.



**Figure 6.13:**

The consequences of unsafe road use

## Promoting safety on the roads

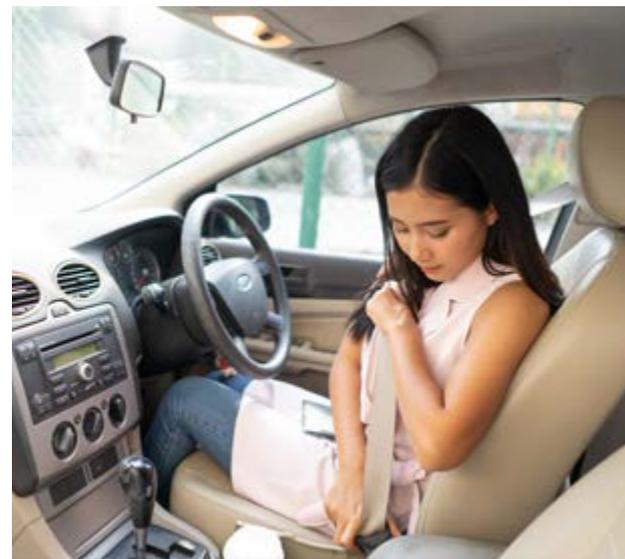
Road safety campaigns devised by state and territory governments aim to raise awareness and educate road users of preventative safety behaviours. The campaigns usually target priority action areas, such as speeding, drink driving and fatigue. The campaigns are commonly advertised as television commercials and images on social media. Other ways they are publicised to the community is through billboards and signs alongside roads in attempt to make road users more aware. Campaigns often concisely promote memorable messages, such as 'Ride to live,' 'Don't trust your tired self' and 'Get your hand off it.'

When a vehicle stops suddenly, a great deal of force is applied to the objects within it, including drivers and passengers. Seatbelts distribute the force to the strongest parts of the body – the chest and the pelvis. Seatbelts also prevent the body from accelerating, with significant force, towards the dashboard or windshield. In this case, the force would be focused on the head, which can easily kill or severely injure a driver or passenger.

The seatbelt has a locking system that allows or limits its ability to extend and retract. The locking system responds to either the car's movement or the belt's movement. In relation to the car's movement, the locking system comes into play when something jerks the belt webbing. Pre-tensioners also exist to reduce the slack in the belt and reduce the force of the belt on the body.

An airbag is a soft pillow drivers and passengers can land against in a collision, rather than landing against the steering wheel, dashboard or windscreen. By law, new cars are required to have airbags on the driver and passenger sides. It is also common in many new cars to have seat-mounted and door-mounted side airbags to offer extra support.

While seatbelts restrain drivers and passengers, airbags are designed to slow the momentum of drivers and passengers rather than force them to an abrupt halt. Airbags are made of a nylon fabric and a sensor in the device causes compressed gas to inflate the airbag, in about 1/25th of a second.



**Figure 6.14:**  
Drivers and their passengers should always wear a seat belt.



**Figure 6.15:**  
All new cars are required to have airbags on the driver and passenger sides.

### Internet activity

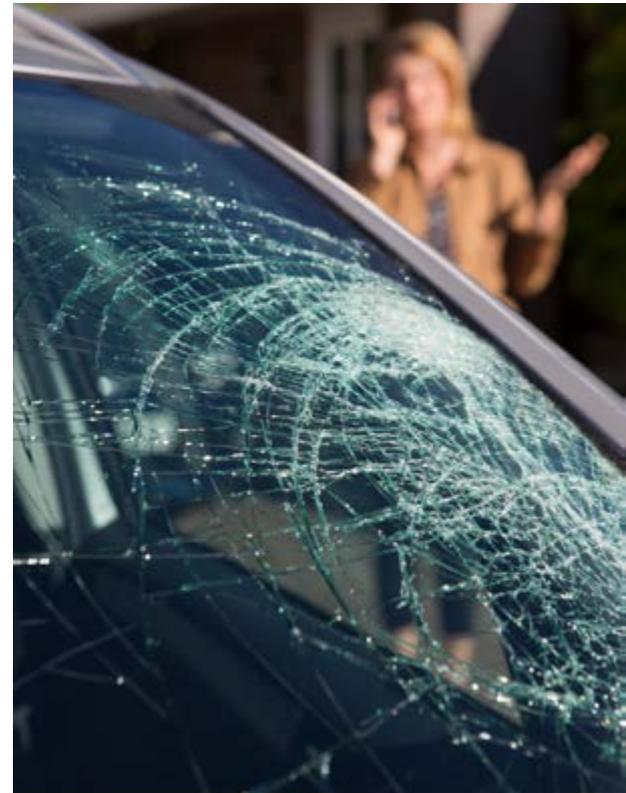
Log on to TitanOnline to complete Activity 6.6, investigating safety features of modern cars.

Just as road safety campaigns have targeted human behaviour, improvements in vehicular safety have resulted in improved rates of death and injury. The compulsory wearing of seatbelts was introduced in Australia in 1973. In the years that followed, there was a significant decline in Australian road deaths.

Technological advancements have also been added to new cars, including the following safety features to prevent injury and harm to road users:

- anti-lock braking systems (ABS)
- lane departure assistance
- collision warning systems
- laminated glass
- speed alerts
- reversing cameras.

ABS aim to prevent car wheels from locking under sudden braking situations. Furthermore, some vehicles have electronic stability control, brake force distribution and assist are designed to minimise the time taken for drivers to react and brake the car in a safe manner. The use of laminated glass for windscreens and some other windows is also becoming increasingly popular. Unlike other glass types, laminated glass is produced to stay connected when broken and not shatter into small pieces that can injure occupants. Technological warning systems are designed to alert drivers when they may be unsafely crossing lane markings, speeding or close to an object.



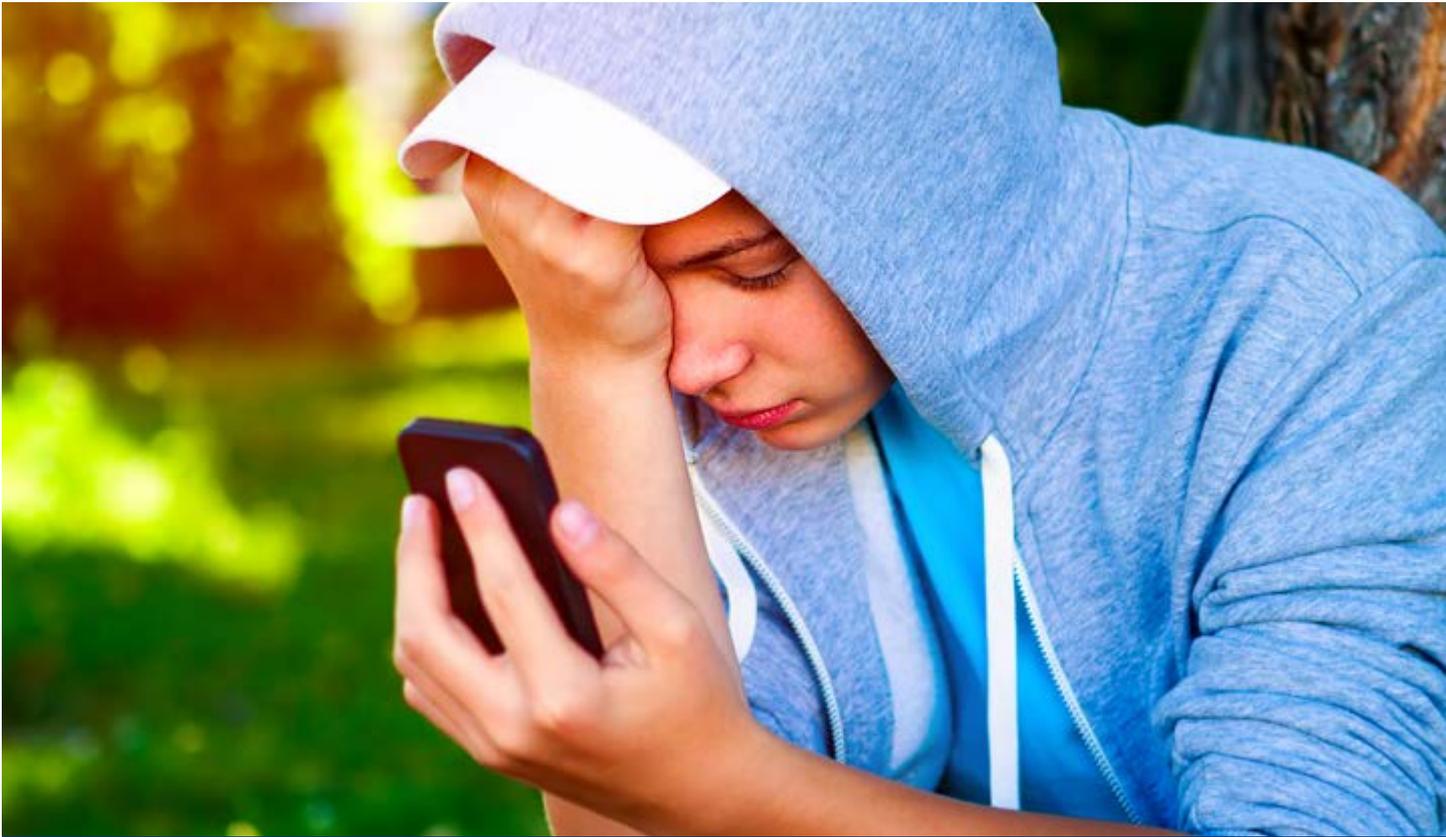
**Figure 6.16:**  
The laminated glass used in cars is designed to not shatter.

### Internet activity

Log on to TitanOnline to complete Activity 6.7 which requires you to review Australia's road safety initiatives.

### Learning activity

1. Identify a range of unsafe driving behaviours and statistics surrounding these behaviours.
2. A 35-year-old father of three works full time in the city, half an hour from his home. He loses his licence for speeding. Discuss the consequences he and his family might experience.
3. Explain the ways in which passengers can:
  - a. distract the driver
  - b. help prevent the driver becoming distracted.
4. Analyse how road environments can affect driving ability.
5. Search online for a new car of your choice. Outline all the safety features provided as standard.



**Figure 6.17:**

It is important that individuals are educated about the risks associated with online accessibility.

## Managing personal safety

Adolescence is a time when lots of changes occur, particularly socially, and there will be a number of unsafe situations one can expect to encounter. It is necessary to recognise the dangers one could face, including transport, violence, drugs, gatecrashers and under-age drinking. It is important that young people develop interpersonal skills and practise self-management to enable them to respond to a variety of challenging or unsafe situations.

For example, during this stage the nature of parties can change dramatically from parties when one was in primary school or just starting high school. In these situations, it is important to recognise risks and how to best handle them to promote and ensure maximum safety for all concerned. In order to minimise risks, one must understand how to manage personal safety, how to respond to situations involving drug use and how to develop safe party plans. At parties where under-age drinking is present and parental supervision is often limited, violence, assault, robberies and bullying become more prevalent.

## Maintaining positive relationships

Positive relationships are those in which both or all parties feel safe, secure and respected. Positive relationships help individuals feel a sense of belonging, respect, trust and happiness. In positive relationships, individuals understand that relationships are dynamic and constantly changing, and can adapt and be flexible while maximising the health and wellbeing of themselves and others in the relationship. Positive relationships are not always happy, effortless, easy or fun, but how individuals act in times of adversity will determine whether the relationship is a positive one or not. The decisions individuals make by themselves or as a partnership will also influence whether a relationship is positive or not. Ultimately, positive relationships are not just about how people in a relationship have a good time but rather how they handle the bad times. If individuals show each other respect, communicate clearly and effectively, listen to each other's ideas and perspective and come up with a sound solution or plan of action, they are practising a positive relationship.

Everyone is entitled to equal and respectful relationships. New relationships should have ground rules and boundaries so that both people feel safe, emotionally and physically, and are able to express their thoughts, beliefs and opinions. Power in relationships can result from many factors, including age, maturity, gender, intelligence, physical size and/or popularity. It is important in a healthy relationship that power is used in a positive way. If used in a positive way, both individuals can feel safe and secure within the relationship.

An intimate relationship often features the following characteristics:

- Individuals have confidential knowledge of one another
- Individuals feel affection for one another
- Individuals trust and respect one another
- Individuals are committed to the relationship and expect it to continue.

A healthy relationship is marked by mutual respect, trust, support and effective communication. During adolescence, the ability to feel intimacy develops. Each individual develops feelings of intimacy at different times and in varying degrees. One may find themselves in a long-term relationship during high school or may find that they don't want an intimate relationship during high school. They may find that they don't want an intimate relationship until sometime in the future.



**Figure 6.18:**

Everyone is entitled to equal and respectful relationships.

## Dating safely

When dating, it is important to know how to participate in the relationship safely. Romantic relationships inherently involve a range of new emotions and experiences for a young or inexperienced person. It is important to respect the rights and responsibilities of each other, communicate clearly and maintain personal values, regardless of peer pressure or pressure from the partner.

At some age, the possibility of a sexual relationship may occur, and if so, it is important this is done respectfully and safely. This involves considering whether this option is right for the individual at this time, safe sex practices and considering the consequences of an unplanned pregnancy. Relationships should only progress physically when both parties are ready to do so. Both parties involved need to know there is mutual respect and understanding of what the other wants.

An important component of moving forward in a relationship physically is practising safe sex. Safe sex involves using contraception. There are many different contraception methods that can be used to prevent sexually transmissible infections (STIs) and unplanned pregnancy. There are both male condoms and female condoms, so both members in the relationship can take responsibility for practising safe sex.

If an individual does become pregnant, or thinks they are pregnant, they should visit a doctor as soon as possible. Individuals do not require a parent to accompany them if they are over 16. However, it is helpful for an individual to have support, as dealing with a possible pregnancy can be a daunting experience. It is important to remember that there are choices and services to provide support no matter what decision an individual makes should they become pregnant.



**Figure 6.19:** Positive relationships help individuals feel a sense of belonging, respect, trust and happiness.



**Figure 6.20:** Dealing with a possible pregnancy can be a daunting experience

### Learning activity

Working in small groups, create a multimedia resource outlining the importance of practising safe sex, including information on contraception that can be accessed online. Create an audio file to accompany the resource.

## Sexual assault

Sexual assault relates to any sexual advancement that is non-consensual. Consent is often misunderstood when it comes to sexual activity. Facts about consent that all individuals should consider include:

- Consent means saying yes.
- Consent can be taken away, at any stage. That means that if an individual says yes, and then half way through intercourse they no longer want to participate, then there is no longer consent. If the other party ignores the request to stop, this is sexual assault.

In most Australian states and territories, the age at which an individual can legally consent to have sex is 16. The exceptions to this are South Australia and Tasmania, where it is 17. If someone has sex with a person under the age of consent, they might have committed a serious offence. Victoria, NSW, ACT and Tasmania have laws that provide a legal defence for someone having sex with a person under the age of consent if the two people are of similar ages (maximum age difference of two years).

Lying about facts that impact directly on an individual's decision to consent to sex can result in the sex being considered non-consensual by a court of law. In other words, to tell a lie to convince a person to consent to sex, when the person would have otherwise said no, is not deemed to be adequate consent.

Sexual assault also relates to any unwanted sexual advances. This includes making comments, wolf-whistling, touching, groping or grabbing, bribing or using someone's sexuality against them in order to gain something. Sexual assault can make an individual feel uncomfortable, embarrassed, ashamed and many other feelings that limit their ability to function normally. Sexual assault can often involve an abuse of power, using one's position of power to make another below them feel they have to oblige to the sexual advances.

Sexual assault can happen to anyone. It can happen irrespective of age, sex, gender, appearance and employment and it can happen in a range of situations, including the workplace, school, within a sporting club, within the home, in an intimate relationship, at parties and even online.

Each case of sexual assault will vary, but there are steps individuals can follow if they have been a victim, if they have been victimised or if they feel someone they know has been affected by sexual assault. Firstly, an individual should remove themselves from the situation in which they are being assaulted. This is to ensure their safety. The individual should talk to a trusted adult and should report the assault. Who the assault is reported to will depend on where and how the assault was committed. Incidents of sexual assault are often reported to the police, a boss, a coach, a teacher, a family member or friend.



**Figure 6.21:** Sexual assault can happen to anyone, irrespective of age, sex, gender and appearance.

## Using technology safely

In 21st century society, internet connection is seen as a necessity. However, it is important that individuals are educated about the risks associated with online accessibility. Laws have been devised to reduce young children from creating social media accounts and using social media before the age of 13 years. Yet, most platforms do not verify all personal details, which enables many young children to falsify details and establish personal accounts. This also enables older individuals to create false accounts, allowing them to pretend to be another identity.

To eliminate personal risk, individuals should always make their online accounts private, only accepting friend and follower requests from people they personally know. Not sharing passwords or personal information is another key way for individuals to protect their identity from being stolen or unwanted content from being shared on their accounts.

## Digital reputation

A person's digital reputation is the digital footprint created by all the things they say and do online, as well as what others post about them. The people and sites a person follows, the content they post, like or share, and the comments they make, all contribute to their digital reputation. A person's digital reputation can affect friendships, relationships and even job prospects for the rest of their life, so it's very important for people to be careful about the picture they paint of themselves online.

Internet users need to remember that once something is online, it can be very difficult to remove and can be easily and quickly shared. Images and words can be misinterpreted and altered as they are passed around, and content intended for a small group of friends can create issues when shared with others outside the group. Individuals need to consider how they manage both their own messages and images, and those of others. Privacy settings on social media sites help control what others can see of a person's online life, but they do not offer complete protection.

To protect their digital reputation, individuals should do the following:

- Stop and think about any content before they post or send.
- Treat others online as they would like to be treated.
- Set their profile to private, so that only their friends have access to their photos and posts. Check every now and then to make sure the settings have not changed.
- Keep an eye on photos of them that have been tagged by their friends, and remove any that are offensive.

Individuals need to remember that online information could be there forever and may end up being seen by people they don't know, including potential employers and universities. To clean up a digital reputation, a person can do the following:

- Search for themselves by typing their name into a search engine and see what comes up. If they find things that they thought were private, check privacy settings.
- If uncomfortable about other people's photos or videos where they have been tagged, individuals can try to un-tag themselves or ask for the images to be taken down.

Cleaning up a digital reputation can be difficult, but it is not impossible. Individuals may not be able to erase the past completely, but they can build a better image of themselves online over time by being more aware of what they say and do.

Source: [www.esafety.gov.au](http://www.esafety.gov.au)



**Figure 6.22:**  
Sexting can lead to significant personal, social and legal consequences.

## Sexting

Sexting is the sending of sexual messages, photos or videos, online or using a mobile phone. Once messages, photos or videos are sent, there is no way to retrieve them and they can be passed on or loaded online at the click of a button. It may be impossible to remove or control who views the material. Sexting is a modern phenomenon – most teenagers have regular access to a mobile phone and/or the internet, and frequently use social networking sites. Sexting can lead to significant personal, social and legal consequences.

Sexting can be considered a criminal offence, even if all parties are willing participants and even if it is distributed only for use within a relationship. Under the Commonwealth of Australia, naked and sexual images, videos and text messages of people under the age of 18 may be considered child pornography. If convicted of creating or distributing child pornography, individuals may be listed as a sex offender or face 10 years in jail.

Unfortunately, teens who experiment with taking suggestive or sexually explicit photos of themselves and sending them to someone else make themselves vulnerable to having their personal images shared online. Very quickly, sexting can lead to potentially devastating consequences. It would be just as damaging to do that to another person without their knowledge, and it is certainly illegal.

There are steps that individuals can take if they become the victim of having their personal photos leaked or shared without their permission. Firstly, speak to an adult. If speaking to one's parents seems too difficult, try talking to another trusted adult, such as an aunt or uncle, sibling, cousin, a teacher or coach. Informing a trusted adult helps because they can help individuals decide what course of action to take next. Individuals should contact the local police and inform them of the incident, so that people who have shared personal content can be dealt with and the content can be removed.

## Sextortion

Sextortion is a form of blackmail where the perpetrator threatens to share intimate images of their victim unless the victim give in to their demands. People are often targeted through dating apps, but they can also be targeted using emails. An example of this is when someone claims to have obtained intimate images and threatens to share them unless their demands are met. Depending on the situation, these demands could be for money, more intimate images or sexual favours.

Warning signs include the following:

- **Things don't add up:** the profile of the contact is not consistent with what the victim can see and hear when they engage with the contact.
- **The contact makes excuses:** they say their webcam is not working, so they can't chat on camera. Instead they send a nude photo, which they claim is of them.
- **They say they need help:** the contact says they need money for a personal emergency like medical treatment, to cover rent or even to travel to Australia.
- **The victim receives an email threatening to share an intimate image of them:** this is a typical scenario that involves the sender claiming to have a video of their victim watching pornography.

Anyone can experience sextortion. Victims should try to remember that they are not alone and they have not done anything wrong. People experiencing sextortion can take the following measures to protect themselves from harm.

- **Report sextortion.** Sextortion can be devastating, so it's important to get help. In Australia, victims can make an image-based abuse report to eSafety ([www.esafety.gov.au](http://www.esafety.gov.au)), who will work with them to get the right outcomes. Anyone concerned about their physical safety should call Triple Zero (000) or contact local police.
- **Do not pay.** Victims should not give perpetrators any money or send any more pictures of themselves. Giving in to demands will actually make things worse – paying a blackmailer will only result in more demands for payment.
- **Collect evidence.** Victims should keep a record of all contact from the blackmailer, particularly any demands or threats and make a note of everything they know about them. This could include their Instagram handle, social media ID, Facebook URL and Money Transfer Control Number.
- **Notify the relevant social media platform.** Notify SnapChat, YouTube, or whichever app or social media service was used.
- **Stop all contact with the blackmailer.** Victims should block the perpetrator and ask their friends to do the same. Victims should also consider temporarily deactivating their social media accounts (but do not delete them, as evidence can be lost that way).
- **Secure all accounts.** Victims should change the passwords for all social media and online accounts, and review the privacy and security settings of their accounts.
- **Do not panic.** Reach out instead – victims can get support from a trusted friend or family member, or from an expert counselling and support service if they are feeling anxious or stressed.

Source: [www.esafety.gov.au](http://www.esafety.gov.au)

### Internet activity

Log on to TitanOnline to complete Activity 6.8 and create a presentation about online safety.

### Learning activity

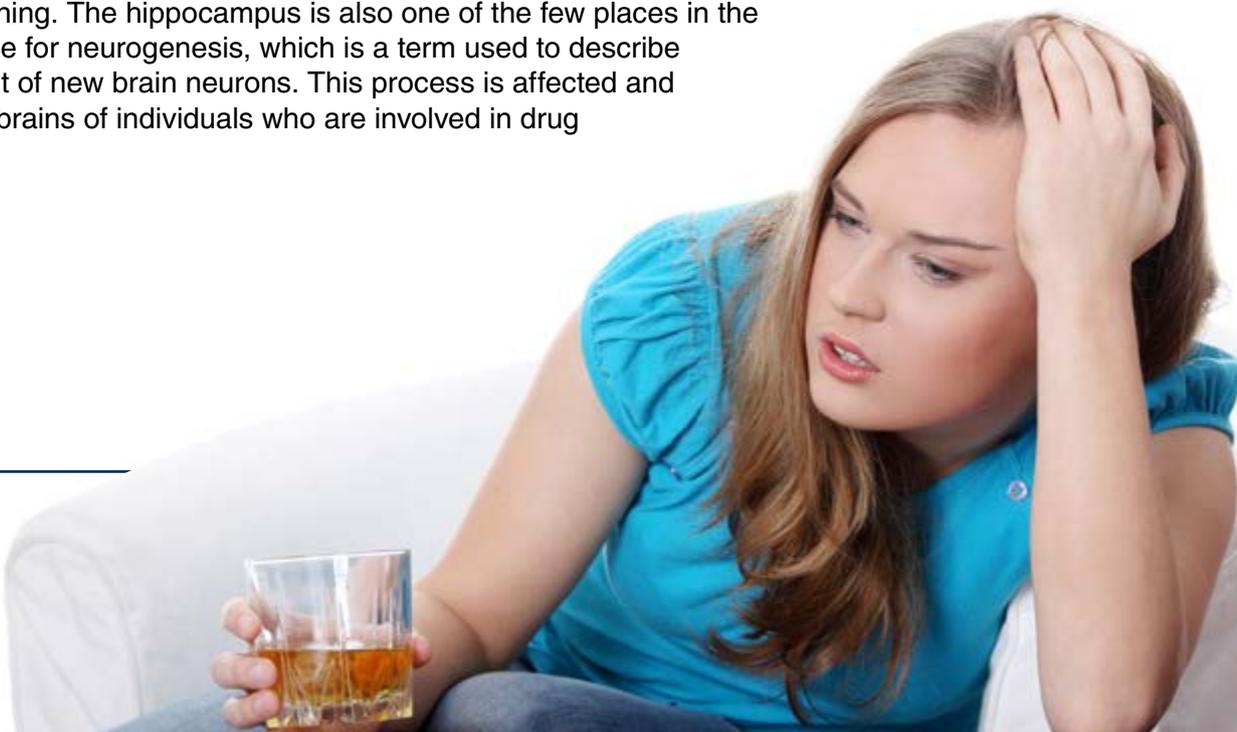
1. Explain the term 'sexting'.
2. Analyse how an individual can be affected if their personal photos are leaked online or shown to others.
3. Issues relating to sexting are often dealt with by the police and not by the school as it often happens outside of the school environment. Propose strategies a school could adopt to minimise and deal with cases where private photos, videos and messages are shared publicly.
4. Discuss what measures an individual can take if they are the victim of having their private data shared publicly. Create a fact file on sextortion cases in the media.
5. Provide a range of tips to a young person using social media for the first time.
6. Research a range of common online scams used via email, phone or SMS.

## The risks of drug use

A study of alcohol and other drugs is covered in detail in Chapter 1. Issues that are of particular concern in regards to safety and risk-taking, especially in social and party situations for young people, include:

- polydrug use
- binge drinking
- pre-loading
- use of energy drinks with alcohol
- risk-taking behaviour while under the influence of drugs, such as drink driving or showing off
- changing trends in drug use and increased use of 'party drugs'.

Many studies have concluded that the long-term use of drugs leads to a shrinkage of the hippocampus, a section of the brain that is responsible for memory functioning. The hippocampus is also one of the few places in the brain responsible for neurogenesis, which is a term used to describe the development of new brain neurons. This process is affected and hindered in the brains of individuals who are involved in drug use and abuse.



**Figure 6.23:**  
Young people often preload on the basis it is a cheaper way to consume alcohol.

With so many negative short- and long-term effects associated with taking drugs, it is confusing that so many people, particularly young people, engage in behaviours associated with drug consumption. There are many reasons why people do, including:

- to be accepted socially
- relaxation and stress relief
- to celebrate
- to get intoxicated
- to self-medicate
- bonding
- rite of passage/tradition
- to deal with a tough time such as a break-up, being fired, a death in the family.

When energy drinks like Red Bull, Mother and V are consumed with alcohol, they enable drinkers to drink for longer and achieve higher levels of intoxication without feeling tired. Since energy drinks contain large doses of caffeine and other legal stimulants like guarana and ginseng, and alcohol is a depressant, the combined effects can be very dangerous. The stimulant effects can mask how intoxicated an individual is and give the impression they are not impaired. When someone drinks too much alcohol, the body will normally fatigue, which in turn slows the rate of drinking. Consuming stimulants may make a person more alert and able to consume more alcohol. The result is higher consumption of caffeine and higher consumption of alcohol than would normally occur if the drinks were consumed separately.

It's important to realise that no matter how alert one feels due to the energy drinks, the BAC is the same as it would be if the energy drinks had not been consumed. The opportunity to drink more than normal can increase the consequences of risky binge drinking behaviour. People who mix energy drinks and alcohol are at greater risk of alcohol poisoning, injury from falls, pedestrian accidents, impaired driving, being a passenger in a vehicle with an impaired driver, and physical and sexual assault.



**Figure 6.24:** Long-term use of drugs can affect a person's memory and brain functioning.



**Figure 6.25:** The stimulant effects of energy drinks can mask how intoxicated an individual is.

There has been very little research into many of the health and nutritional claims made by energy drink companies, and what research has been conducted often funded by the companies, which in turn makes the findings questionable. The facts that are known about the short-term effects include increased heart rate, body temperature, dehydration, alertness, stimulation of the brain and nervous system, which can lead to nervousness and agitation.

Preloading is a behaviour that involves young people consuming high amounts of alcoholic beverages prior to attending an event or night out where alcohol is either not available or sold at a much higher price. Young people often preload on the basis it is a cheap way to consume alcohol and a way to calm down the body. The dangers of preloading involve the consumption of a significant amount of alcohol in usually a short period of time. Usually preloading occurs at a different venue and therefore the requirement to travel poses another danger for people who have consumed alcohol.

Synthetic drugs are becoming more popular across Australia, with many young people choosing to use synthetic drugs over illicit drugs because they are cheaper and some are not yet illegal. Synthetic drugs are designed to mimic illegal drugs such as marijuana, amphetamines and LSD, using a different chemical make-up in an attempt to keep the drugs legal.

Changing the chemical make-up allows for the production of these drugs, because the banned substances are often left out or modified. As a result, the risks and dangers associated with these chemicals are unknown and synthetic drugs can often end up being more potent.



**Figure 6.26:**

People who mix energy drinks and alcohol are at greater risk of alcohol poisoning.

### Internet activity

Log on to TitanOnline to complete Activity 6.9 and investigate the effects of different drugs on the brain.

### Learning activity

1. Research the link between drug use and personal safety.
2. Outline the health and social benefits for party goers who choose to not drink or consume drugs.
3. Discuss the dangers associated with mixing alcohol and energy drinks.
4. Research three recent cases of deaths from synthetic drug use and suggest reasons why individuals choose these drugs despite the publicised risks.
5. Create a fact sheet on the dangers of pre-loading.



**Figure 6.27:**  
Expectations of guests, including guest behaviour, should be established before hosting a party.

## Party plans

Personal safety is always an important factor when attending or hosting a party. Being prepared and planning for possible risks best equips individuals to deal with adverse situations in a safe way. Being party-prepared involves organising security, notifying police, taking care with social media posts and the responsible service of alcohol.

### Parties and social media

Social media can be a very dangerous place to advertising a party, particularly if adequate privacy settings are not used. There are some necessary steps and precautions to follow to ensure only the invited people show up to the party if social media platforms, such as Facebook are used to invite guests. These steps include:

- In the event settings, set the event to private and invite only.
- Avoid having numerous hosts, because all hosts can invite more guests. It is a good idea to only have the person whose party it is, and an adult as a host, so that the adult can keep track of how many people are attending and how guests are responding on the event page.
- Avoid sharing the address of the party in the event page, particularly if it is a home address. There is an option to send a private message to people who have clicked attending, which is a safer option to notify them of the address. If necessary, send the address close to the day and time of the event.
- Make it clear in the event description the expectations of the guests should they choose to attend the party. This includes behaviour expectations, whether they are allowed to bring a plus one or not, and whether alcohol is allowed. It is also a good idea to let guests know that there will be security and that the police have been notified. This simple step may deter possible gate-crashers.

## Security

When hosting a party, especially if it is one with a lot of people invited, it is a good idea to have security. Professional security guards attending the party can assist to make sure no unwanted guests attend, as well as ensuring party-goers are behaving safely. Hiring security guards can be expensive, therefore other ways that can increase security include having adult presence at a party. Firstly, they can supervise and ensure unruly behaviour is not tolerated. Unruly behaviour can range from under-age drinking and drug taking, to stealing, fights and assault. Having an adult presence can often be enough of a deterrent to uninvited people who want to come to a party and cause trouble.

To make sure the party is as secure as it can be, it is a good idea to ensure that guests can only enter the party through one area. This prevents people coming in from different directions and makes it harder for people who weren't invited to enter.

### Police notifications

When hosting a party, it is always a good idea to notify the local police. If the police are notified, they are more likely to be understanding if they do get a call out to the party and may even provide an officer to drive past the house at various stages of the night to ensure the party is not getting out of control.

Parties can be registered online with the local police, and should be done so at least two days before the date of the party in order to allow enough time for the police to distribute everything the party host will need including information on how to keep the party safe and wristbands in case there is alcohol and under-age people present.

### Internet activity

Log on to TitanOnline to complete Activity 6.10 and prepare a safe party plan.

## Responsible service of alcohol

It is against the law for minors to purchase alcohol or consume alcohol on licensed premises. The laws that relate to supply of alcohol to minors in private residences vary from state to state and where allowed, require the permission of a parent or guardian. There are very strict guidelines in relation to the service and consumption of alcohol because it impairs brain functioning and can lead to various injuries, assault and even death if used incorrectly or irresponsibly.

Making guests aware that alcohol is not allowed at the party and anyone consuming alcohol or under the influence of alcohol will not be permitted entry is a great start in avoiding alcohol-fuelled problems. If there will be alcohol present, possibly supplying the alcohol is a good way to control the strengths of the drinks that guests are drinking. Of course, some sort of system will be needed if supplying alcohol to ensure there is no under-age drinking, such as wristbands for guests over the age of 18. Having a ban on glass is also a good way of managing alcohol consumption. This can be done by having a responsible adult at a drink station who pours the guests' drinks out of the glass and into a plastic cup. If the responsible adult feels that a guest has had too much alcohol, they can stop that guest from consuming any more alcohol. This strategy also minimises the risk of a glass bottle causing injury or being used as a weapon should a conflict arise or a fight break out.

## Minimising the risks

Managing personal risks is a skill that involves having the experience and knowledge to identify potentially dangerous situations and appropriate courses of action to address the situation. The 'trust, talk, take control' strategy is an effective tool for staying safe and managing certain situations within a person's control. It enables a person to remain calm in risk situations and make the best possible decisions. The strategy involves having the confidence to trust feelings and intuition. Secondly, individuals must utilise a group of trusted people they can talk to about their feelings and concerns in order to give and receive advice. Lastly, based upon feelings and trusted discussions, an individual 'takes control' and chooses a solution that they feel best manages the situation.



**Figure 6.28:** The 'trust, talk, take control' strategy is an effective way to manage risky situations.

### Internet activity

Log on to TitanOnline to complete Activity 6.11 and create a presentation to event organisers in promoting safe environments.

### Learning activity

1. Outline risks involved in hosting a party.
2. Discuss measures an individual could take to ensure their party is safe and enjoyable.
3. Propose and practise a range of realistic responses to scenarios where peers are encouraging you to behave in unhealthy or unsafe ways in a variety of contexts. These may include party settings with alcohol and/or drug use, unsafe road use and sexual harassment.
4. Explain how to use the 'trust, talk, take control strategy' to manage the challenge of an abusive or violent situation.

## Case study

Tom Brooks, seventeen, has spent the last seven months in a coma, failing to show any signs of improvement. Tom attended an end of exams party with his classmates at a friend's house in South Beach. At around 10.30pm, a group of gatecrashers arrived and began causing trouble. They were refused entry, but forced their way in regardless. They were at the party for about 30 minutes and the rest of the party-goers tried staying out of their way.

At about 11pm, one of the gatecrashers, began pushing Tom's best mate, which is when it all went horribly wrong. Tom stepped in to try and diffuse the situation, which only made the unnamed male more aggravated, resulting in him turning around and king hitting Tom in the back of the head, knocking him unconscious. While falling to the ground, he smashed his head on a glass table.

Tom lay unconscious for seven minutes while waiting for the ambulance to arrive. The gatecrashers fled and Tom was rushed to hospital. He is not expected to wake up, although his parents remain hopeful that they will see some improvement in their son's condition. The attacker was tracked down with help from other party-goers and this case is currently in court. Tom has permanent brain damage and is expected to have lost all communication skills, if he wakes from his coma.

Doctor Christian Waters, Tom's primary doctor, stated, "We see king hits all the time. It's heart-breaking. It is completely avoidable, and no one is better off afterwards. In Tom's case, we don't expect his condition to ever improve, but in other cases sometimes there are improvements. Other cases also result in death."

1. List possible risks that may be present at a 16th birthday party.
2. Propose strategies to manage these risks.
3. Discuss what you could do if you are at a party and you notice things start to get out of hand and people are getting aggressive towards each other.
4. Propose an educational campaign to raise awareness about violent assault and promote personal protection strategies.



**Figure 6.29:**

A first aider must act quickly, calmly and correctly in order to prevent the condition worsening.

## First aid

First aid relates to the initial treatment and care a person receives straight after an incident, accident or sudden illness has occurred. When learning about and practising first aid, an individual should be familiar with the terms: DRSABCD, emergency services, bites and stings and managing injuries.

A first aider must act quickly, calmly and correctly in order to save the life of a person and prevent, if possible, the condition worsening. First aid should commence immediately and continue until medical help arrives. All first aid treatment is based on common sense and knowledge. These factors go hand in hand in the preservation of life.

The aims of first aid include:

- promote a safe environment
- preserve life
- prevent injury or illness from becoming worse
- help promote recovery
- provide comfort to the ill or injured.

### Did you know?

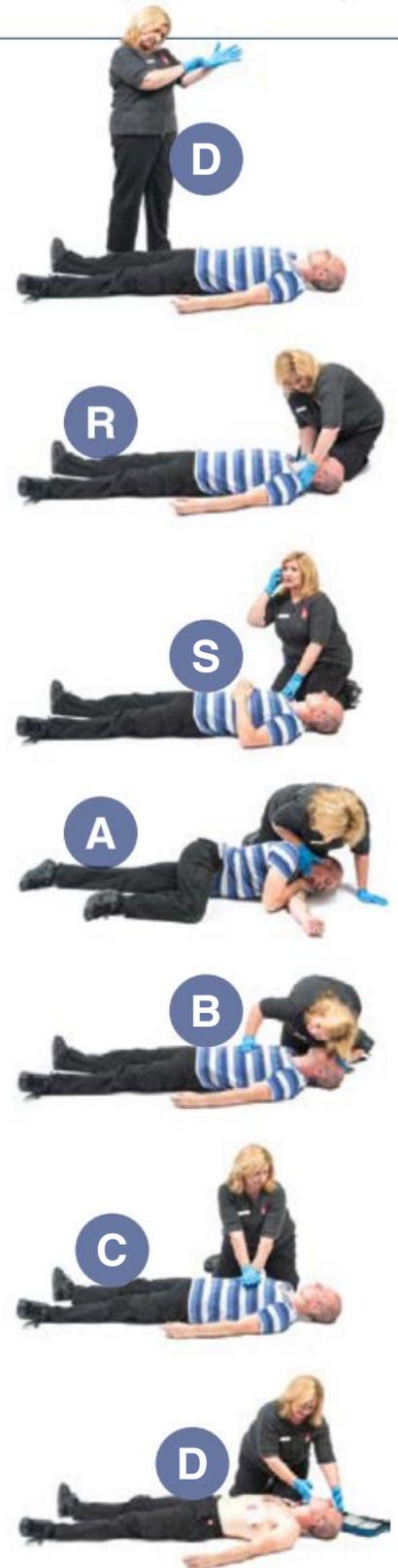
Peter Safari is credited with pioneering cardiopulmonary resuscitation in 1957 and influenced a Norwegian doll maker to create the first Resusci Anne.

## DRSABCD

DRSABCD is the acronym for the procedure used to assess an emergency situation and treat casualties. Table 6.3 outlines the stages of DRSABCD.

**Table 6.3:** DRSABCD.

Stage	Explanation
<b>Danger</b>	This stage involves checking for danger to: <ul style="list-style-type: none"> <li>oneself</li> <li>others</li> <li>the casualty.</li> </ul>
<b>Response</b>	This stage involves working out the level of consciousness the casualty has. COWS is often used in this stage: <ul style="list-style-type: none"> <li>Can you hear me?</li> <li>Open your eyes.</li> <li>What's your name?</li> <li>Squeeze my hand.</li> </ul> <p>If the casualty responds, they should be placed in the recovery position. If not, DRSABCD should continue.</p>
<b>Send for help</b>	This stage involves calling triple zero (000) and requesting an ambulance. If possible, the first aider should ask a bystander to call for help and be sure to double-check the ambulance has been called.
<b>Airway</b>	This stage involves tilting the head backwards and slightly down. The airway should be cleared and opened. Any foreign objects should be removed.
<b>Breathing</b>	This stage involves turning the casualty onto their back and giving two initial breaths. If by this stage the casualty is or starts breathing, they should be placed in a stable recovery position and monitored.
<b>Compressions</b>	In this stage, if there are no signs of life, compressions should begin immediately after the two emergency breaths. Compressions should occur at a rate of 30 compressions followed by two breaths.
<b>Defibrillation</b>	At this stage, if there are still no signs of life, an automated external defibrillator should be used as soon as possible.



**Figure 6.30:** DRSABCD action plan. Image source: St John Ambulance, WA.

## Lateral recovery position

The lateral recovery position is used in emergency situations because it allows a casualty to have an open airway, even if unconscious. The position was first recognised by a doctor named Robert Bowles in England in the 1890s. The position can be divided into five phases.

- **Phase 1:** Place the arms at right angles to the body pointing in the direction the patient is to be rolled.
- **Phase 2:** Lift the opposite leg behind the knee, and place the foot flat on the ground next to the other leg, which is still straight.
- **Phase 3:** If there is someone to help support the head and neck, take the other arm and place it across the chest. If alone, place the palm of the open hand on the patient's cheek. This will assist in supporting the head and neck.
- **Phase 4:** Place hands on the raised knee and elbow. Gently move the patient onto the side, until the knee contacts the ground.
- **Phase 5:** Gently tilt the head back to ensure an open airway.



**Figure 6.31:** The lateral recovery position allows a casualty to have an open airway, even if unconscious.

### Internet activity

Log on to TitanOnline to complete Activity 6.12 and develop your own DRSABCD resource.

## Emergency services

In case of an emergency, it is extremely important to contact emergency services. To contact emergency services, 000 should be called. Alternatively, 112 can be called on mobile phones, even without the need for credit, and can be used worldwide to access emergency services. For people with hearing or speech impairment, 106 may be dialled and a text emergency relay will communicate the request for help. Have available the details the person who answers the call is going to need, including the number and names of casualties, what has occurred and if there is easy access to the emergency site.

In any situation where one suspects emergency help is needed, do not hesitate to call, even if people are worried about getting in trouble. There have been many instances where someone has been injured or in need of help and their friends have not called for help because they were scared of the consequences. If calling the ambulance for something like a drug overdose, the police do not have to become involved and privacy of the casualty is respected. Even if bystanders and/or the casualty will get in trouble, this is still more preferable than someone becoming permanently injured or even killed because help was not called in time.

### Learning activity

1. Research the history of the DRSABCD protocol and the reasons for the changes over time.
2. Practise performing CPR on a manikin.
3. Working with a partner, practise placing a casualty in the lateral recovery position.



**Figure 6.32:**  
Bites and stings can cause allergic reactions.

## Bites and stings

Australia's climate is home to many different snakes, spiders, insects and sea animals that can do a lot of harm if provoked. Table 6.4 identifies these animals and how to handle a bite or sting from each specific animal.

**Table 6.4:** Common bites and stings.

Condition	Signs and symptoms	Management
<b>Bee and wasp stings</b>	<ul style="list-style-type: none"> <li>▪ Sharp pain at the site.</li> <li>▪ Possible swelling redness.</li> <li>▪ Allergic reactions such as:               <ul style="list-style-type: none"> <li>– Rash</li> <li>– Swollen eyes, face and neck</li> <li>– Wheezing</li> <li>– Altered conscious state.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Remove the sting by scraping or flicking it sideways.</li> <li>▪ Apply ice.</li> <li>▪ Monitor for an allergic reaction.</li> <li>▪ Seek medical assistance immediately if a reaction occurs.</li> </ul>
<b>Bluebottle sting</b>	<ul style="list-style-type: none"> <li>▪ Pain at the sting site.</li> <li>▪ Redness.</li> <li>▪ Swelling.</li> <li>▪ Rash.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pick off the tentacles slowly.</li> <li>▪ Apply a heat pack.</li> <li>▪ Run hot water (as hot as the patient can tolerate) over the sting site.</li> </ul>

### Did you know?

According to Australian Geographic, the deadliest animal in Australia is the box jellyfish.

**Table 6.4:** Common bites and stings.*(continued)*

Condition	Signs and symptoms	Management
<b>Blue-ringed octopus sting</b>	<ul style="list-style-type: none"> <li>▪ Pain at the bite site.</li> <li>▪ Redness.</li> <li>▪ Swelling.</li> <li>▪ Difficulty breathing.</li> <li>▪ Respiratory arrest.</li> <li>▪ Unconsciousness.</li> <li>▪ Possible cardiac arrest.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DRSABCD.</li> <li>▪ Call 000 (or 112) for an ambulance.</li> <li>▪ If necessary, start rescue breathing and CPR.</li> <li>▪ Apply pressure and immobilise with a bandage.</li> <li>▪ Keep patient still.</li> </ul>
<b>Box jellyfish sting</b>	<ul style="list-style-type: none"> <li>▪ Pain at the site.</li> <li>▪ Redness.</li> <li>▪ Swelling.</li> <li>▪ Rash.</li> <li>▪ Respiratory and circulatory failure.</li> <li>▪ Death.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DRSABCD.</li> <li>▪ Call 000 (or 112) immediately.</li> <li>▪ Douse area with vinegar for 30 seconds.</li> <li>▪ Apply a pressure bandage above the stung area.</li> <li>▪ Immobilise and keep the patient still.</li> </ul>
<b>Redback spider bite</b>	<ul style="list-style-type: none"> <li>▪ Sharp pain at the bite area.</li> <li>▪ Heavy sweating.</li> <li>▪ Nausea.</li> <li>▪ Vomiting.</li> <li>▪ Abdominal pain.</li> <li>▪ Intense local pain.</li> <li>▪ Small hairs may stand on their ends.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DRSABCD.</li> <li>▪ Lay the person down.</li> <li>▪ Calm them.</li> <li>▪ Apply an ice pack.</li> <li>▪ Call 000 (or 112).</li> </ul>
<b>Funnel web spider bite</b>	<ul style="list-style-type: none"> <li>▪ Sharp pain at the site of the bite.</li> <li>▪ Heavy sweating.</li> <li>▪ Nausea.</li> <li>▪ Vomiting.</li> <li>▪ Confusion.</li> <li>▪ Breathing difficulties.</li> <li>▪ Cold skin and shivering.</li> <li>▪ Possible coma.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DRSABCD.</li> <li>▪ Lay the casualty down.</li> <li>▪ Calm them.</li> <li>▪ Apply a pressure bandage.</li> <li>▪ Immobilise the area.</li> <li>▪ Keep the patient still.</li> <li>▪ Call 000 (or 112).</li> </ul>
<b>Snake bite</b>	<ul style="list-style-type: none"> <li>▪ Puncture marks.</li> <li>▪ Headaches.</li> <li>▪ Blurred vision.</li> <li>▪ Nausea.</li> <li>▪ Vomiting.</li> <li>▪ Breathing difficulties.</li> <li>▪ Pain or tight chest.</li> <li>▪ Respiratory weakness or arrest.</li> </ul>	<ul style="list-style-type: none"> <li>▪ DRSABCD.</li> <li>▪ Rest and calm the casualty.</li> <li>▪ Apply pressure.</li> <li>▪ Immobilisation of the site.</li> <li>▪ Do not allow the casualty to move.</li> <li>▪ Call 000 (or 112 on a mobile).</li> <li>▪ Do not wash the venom from the skin.</li> </ul>

## Managing injuries

The management of an injury is usually dependent on the type of injury that has been sustained. Due to the environment that we work and/or play in, a variety of injuries may occur in different situations. As a first aider, it is important to identify the symptoms of a variety of injuries and then be able to administer the correct management techniques. Before assisting an injured person and asking bystanders and/or the injured person what happened, remember to make sure the environment is safe for all concerned. Call for assistance, stay calm and be positive. Some of the common injuries that occur are fractures of limbs, dislocations, concussion, cramps and burns.

### Dislocations

A dislocation is a separation of two bones where they meet at a joint. It can be difficult to tell whether the injury is a fracture, dislocation, sprain or strain. If in doubt, always treat as a fracture. No attempt should be made to force a dislocation back into place. For a suspected dislocation, follow DRSABCD.

The signs and symptoms of a dislocation include:

- deformity or abnormal mobility
- pain at or near the site of the injury
- difficult or impossible normal movement
- loss of power
- tenderness
- swelling
- discolouration and bruising.

### Fractures

A fracture is a broken bone. A bone may be completely fractured or partially fractured. If a fracture is present, the casualty will feel pain and they may have heard or felt a snap. Other signs and symptoms include swelling, deformity, unnatural movement and grating of bones on movement.

If there is a fracture, the first aider should follow a basic plan of DRSABCD, cover the wound/s, immobilise and restrict movement, seek medical assistance and reassure the casualty.



**Figure 6.33:**

The management of an injury is dependent on the type of injury sustained.

## Concussions

Concussions occur when someone receives a blow to the head. Between the brain and the skull is a layer of fluid, and when a person is concussed the brain is essentially moving back and forth against the skull. Common signs and symptoms of concussion include a loss of consciousness, headaches, dizziness, blurred vision, nausea, tiredness, vomiting, loss of memory and irritability.

If a concussion is suspected, follow DRSABCD. If unconscious, the casualty should be placed in the lateral recovery position. The first aider should try to keep the head and neck in alignment. If the casualty is conscious, the first aider should reassure them, contact medical services and treat any bleeding.

## Cramps

Cramps are spasms or abnormal contractions of muscles. The blood supply is usually restricted or cut off to a muscle, therefore creating a great amount of pain. They usually occur in the foot, calf, and hamstring or thigh muscle. If experiencing a cramp, one can expect abnormal contraction of the muscle, pain and the muscle will stiffen as it shortens and contracts.

To manage a cramp, gently stretch the affected muscle, apply ice packs and massage gently if it assists in relieving pain.

## Burns

Burns can occur from direct fire, the sun, boiling water or any hot surface such as a barbeque or stove. Burns will have varying signs and symptoms, depending on how severe the burn is. If the burn is superficial, there is usually pain and redness to the skin. If the burn is partially thick, the outer layers of the skin will be broken, blistered and extremely painful. If a burn is full thickness, the deepest layers are affected and the nerve endings are destroyed. Because of the destroyed nerve endings, this type of burn is the least painful but most life threatening.

To treat a burn, follow DRSABCD. Cool the burn using large amounts of cool water. Cover the burn loosely using a non-stick sheet and reassure the casualty while waiting for emergency services.

### Internet activity

Log on to TitanOnline to complete Activity 6.13 to distinguish key treatment differences between burns and poisons.

### Learning activity

1. Working with a partner, demonstrate the first aid procedure for a dislocated shoulder.
2. Research the dangers of repeated concussions and how concussions in contact sports has become a major concern for sporting organisations.
3. Describe the actions a first aider should take if an intoxicated person at a party has fallen into a fire pit.
4. Write an information report on the prevention of cramps.

## Revision questions

1. Identify current trends surrounding young people and risk-taking.
2. Explain why these trends are occurring.
3. Make a list of unsafe situations that might arise at a party and propose ways to handle these situations.
4. Evaluate the difference between 'peer pressure' and 'peer acceptance'.
5. Research past and current road safety campaigns targeting one of the following areas:
  - a. Fatigue.
  - b. Speeding.
  - c. Drunk and drug driving.
  - d. Texting.
6. Discuss how the campaigns differ and whether or not they have been effective.
7. Propose a strategy the your state or territory government could implement to lower road deaths in relation to one of the priority areas explored (e.g. drink driving, speeding).
8. Explain the specific driving restrictions learner and provisional drivers have to adhere to.
9. Discuss how alcohol and drugs can negatively impact driving skills.
10. Discuss strategies to minimise distracted driving.
11. Analyse ways in which the road environment can impact driving.
12. Discuss how seatbelts and the use of seatbelts have evolved in Australia.
13. Create a letter to a friend who is in an abusive relationship (either the abuser or the person being abused) and provide advice for them on how to handle their situation.
14. Discuss the impact of drug use on the developing brain.
15. Compose a letter to your local member of parliament expressing concern about the ease with which adolescents can purchase energy drinks.
16. Briefly explain DRSABCD.
17. Discuss how you would treat a cramp and dislocation.



## CHAPTER 7

# Health benefits of physical activity

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In this unit, students explore the physical activity profile of Australians. This involves a study of current statistics surrounding the nation's participation rates in organised and non-organised physical activity pursuits. Students explore the factors and motivations that influence an individual's participation in physical activity. They investigate what good health means and how regular physical activity can benefit disadvantaged groups throughout society and individuals in the school setting and the workplace. There is a study of current health promotion initiatives and strategies to get Australians active in a variety of settings. Students explore and participate in a range of individual and group fitness activities to raise awareness of physical activity opportunities.

### Focus areas

- Physical activity profile of Australians
- Physical activity for health and wellbeing
- Getting Australia active
- Safety and physical activity

# Physical activity profile of Australians

There are numerous benefits to be gained from becoming involved in lifelong physical activity. There is a need for more individuals to become involved in activities that they can pursue well into their old age.

It is evident that, in Australia, individuals are becoming less involved in physical activity as they get older. This is problematic for a number of reasons. Being involved in physical activity provides multiple benefits, which are outlined in Table 7.1.

**Table 7.1:** Benefits of lifelong physical activity.

Benefit type	Examples
<b>Physical</b>	<ul style="list-style-type: none"> <li>▪ helps prevent illnesses such as:               <ul style="list-style-type: none"> <li>– type 2 diabetes</li> <li>– cardiovascular disease</li> <li>– obesity</li> <li>– numerous forms of cancer</li> </ul> </li> <li>▪ feel better with more energy</li> <li>▪ improvements in components of fitness</li> <li>▪ lowers blood pressure</li> <li>▪ helps maintain weight</li> <li>▪ recover better and quicker from periods of illness or injury</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>▪ meet new friends</li> <li>▪ build and strengthen relationships</li> <li>▪ learn how to work in a team</li> </ul>
<b>Emotional</b>	<ul style="list-style-type: none"> <li>▪ develop confidence</li> <li>▪ improved perception of self because of accomplishments made through physical activity pursuits</li> </ul>
<b>Mental</b>	<ul style="list-style-type: none"> <li>▪ helps develop problem-solving and decision-making skills</li> <li>▪ stress relief</li> <li>▪ strengthens memory functioning</li> </ul>
<b>Spiritual</b>	<ul style="list-style-type: none"> <li>▪ stress relief</li> <li>▪ calming and centring effect</li> </ul>



**Figure 7.1:** Walking the dog is an example of moderate physical activity.



**Figure 7.2:** Jogging is a great way to improve cardiovascular fitness.

The 2018 Physical Activity Across the Life Stages report, conducted by the Australian Institute of Health and Welfare (AIHW), indicated the following:

- Physical activity participation decreases with age. The percentage of young people meeting the recommended physical activity guidelines was proportionately higher than the percentage of older Australians.
- Younger Australians between 13–17 years of age are most likely to spend greater than the recommended amount of time sedentary and on screen-based devices. Approximately 80 per cent of all people aged 13–17 spend more than the recommended time in sedentary behaviours each day.
- Feeling as though there was not enough time to be physically active and the number of people who remain the two most reported barriers to physical activity as preventing them from participating in physical activity. For Australians older than 65 years, poor health and risk of injury becomes the highest reported barrier.
- Socioeconomic status was found to significantly influence physical activity participation for Australians. This association was only prominent for adults between 18–64 years of age, with individuals that have a higher socioeconomic status participating in high amounts of physical activity than those with a lower socioeconomic status.

Source: AIHW 2018, Physical activity across the life stages

### Did you know?

According to the World Health Organization, insufficient physical activity is one of the 10 leading risk factors for death worldwide.

### Internet activity

Log on to TitanOnline to complete Activity 7.1 to evaluate health initiatives from your school.



**Figure 7.3:** Physical activity helps develop problem-solving and decision-making skills.

## Case study

Aaron is 36 years old and lives in a large capital city. He has always been an active and sporty guy. He believes regular physical activity not only helps with his physical health, but it also helps his mental wellbeing. He loves the challenge of 'pushing through the pain' at the gym and the camaraderie he experiences with his teammates after having played football at the same club for the last 21 years.

In the past 18 months or so, Aaron has noticed changes in the way his body is responding to physical activity. He has found lately that he isn't achieving as much as he normally would at the gym and because of this, he has been getting frustrated and missing workouts.

When he was younger, Aaron needed surgery on his shoulder after one too many bad knocks at football and gradually the old injury site has been worsening. The muscle soreness after a game or training session is lasting longer than it usually would. Aaron decided this year to hang the boots up and take a season off. He still goes down to the park every week, supports his club and socialises with his team. Aaron is still struggling, however, and desperately wants to take up a new form of physical activity. As confident as Aaron is, he has always played for the same club and has never had to worry about being the 'newbie'. Surprisingly, the concept of being the new person in a new team for a sport other than football is really daunting for Aaron.



**Figure 7.4:**

As individuals grow older, they may no longer be as physically able as they once were.

1. Discuss Aaron's physical activity participation.
2. Analyse how the change in the patterns of Aaron's exercise regime could be affecting other components of his health.
3. Aaron usually visits the gym every week morning but lately he has been going a lot less. Suggest three one-hour workouts Aaron could use at the gym, keeping in mind his recurring shoulder injury.
4. Suggest strategies Aaron can practise in order to build the confidence to join a new sports team.
5. Create a list of sports Aaron could try that require a similar skill set to that of football but at the same time are less physically demanding.

## Factors influencing participation

The rate of participation in various organised and non-organised activities throughout Australia depends on a number of factors, such as age, socioeconomic status, education and gender. These factors can also influence an individual not to participate in physical activity pursuits and choose sedentary pastimes.

### Age

Age can influence an individual's choice to participate in, or how they choose to participate in, physical activity. At a younger age, many people participate in physical activity because their parents enrol them into sports or because it is part of the physical education curriculum. As an individual gets older, they may choose to be physically active to stay fit and healthy rather than participating purely because someone else wants them to. As individuals enter into their older years, they may no longer be as physically able as they once were. Therefore, the activities they do may have to be adapted in order to still be safe and realistic.

### Socioeconomic status

Individuals of higher socioeconomic status are generally considered to be more physically active than those of lower socioeconomic status. Reasons may be that many recreational and organised sporting activities incur considerable cost for transportation, registrations, equipment, uniforms and entry to facilities. The physical activity options and resources that are locally available are generally greater in urban areas of higher socioeconomic status. On average, these areas have greater access to gyms, coastal environments, ovals, community organised sports competitions and bicycle tracks.

Factors that contribute to an individual's socioeconomic status include their:

- geographic location
- education
- career or employment
- access to health care.

Interventions to increase the physical activity of low socioeconomic status families can improve the health status of individuals, with benefits such as:

- improved physical health
- healthier lifestyle routines
- increased sense of community, particularly through local sporting clubs
- better health outcomes for the community
- more educational engagement
- improved decision making.



**Figure 7.5:**

There are free physical activity options available to with a lower socioeconomic status.

## Ethnicity

Ethnic or cultural groups have a similar set of beliefs in relation to things such as values, laws and religion, and the beliefs are often passed from generation to generation. In the context of physical activity, culture can be viewed as being the range of activities, ideas, beliefs and values that are related to participation in physical activity, including organised sport.

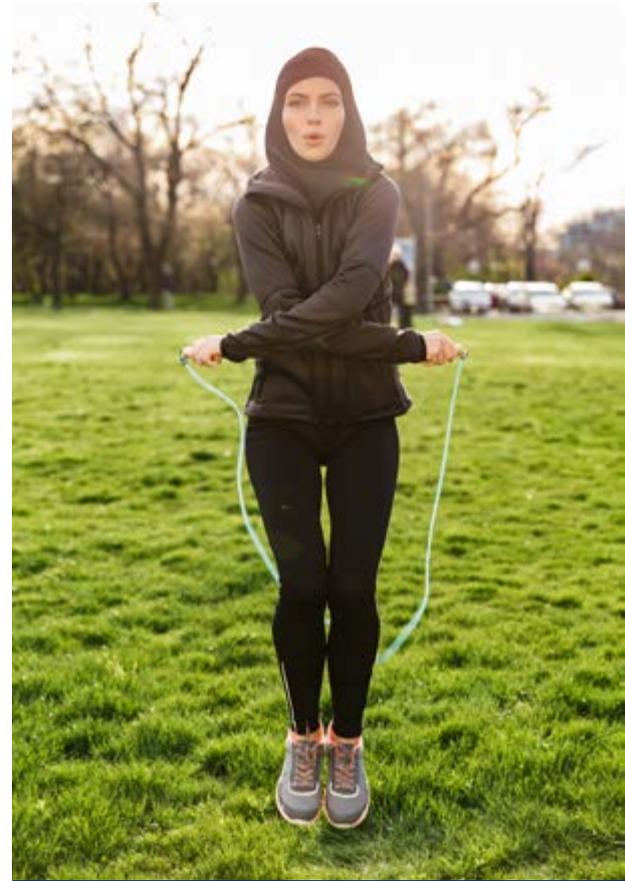
Australian society is culturally diverse and the members of various cultures bring with them various ideas about physical activity. Historically these ideas came from Aboriginal and Torres Strait Islander people and European cultures, but has now expanded to cover cultural groups from around the world. Gender issues are closely linked with cultural influences, especially in terms of the different perceptions of men and women in relation to physical activity. In some cultures, less importance is placed on sport and physical activity for women.

Individuals often make physical activity choices based on their religion or spirituality. For instance, many individuals choose to practise disciplines such as yoga, qi gong and tai chi, because there are spiritual gains to be felt from participating in these sorts of activities.

When it comes to religion, there will be individuals who are more stringent or devoted to their religion than others and some will practise very traditional beliefs. Sectors of religions such as Islam or Hinduism may discourage women being involved in certain physical activity pursuits.

## Education

Education is a big influence over the types of physical pursuits individuals choose to involve themselves in. Education and awareness of the physical activity options available in the local community play a major role in what individuals choose to participate in. Primary school, high school and even tertiary education can influence activities, as individuals may want to participate in the same types of activities as their friends. If individuals are not educated about the benefits of physical activity for overall health and wellbeing, they may be less inclined to participate in physical activity. Individuals who are motivated and engaged in education also have a greater likelihood to transfer those attitudes to other areas of their life, such as sport and physical activity.



**Figure 7.6:** Individuals often make physical activity choices based on the religion.

### Did you know?

Cricket's popularity in Australia originates from England, where it became the country's national sport soon after its inception in the 18th century.

### Internet activity

Log on to TitanOnline to complete Activity 7.2 that requires you to explore various education systems and how they influence participation in physical activity.

## Gender

Gender still influences the physical activity and sports individuals choose to participate in. Traditionally there have been ‘female sports’ and ‘male sports’. Typical male stereotyped sports include contact sports, football and cricket and typical female stereotyped sports include netball, gymnastics and dancing. Nowadays, people are less inclined to be restricted by such stereotypes, resulting in a growth in women’s football and cricket leagues as well as a growth in males participating in dance and the development of new dance genres such as hip-hop.

## Personal interests

Interests and hobbies will influence the physical activity habits of individuals. If individuals participate in activities they don’t enjoy, retention rates are likely to be lower. During schooling years, students are often introduced to a variety of physical activities in sport and PE classes, enabling them to pursue those activities they enjoy outside the school setting.

## Self-esteem and self-confidence

Self-esteem and self-confidence also influence an individual’s participation in physical activity. If an individual feels self-conscious about the way they run or their lack of coordination, they may not want to participate in any team sports or physical activity. If individuals are embarrassed to work out in front of others they might avoid places such as public gyms, pools and fitness centres. If an individual has positive self-esteem and self-confidence, they are more likely to try new physical activities and aim to challenge themselves.

### Learning activity

1. Suggest reasons why participation in organised sport is higher among males than females.
2. Research reasons why the Australian Capital Territory has such high physical activity participation rates compared to other states and territories.
3. Reflect on the physical activity pursuits you have tried over the years and answer the following:
  - a. What influenced your choice to pick the activity you did?
  - b. If you haven’t been involved in organised sport before, why?
  - c. What is an organised sport you’d like to try? Research local competitions nearby.
4. Analyse how socioeconomic status, ethnicity and religion can influence an individual’s choice of physical activity.
5. Create a fact file for the various physical activity and sporting clubs in the local community.



**Figure 7.7:**  
Regular physical activity boosts self-esteem and confidence.

## Physical activity for health and wellbeing

Regular participation in physical activity provides many benefits for health and wellbeing. These include benefits for individuals, schools, the workplace and economy and disadvantaged groups.

### Benefits for schools and learning

Physical activity and sport are usually promoted to highlight the benefits and positive impact they have on overall health, both physical and mental. Students who have good health and are regularly physically active will experience multiple benefits. These are outlined in Table 7.2.

#### Did you know?

The Heart Foundation reports that less than 20 per cent of Australians aged under 12–17 years meet the recommended Australian physical activity guidelines.

#### Internet activity

Log on to TitanOnline to complete Activity 7.3 to design a promotional advertisement for a community health initiative aiming to increase physical activity levels.

**Table 7.2:** Health benefits of being physically active.

Benefit	Explanation
<b>Physical</b>	<p>It is important for students, particularly from a young age, to participate in physical activity in order to continually develop their fundamental movement skills, including fine and gross motor skills. If students do not learn how to throw and catch, or even run properly in primary school, by the time they get to high school, sport and physical education can prove to be difficult.</p> <p>Students, particularly younger students, can benefit greatly from practising movement discovery activities. In these sorts of activities, students learn about travelling from one point to another using their body in a variety of different ways. Students also learn about concepts such as centre of gravity and base of support in a practical manner.</p> <p>By encouraging physical activity within and beyond the schooling environment, students are presented a great opportunity to prevent many lifestyle diseases such as obesity and type 2 diabetes.</p>
<b>Cognitive</b>	<p>There are multiple cognitive benefits achieved by students participating in regular physical activity and practising good health behaviours. Skills developed through participation in physical activity, particularly through team games and sports, provide students with cognitive skills that can be transferred across all areas of learning. These skills include:</p> <ul style="list-style-type: none"> <li>▪ problem solving</li> <li>▪ decision making</li> <li>▪ timing</li> <li>▪ coordination</li> <li>▪ spatial awareness</li> <li>▪ negotiation skills</li> <li>▪ memory</li> <li>▪ divergent or lateral thinking</li> <li>▪ multitasking.</li> </ul>
<b>Social</b>	<p>The social benefits of students who participate regularly in physical activity and practise good health have been studied closely. According to the Heart Foundation, children who participate in regular sport and physical activity:</p> <ul style="list-style-type: none"> <li>▪ are engaged with others and learn teamwork and negotiation skills</li> <li>▪ learn to work within the rules, regulations and etiquette of a social system</li> <li>▪ develop decision-making skills</li> <li>▪ cumulatively acquire transferable motor skills, giving them a sense of movement competence and confidence.</li> </ul> <p>Source: Heart Foundation (<a href="http://www.heartfoundation.org.au">www.heartfoundation.org.au</a>)</p> <p>Being involved in any physical activity provides students with an opportunity to make connections with their peers outside the classroom environment in a more natural setting. Involvement in physical activity can help build self-confidence and self-acceptance, which can help an individual's social skills.</p>

While there are many benefits of good health for students, there are also benefits for the school. Sport programs in schools:

- provide the school community opportunities to develop a strong identity and culture of excellence
- develop respect, fitness, responsibility and resilience among the student body
- encourage a partnership between the school and local community sporting and physical activity organisations.

Prioritising physical activity in the school environment has proven to have multiple benefits in relation to academic performance. Different school systems around the world treat physical education in different ways, with significantly different health outcomes. Finland, for instance, has been leading the world in terms of optimising student performance through using unconventional teaching methods. Students in Finland practise physical activity multiple times a day and have outstanding results in mathematics, English and science.



**Figure 7.8:**

Sport programs in schools develop respect, responsibility and resilience, as well as fitness.

### Learning activity

1. Discuss the importance of incorporating physical activity into an individual's regular routine.
2. Suggest a range of benefits for a whole community practising good health habits and being regularly physically active.
3. Reflect on your own experiences to explain the cognitive benefits of regular physical activity.
4. Explain the social benefits you have benefited from as a result of regular physical activity.
5. Reflect on what your school is doing to promote physical activity among students and staff.

## Benefits for the workplace and the economy

There are many benefits for the workplace and the economy from employees and employers practising good health habits and regular physical activity. Individuals are working long hours and many of these hours are carried out utilising technology, such as sitting in front of a computer screen, with little or no periods of physical exertion.

Presenteeism and absenteeism are two important terms to understand when discussing how good health habits and physical activity can benefit the workplace and the economy. Absenteeism relates to being absent or away from work. Presenteeism relates to being present at work, but not working at a fully productive rate. Just because an individual is present at their place of work does not mean they are benefiting the company. Presenteeism is responsible for the loss of more productivity than absenteeism. Presenteeism comes in numerous shapes and forms. Employees may be at work but not be working because:

- they are injured
- they are on restricted or light duties
- they are distracted
- of depression
- they are distracted by social media
- they are tired or bored
- the work area is unproductive or unhealthy, for example, noisy, unclean, cluttered, poor teamwork, ineffective leadership or poor lighting
- they are under the influence of alcohol and/or drugs or recovering from recent use.

Many of these distractions can be easily avoided through the interaction of physical activity into the working schedule.

According to Exercise and Sports Science Australia, there are many health concerns associated with sitting at an office desk for prolonged periods of time. This is why it is so important to break up the working day and integrate physical activity into an individual's routine. Benefits of physical activity for the workplace and productivity include:

- increased alertness
- increased energy levels
- improved engagement
- better health, leading to less sick days
- improved stress management
- fewer workplace-related injuries.

If individuals from a workplace exercise together, team spirit is promoted. Regular exercise routines can also help be more organised at work. Workplaces that value the health and wellbeing of their employees are ones in which job satisfaction and staff retention rates are higher. Employees are more likely to choose to stay at jobs longer where there is a sense of camaraderie and support beyond the job requirements.

### Did you know?

Research has shown that workplace health programs resulted in, on average, a 23.5 per cent decrease in



**Figure 7.9:**

It is important to break up the working day and integrate physical activity into an individual's routine.

### Learning activity

1. Discuss the benefits of physical activity and good health habits for the workplace and the economy.
2. Alice works in a fast-paced legal office that is usually pretty busy, is high-stress and employees rarely eat together or socialise outside of the office together. Suggest five ways Alice's employer could promote physical activity in the workplace.
3. Research a large company, such as Google, and describe how they incorporate physical activity into their employees' daily routine.

## Benefits for groups experiencing disadvantage

Disadvantaged groups in society include any minority groups that experience a standard of living that is in some way, shape or form, limited or impaired more than that of the average person. Individuals from disadvantaged groups are not in a group together due to a sense of belonging but rather because they may require extra support to overcome health barriers. People who fall into the category of disadvantaged include:

- sole parent families
- Aboriginal and Torres Str
- people with mental health
- people of low socioeconomic
- people with disability
- culturally and linguistically diverse communities
- the aged
- people from rural or remote

As needs and individuals in groups are so diverse, the participation in physical activity vary considerably.



**Figure 7.10:**

The benefits of participation in physical activity will vary considerably for each group experiencing disadvantage.

## Sole parent families

Sole parent families refer to one parent raising their child or children in a household by themselves, that can be the result of divorce, separation or the death of a spouse. The Australian Bureau of Statistics (ABS) reports that approximately 14 per cent of Australian families are sole parent families.

Source: ABS 2020 Labour Force Status of Families.

Being part of a sole parent family is challenging for both the dependant and the parent. The parent may feel unsupported, overwhelmed, overworked, stressed and as though they are not providing enough for their children. Children from sole parent families may feel resentful, lonely or like a part of them is missing.

There are a number of benefits this group can experience from participating in physical activity:

- Physical activity carried out between a parent and a dependant provides opportunities to bond, connect, communicate, be out of their comfort zone together, etc.
- Physical activity may be a parent's only opportunity to focus completely on themselves.
- Physical activity provides numerous health benefits, which makes it extremely important for sole parents because they are the sole carer of their children.

## Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people are considered a disadvantaged group in Australian society for a number of reasons. Indigenous people experience a lower health status than non-Indigenous people. There are a number of benefits this group can experience from participating in physical activity:

- An opportunity to practise cultural games and learn about their heritage.
- Aboriginal and Torres Strait Islander people experience educational disadvantage and benefit educationally when physical activity and sport are integrated and valued in the curriculum. Physical activity provides a great opportunity for this.
- Create and foster new friendships, if physical activity pursuits are in the form of team sports or exercise classes.



**Figure 7.11:** Participating in physical activity together is a great way for a parent and child to bond.



**Figure 7.12:** Physical activity provides the opportunity to master fundamental movement skills.

## Case study – The GO Foundation

The GO Foundation was started by Adam Goodes and Michael O’Loughlin, former professional players from the Sydney Swans AFL team. The GO Foundation was first introduced to the town of Dareton in NSW, a town with roughly 600 residents; one-third of whom share Aboriginal or Torres Strait Islander heritage. According to Goodes and O’Loughlin, they are in a unique position where they have struggled growing up but managed to achieve great success in life through sport. They both grew up in small Indigenous communities in South Australia and have both worked hard to accomplish what they have today, while making some useful contacts and learning some inspiring lessons along the way. One of the major aims of this foundation is to engage Aboriginal and Torres Strait Islander people with a quality secondary education. They believe that access to education is one of the core factors in attaining a promising future in adult life. An education not only qualifies and equips young Aboriginal and Torres Strait Islander people for their career and future life, but also teaches valuable skills in relation to health, wellbeing and physical activity skills, that they can share and pass on throughout their communities.

According to the Closing the Gap Report 2020, around 66 per cent of Indigenous Australians age 20–24 years had attained Year 12 schooling. In comparison, non-Indigenous Australians have an attainment rate of approximately 15 per cent higher. This is a dramatic difference for such a developed country and the Go Foundation aims to address this and to help achieve this goal, the GO Foundation has made partnerships with the Australian Indigenous Education Foundation.

Goodes and O’Loughlin visit communities and teach the importance of exercising regularly, restricting sedentary behaviours, eating a nutritious, healthy diet and looking after oneself.

1. Visit [www.gofoundation.org.au](http://www.gofoundation.org.au) and browse the website to investigate the current focus of the foundation.
2. Provide reasons why there is such a dramatic difference in the Year 12 completion rates between Aboriginal and Torres Strait Islander students and other students.
3. Research other work Adam Goodes and Michael O’Loughlin are involved in, with relation to health and wellbeing of Aboriginal and Torres Strait Islander people.
4. Outline the foundation’s view on the correlation between a strong cultural identity and participation and achievement in education.

## People with disability

Disability is commonly understood to be an illness or condition that prohibits an individual's ability to undertake core activities, particularly activities associated with self-care, mobility and communication. Just under one-fifth of the nation is living with disability. There are a wide variety of disabilities individuals are currently living with. Some people living with disability may have been born with the disability; in others their disability will develop as they age; and others may acquire disability through illness or injury. Forms of disability in Australia are varied, with common disabilities including:

- deafness
- blindness
- cerebral palsy
- multiple sclerosis
- epilepsy
- amputation.

There are a number of benefits this group can experience from participating in regular physical activity:

- Improved mood and overall happiness.
- Can improve conditions such as long-term workplace injuries.
- Can prolong the onset or development of disease, such as degenerative diseases, that gradually worsen to become disabilities.
- Promotes social interaction.



**Figure 7.13:**  
Physical activity promotes social interaction.

### Did you know?

Hand-cycling is an excellent alternative to conventional cycling for people with lower-limb impairment.

### Learning activity

1. Explain what is meant by the term 'disadvantaged' in relation to groups in society.
2. Discuss statistics relating to the physical activity levels of sole parent families compared to traditional or nuclear families.
3. Propose reasons why Aboriginal and Torres Strait Islander people generally experience poorer health than other Australians.
4. Research current physical activity pursuits available to individuals with disability.
5. Participate in a range of physical activities and sports available to people with disability.

## Culturally and linguistically diverse communities

Culturally and linguistically diverse (CALD) communities are those communities with a broad range of cultures and ethnicities. These communities may have more than one language spoken and may hold opposing or varying beliefs concerning health, religion, politics, women's place in society, etc. The 2019 ABS Census found that the top 10 countries of birth for people who immigrate to Australia are:

- England
- China
- India
- New Zealand
- Philippines
- Vietnam
- South Africa
- Italy
- Malaysia
- Sri Lanka.

Besides the physical benefits obtained from participating in regular physical activity, there are a number of other benefits this group can experience:

- Helps develop English skills for those who are not fluent English speakers.
- Integrates individuals who participate in organised physical activity into the Australian community.
- Provides opportunities for individuals to socialise and starting new friendships.

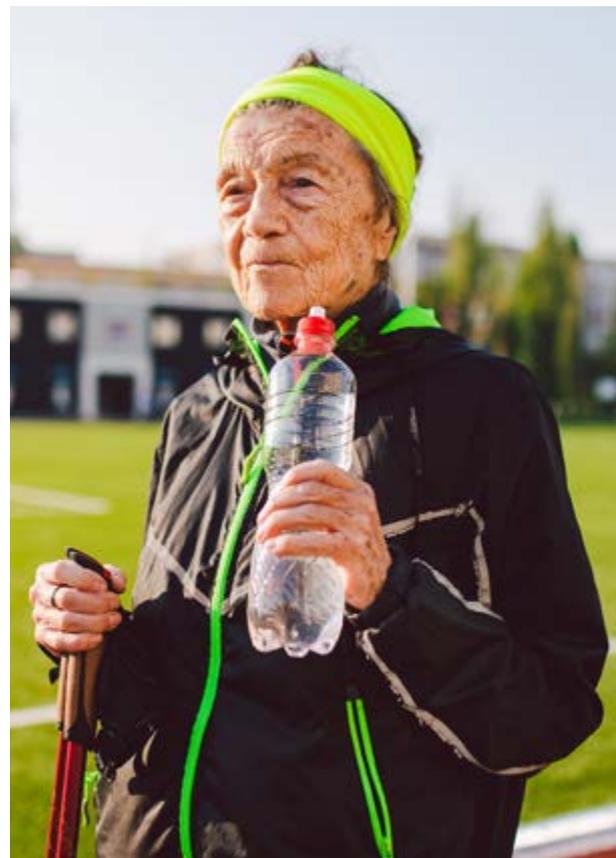
## Aged

Over the past two decades, the number of people aged 85 years and over increased by 117.1 per cent, compared with a total population growth of 34.8 per cent over the same period. In the year ending 30 June 2019, the number of people aged 85 years and over increased by 12,600 people to reach 515,700.

Source: ABS 3101.0 - Australian Demographic Statistics, June 2019.

There are a number of benefits this group can experience from participating in regular physical activity. Physical activity reduces the onset of a number of diseases and ailments associated with ageing, including:

- reduced bone strength
- arthritis
- reduced lean muscle and collagen
- decreased efficiency of the five senses
- dementia
- cataracts
- isolation and loneliness
- mobility issues
- reduced independence.



**Figure 7.14:** Physical activity reduces the onset of chronic diseases in the elderly.

### Internet activity

Log on to TitanOnline to complete Activity 7.4 and investigate how physical activity organisations cater for culturally and linguistically diverse communities.

### Did you know?

Walking, fitness/gym, swimming and cycling are the most popular sports and forms of physical activity for older Australians.

## People from rural or remote areas

The majority of Australians live in urban areas (cities or towns of more than 1,000 people), with only 10–15 per cent of Australians live in rural or remote areas. Living rurally means there are often less choices in terms of education and career path, as well as limited facilities such as doctors, gyms, recreation parks and supermarkets.

There are a number of benefits this group can experience from participating in regular physical activity. Participating in physical activity:

- provides opportunities for individuals to socialise and form meaningful relationships
- benefits physical health
- prevents sedentary behaviours
- develops connectedness and bonds communities together in hard times
- minimises rates of mental illness and suicide.



**Figure 7.15:**

For a town with limited recreational facilities, hiking is a great way to participate in physical activity.

### Learning activity

1. Analyse reasons why individuals from culturally and linguistically diverse communities may be less inclined to participate in regular physical activity.
2. Provide specific examples of how physical activity can benefit the aged population.
3. Research physical activity opportunities offered in the local area specifically targeting the aged.
4. Create a flyer advertising a new Flip Out (indoor trampoline arena) opening soon in a remote community. In the flyer, be sure to highlight the importance and benefits of regular physical activity.

# Getting Australia active

Over the last few decades, with improvements in technology and science, Australia's approach to health has moved away from purely treating illnesses, towards the largely recognised and practised holistic approach. The holistic approach to health encompasses prevention as well as treatment, with a strong focus on the importance of diet and exercise. This approach aims to relieve healthcare services and the cost of illness and disease to sick individuals. However, technological and scientific advancements have also seen Australia become an increasingly sedentary nation.

Australia's physical activity levels are declining and sedentary behaviours are increasing. The Australian Bureau of Statistics (ABS) has released the following facts and figures relating to physical activity levels of Australians:

- Only 50 per cent of adults actually meet the 'sufficiently active' threshold.
- On average, children spend 1.5 hours a day being physically active and over three hours a day engaged in screen-based activities.
- Approximately 45 per cent of teenagers aged 12–13 years have a television in their bedroom.
- Levels of physical activity tended to decline in older ages, with the lowest being among people aged 75 years and over.
- Sedentary activity occupied an average 39 hours per week for adults.
- Watching television was the most prevalent sedentary activity at nearly 13 hours per week.

Source: [www.aihw.gov.au/reports/risk-factors/insufficient-physical-activity/contents/physical-inactivity](http://www.aihw.gov.au/reports/risk-factors/insufficient-physical-activity/contents/physical-inactivity)

In order for a holistic approach to work, all areas of the public and private sectors need to work as a cohesive unit, including workplaces, schools, community, government at multiple levels and the family unit. Many of these areas have specific health promotion initiatives targeting the sedentary behaviours of many Australians.

## Internet activity

Log on to TitanOnline



**Figure 7.16:**

Families can be physically active together.



**Figure 7.17:**  
Bushwalking can accommodate people of all ages and fitness levels.

## Health promotion initiatives in different settings

According to the World Health Organization (WHO), health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviours towards a wide range of social and environmental interventions. Furthermore, WHO states that health is a resource for everyday life, rather than the object of living.

There are a number of dimensions to health promotion, with one of the most common models being the Ottawa Charter for Health Promotion, which consists of five action areas. The individual or body running a campaign will ultimately decide which areas to focus on depending on the goals of the campaign or initiative.

In relation to the health benefits of physical activity, there are health promotion initiatives in all domains of life. Health promotion initiatives can be as intricate as government campaigns, or as simple as an individual's family making changes to promote improved health behaviours.

### Internet activity

Log on to TitanOnline to complete Activity 7.6 that requires you to examine and apply the principles of the Ottawa Charter to increase participation in physical activity.

## Promotion within the family

There are many behaviours families can adopt in order to promote physical activity. It is important that parents or carers make their children aware of the impact regular physical activity can have on an individual's lifetime health and wellbeing. Not only should they educate their children on the importance of physical activity but they should also set a good example as role models. Ways families can encourage physical activity include:

- ensure dependants have an active childhood
- walk and bike ride as a family instead of driving places, where possible
- allow children company so they can play together, e.g. siblings, pets, friends
- get children appropriate immunisations and vaccines
- enrol in organised sports
- go on active family outings
- monitor screen-based activities.



**Figure 7.18:**  
Parents should be role models for their children.

### Did you know?

A child's participation in physical activity is significantly more likely if one parent or both are physically active.

### Learning activity

1. Research the physical activity rates in Australia and compare them to two countries of your choice. Discuss your findings.
2. Evaluate the purpose of health promotion initiatives.
3. Reflect on how your family values physical activity and answer the following questions:
  - a. Is your family meeting the Australian physical activity guidelines?
  - b. Does anyone encourage physical activity?
  - c. If so, how? If not, what could you do to encourage your family to exercise?

## Promotion within schools

Education surrounding health and wellbeing and the importance of physical activity is compulsory within the health and physical education syllabus. Schools offer a wide range of physical activity opportunities for their students. These include:

- physical education lessons
- sport
- inter-school competitions
- before- and after-school opportunities
- lunchtime competitions and free play using school equipment.

Specific health promotion initiatives run in schools are explored in Table 7.3 below.



**Figure 7.19:** Schools offer a wide range of physical activity opportunities.

**Table 7.3:** School health promotion initiatives.

Initiative	Details
<b>Jump Rope for Heart</b>	<p>This is an Australian initiative established in 1983 by the National Heart Foundation. The aim of the program is to encourage increased health and fitness levels for students across Australia. Schools need to register to participate but once they do, they are provided with a Heart Foundation representative who helps train teachers to run the program. The program usually runs for anywhere between four and nine weeks, concluding with a 'jump off' day where special games and challenges are played. Fundraising occurs throughout the duration of the program. It has been extremely successful over the years it has been running, with over 300,000 students in over 1,300 schools and with over 500,000 sponsors taking part.</p> <p>Source: Heart Foundation</p>
<b>Fit Futures</b>	<p>Fit Futures is an initiative being undertaken in many primary schools across Australia. The aim of Fit Futures is to provide qualified physical education teachers or qualified coaches to come into primary schools and educate students on how to move their body and the benefits of being active. The lessons are designed to promote inclusivity. All students, regardless of their ability, are included and the focus is not on winning or scoring the most points. Rather, the aim is on skill acquisition and movement discovery. Ideally, through being involved in Fit Futures, all students will receive physical movement education and hopefully enjoy physical education rather than dread it, as is the case for some students who are less athletic. The philosophy behind Fit Futures is learning through play.</p>



**Figure 7.20:**  
Many companies encourage their staff to be active.

## Promotion within the workplace

Approximately 65 per cent of Australians participate in the labour force. For many of these Australians, particularly those with office or desk jobs, most of the day is taken up carrying out sedentary activities such as researching, typing and reading documents, taking phone calls and planning. Individuals working in an office, particularly those working full-time, may have limited opportunities for physical activity, especially if they have a family to look after as well. That is why over the past number of years, many workplaces have introduced ways to make the office a more active place. There are tremendous opportunities to make the workplace more active. Some of these are detailed below.

- Encourage active lunches.
- Provide employees with shower facilities so they can work up a sweat riding or running to work rather than driving.
- Start a workplace training program.
- Meet with the local gym and discuss discounted membership prices for staff.
- Make stairs a more appealing option by adding artwork.
- Provide employees with a pedometer.
- Employers being more flexible, e.g. allowing employees to take three-minute breaks to go for a walk, stretch or jump around.
- Enrol workplace as a team in events, such as fun runs.
- Rather than sitting down for a meeting try conducting the meeting while going for a walk (only effective with small meetings).
- Workplace sport competition.
- Employers to reward active behaviours.

## Promotion within the community

There are numerous efforts being made in communities across Australia to encourage members to create regular physical activity patterns. The initiatives a community develops will differ from other communities depending on a number of factors, particularly geographical location and socioeconomic status. Some of these initiatives include local council sport competitions, gyms, fun runs and community partnerships.

### Local sporting clubs

Local council sport competitions are an excellent way to get individuals of all ages involved in regular physical activity. According to the 2019–2020 AusPlay survey:

- 73.6 per cent of Australian children participate in organised sport or physical activity, with 55.1 per cent participating more than once per week.
- 81.4 per cent of Australians aged 15–17 years participate in organised sport or physical activity, with 86.2 per cent participating more than once per week.

Around Australia, weekends are full of cricket, soccer, football, netball, swimming, hockey, softball, baseball, tennis and many more sports. These competitions provide participants with multiple benefits. Aside from the physical benefits, it also provides them with social, mental and cognitive benefits. Swimming remains the most popular organised physical activity participated in by individuals between 0–14 years of age, followed by soccer and recreational dance.

### Fun runs

Fun runs are community-based events that cater for a range of abilities. Participants can nominate to run or walk a specific distance, depending on their fitness levels. Many of the fun runs are held to raise funds for a specific charity or cause, with part of the registration fee going towards that charity or cause. Examples of popular fun runs include the Mother's Day Classic, the Colour Run, Sydney Running Festival and City2Surf. Individuals enter fun runs for numbers of reasons, including to:

- improve fitness
- have fun
- share the experience with a friend, partner or family member
- fulfil a personal challenge
- raise funds for a particular cause or charity.



**Figure 7.21:**

Local council sport competitions are an excellent way to get individuals involved in regular physical activity.



**Figure 7.22:**

Colour runs are popular community events.

### Internet activity

Log on to TitanOnline to complete Activity 7.7 to evaluate various physical activity campaigns from around the world.

## Recreational facilities

Over the past few decades, the growth of gyms and recreational facilities has increased significantly. There has also been an increase in popularity in training styles such as CrossFit. In order to cater to a diverse client base, many gyms are now open 24 hours a day. Recreational centres and facilities, such as rock-climbing centres, yoga studios and swimming pools, also make it easier for individuals to practise regular physical activity.

## Community partnerships

The concept behind community partnerships is for two or more organisations or groups within the community to come together and work towards achieving a common goal. Ultimately, both parties will get something out of the partnership that benefits their own interests, but as a by-product, others can benefit as well. Partnerships in the community include Coles and Woolworths and the partnerships they make with local schools through the Coles Sports for Schools program and the Woolworths Earn and Learn program. Both of these initiatives involve collecting stickers from the retailers based on how much an individual spends (one sticker for every \$10 spent). These are taken to a school and collected. The school can then exchange them for sporting and educational resources.



**Figure 7.23:**  
The addition of exercise equipment to public parks makes it easier for individuals to practise regular physical activity.

### Did you know?

Gyms report that over half of new members quit within six months.

## Learning activity

1. Discuss the effectiveness of school-based health initiatives.
2. Propose two alternative initiatives that schools could use to incorporate physical activity into the curriculum.
3. Think about community partnerships in your local area that promote physical activity. Discuss these initiatives and identify the benefits that they provide within the community.
4. Propose a number of ways a workplace can increase the amount of physical activity for its workers.

## Promotion by governments

The Australian Government works to address national problems regarding health and physical activity. It promotes healthy lifestyle, addresses issues such as obesity and puts in educational and preventative measures to improve the overall health of Australians. The federal government undertakes this through nationwide campaigns and initiatives. An initiative involves identifying a national issue, outlining a purpose, proposing strategies to promote and prevent the issue and then marketing the strategy around the country through the media, including social media. Initiatives and campaigns work to educate the public and help Australians live a healthier life. Some initiatives that the federal government has put in place to promote physical activity are detailed in Table 7.4 below.

**Table 7.4:** Government health promotion initiatives.

Initiative	Details
<b>Girls Make Your Move</b>	<p>Girls Make Your Move is about inspiring, energising and empowering young women to be more active. Many young Australian women don't feel they can be physically active. They face a number of additional barriers not experienced by young men. Girls don't want to be judged or ridiculed. They can be self-conscious about how they might look during and after exercising. The Girls Make Your Move campaign features real girls playing sport and being active. The campaign aims to encourage and support young women aged 12–19 to be more active and reinforce the benefits of an active life, whether through recreation, sport or other physical activity.</p> <p>Source: <a href="https://campaigns.health.gov.au/girlsmove/campaign-backgrounder">https://campaigns.health.gov.au/girlsmove/campaign-backgrounder</a></p>
<b>Tiny Trainers</b>	<p>Almost two thirds of Australian adults are insufficiently active and Sport Australia has enlisted a band of Tiny Trainers to help get Australians moving more often. Sport Australia research shows parents heavily influence the physical activity of their children. The Tiny Trainers campaign flips the script and sees children encouraging adults to get moving. AusPlay research shows children with at least one inactive parent are 68 per cent more likely to be inactive themselves. If parents and adults get active, then children are more likely to follow and be active themselves.</p> <p>Source: <a href="http://www.sportaus.gov.au">www.sportaus.gov.au</a></p>
<b>Find Your 30</b>	<p>The Find Your 30 campaign was introduced to increase to physical activity levels of Australians. It is targeted toward all Australians, young and old. The campaign takes away the focus of physical activity being just on sport, and encourages every Australian to commit to at least 30 minutes of activity each day. There are many ways this can be achieved and examples are given for at home, work, school and on the weekends. The campaign emphasises that engagement in regular physical activity is one of the key elements of a healthy lifestyle and making a commitment of 30 minutes a day is an achievable goal that can fit into anyone's lifestyle, however busy that lifestyle may be.</p> <p>Source: <a href="http://www.sportaus.gov.au">www.sportaus.gov.au</a></p>

### Internet activity

Log on to TitanOnline to complete Activity 7.8 where you will design a health campaign to continue to improve physical activity participation in Australia.

## Individual and group fitness activities

Physical activity can be competitive and non-competitive, individual and group activities. Individual fitness activities can include walking, running, cycling and resistance training. Group fitness activities can include a spin class, Zumba, body combat, team sports and many more. These can be undertaken in a health and fitness centre or as an active recreation activity. Lifelong recreation activities are low-impact and can be catered to suit the need of people of all ages and fitness levels. These activities include swimming, yoga, Pilates, tai chi, bushwalking, recreational cycling, and recreational sports.

Lifelong physical activity refers to an exercise or sport that can be enjoyed over the course of a lifetime. It involves participating in a range of physical activities to improve and maintain overall health, wellbeing and fitness in the short term and across the life span. Physical activities can be broken up into two categories: non-competitive and competitive.

- Competitive sports** are played with a focus towards winning. They generally have a set of defined rules. These sports are mainly played by younger people who are physically able to participate. However, competitive sports can be enjoyed by all age groups. Examples of competitive sports include soccer, rugby, netball, basketball and golf. Competitive sports can also be played over the lifetime as a recreational sport.
- Non-competitive sports** are played for enjoyment and generally have fewer rules than competitive sports. They are ideal for older people as they involve less wear and tear on the body. Activities include tennis, golf, swimming, running, walking and yoga. Lifelong physical activities are generally non-competitive and non-contact exercise.



**Figure 7.24:** Lifelong physical activities are generally non-competitive and non-contact exercise.



**Figure 7.25:** Competitive sports are played with a focus towards winning.

## Fitness centres

According to statistics, two-thirds of Australian adults are overweight or obese and are not engaging in enough physical activity. The fitness industry plays an important role in addressing the health issues of obesity and low activity levels. It is represented by the national body Fitness Australia, which provides leadership in accreditation, research and training. The fitness industry encompasses health centres, fitness centres and fitness professionals located throughout Australia. As a professional organisation, Fitness Australia is well placed to promote the benefits of physical activity so that the quality of life of all Australians can be improved. Individuals, communities, government sectors and the business industry have become increasingly aware of the benefits of physical activity on health.

Health and fitness centres are an ideal setting for physical activity in that they are well resourced and have a wide variety of services and options. Fitness centres meet the needs of a large number of people with various preferences, allowing for both individual and group fitness activities.

For example, a health or fitness centre provides a range of aerobic and strength training facilities, a range of equipment and specialised classes such as Pilates and yoga. Fitness centres also provide trained professionals and are in a position to create specialised programs for members, based on each member's needs. Many centres open for extended hours, making them accessible to people working long hours or shift workers. Gyms and fitness centres are becoming increasingly popular, providing education, motivation and a safe environment for physical activity, regardless of weather conditions.

In order to maintain and improve their role in promoting physical activity, fitness centres should:

- work collaboratively with members and other organisations, such as government departments, media representatives and health professionals
- promote physical activity to the general community
- provide structured training schemes and employ qualified leaders and personal trainers
- work with the members of similar organisations to provide research opportunities, develop new programs and practices and investigate current trends

**Figure 7.26:**

Fitness centres meet the needs of a large number of people with various preferences, allowing for both individual and group fitness activities.



## Individual fitness activities

Individual fitness activities include a range of fun and challenging activities. An individual can choose what activities suit them, meet their fitness goals and are enjoyable for them. There are many conventional activities such as power walking, jogging, cycling and swimming that people can participate in on their own. Resistance training and TRX suspension training are also popular choices to achieve physical activity and fitness goals.

Completing fitness activities individually allows customised activity plans to be undertaken at whichever pace most suits the specific individual's lifestyle, needs, health status and budget.

### Resistance training

Resistance training, or a weight training program, is the use of resistance in a muscular contraction to build strength, endurance, power and/or muscle mass. When a weight or resistance is applied, the muscles will work to overcome the resistance. This means that when performed regularly, muscles will adapt to this stress and muscle hypertrophy occurs. Examples of resistance training:

- weight machines
- medicine balls
- resistance bands
- free weights such as dumbbells, barbells and handheld plates
- a person's own body weight.

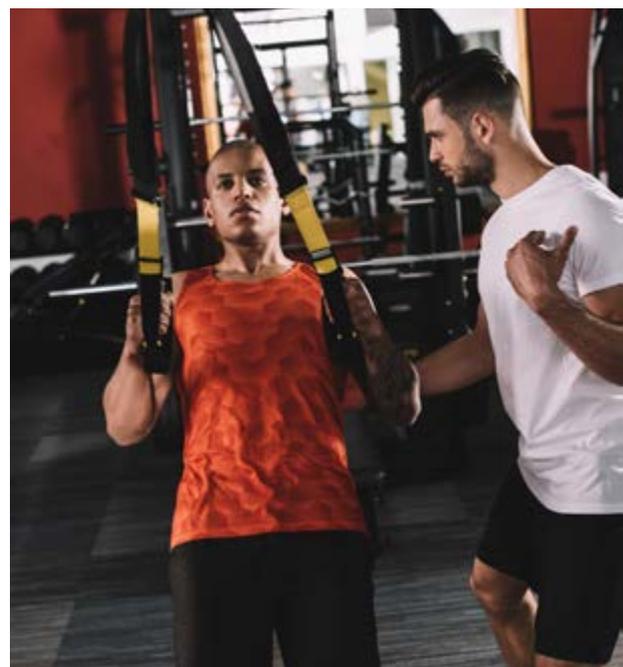
A resistance training program consists of several elements and principles to achieve optimal results. These include the number of training sessions and sets of the resistance, as well as the intensity of the exercise and the number of times the exercise is performed. A properly designed resistance training program allows an individual to increase their strength, lean muscle mass and endurance.

### TRX suspension training

TRX training uses portable ropes and leverage systems that use gravity and body weight to perform a variety of different exercises safely and suits people of any age group. It develops and improves strength, endurance, balance, flexibility and core stability.



**Figure 7.27:**  
A properly designed resistance training program allows an individual to increase their strength and endurance.



**Figure 7.28:**  
TRX suspension training is a popular choice to achieve physical activity and fitness goals.

### Practical activity

Test how many push-ups you can do. Practise your push-ups, trying to add an extra push-up to your total each night. Repeat the test each week this term and assess whether your results improve.

## Group fitness activities

Group fitness activities are for those who enjoy exercising in the company of other people and participating in a range of different classes and exercise routines. Health and fitness centres provide many different classes such as spin classes, body combat, boxing, Zumba and body attack. Participating in team sports such as soccer, hockey and netball provides opportunities to exercise, compete, have fun and interact with other people.

- **Spin classes:** A spin class is a high-intensity exercise performed indoors. It involves peddling on a stationary bike and adding or reducing the resistance of the peddling. A spin class works on cardiovascular endurance and is run by a qualified instructor. It is an enjoyable, social class that is set to music and lasts for between 40 to 60 minutes.
- **Body combat:** Body combat is an aerobics class that is inspired by martial arts, karate, boxing and Tai chi. It requires a person to kick, punch and strike the air to music and choreography. It works on improving cardiovascular endurance, strength and balance. It is run by a qualified instructor who helps participants achieve their fitness goals.
- **Zumba:** Zumba is an aerobics routine that is inspired by Latin dance themes. It involves a combination of movements that are fast and slow, improving fitness and coordination. It is a class that is created to be easy and enjoyable, as well as toning the body. Zumba is run by an energetic instructor and is performed to a range of international music styles.
- **Body attack:** Body attack is a high-intensity cardiovascular workout that is designed to improve fitness and strength. It involves interval training of fast-paced aerobic movements with exercises that improve strength and stability. It is run by a qualified, active instructor who motivates the participants to achieve their fitness goals.
- **Boxing classes:** A boxing class involves boxing techniques and exercises to improve cardiovascular endurance and upper body and core strength. It also helps to improve a person's coordination and agility through a high-intensity workout. Boxing classes use boxing gloves, pads and bags.
- **Team sports:** Team sports are one of the most popular forms of group exercise due to the element of competition and social aspects. There are many team sports available in local communities such as Australian football, soccer, rugby, netball, hockey and basketball. Team sports are also popular as they can be played all year round as an indoor or outdoor activity and are suited to all fitness levels and capabilities. The physical benefits of team games differ with the different types, but all sports require cardiovascular endurance and elements of strength, flexibility, agility and coordination.

### Learning activity

1. Compile a list of your local area's health and fitness centres and the services they provide.
2. Investigate one local health and fitness centre and:
  - a. Identify the classes and physical activities it offers.
  - b. Analyse the costs involved for members.
3. Analyse the role of the fitness industry in promoting physical activity.
4. Create a 30-second commercial for a fitness centre for young people. Make the commercial catchy, memorable and appealing to young people. Present it to the class.

### Case study

Hayley has just moved to a new suburb after her dad received a promotion at work, causing them to move away from her childhood home into a new and busy town. She had grown up in a quiet suburb and had kept the same group of friends from primary school through to high school and was very close with them all. They would hang out after school at the local park and go to the shops or the movies on the weekend. Hayley was nervous about starting at a new school with people that she had never met before. She realised when she got to school that she had forgotten how to make new friends. At first, people were excited and saying hello to Hayley but as the novelty of the 'new girl' wore off, she didn't have any proper friends or people that she could hang out with during lunch. Hayley started to get lonely both at school and when she was at home. She kept in regular contact with her old friends but it wasn't the same when they couldn't meet up and hang out like they used to.

Hayley started looking for things that she could do in her spare time to keep her entertained and to help make some new friends in the area. She spoke to her parents about it and they suggested she get involved in physical activity as there were many facilities in their suburb.

Physical activity was something Hayley had always thought about but in the past; when it came to exercise, she was unmotivated, felt as though she couldn't do it properly, became fatigued easily and would always make excuses to not do it. Hayley has been researching the personal and social benefits of physical activity and knows that it will be a really good way for her to fill in her spare time and to help her to feel happier and make friends but she is stuck on what to do and how to get started.

1. Identify steps involved for Hayley to become more physically active.
2. As a fitness consultant, give Hayley suggestions on the types of activities that she can be involved in and the benefits of each.
3. Distinguish the benefits that individual and group fitness activities can provide to her wellbeing.
4. Provide Hayley advice about the differences in organised and non-organised sporting activities (such as signing up to a fitness centre or joining a team sport).



**Figure 7.29:**  
Yoga provides many positive effects on the physical body and mind.

## Active recreation activities

Recreation is defined as being a source of refreshment. It includes activities during which mental and physical health is renewed. Participating in active recreational activities can lead to a range of positive experiences, from relaxation, fun and enjoyment to personal development and fulfilment as well as improved health. The broad social, economic and attitudinal changes that are occurring in society have led to the following trends in community recreation behaviour:

- A trend towards participation in non-competitive and passive activities.
- A search for more flexibility and diversity in recreational pursuits.
- Dramatic falls in the number of traditional sports such as tennis and lawn bowls.
- Significant increases in non-competitive but active pursuits such as cycling, walking and swimming, across all age groups.
- Greater support for and more involvement in informal, community-focused activities.
- Participation in leisure and recreation activities across a wider period of the day and week.
- Growth of more personalised leisure venues and services, as seen in ‘boutique’ health and fitness centres, personal trainers and engagement with fitness apps, books and programs, and home gyms.
- Growth in concern for protection of the natural environment.
- Use of natural and wilderness areas for a wide range of often conflicting uses, including participation in educational activities, bushwalking, skiing, four-wheel driving, abseiling, rock climbing, hang-gliding and canoeing.

## Swimming

Swimming has been used as a leisure pursuit by humans for thousands of years and is one of the most popular sports in Australia. Swimming is not only a great way to maintain health and fitness, but is also an activity that can be continued throughout a lifetime. It is a low-cost activity that is a great form of exercise as water provides a resistance against the body.

It is a beneficial recreational activity for people of all ages, providing low-impact exercise. It is also a great way for many people to relax and feel good. The most common recreational swimming styles are freestyle, breaststroke and backstroke.

### Health benefits of swimming

Swimming provides many health benefits and is a great all-round physical activity. It is great for relaxation and alleviating stress as well as toning and strengthening muscles. It helps to build muscular endurance, cardiovascular fitness and strength as well as providing a whole-body workout, using most of the muscle groups. Swimming also helps the maintenance of a healthy heart and lungs and well as a healthy weight and lifestyle.

It also helps improve coordination, flexibility, balance and provides therapy for people who are overcoming injuries. Learning how to swim also provides pathways to a range of other activities such as kayaking, canoeing, water skiing, surfing and snorkelling.



**Figure 7.30:** Swimming provides many health benefits and is a great all-round physical activity.

### Learning activity

1. Define the term 'active recreation activities' in your own words and discuss how these can be lifelong physical activities.
2. Identify the trends in modern recreation activities.
3. Research and describe the water-based activities available in your local area.
4. Discuss what the following slogans mean:
  - a. Wave, tide or ride, follow the guide
  - b. Look before you leap
  - c. Think so you don't sink
  - d. Reach or throw, don't go.

## Yoga

Yoga is a practice that incorporates physical, mental and spiritual aspects of Buddhism and Hinduism to harmonise these aspects. It is commonly practised by a large number of people for its health and relaxation benefits, including meditation, breathing control and posture.

Yoga provides many positive effects on the physical body and mind. It helps with flexibility and making muscles strong and toned. Yoga can also improve the functioning of many bodily systems such as the respiratory, circulatory, endocrine and digestive systems. Yoga is a popular activity for a variety of people including children, athletes and aged people. It can be modified and altered to suit people of all ages and fitness levels.

### History of yoga

The word 'yoga' is derived from the word 'yuj' meaning to unite or join together. Yoga has been practised for more than 2,600 years, derived from the ancient philosophies and principles by the Indian and Himalayan Vedic tradition. The foundations of the Vedic tradition are constructed by Patanjali, an Indian sage. He developed what is known as Yoga Sutra, which has been developed and altered through the years. The western world has since taken interest in yoga and the benefits that it provides. Today, yoga is practised in many forms through instructors, in health and fitness centres and outdoor areas. Individuals can also practise yoga in home gyms with the use of online videos and classes.

### Poses and postures

Yoga poses are not only about stretching and toning the muscles of the body but are also about opening the channels of energy in the body to create harmony. When in a yoga posture, it is important to focus on breathing slowly and deeply while strengthening the muscles and feeling a stretch. There are many different types of poses such as seated yoga poses, standing yoga poses, supine yoga poses and prone yoga poses.

- **Seated yoga poses** are most suitable for beginners as they can be easily adapted to a person's level of flexibility and strength. These poses create a grounded feeling. An example of a seated pose is the 'child's pose', in which a person kneels on the ground and sits on their feet, with the upper body stretched forward, arms extended and palms on the ground.
- **Standing yoga poses** are more advanced than seating poses, due to the requirement of both flexibility and strength. These poses create an uplifting and open energy.
- **Supine yoga poses** are postures that are performed on the floor with an individual's back. These poses create a grounded feeling that stretches areas of the body to promote the relief of stress.
- **Prone yoga poses** are those that use the core body and lower back. They are also known as back-bending poses. They can be suitable for a beginner and can increase in difficulty for advanced. An example is the 'bow', in which a person lays on their stomach, bends their knees towards the ceiling and reaches their arms back to grab their feet. This pose develops core strength and strengthens the lower back.

### Practical activity

Participate in a yoga session as a whole class. Reflect on how you felt participating in a journal entry.

## Pilates

Pilates is a form of exercise that is based on a range of controlled movements, designed to improve flexibility, strength, muscle control and body awareness. It was developed from an interest in yoga, callisthenics and ballet.

Pilates is a system that focuses on physical and mental conditioning with key benefits of sustained fitness and wellbeing, reduced pain and increased mobility. Pilates is also used commonly to improve posture and for rehabilitation and prevention of injuries.

It is beneficial for everyone who is involved, whether they are a beginner, intermediate or advanced. Pilates is taught by a qualified health or fitness instructor. The class is designed to suit the fitness needs of each individual, and regularly check up on each person to re-evaluate their level of fitness. It caters for a range of different people, including people with low levels of flexibility or fitness, pregnant women and people with disability or poor mobility levels.

### History of Pilates

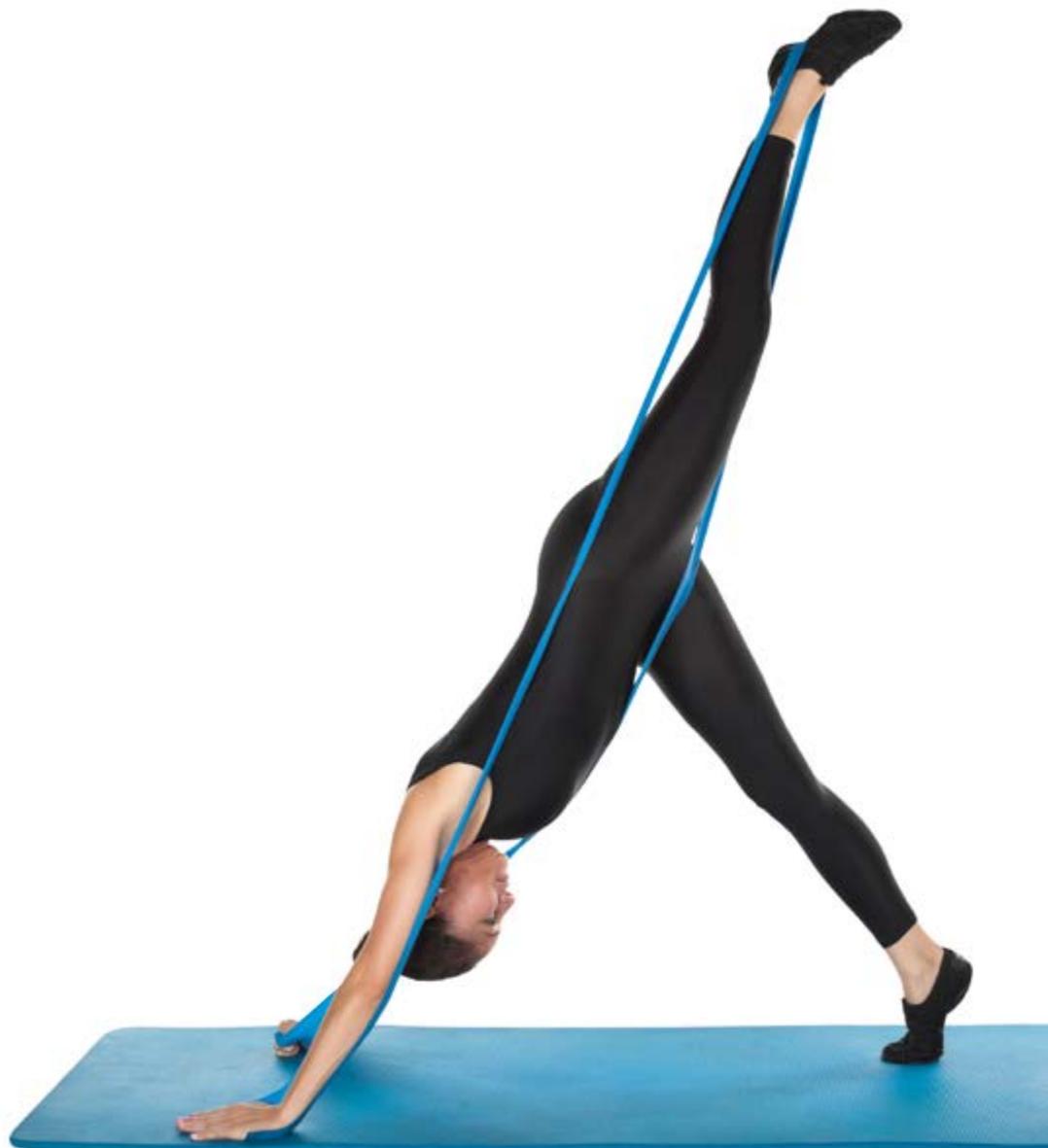
Pilates was founded in the 1920s by Joseph Pilates, a former athlete and dancer. Today, it is taught all over the world and is used for rehabilitation. It has become a popular form of exercise for a variety of different people.

### Pilates workout

There are several forms of Pilates, including mat-based and equipment-based.

- **Mat-based Pilates** is a form of Pilates performed using a person's body weight on the floor with a mat for support. It provides resistance against the body's muscles. Mat-based Pilates improves balance and posture.
- **Equipment-based Pilates** uses resistance against the body's muscles. It comprises a spring-loaded mat that is adjusted to a person's level of fitness.

The exercises performed in Pilates involve slow, controlled movements and holding positions for a certain amount of time. The quality of the movements performed relate directly to the individual's fitness level.



**Figure 7.31:**  
Mat-based Pilates improves balance, coordination and posture.



**Figure 7.32:**  
Tai chi provides benefits for people of any age and fitness ability

## Tai chi

Tai chi derives from Chinese culture and promotes the development of combat and self-defence skills. It is a martial art that improves overall health, wellbeing, concentration and movement skills. Some styles of tai chi are performed slowly and peacefully, promoting relaxation and meditation, harmonising the mind and the body. Tai chi provides benefits for people of any age and fitness ability, creating an active lifelong physical activity.

### History of tai chi

The term ‘tai chi’ is translated to mean supreme ultimate exercise or skill. Tai chi is derived from Chinese martial arts that form from ancient disciplines in Chinese traditional medicines. It was developed centuries ago and has been passed down through generations and families, creating many different versions of the original form.

### Poses and postures

All postures in tai chi use the grounding stance known as the ‘wuji’ stance. This allows a supportive foundation for the rest of the body. A person in the wuji stance will have their feet flat on the ground, knees bent and arms relaxed by their side.

The 13 poses move off the wuji stance and make formations with the arms and legs. The poses are soft, slow and focus on timing, balance and coordination, aiming to connect the energy of the body with the mind.

## Bushwalking

Bushwalking refers to walking on or off trail in natural areas for exercise, enjoyment or challenge. A bush walk usually features diverse landscapes such as rainforests, cliffs or mountains, and can considerably vary in length. Bushwalking is also known as hiking or trekking.

Recreational bushwalking can improve fitness and help a person understand their physical weaknesses and strengths. Bushwalking can accommodate people of all ages and fitness levels, and allows a person to go at their own pace. Being in a natural environment can create peace of mind, alleviate stress and have a positive effect on the spirit.

Bushwalking terrain can be unpredictable, therefore bush walkers may use muscles that they don't work during a normal walk or run. The body uses the core, leg and gluteus maximus (bottom) muscles to keep the body balanced and secure when climbing hills or descending into valleys. This helps to tone and strengthen the muscles in the body, as well as providing a cardiovascular workout. The weight-bearing nature of bushwalking also helps to strengthen a person's joints and bones.

## Cycling

Cycling is an activity that is suitable for people of many ages as it is a low-impact physical activity. This means that it causes less strain on the body than other forms of physical activity. Some people cycle for exercise or enjoyment, while others cycle for transportation, using roads and cycleways to get to work or school.

Regular cycling can improve a person's health and wellbeing significantly, reducing the risk of developing many illnesses and lifestyle diseases. It improves cardiovascular fitness, helps with weight management and metabolism rate, and increases muscular endurance and strength. Cycling also has positive effects on wellbeing, alleviating stress and anxiety, and promoting positive mental health.



**Figure 7.33:** Bushwalking usually features diverse landscapes.



**Figure 7.34:** Regular cycling reduces a person's risk of developing many illnesses and lifestyle diseases.

## Recreational sports

### Tennis

Tennis is a popular physical activity in Australia for people of all ages and fitness levels. It can be played competitively as a sport or recreationally. Tennis involves fast movements of hitting the ball, moving around the court and anticipating where the next shot is going to be played. It is played in groups of two or four, providing many social benefits, such as meeting new people or spending some time with friends and family.

Tennis has many health benefits, including:

- improved cardiovascular fitness
- lowered resting heart rate
- improved tone and strength of muscles in the body
- improved weight management
- increased metabolism
- improved flexibility and reaction time.

### Golf

Golf is a sport that provides many benefits to a person's health and wellbeing. Not only is golf mentally stimulating, it provides a great form of physical activity and is located in enjoyable, natural surroundings. Golf can be played individually or in a group, and is played by people of many different ages and abilities.

Playing a round of golf generally requires walking between four to seven kilometres, depending on the length of the course. Playing golf provides many benefits derived from regular participation in physical activity, including:

- helps prevent illnesses such as:
  - cardiovascular disease
  - obesity
  - numerous forms of cancer
  - type 2 diabetes
- feel better with more energy
- improvements in skill- and health-related components of fitness
- lowers blood pressure
- helps in maintaining ideal body weight.

Golf also provides a way to meet to new people and be involved in the social aspects of being a part of a local club.



**Figure 7.35:**  
Tennis can be played competitively as a sport or recreationally.



**Figure 7.36:**  
Golf can be physically and mentally challenging.

## Practical activity

In groups of four, design and set up a golf course on the school oval. As a class, play each of the holes.

### Rock climbing

Rock climbing is a recreational activity in which a person climbs up and down rock formations that are natural or on an artificial wall. In previous years, rock climbing was only performed by professionals who climbed rock formations in mountainous regions. Nowadays, it has evolved into a popular recreational physical activity that is performed indoors with safety harnesses.

Beginner level rock climbing caters for people of all ages and fitness levels and capabilities, including children, aged people and people with disability. It does not require a person to be exceptionally fit, although when climbing regularly it significantly increases fitness. It also strengthens many muscles in the body including the core muscles, legs, back, arms and shoulders. Flexibility and agility are also improved, as well as learning good technique and problem-solving skills.



**Figure 7.37:** Rock climbing is a popular activity that can be enjoyed indoors or outdoors.

### Internet activity

Log on to TitanOnline to complete Activity 7.9 where you will evaluate various ways individuals can become physically active.

### Learning activity

1. Determine the similarities and differences between each lifelong recreational activity.
2. Identify an activity that people may perceive as being less physically demanding. Analyse this activity in relation to its physical demands and health benefits.
3. Identify the recreational needs of the following groups:
  - a. Children
  - b. Older people.
4. Create a list of lifelong recreational activities that provide physical, social, emotional, mental and spiritual benefits.
5. Identify a range of lifelong recreational activities available in the local area that have not been mentioned in this chapter.
6. Create a fact file on three of these activities and present them to the class using appropriate ICT software.

# Safety and physical activity

Before trainers, coaches and leaders design a training program, they need to consider the following three factors to ensure the safety of participants:

- An analysis of the person who will be following the program, including a thorough pre-screening to determine their history and current health status.
- The general training principles that apply to all fitness programs.
- The types of training that should be used in the program.

In addition to these safety considerations, fitness leaders need to consider the following factors to establish the needs of the individual and their capabilities.

- **Preference:** For an individual program, the person's likes and dislikes should be taken into account. People are much more likely to continue exercising and achieve fitness improvements if they enjoy the activities they participate in.
- **Goals:** An individual's program should be tailored to their specific short- and long-term fitness goals. For example, if an individual wants to increase their cardiovascular endurance, the program would be different from the one they would follow if they wanted to lose weight and increase their lean muscle mass.
- **Gender:** Males and females demonstrate variances in physical ability as a result of differences in body composition and hormones. Males exhibit better cardiovascular endurance and more strength, whereas females are more flexible and are likely to carry a higher percentage of body fat. These differences should be reflected in a person's individual program.
- **Age:** In general, children and adolescents (people younger than 16) should not engage in repetitive exercise programs such as running or a high-load training program. The bones are still developing to prevent damage to their bones. The body composition peaks between the ages of 10 and 14, after which a decline is evident, so a person's program should be tailored accordingly.
- **Ability:** Undergoing a fitness test is a good way to determine fitness level and form a program. People who are new to an activity should commence with a low level of intensity and gradually increase the intensity.



**Figure 7.38:**  
Fitness activities should be supervised by trained instructors.

## Medical history and pre-existing injuries

An individual's previous exercise experience or training background should be considered when their program is being planned. Each person has a different training background, and new participants will notice significant changes in their body in six to eight weeks, whereas people who exercise regularly might see little improvement during that period.

Involvement in physical activity and sport is an effective way to increase an individual's quality of life and keep physically, mentally and socially healthy. However, participation in most physical activities and sports has a level of risk to the individual. In order to reduce the level of injury risk, individuals who are beginning their physical activity involvement should consult a medical professional to analyse their current health status. Based upon an initial assessment, medical professionals may provide recommendations on the types of physical activity and sport an individual should participate in. A survey or questionnaire is commonly used to collect data indicating common medical conditions an individual may have, such as asthma that may need to be considered prior to vigorous activity.

In addition, any pre-existing musculoskeletal injuries should be assessed to reduce the likelihood of them recurring or becoming chronic. A physical assessment can be completed by a medical health professional, such as a physiotherapist to determine safety considerations prior to participation. Following an assessment, medical professionals may determine that the individual's health is suitable for participation in most sports and physical activities with limited modifications required. Secondly, the individual may be advised to significantly modify physical activity and sport participation in terms of time, effort, frequency and type. Depending on the type of injury, an individual may also be recommended to take a rest period and not engage in a physical activity and sport. During this stage an individual may be advised of specific exercises to rehabilitate their body and ensure that range of motion and mobility improves.

To reduce the risk of injury, participants should:

- warm-up, stretch and warm-down
- participate in training sessions
- participate in activities involving speed and acceleration
- include appropriate stretching and strengthening exercises in training programs
- gradually increase the intensity of training sessions
- maintain high levels of cardiorespiratory and muscle endurance to prevent fatigue
- allow adequate recovery time between training sessions and games
- wear appropriate footwear and protective equipment that is recommended by sporting organisations
- ensure the playing surface is safe and remove any potentially dangerous objects
- remain hydrated – drink water before, during and after activity
- avoid extreme risk activities wherever possible.

# Exercising safely

## Training principles

A range of training principles underpin all effective training programs, including the principles of warm-up, warm-down, progressive overload, reversibility, specificity, variety and training threshold.

- **Warm-up and warm-down:** essential for preparing the body to safely participate in physical activity, as well as preventing side effects of training such as cramping, delayed onset of muscle soreness, and a build-up of lactic acid and other waste products.
- **Progressive overload:** training should increase in terms of frequency, intensity and time. The overload should occur gradually and steadily, and athletes should avoid plateauing. When the body is progressively overloaded, and a safe amount of additional stress is placed on the body systems, adaptations begin to occur. For example, an athlete who regularly runs for 20 minutes at a certain pace may overload by either increasing the time to 30 minutes but quicken the pace, or keep the time at 20 minutes but quicken the pace.
- **Reversibility:** if an individual stops training, their fitness levels will deteriorate. As training intensity reduces, they will see their fitness levels reverse and fitness levels will deteriorate.
- **Specificity:** how the training is made specific to the individual or the team by considering factors such as unique game requirements, and hereditary factors, muscle fibre somatotype, gender, age and training experience.
- **Variety:** if a training program is boring, individuals can lose interest. While individual training must specifically target the individual's needs or training goals, there is always more than one way to achieve the same outcomes. Cross-training and activities with similar skill sets provide good alternatives for sports people. Fitness programs that target fitness components in new ways, incorporating competition or fitness challenges, can be different and increase motivation.
- **Training thresholds:** involves training the body under sufficient stress to reach a new level of fitness. It is the zone between being comfortable and being challenged. In an individual's training level where lactic acid begins to build up faster than it can be dispersed.



**Figure 7.39:**

A range of principles underpin all effective training programs.

## Types of training

The four main types of training are aerobic training, anaerobic training, strength training and flexibility training.

Aerobic fitness is dependent on the cardiovascular system supplying oxygen to the body's cells to produce energy. The more oxygen that is made available to the muscle, the more energy that can be produced with minimal fatigue on the body. Participating at approximately 65–80 per cent of an individual's maximum heart rate (MHR) will predominantly use the aerobic system. Examples of aerobic type activities include marathons, triathlons and most team sports.

Anaerobic fitness is dependent on the athlete's ability to draw energy stored in the muscles, without the use of oxygen. When exercise is short and intense, the athlete must rely on the immediate anaerobic energy available. This form of energy will not last long – possibly up to one minute, longer in a trained athlete. Examples of anaerobic type activities include sprinting, shot put and high jump.

In understanding aerobic and anaerobic training, it is important to understand how intensity, duration, recovery, energy source and psychological benefits all impact on training.

Strength training is an integral part of most effective training programs designed for improved performance. The purpose of a well-developed strength training program is to:

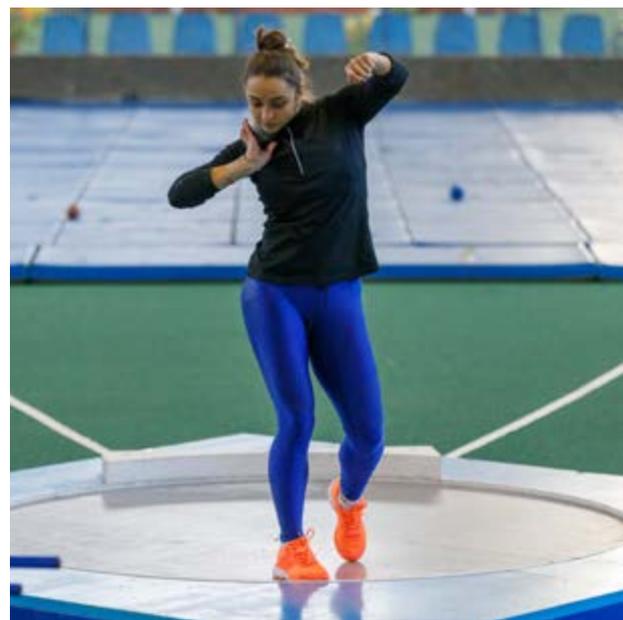
- develop correct exercise technique in order to avoid injury and maximise training effect
- improve strength base
- identify specific strengths and address specific weaknesses
- meet sport-specific strength needs.

In strength programs, a range of equipment can be used, such as free weights, hydraulic machines and elastic bands, as well as the body's own weight.

The aim of flexibility training is to improve the range of movement or motion across a joint. Types of flexibility training include static stretching, ballistic stretching and proprioceptive neuromuscular facilitation (PNF) stretching.



**Figure 7.40:**  
Team sports are a great way to improve aerobic fitness.



**Figure 7.41:**  
When exercise is short and intense, such as in shot put, the athlete uses anaerobic energy.

### Learning activity

1. Explain how the following principles can be applied to resistance training:
  - a. Overload.
  - b. Reversibility.
  - c. Specificity.
2. Discuss how the following factors can influence a training program:
  - a. Preference.
  - b. Ability.
  - c. Exercise history.
3. Using only the facilities and equipment available at the local park, create a training program for a 40-year-old woman of average fitness ability who wants to increase her aerobic fitness and lose excess weight.
4. Over a two-week period participate in a range of training sessions aimed at improving aerobic fitness, anaerobic fitness, strength or flexibility. Perform a pre-test before commencing the training sessions and keep an exercise diary. At the conclusion of the two-week period, perform a post-test and analyse the results.

## Hydration

The human body contains a very high percentage of water. Water is extremely important for the body's major organs, ensuring that the health of the skin is optimal and the blood volume is appropriate to the energy expenditure. It is recommended that a minimum of one and a half litres of water is consumed sporadically throughout the day, with a more accurate recommended intake dependent on body size, activity levels and environmental conditions. For individuals exercising at a more rigorous intensity, greater intake is required as the body loses water through sweat and urine. Water is essential for everyone, as it assists with the regeneration and growth of new cells, maintains correct sodium levels, flushes unwanted cells out of the body, maintains the body's internal temperature and enables joints and muscles to be appropriately lubricated for ease of movement. In extremely hot and humid environments athletes should regularly consume small amounts of water when not involved in an activity.

Dehydration is caused by the body not retaining enough water. When dehydrated, an individual may have a dry mouth and throat, dark yellow urine or suffer headaches. Dehydration from occurring in sport and physical activity can be prevented by regularly consuming small amounts of water. Water does not only have to be consumed in liquid form, as many fruits such as watermelon and cucumber have a high water content.

**Figure 7.42:**

It is recommended that a minimum of one and a half litres of water is consumed sporadically throughout the day.



## Intensity of exercise

It is widely acknowledged that physical activity is beneficial to a person's health. However, knowing and recognising the appropriate intensity of exercise needed to achieve the best improvements can be difficult for the inexperienced.

Exercise intensity relates to how much effort is exerted during physical activity. It is determined through a person's current level of fitness and their health and fitness goals. Exercise intensity is categorised into low, moderate and vigorous exercise. Australia's Physical Activity and Sedentary Behaviour Guidelines advises for the maximum fitness benefits, the average person should be working at a moderate intensity. For 13–17 year olds, at least 60 minutes of moderate to vigorous intensity exercise should be achieved every day. Examples of moderate activity are walking briskly, cycling, throwing a ball and walking the dog. Examples of more-vigorous activities are playing a team sport, swimming, running and dancing.

There are several factors that influence the appropriate intensity of physical activity, including health status, age, previous participation in physical activity, personal preference, facilities that are available and time constraints.

## Measuring exercise intensity

There are many ways in which a person can measure their exercise intensity. These include utilising a target heart rate, talk test or exertion rating scale.

### Target heart rate

The use of the heart rate to determine the intensity of physical activity is an accurate indicator of exercise intensity. Heart rate will increase in relation to the intensity of the exercise. A person's target heart rate should be 50 to 70 per cent of their maximum heart rate, working at a moderate to vigorous intensity.

Knowing the target heart rate involves calculating the heart-rate range that is appropriate to an individual's age. An individual has to know how to calculate their heart-rate zone and have the skills or equipment necessary to determine whether they are keeping within the heart-rate zone during their physical activity.

Maximum heart rate in beats per minute can be worked out by using the formula 220 minus your age. Therefore, the maximum heart rate for a 16 year old would be calculated as:  $220 - 16 = 204$ .

The target heart rate working at a moderate to vigorous intensity would therefore be 50–70 per cent of 204 beats per minute. This equates to a target heart-rate zone of between 102 and 143 beats per minute. Within this zone, the person maximises the benefits of physical activity.

### Learning activity

Record your resting heart rate. Jog on the spot for 30 seconds, one minute and two minutes, recording your heart rate at each interval. Account for the differences in heart rate.

### Practical activity – How to measure your pulse

The radial pulse can be found on the inner wrist. To measure the radial pulse in beats per minute, an individual should:

- Place two or three fingers against the inner wrist of the opposite hand. Remember not to use the thumb, as it has its own pulse and can interfere with measuring the radial pulse.
- Put light pressure on the hollow in the wrist, directly below the thumb. This is where the artery sits below the skin.
- Count the beats for 15 seconds using a stopwatch or clock. To work out beats per minute, multiply this number by four.
- For example, counting 29 beats in 15 seconds would equal 116 beats per minute.

### Talk test and exertion rating scale

The talk test is a simple way to measure the intensity of the exercise. It works by observing the body's physical signs during exercise such as increased breathing rate, increased heart rate, sweating and fatigue.

As an easy way to measure the three levels of intensity, follow these rules:

- If a person can talk and sing without puffing, they are working at a low intensity.
- If a person can talk normally but cannot sing, they are working at a moderate intensity.
- If a person can't say more than a few words in a conversation, they are working at a vigorous intensity.

When measured on a scale using all physical signs, to be working at a moderate to vigorous intensity, a person should aim for between four and six on the exertion rating scale. Table 7.5 explains the exertion rating scale.

**Table 7.5:** The exertion rating scale.

Level	Restrictions	Physical signs
1	Minimum	Normal breathing, can talk normally
2	Low	Awareness of movement, light breathing
3–4	Slightly hard	Warmth and light sweating, can have a conversation
5–6	Hard	Moderate sweating and moderate breathing
7–8	Very hard	Heavy sweating and heavy breathing
9	Extremely hard	Very heaving sweating, can only talk in broken sentences
10	Maximum effort	Strenuous, gasping for breath, can't talk, exhaustion

## The use of technology

The opportunities to use various forms of technology to impart knowledge, track activity levels, provide feedback and motivate, has empowered many individuals and increased safety. Devices have become more functional, smaller and more cost effective. Technology has been used to promote sport and physical activity in order to change people's exercise behaviours. Pedometers, accelerometers and heart rate monitors have been used to track activity and levels of intensity for many years, but are now standard features of most wearable technologies.

Fitness trackers such as watches or wrist bands that monitor a variety of fitness measures such as steps taken, kilojoules burnt, heart rate and sleep times. They also feature an inbuilt GPS in which an individual can track their physical activity when running, swimming or cycling. The devices help measure activity levels and keep track of an individual's fitness history and goals. Examples of these include the Fitbit, Garmin, TomTom runner and Apple Watch.

Mobile phones enable fitness apps such as MyFitnessPal, Runtastic, Fitness Buddy and Map My Run to provide knowledge, enjoyment, feedback and motivation.

Cardio equipment has become more sophisticated in relation to the physiological information it can generate about a workout. As well as speed, time and distance covered, it can also display the number of kilojoules burnt, heart rate and power output. Many gyms also have software where an individual's workout information can be linked to a record of their nutrition, exercise and weight management so they have a more precise reading. This information informs trainers and participants so workloads can be managed to avoid overtraining and stress-related injuries.

Video analysis is a tool that is becoming popular for coaches or trainers who work with people of all ages and standards. It has grown enormously, enabling the improvement of performance. These software programs are used to capture video, edit and compare footage. Measurements of key features, such as body and joint angles, angles of release, speeds and techniques can be obtained by way of video analysis. These can be used by an athlete to improve performance and correct poor technique that can lead to injury.

## Correct technique

Correct execution of physical activity and sport movements minimises injury and improves performance. Technique involves an individual learning how to coordinate and time their movements with external factors to achieve skill execution. Many individuals beginning involvement in physical activity and sports are recommended to attend professional coaching sessions with trainers who have undergone accreditation and training to facilitate coaching sessions with minimal risk of injury to participants.

Incorrect technique is likely to result in some form of injury, whether acute or chronic. Anatomically correct positioning will assist to minimise injuries when movement sequences and involvement in physical activity occurs. For fast paced sports and physical activities, slow motion video can assist to enable coaches to review execution and positioning and provide feedback or corrections if required.

## Footwear and clothing

Correct footwear and clothing are imperative for all physical activities and sport. Many require specific apparel, with some sports organisations requiring participants to wear clothing or equipment to promote safety.

Correct footwear supports the foot while enabling flexibility to ensure maximum speed. During activity, shoes cushion the impact as the foot lands and maintains correct foot alignment. Advances in footwear also promote comfort and grip to avoid slippage and falls.

Improvements in clothing have promoted comfort, injury protection, recovery and safety. A variety of clothing features have promoted safety such as hi vis, sun protection, thermal regulation and moisture wicking.

Protective apparel have also played an important part in promoting safety. Wearing helmets where necessary also helps to prevent serious injuries. Technological advancements have led to the production of lightweight and malleable protective equipment, such as shields made from D30 to ensure that protective equipment does not negatively affect performance and therefore not be worn by participants. Compression garments are also commonly used to assist muscle and circulation recovery and swelling that may be caused by the damage participation in physical activity and sport can do to the body's soft tissues.



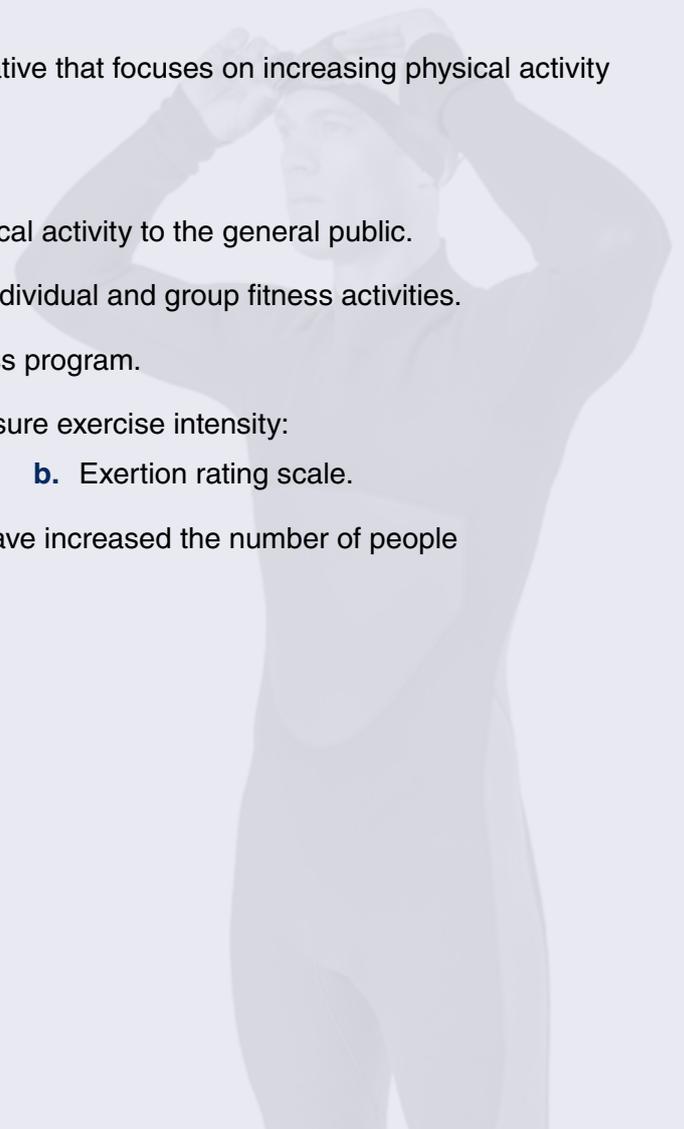
**Figure 7.43:** Correct footwear supports the foot while enabling flexibility.

### Learning activity

1. Calculate your maximum heart rate and determine your target heart-rate zone for moderate to vigorous intensity physical activity.
2. Identify the physical signs that determine the intensity of your exercise.
3. Discuss how technological advances have made it easier for people to analyse the intensity of their workout.
4. Research a fitness app that is available as a download to a smart phone. Create a fact file for this app.
5. Analyse the advantages and disadvantages of using this app to improve an individual's fitness.

## Revision questions

1. Look up Australia's Physical Activity and Sedentary Behaviour Guidelines and answer the following questions:
  - a. Are you currently meeting the national physical activity guidelines?
  - b. If yes, how? If no, why not?
2. In groups of three to four, brainstorm barriers that prevent individuals from meeting the national physical activity guidelines.
3. Suggest a range of strategies individuals can use to overcome these barriers.
4. Explain how regular physical activity can help students' overall health and wellbeing.
5. Create an initiative that your school can implement to encourage increased participation in physical activity for staff and students.
6. Create a plan for an app that disadvantaged groups in society could use to assist them increase regular physical activity habits. Make sure your app reaches as large an audience as possible by ensuring that it is completely free and doesn't require access to expensive equipment or facilities.
7. Research a previous or current government initiative that focuses on increasing physical activity levels among Australians. Assess its success.
8. Discuss the benefits of lifelong physical activity.
9. Analyse how the fitness industry promotes physical activity to the general public.
10. Discuss the advantages and disadvantages of individual and group fitness activities.
11. Identify the determinants of a personalised fitness program.
12. Describe and discuss the following ways to measure exercise intensity:
  - a. Measuring your pulse.
  - b. Exertion rating scale.
13. Propose reasons why technological advances have increased the number of people participating in physical activity.





## CHAPTER 8

# Boost your performance

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Improving coaching and athletic performance is a worthwhile goal regardless of the ability and competition level of the individual. At the elite level, boosting performance might equate to new records and achievements, while for other participants, it may simply mean greater enjoyment and engagement with sport. Knowing the preferred learning style of the performer and providing appropriate learning experiences maximises the likelihood of improvement. There also needs to be an understanding of how to accurately measure performance and provide effective feedback, thereby enabling athletes and coaches to work together to improve technique. Advances in sport-related technology and biomechanical applications have led to a more scientific approach to performance improvement and provide a framework for future innovation.

### Focus areas

- Skill acquisition
- Improving performance
- Equity and ethical behaviour



**Figure 8.1:**  
Skill acquisition takes time, practice and repetition.

## Skill acquisition

In sport and physical activity, the term ‘skill’ refers to the voluntary control and appropriate coordination of the body and limbs to perform an intended movement. Skill acquisition involves an individual’s decision making and associated movements, often in dynamic and complex environments. Athletes need to develop different types of skills, depending on the sport and their current skill base. The ability of individuals to conceptualise, learn and refine sporting skills impacts their ability to perform and succeed. The process and rate of learning and perfecting skills will differ for each individual. Skill acquisition seems to come quickly for some people, while for others the process of improvement may be much slower. One aspect all people have in common, however, is that skill acquisition takes time, practice and repetition. Learning a new skill is a dynamic process that can be influenced by many factors, some of which are external factors and some are part of the makeup of the athlete.

### Stages of skill acquisition

As a new skill is being learnt, the individual may progress through certain learning stages. These stages provide a broad indication of how learning is progressing and includes the cognitive (or understanding) stage, associative (or practice) stage and the autonomous (or automatic) stage. For some athletes, learning new skills might mean moving from a beginner level to the elite level. Others may plateau and never quite master certain skills.

## Cognitive stage

Athletes in this stage are at the learning stage and have a high degree of mental processing about each skill they are performing. The athlete has to think about each section of a skill and how the body has to move to execute it. Movements in this stage are not fluid and errors occur frequently. Athletes in this stage of skill acquisition require a high degree of immediate and external feedback, such as verbal feedback by a coach or teacher. Athletes will also often require visual demonstrations and videos to assist their understanding of correct performance.

## Associative stage

Once an athlete progresses into the associative stage, their movements become more fluid. The athlete can begin thinking about how they execute a movement rather than simply what they are doing. This means they can begin to focus on the end results of their movement, rather than whether they can complete the initial skill. An example of this is moving from focusing on kicking a ball, to focusing on where they are kicking the ball to.

Many athletes will spend most of their time acquiring a skill in the associative stage. Athletes can adjust their technique in dynamic situations, such as in modified or traditional games. Some success in completing the skill may be experienced, however errors still occur, just less frequently. With increasing mastery of the skill, the athlete will be able to provide their own internal feedback, but immediate feedback from the coach remains beneficial.

## Autonomous stage

The autonomous stage is the final stage of skill acquisition and is characterised by a thorough understanding of the skill and the ability to correctly perform the skill in challenging dynamic contexts. The athlete will have a high degree of autonomy of their movements, where they can focus on several other aspects of competition and not the skill itself, which will appear effortless and natural. Sudden corrections in movements are easily made by athletes in this stage, in relation to oppositional movements and environmental factors, such as opponents pressuring a player with a scoring opportunity. These skilled performers make minimal and minor errors and have the ability to provide quality internal feedback, due to their high kinaesthetic awareness. Because of this, coaching of autonomous athletes will often involve creating high pressure environments that challenge the cognitive and physical skills of the athlete.

### Practical activity

1. Select a movement skill that you have not mastered. Break the skill into separate parts. Practise each part of the skill and as you improve, gradually add the different parts together to execute the entire skill.
2. Describe the different parts of the skill.
3. Analyse how you felt and the changes in your performance as you moved between the different learning stages i.e. the cognitive stage, associative stage and autonomous stage.
4. Discuss the factors that enhanced or hindered development of the movement skill.

## Factors that affect skill acquisition

When developing a skill, awareness of the stages of skill acquisition is important, but extending on that is the importance of the factors that affect skill acquisition. Acquiring a skill is not a simple and straightforward process and a learner may move up and down the level of skill acquisition at different speeds, which can be influenced by a variety of factors. These factors relate to the specific individual and their characteristics, the quality of the teaching and the level of engagement.

### Personality

The characteristics of the learner influences their capacity and speed of skill acquisition. An athlete's personality includes their innate traits that influence their behaviours, thoughts and feelings. An athlete with a willingness to learn, positive attitude and patience will acquire a skill faster and more easily than an athlete who lacks focus, has a weak work ethic or has a negative attitude to acquiring the skill. An athlete with a personality that is dedicated and hardworking will put in the extra effort that will improve their performance. They may be more resilient and be prepared for setbacks or difficulties that they may encounter as they are learning.

### Hereditary

There are many characteristics that are passed down from parents to children that can influence skill acquisition. Genetics have a significant influence over body shape, muscle size, muscle fibre composition (slow or fast twitch), flexibility, lung capacity and strength. While these inherited characteristics are greatly affected by the environment and training, the inherited traits provide a basis that can hinder or support the learning of skills, particularly in those sports where certain movements are suited to a particular body type or characteristic. Inherited personality traits may also be an important factor in learning new skills. These factors may be evident in the number of young athletes who excel in the same sports as their parents.



**Figure 8.2:**  
A hardworking athlete will put in the extra effort to improve their performance.



**Figure 8.3:**  
Inherited traits provide a basis that can hinder or support the learning of skills.

## Confidence

The belief a learner has in their ability to learn a new skill can have a huge impact on their skill acquisition. A learner's confidence will develop with their success in learning, which will consequently increase their confidence to persevere with more practice. Conversely, if an athlete experiences continual failure in learning a skill they will lose confidence and ability to work toward more complex skills. Confidence gives athletes a positive attitude to learning. It promotes focus, concentration and an enjoyment of taking on new challenges.

## Ability

A learner's ability to acquire a skill is characterised by their natural talent, previously learnt skills and processing skills. Some learners will have a good perception or capacity to read a game, sport or competition. Others will lack these skills. The athletes that have these skills. Some athletes will be quick to understand and acquire new skills. Others who may not be quick to learn with perseverance, practice and hard work.

## Appropriateness of

When teaching for skill acquisition, the level of challenge and the learner's experience are appropriate to the age of learners is essential. Although all learners may be the same or similar, this does not mean they will have the same proficiency in their skill level. This skill development of athletes occurs over time and is often developed through repeated exposure of skills, such as small-area training. It is also important to remember that age is not a predictor of motor skill development. A learner has the capacity to develop a skill. Educators need to correctly identify the learner's skill levels, which may differ among individuals, such as different skills or game situations. They then need to tailor learning programs to specific areas to improve their overall performance. This may involve a coach having a strategy for their team to assess their movement, decision making, level of concentration, communication ability and understanding of strategy and tactics. This provides an overall picture of skill acquisition and allows for individualised training programs to be developed.

**Figure 8.4:**

Confidence gives athletes a positive attitude



## Transfer of skills

Having prior experience of similar movements can often make the acquisition of a new skill easier. This learning can be accelerated if the athlete is supported in identifying the commonalities of skills they know and the skill they are learning. This is referred to as ‘positive transfer of learning’. For example, involvement in activities that require a high degree of hand–eye coordination, such as striking the ball in cricket, can ultimately support similar skills in baseball, softball, golf and hockey.

Learning experiences also have to relate and build upon each other. For optimum performance, acquisition of movement, decision making, strategy and tactics and communication and concentration skills need to be applicable across a range of contexts. This means students need opportunities to practise the skill in a variety of contexts, where they are encouraged to be engaged and mindful of their learning, through self-reflection. For example, when coaching a junior Australian football team, an understanding of players prior experience in other sports will allow a coach to identify links between their skills acquired in that sport and how that relates to Australian football. This understanding can improve the skill acquisition process if players are able to make connections between what they know and how that is similar or different to what they are learning. An understanding of game play configuration for a hockey player and an Australian football player would be quite similar, due to the nature of the game and where the goals are positioned. These learning experiences need to be made explicit, with the educator facilitating these connections to be made. Transfer of learning is related to an athlete’s prior experience, but also the way students learn and the appropriateness of learning experiences.

## Preferred learning style

Each athlete has a preferred style when learning new skills. The way learning experiences are created should reflect the preferred learning styles of the athletes. Some athletes prefer seeing what they need to do, some like to listen and talk, others learn best by actively being involved through movement, while some learn by critically analysing to solve problems. There is no right or wrong way to learn, but it is important for the athlete and the educator to be aware of the learning styles and ways to engage, so that best performance can be achieved. If skill acquisition is focused on how learners learn best, they will be more able to acquire the skills. If methods don’t address the preferred learning styles, acquisition can be limited and take longer.



**Figure 8.5:** Striking the ball in cricket requires a high degree of hand–eye coordination.



**Figure 8.6:** Experience of similar movements can make the acquisition of a new skill easier.

### Internet activity

Log on to TitanOnline to complete Activity 8.1, analysing the TED talk on improvements to sporting performance.

**Table 8.1:** Learning styles.

Style	Description
<b>Visual</b>	Visual learner's primary source of information is received through their eyes. They like to observe and watch how skills are completed, in order to understand and process the important elements of a performance. Visual learners in a movement context, appreciate watching demonstrations or models of an action, so they are able to note important visual cues that reinforce key concepts of the skill performance. Educators should ensure visual aids are available to complement their instructions, feedback and discussions. This will enhance their learning and information processing.
<b>Auditory</b>	Auditory learners learn best by focusing on sounds, rhythms and vocal cues to learn movement patterns. They have a strong liking for the use of language in instruction, group discussions and verbal explanation of a movement. These learners need auditory opportunities, such as talking through plays, movements and skill cues, as well as quality discussion of game strategies with their team mates and coaches. Clear and effective communication is essential and coaches must provide opportunities for questions and answers.
<b>Kinaesthetic</b>	Those who learn best by physically doing skills and activities are known as kinaesthetic learners. Kinaesthetic learners process information when they are provided with opportunities to move and participate in hands-on activities. Educators need to provide these learners with 'game-like' situations, so they can move or manipulate objects required and try the skill themselves. This allows kinaesthetic learners to understand what the movement feels like. Because of this, effective feedback is important, as these learners like to repeat a movement over and over again to get the feel of it.
<b>Cognitive</b>	Some athletes learn best by analysing and solving problems in their mind. These learners are called cognitive learners and are stimulated by asking questions and solving movement problems creatively. Cognitive learners like to find solutions and require multiple ways of processing information. These learners require coaches to provide thought provoking discussions and opportunities to analyse skill performances and game strategies.

### Learning activity

1. Choose a sport that can be played in practical lessons that you have no or limited experience playing. Analyse and describe your prior experiences in other sports that will be of benefit when learning the new skills required for this sport.
2. Explain how confidence plays a role in learning new sporting skills.
3. Reflect on your own experiences learning new skills and identify your own preferred learning style.

## Types of skills

Having an understanding of different types of skills enables practice to be refined and varied. Practice drills can be organised to address deficiencies in skill and designed to mimic conditions that would be experienced in the game. The maturity of the athlete, the skill requirements of the sport and timing of the skill, all play a part in defining the type of practice that is most beneficial to improving performance.

### Open and closed skills

Open skills are performed in environments that are constantly changing.

The environment could change depending on the weather, oppositional players or the playing surface of the venue. Examples of open skills include surfing, as the athlete performs in response to the changing waves or scoring a try in rugby league, as the player attempts to avoid the defence in a dynamic, changing environment. Closed skills are performed in a stable or predictable environment. Many of these skills are performed indoors. Examples include weight lifting and badminton.

### Gross and fine motor skills

Skills that require large muscle are referred to as gross skills. Common gross motor skills include running, jumping, kicking, walking and swimming. These motor skills require a high use of the large muscle groups of the legs, back, chest and arms. Motor skills that utilise smaller muscles of the body are referred to as fine motor skills. This is because they use small or isolated muscles, such as the biceps, wrist and fingers, and require more control and precision. Examples of fine motor skills in sport include throwing darts, putting in golf and pool.



**Figure 8.7:**  
Weight lifting is performed in a predictable environment.



**Figure 8.8:**  
Pool uses fine motor skills.

## Discrete, serial and continuous skills

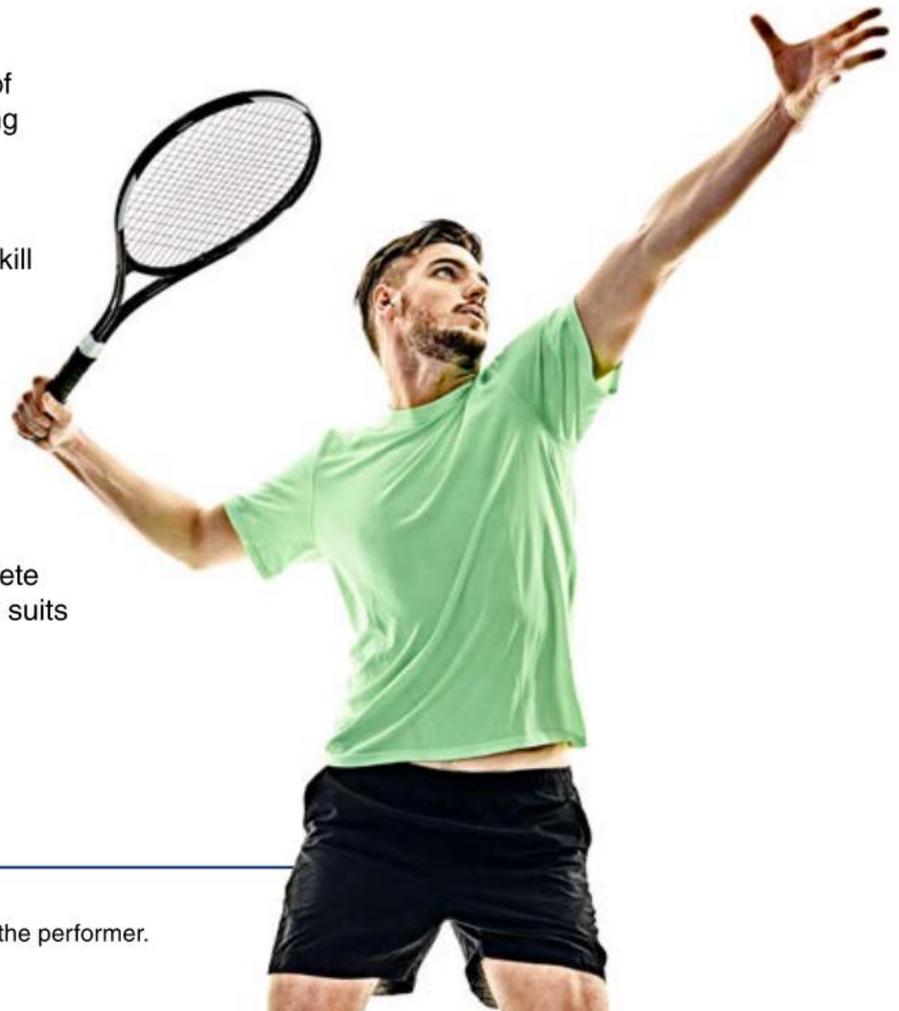
Identifying the beginning and end of a skill will determine whether a movement skill is discrete, serial or continuous. If the beginning and end of a skill is clear, the motor skill is classified as discrete. Discrete skills are usually one short movement, such as a kick in football or a penalty flick in hockey. Serial movement skills are made up of several discrete skills that are put together. When several discrete movement skills are strung together, they make a more complex skill, such as triple jump or a layup in basketball. If a skill has no clear beginning or end, it is a continuous movement skill. This is where the skill is repeated over and over again, but can be stopped at any time during the performance of a skill. Common examples of continuous movement skills include swimming, running and cycling.

## Self-paced and externally-paced skills

When performing a skill, the pace is either determined by the athlete or in response to an external factor. Skills such as a tennis serve or a discus throw have the timing and speed determined by the performer. Such skills are referred to as self-paced skills, with the athlete having control. Externally-paced skills have their timing and speed determined by external factors. Reacting and attempting to hit a cricket ball or catching a basketball pass are examples of externally-paced skills, as the athlete is not in control and commences the skill in response to the external influences.

## Feedback

Feedback is a very important aspect of learning movement skills and improving performance. Feedback provides direction and helps create goals. Most importantly, feedback helps an athlete adjust their performance and skill execution as they progress through stages of skill acquisition. Even as an athlete becomes elite and they are able to rely more on their own judgment to adjust their movements, they still require appropriate and specialised feedback. Feedback comes in many forms and both the coach and the athlete need to identify what type of feedback suits the learning context and the athlete.



**Figure 8.9:**  
The speed of a tennis serve is determined by the performer.

## Internal and external feedback

Feedback can be either internal or external. Internal feedback is provided by the performer and relies on how the movement feels. Often athletes who are more skilled and experienced can adjust their movements due to their understanding of proprioception, i.e. how the movement felt compared to how it is supposed to feel. An example of internal feedback is a swimmer modifying their stroke technique, based on their innate knowledge of the 'catch' and 'pull' phase of the swimming stroke. Opposite to this is external feedback, which comes from outside the body. External feedback includes sounds, videos and inputs from a coach. External feedback is important as it can allow an athlete to reflect on their movements from an outside perspective of what they looked like. Examples of external feedback include cues given from the coach, the sound of spectators or a video analysis of a performance.

## Concurrent and delayed feedback

The timing of feedback is also important and can be given during or after a performance. This will depend on the context or the sport, the opportunities to interact during completion and the preferred style of athlete and coach. Concurrent feedback is feedback given to an athlete while they are completing the skill. This type of feedback is often helpful for beginners, as long as there is not an overwhelming amount of instruction to correct their grip on the club, or a coach stopping to correct their positioning, are examples of concurrent feedback. Examples of delayed feedback include a coach analysing a performance, where the coach can analyse movements of individual athletes on areas they did well and areas they need to improve.

## Knowledge of results and knowledge of performance

Coaches can also give feedback on the results of a performance or the performance of a skill. Knowledge of results is feedback that provides information about the outcome of the skill execution. This type of feedback allows the coach or player to reflect and comment on the outcome, such as hitting a six in cricket or scoring a goal in soccer. Information provided about the process of movement and how well the performer executed a performance is referred to as knowledge of performance. This is often given as delayed feedback and includes technical advice from a coach.



**Figure 8.10:**

Concurrent feedback is feedback given to an athlete while they are completing the skill.

### Practical activity

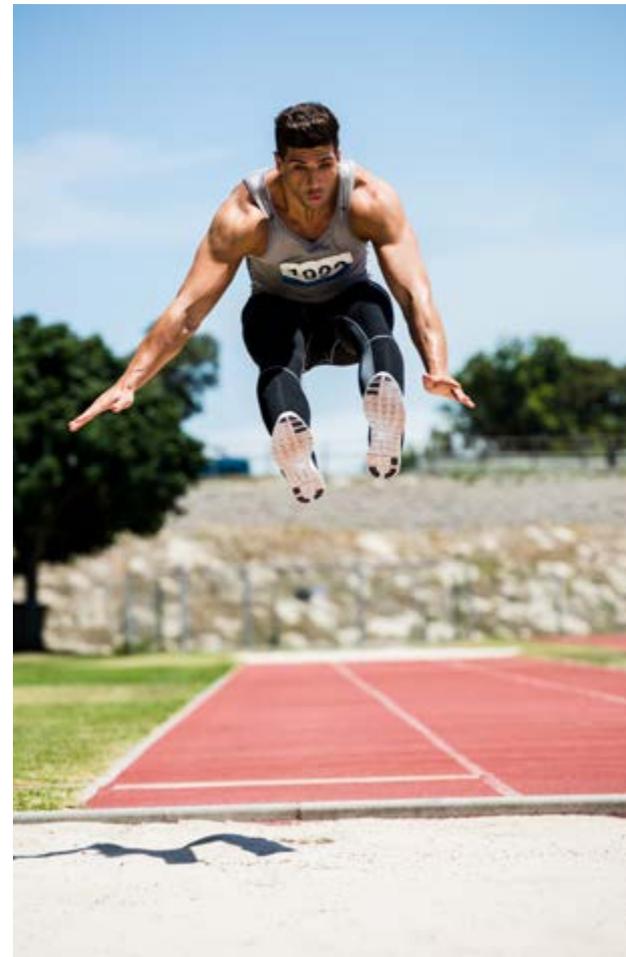
Create or replicate a group performance, such as a dance or set soccer play from a free kick. Discuss the type of practice involved in the creation and learning of the performance. View another group's performance and provide feedback. Describe the effectiveness of received feedback and the type of feedback best suited to enhance performance.

## Measuring performance

Measuring sports performance is important for a number of reasons. Players, coaches and support staff use sport performance measurements to get a baseline of where an athlete is at, identify individual training needs, areas of strengths, areas for improvement and for injury prevention. Measuring performance is also used within talent pathways, where clubs and scouts are able to identify different areas of an athlete's performance to provide feedback, decide on team selections or offer improvement programs. Sports performance can be measured in many ways that fall within the continuum of objective measures to subjective measures, with each type of measurement providing opportunities for certain types of feedback.

### Objective measurement

During an objective measurement of skill, an athlete's performance is measured without being influenced by a judge or an observer; for example, the 100-metre sprint. Objective measurement removes bias or prejudice from a performance, as there is no personal opinion or interpretation involved. This is supported by equipment, such as stop watches, electronic timing and measuring tapes, to measure performance. For example, the time it takes for a swimmer to swim 50 metres freestyle is an objective measure of their speed and the distance a long-jumper achieves is an objective measure using metres and centimetres.



**Figure 8.11:** The distance a long-jumper achieves is an objective measure.

## Subjective measurement

Subjective measurement involves performance measures based on an observer's opinions, feelings and general impressions. This means subjective measures are often criticised and scrutinised as they are open to interpretation. Sports such as dancing and gymnastics are judged on quality and style of the performance and may differ between judges. Various methods, such as use of marking criteria, checklists, rating scales and multiple judges, are used in an effort to make subjective measurements as objective as possible.

In many sports, rule changes and/or new pieces of technology have been introduced in an effort to increase the level of objectivity. They include the following initiatives:

- **Cricket:** DRS for dismissals in cricket.
- **Tennis:** Hawk-Eye replacing linespeople.
- **Athletics:** the photo finish.
- **Soccer:** VAR.
- **Australian football and rugby league:** video referrals.
- **Swimming:** sensor touchpads at the finish.

### Did you know?

The touch pads used in major swimming meets must be so sensitive that they detect the slightest touch of a swimmer's finger, but not be triggered by the splashing of water.

## Performance criteria and checklists

Performance criteria and checklists can be a great resource to provide information and feedback to a player. Performance criteria and checklists are used to collect information and statistics. They can be used during training sessions or while athletes are competing. Careful thought needs to be given to what information will be collected so the information is accurate and reliable. Checklists are often used by coaches as memory aids to make sure that all relevant issues have been covered.

Coaches constantly analyse the players, athletes or participants they work with to help them further develop their skills and reach their potential. Performance criteria and checklists are used to help identify a range of strengths and weaknesses. This enables a coach to:

- formalise an opinion or idea about the individual and team
- monitor the success of strategies and tactics
- identify strengths and areas for development
- plan to address those areas for development.

### Practical activity

Select a movement performance and create a criteria or checklist to assess the performance.

- a. Describe the type of criteria used and what type of measure it is.
- b. Record the performance to allow for an assessment based upon the set criteria.
- c. Provide feedback using the recordings and the criteria.

## Skill and fitness tests

Skill and fitness testing are useful tools to assess performances and provide feedback to athletes. The tests involve structured examinations to determine an athlete's level of skills and fitness. Testing an athlete's skill and fitness can be used prior to a training program to assess an athlete's baseline and to set goals. They can be used during training programs to monitor progression, and after a training program to determine success and plan for later stages of training. Each time an athlete engages in skill and fitness tests, they should be provided with results and clear feedback, so they can modify and change their training in order to improve. The types of tests used will vary according to the sport, assessment focus and level of the athlete. For example, coaches may test a swimmer's fitness using an 8 × 200 metre time trials, including measuring heart rate, split times, stroke rate, perceived exertion and even lactate levels. Alternatively, coaches may test a netball player's agility using the 505 agility test for 90 or 180 degree turning ability. However, there are generic tests can be used across many sports.

- **Skill tests** can test an athlete's agility, coordination, reaction time, balance, power and sport-specific motor skills. Examples of tests to assess these components include agility tracks, alternate wall toss test, standing stork test, ruler drop test and vertical jump test. Each test relates specifically to a component of skills, however there are many other sport specific tests that can be used for each.
- **Fitness tests** can test an athlete's muscular strength and endurance, cardiovascular endurance, flexibility, speed and body composition. An athlete's fitness can be progressively tracked by tests, such as one repetition max weight tests, 60 second push-up or sit-up tests, the beep or yo-yo test, the sit and reach test, short distance sprints and skin-fold tests. Like skill tests, the choice and usefulness of each test used will depend on the context of the sport.

All skill and fitness tests are used in conjunction with specific criteria that provide an athlete with an understanding of where their results sit on a continuum. These tests identify areas for improvement and allow records to be developed.

### Did you know?

Jose Romero, formerly a



**Figure 8.12:**  
Skill and fitness tests used during training to monitor progress



**Figure 8.13:**

Using technology to record a swimmer's dives can highlight improved angles and body positioning.

## Improving performance

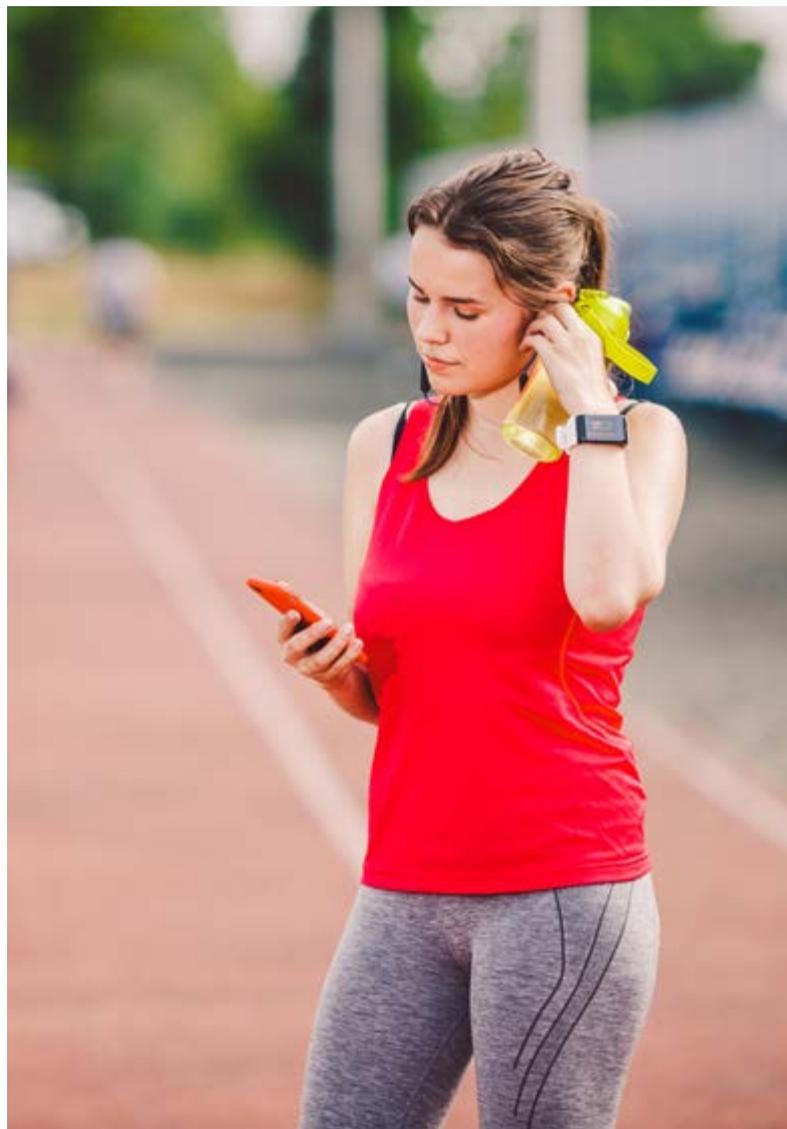
The science behind sports performance covers a wide variety of issues relating to physiological and psychological training and adaptation. An important part of improving the body and mind involves strategies that use new technologies, applies the principles of biomechanics and addresses issues such as motivation and leadership. New, improved ways of improving performance have enabled athletes to train smarter, recover more quickly, minimise injuries and set new standards of performance. It has led to increased professionalism and commercialisation of sport, as spectators and sponsors seek out greater viewing experiences. At the grass roots level, improved performance has enabled greater engagement with sport and enjoyment of all participants.

### Use of technology to improve performance

Technology has had a huge contribution to improving sport performance. In sports performance feedback, technology has allowed athletes to receive highly detailed analysis of performances that previously weren't identifiable to the naked eye. The use of biomechanical analysis has dramatically improved with advancements of videotape analysis. Sport scientists and coaches can now video their athletes through various apps and programs, that can be slowed down and drawn on. Athletes can view these performances and specific areas of success and limitations can be identified. For example, a swimming coach can record their athletes' dives and highlight improved angles and body positioning, which can be a source of immediate and visual feedback for the athlete.

Body-worn sensors, heart rate monitors and GPS vests are highly useful during training and competition. These technologies are lightweight and small, but have huge positive implications for improving sports performance. These devices provide biometric player data by tracking player locations to create heat maps. They also track player sprint speeds and distances, positioning, total distance covered, velocity, acceleration, deceleration and the angles they complete these in. Heart rates can be taken to determine how hard the athlete works overall and in particular areas of a training session or game. These specific and detailed measures are now linked to mobile apps, providing specific and immediate feedback for athletes and coaches to track progression and plan for future training.

Electromyography (EMG) muscle analysis is another form of technology that has resulted in significant improvements of athletic performance and performance feedback. It involves an athlete having small patches attached to different muscular sections of the body and performing basic exercises, such as a squat or small leg hurdle. The EMG technology tracks the electrical input from the motor units of the muscle to determine the muscle's firing potential, indicating how much the muscles are being activated. This performance test can provide an indication of muscle imbalances and assist a physio or sports scientist in providing information and feedback to the athlete.



**Figure 8.14:** Heart rates can be taken to determine how hard the athlete works in a training session.

### Internet activity

Log on to TitanOnline to complete Activity 8.2 by viewing the video and considering the ethical use of technology in sport.

### Learning activity

Design a new technology to improve sport performance feedback. Describe how it can be used and discuss the potential of the technology for effective performance feedback.

## Motivation and performance

Motivation involves an athlete's desire and determination to improve sporting performance. Motivation is foundational to athletic effort and accomplishment, as it requires an athlete to continue working until they achieve their goals. Achieving difficult goals is never easy and athletes need the motivation to persevere even through pain, injury and failure. A motivated athlete will do be more successful than an unmotivated athlete, as they actively make decisions to continue putting in extra effort and work through tough times.

### Types of motivation

There are different types of motivation, including positive or negative and intrinsic and extrinsic. Positive motivation is when an athlete is rewarded for a good performance. If an athlete is punished for a poor performance, this is negative motivation. Intrinsic motivation is self-generated by the athlete, when they want to do well for themselves, while motivation that comes from an external source, such as a coach, parents, financial rewards or fame, is known as extrinsic feedback.

**Table 8.2:** Types of motivation.

Motivation type	Example
<b>Positive-intrinsic</b>	An athlete's feeling of achievement when hitting a new personal best.
<b>Positive-extrinsic</b>	An athlete getting paid more if they kick a certain amount of goals in a game.
<b>Negative-intrinsic</b>	An athlete's feeling of disappointment if they perform badly.
<b>Negative-extrinsic</b>	An athlete having to do extra running laps during a sprint session.

### Motivation for performance

Positive motivation generally works better than negative motivation for most athletes. Good coaches will praise their athletes for good performances and will encourage their athletes to use intrinsic motivators so they can focus on achieving results for themselves. This will result in the athlete becoming self-driven and resilient and increase the likelihood of a successful performance. Athletes who focus on intrinsic positive motivators are more likely to have greater success over their athletic career. Coaches that continue to punish their athletes for poor performances or mistakes will risk reducing motivation.



**Figure 8.15:**

Athletes need the motivation to persevere even through pain, injury and failure.

## Developing motivation

As motivation is extremely important for performance, it is imperative to know how to develop motivation of all athletes. Athletes need to have an understanding of what drives them to train and perform. These come as a result of personal goals that an athlete may want to achieve. Having both short-term and long-term goals creates a clear path for an athlete to work toward and they will feel a sense of pride and success when goals are achieved. For example, an athlete may have a long-term goal of being an Olympic athlete, but will have set short-term goals, such as training goals, to achieve certain times in competition. Without the short-term goals, it becomes difficult to maintain the motivation to train and make lifestyle sacrifices while working towards the long-term goal.

There are many other methods of developing motivation. Having a training partner is extremely beneficial, particularly when an athlete is lacking their own motivation. If training partners have similar goals and work ethic, they will help keep each other accountable and dedicated. Motivation cues, such as inspirational phrases or images in places that an athlete commonly views, may also remind an athlete of their goal and why they want to achieve it. Athletes may also keep a reflection journal and/or ask themselves daily questions about what they have done during the day that will make them better than the day before.

### Practical activity

Research juggling methods and attempt to learn the skill. Apply knowledge of skill acquisition and the learning environment, by analysing the impact these factors have on motivation, persistence and confidence to learn the skill.



**Figure 8.16:**

Good coaches will encourage their athletes to use intrinsic motivators.

### Internet activity

Log on to TitanOnline to complete Activity 8.3 by viewing the TED talk on sports psychology and looking inside the mind of champion athletes.

## Biomechanics and performance

Biomechanics is a branch of science that uses observation and analysis to examine how forces interact with the motion of objects and movement of the human body. In coaching, biomechanics is used to analyse and monitor progress and determine appropriate training programs. Biomechanical knowledge is a valuable tool for coaches when collaborating with sports professionals to treat or prevent injuries. It provides a biomechanical knowledge can significantly enhance coaching ability. It provides an opportunity to look beyond traditional, subjective coaching methods and provide athletes with scientifically based feedback to improve their performances.

Examples of the practical use of biomechanics include identifying and addressing errors in running technique that could lead to injury, the choice of appropriate footwear depending on the observed foot strike of a runner, or determining the most appropriate bat for a cricketer based on biomechanical data and technique. For a swimmer, the analysis of body position and an understanding on the influence of body position has on propulsion and water dynamics can lead to increased performance.

### Centre of gravity

The centre of gravity is also known as the centre of mass. It is the point of a body where gravity, the force of attraction towards the centre of the earth, acts and all the body's weight is concentrated. When standing in the anatomical position, the average person is found to have their centre of gravity at the centre of the body. The distribution of mass of an object will influence its centre of gravity. If a person has more mass in one part of their body, their centre of gravity will sit lower. This is why the centre of gravity sits slightly lower in a male, due to their larger shoulder and chest. A person is more likely to hold more of their mass in their lower body. The centre of gravity will generally sit lower.

### Internet activity

Log on to TitanOnline to complete Activity 8.4 by



**Figure 8.17:**

The most appropriate weighted bat for a cricketer can be determined using biomechanics.



**Figure 8.18:**

The Fosbury Flop is a high-jumping technique that considers an athlete's centre of gravity.

When athletes are active during sport, they change their body position and their centre of gravity moves accordingly. The location of an athlete's centre of gravity has several applications for sporting performance. A great example of how an athlete can improve performance considering their centre of gravity is the Fosbury Flop, which is a high-jumping technique that revolutionised the event. The traditional method was known as the straddle, which involved jumpers flinging themselves sideways over the bar. This required the jumper to have their whole body, including their centre of gravity, above the bar at the peak of their jump. The Fosbury Flop allowed the centre of gravity to pass underneath the bar. This is because at the top of the jump, the jumper has their head and upper torso over and below one side of the bar and their legs below the bar on the other side. When the jumper lifts their legs, the upper body will be well below the bar, so at no time does the centre of gravity reach the level of the bar. The advantage of this technique compared to the straddle is the jumper doesn't have to jump as high to jump over the bar. Centre of gravity also has significant influences on stability and acceleration. In high contact sports, such as football and boxing, players will bend their knees and spread their feet wide. This lowers their centre of gravity and is important to support and retain strength and balance from knocks and tackles.

## Base of support

The base of support is the area around the body parts that are in contact with the supporting surface. Having a wide base of support, opposed to a narrow or small base of support, allows an athlete to be more stable and it is harder to disturb their balance. However, a wider base of support makes an athlete less agile and limits their ability to make quick changes in their movement. The need for a wide or narrow base of support, depends on the athlete's ability and what they are trying to achieve. A wide base of support is beneficial in tackling in rugby league, where an athlete will widen their stance and bend their knees to absorb the force of the tackle of an opposition player. Narrow base of support can increase the complexity of a skill and is advantageous for quick changes in play, such as weaving through players and changes in direction.

## Line of gravity

The line of gravity is an imaginary line from the centre of gravity vertical to the ground or surface a person is on. It signifies the direction that gravity is acting on a person. When a person is standing in the anatomical position, the line of gravity falls between the legs and feet, directly to the ground. In sports performance, the location of the line of gravity in relation to the base of support is important for stability and balance. To increase balance, the line of gravity needs to fall within or very close to the base of support and is important for sports performance such as a runners sprint start, to ensure stability for acceleration.

## Balance and stability

Balance and stability are commonly used interchangeably, but in terms of biomechanics, they are different concepts. Balance is the ability to control the body without movement against the force of gravity. Stability is the ability to control the body during movement. Stability involves a person responding to the forces being applied to them, whether they be internal or external forces, to maintain a desired body position or trajectory.

An object or person's stability depends on several aspects, including:

- the weight of the object or person
- the position of the line of gravity in relation to the base of support
- the width of the base of support.

### Practical activity

Complete the following tasks to assess the influence of the centre of gravity, line of gravity and base of support on stability and balance.

1. **Poison Hoop:** A hoop is on the ground between two participants.
  - a. Participants attempt to pull the other participant into the hoop, while avoiding themselves being pulled into the hoop.
  - b. Observe and explain what each participant did to pull the other participant in and avoid being pulled in themselves.
2. **Toe Touches:** Tie a small weight to string and clip onto the side of the participants clothing, near the hip area, so that the weight is off the floor. Place a pen on the floor two centimetres away from the participant's feet.
  - a. Have the participant stand with their heels and glutes against the wall and attempt to pick the pen up.
  - b. Have the participant move away from the wall and attempt to pick the pen up.
  - c. Discuss the successfulness of each attempt and justify the reasons for this.



**Figure 8.19:**

Shot-putters can produce more force if they move quickly rather than slowly.

## Force

There are many different types of forces, but all are defined by a push or pull that alters a body at rest. Forces are calculated by the mass  $\times$  acceleration, with mass being the amount of matter in an object and acceleration is the rate of change of velocity (speed). For example, a shot-putter will produce more internal force if they move a five kilogram shot put quickly than if they push it slowly. There will also be external forces acting on the shot-put when it is pushed, such as gravity, which will cause the shot-put to fall to the ground.

The human body absorbs forces in the bones and body tissue, however most forces are absorbed by the actions of the muscles. This is an important aspect of safety, as muscles have the ability to increase the time of absorption, the movement length, or the area of where the force is absorbed. For example, when jumping and landing in a sporting activity, an individual will bend their knees, hips and ankles to safely absorb the force of the landing in their quadriceps, hamstrings, glutes and calves.

Frictional forces are also important in sport and relate to the resistance one surface experiences when moving over another. These forces are important in sport, particularly for safety and performance. Some sports require the least friction possible in order to move efficiently, such as ice skating, where the blade on the boots makes this possible. Others require a higher degree of friction to reduce slippage and quick movements, such as Australian football, where boots with studs are worn, or netball, where shoes are specifically designed to grip to the floor.

## Speed

The speed of a person or object is measured by the time it takes to travel over a given distance, using the formula:  $\text{speed} = \text{distance} \div \text{time}$ . Developing the ability to generate speed is useful in almost all sports. Acceleration is an important part of an athlete's speed and relates to how quickly an athlete or object can increase and achieve a certain speed. The ability to accelerate is required in movements requiring speed, such as a sprinter's start or a netballer moving into free space to gain distance from a defender. Alternatively, the ability to decelerate involves rapidly reducing speed. Deceleration is important in sports such as Australian football, where athletes sprint to gain free space and then decelerate quickly to mark the ball.



**Figure 8.20:**  
The ability to accelerate is required in movements requiring speed, such as a sprinter's start.

### Learning activity

1. Watch a clip of a sport performance or skill. Describe the relevant biomechanical principles involved in the performance.
2. Experiment with the application of simple biomechanical principles including force and speed applied to an object to enhance performance and ensure safety.
3. Demonstrate and describe how the body can produce and absorb force.

### Practical activity

1. Practise the tasks outlined below. Describe how the body produces and absorbs force across each attempt. Discuss the importance of this for safety in sporting performances. Hint: filming performances can assist analysis.
  - a. Throwing and catching will different implements.
  - b. Jumping and landing from different heights and with varying postures.
2. Practise running 100 metres, changing speeds from slow, to intermediate, to sprinting.
  - a. Determine changes in the performer's technique made at different speeds and discuss the reasons why.
  - b. Evaluate changes that could be made to improve the performance based on your biomechanical understanding.
  - c. Discuss the elements of safety involved with speed.

## Leadership and performance

Leadership is the ability to influence, inspire and direct other people towards achieving set goals. In games and sports, leadership ability was formerly linked to either a player's athletic success or who was the most mature member of the group. More recently in professional sport, athletes have been given training, instruction, formal support and education in leadership.

Researchers have identified three leadership styles: autocratic, democratic and laissez-faire.

- **Autocratic leadership** – also known as authoritarian leadership. In this style of leadership, the coach focuses on being in control. They are commonly strict and disciplined and has a 'Do as I say!' mentality. They are responsible for all decision making and solicits little communication from athletes. The focus of authoritarian coaching is on winning, and the coach allows for little flexibility in their coaching operations. This style of coaching is common in team games, especially men's. Authoritarian coaching is questioned in relation to whether it leads to motivation among the athletes or teams.
- **Democratic leadership** – also known as participative leadership. In this style of leadership, the focus is on communication and cooperation between coaches and athletes. It is an athlete-centred style in which decision making is shared and interaction is high. The coach can form a positive relationship with the players, and their motivation is arguably high when their coach uses this style of leadership. However, coaches using this style have to be wary of their status as a coach, because if they become too friendly with their athletes, they (the coach) risk losing their authority.
- **Laissez-faire leadership** – also known as delegative leadership. This style of leadership is casual or easy going, and is characterised by less dedication to the task of leadership and more focus on enjoyment and participation in the organised sport in question. In this style, the decision-making power lies with the athletes. However, the athletes can feel frustrated because of the lack of organisation and commitment in their coaching. Also, athletes' potential might not be realised due to the coach's informal and relaxed approach.



**Figure 8.21:**

The focus of democratic leadership is on communication and cooperation between coaches and athletes.

### Did you know?

Participation in sport teaches skills such as leadership, teamwork, commitment and discipline that foster success in other areas of life.

### Internet activity

Log on to TitanOnline to complete Activity 8.5 by watching the video clip and analysing the advantages and disadvantages of autocratic leadership.

An effective leader needs a wide variety of skills, many of which are dependent on the participants' age and level of ability. Effective leaders:

- listen carefully to all the group members and treat them as equals
- create options and opportunities
- solve problems
- communicate effectively
- are well organised
- provide constructive feedback
- are flexible
- share accolades and successes
- are role models and inspire other people
- empower other people to take on a leadership role
- learn from experience, and self-monitor the knowledge and skills they are helping develop
- understand the group members' physical, social, emotional and cognitive needs
- prepare both players and teams so they can achieve their maximum potential
- provide training sessions from which the outcome is improved performance.

## Conflict management

Sport can be a competitive and highly stressful environment. Participants in junior, senior, representative and professional levels in sport will experience conflict at some point. Often this stems from disagreements in people's behaviours, interest, desires or values, as well as a result of jealousy or personal dislike. For example, conflict may arise due to disagreements over penalties/infringements of players, perceived bias of officials, frustration of a player's performance, a misunderstanding of instructions from an official or sledging between players.

Although conflict can sometimes simply be a part of competition, such as players saying things to an oppositional player to distract them, there are healthy and unhealthy levels of conflict. A team and leader that values respect, will know where to draw the line. They will work on preventing negative conflict by focusing on positive communication between players and club members. Other ways to prevent conflict include being aware of the rules, respecting the officials and other players, remaining objective by focusing on the bigger goal and not taking criticism personally. It is important for leaders to have contact with players and their families to identify best channels of communication if issues arise.

Whether there is conflict occurring in sport, outside or inside of competition, on the field or on the sidelines, there are several strategies that can be used to manage conflict. If individuals remain professional, speak clearly and stay composed in heated situations, the conflict is not likely to escalate. Off-field conflict can often be diffused by use of good verbal and non-verbal communication skills, including active listening, relaxed/non-threatening body language and a calm tone. Team leaders, such as coaches and captains, need to model positive behaviours, clear communication and effective conflict management, as they set the tone for the rest of the team.

### Learning activity

1. Devise, implement and refine strategies demonstrating leadership and collaboration skills that you would expect to see at a professional sporting level.
2. Reflect on an influential leader you have personally experienced in sport. Evaluate individual strengths and the contribution they make to teamwork and leadership to encourage enjoyable participation for everyone in movement activities.
3. Develop a sequence of rules and expectations a leader could create to alleviate conflict in the team.

## Promoting teamwork

Teamwork is the ability of a team to collaborate and cooperate to achieve a desired result. In a sporting context, teamwork is a very important part of any successful sporting endeavour. Teamwork requires each team member to play their part and be supportive of each other. Even individual-based sports have an element of teamwork. This is because they will be required to support each member of their squad during training and competition, even if they are on the sideline. Each member of a team needs to be trusting and committed to the bigger picture and team goal.

Creating a  
when team  
This makes  
and success



**Figure 8.22**  
Each member  
a team needs  
be committed  
team goals.

## Developing a winning culture

Sports teams or groups that have continued success or can maintain an unusual high standard of play over a prolonged period of time are often described as having developed a winning culture. A winning culture does not happen by accident. It is a result of persistent hard work and strategic planning. A team needs to develop their culture, by creating their ethos and goals. This means the team has a clear direction of the expected attitudes and behaviours, as well as the overall goal for the team and how they will achieve it. Having a common purpose for the team, gives members a sense of purpose and accountability. Accountability is also enforced when players are given roles within the team and are held responsible for their actions in a fair manner. Pride and unity are also essential for a winning culture and can be developed by mutual respect, strong traditions within a club and team building activities within and outside of the sport. Communication channels need to be positive, open and clear so that every athlete and member feels valued and heard.



**Figure 8.23:** Pride and unity are essential for a winning culture.

### Practical activity

Participate in a small sided, modified game of your choice.

1. Split class into playing teams and appoint captains, coaches and referees and discuss the appropriate leadership style for each role.
2. Devise an offensive and defensive strategy and present this to the team.
3. In breaks of play, discuss the effectiveness of the strategy and discuss required changes.
4. After play, hold a team discussion on the effectiveness of the strategy, the captain and coach's leadership and how this influenced their motivation to play and the team culture.



**Figure 8.24:**

There are still barriers that prevent equitable access to sport participation for people with disability.

## Equity and ethical behaviour

Participation in sport and physical activity is important for children and adults, as it provides a diverse range of physical, social, emotional and mental health benefits. Issues of equity and ethical behaviour can significantly influence the outcomes of movement activities. These issues can impact engagement and enjoyment of sport and physical activity as well as levels of performance. It is essential that all key stakeholders, such as coaches, players, spectators and administrators understand what equitable and ethical behaviour looks like and support it at all levels of competition.

Equity at grassroots level addresses issues such as:

- equitable opportunities for participation regardless of gender, size, ability, socioeconomic status or location
- providing opportunities for leadership in appropriate settings
- being inclusive of athletes with disability
- fair allocation of play time and recognition of achievements.

Maximising enjoyment and performance is key to retention of children in sports into their teenage years and adulthood. In order for this to happen, all children need to have equitable access to participation in grassroots sport. Although improving, there are still barriers that prevent equitable access to sport participation for females, Indigenous Australians, those living in rural and remote areas, those from low socioeconomic status, people with disability and those who are culturally and linguistically diverse.

### Did you know?

In 1900, women first made their appearance at the Olympic Games in Paris, with 22 women competing.

## Equitable participation

There are common perceptions that females are far less active than males. However, females are just as active, but take part in more non-sport-related physical activity; walking and gym/fitness. Girls participation in sport-related activities, team sport and club sport is significantly lower compared to males across all age groups, with 75 per cent of girls and 86 per cent of boys aged 12–14 years old participating in sport. This continues into early adulthood, where 65 per cent of females and 75 per cent of men participate in sport, with the numbers continuing to decrease with age. There are significant barriers that prevent participation of girls and adult females in sport within Australia, including:

- access barriers, such as time available, facilities, transport and cost
- cultural barriers, such as gender roles, expectations and male-orientated sporting culture
- self-consciousness
- family/caring responsibilities
- lack of role models and female representation.

AusPlay Focus 2019–2020 that found that children living in regional and remote areas and Indigenous Australians have below-average participation rates in sport and physical activity. This is due to the lack of access, limited range of activities available and the difficulty in transporting children to activities given the distances involved. Cost remains a barrier to participation for many children from low income families, while children with a parent who speaks a language other than English (LOTE) at home have below-average participation rates and LOTE parents were more likely to cite other commitments/lack of time as the reason for their child's non-participation.

People with disability are also 15 per cent less likely to participate in sport and physical activity than the general population. This is suggested the under-representation in sport participation of those with a disability exists due to disadvantages or barriers encountered, such as discrimination, lack of access and support to accommodate different disabilities. It is a legal requirement that Australians of all abilities have access to sport and physical activity opportunities. Knowledge of the barriers preventing different groups from participation is important, so that supportive factors to encourage and facilitate participation for all based on their specific needs and needs can be created, to promote lifelong a

Adapted from: [www.clearinghousef](http://www.clearinghousef)



**Figure 8.25:**

People with disability are 15 per cent less likely to participate in physical activity.

### Learning activity

1. Define 'equity' in your own words.
2. Reflect on how fair play and ethical behaviour can influence the outcomes of movement activities.
3. Analyse how equitable participation in group activities can influence outcomes in physical activity.
4. Suggest a potential solution for unequitable access to sport and physical activity for a disadvantaged group.
5. Demonstrate an understanding of ethical and fair behaviours across a variety of physical activities, for example, equitable participation of people with disability in physical activities.

## Australia's sporting culture

Australia's sporting culture places inherent value in sporting performance and success. In Australia, sport provides one of the best opportunities for people from diverse backgrounds to come together. Australia is often considered to be a 'sports mad' country, reflected in the large numbers of passionate players and spectators attending sporting events and watching sport on television. Australia has arguably the most professional diverse sporting environment in the world and is one of the leading countries in the world in sports science and in the technical development of television sporting coverage. Considering the relatively small population of Australia, Australian athletes perform remarkably well at international and professional levels. Sporting success, particularly on the world stage, has created a distinct national identity within Australia, as successful and memorable sportspeople often become legendary in Australian culture.

The warm climate of Australia can be partly credited to the popularity of sport in the country, as it encourages outdoor activity. During the summer, sports like cricket and tennis dominate household television screens and many Australians engage in water-based activities such as surfing and swimming. As Australia moves into cooler months of the year, sports such as Australian football, rugby league, soccer, hockey and netball are watched and played. From grassroots to professional levels, many Australians spend their weekends watching and participating in sport, which becomes a key social activity, connecting friends, families and strangers. This is especially present in country towns, where often the football and netball clubs are the social connection of the entire town and surrounding areas. Sport also facilitates well-loved national values like 'mateship', 'having a go' and 'egalitarianism' (the assumption of equality). Australians also strongly align with the notion of 'fair play' on the sporting field, so if athletes or teams cheat, they are often called out by the Australian public as being 'un-Australian.' Australians seek and expect improvements in performance, but not at the expense of ethical behaviour or equity.

The changes that occur in sport in Australia also reveal significant social changes and the acceptance of these social changes can be reinforced by sport performance and sporting success. Examples of social change being underpinned by sport performance includes the equity for people with disability, such as tennis player Dylan Alcott and a host of successful Paralympians. The case for equitable professional sport opportunities for women has benefited greatly by the increased coverage and success of women in sports such as cricket, soccer, netball, Australian football and rugby league. The cultural shift to a multicultural Australia and integration of minority groups has benefited greatly from the popularity and success of international sports that were introduced sometime after the traditional British sports.

Despite the values of Australian sporting culture and progress in recent times, there remains inequitable outcomes for particular groups, such as Indigenous people, people with disability, women and ethnic minorities, who have been discriminated against or treated unfairly in sports participation. This has been evident through the choices and opportunities available for participation in sports, along with representation, resources and support.

## Ethical behaviour

Ethical behaviour of athletes is highly respected and expected across Australian culture. Australians revel in the demonstration of sportsmanship, with many specific moments being iconic in Australian sporting history. At the 1956 National Athletic Championship, the action of Australian John Landy, who stopped on the third lap to help fellow Australian Ron Clarke, who had fallen and then go on to catch the leaders and win the race, is still mentioned to this day whenever the true spirit of sport is discussed.

It is extremely important for athletes to conduct themselves appropriately within and away from their sporting performances, out of respect for themselves and others. When an athlete's conduct is inappropriate or unethical, the consequences can be significant for sponsors, players, supporters, clubs and administrators. Unethical behaviour can influence participants who may look upon athletes as role models. Those athletes in particular who use performance enhancing drugs bring into question the validity of improvements in performance and fairness of competition.



**Figure 8.26:**  
The popularity of contact sports like rugby league is increasing among females.



**Figure 8.27:**  
Australians revel in the demonstration of sportsmanship.

### Case study – Sandpapergate scandal

In March 2018, during the third test match against South Africa, in Cape Town, three Australian cricket players found themselves caught up in the infamous ball-tampering scandal. With South Africa in the lead, a small group of Australian players decided to gain an advantage by tampering with the ball. The players involved included Captain Steve Smith, Vice-Captain David Warner and batsman Cameron Bancroft. The plan was for Bancroft to alter the condition of the ball, by rubbing one side of the ball with sandpaper, to increase the likelihood of the ball swinging.

Bancroft was caught on camera rubbing the ball with a small yellow object and the footage was replayed. The yellow object was hidden in his trousers and when the umpires came over to confront Bancroft, he presented his sunglass case. The ball was inspected by the umpires and no immediate action was taken and the game continued. South Africa were ahead by the end of the day and the Australian team refused to answer any post-match questions. Only at a later press conference did Bancroft, supported by Smith, admit to attempting to alter the ball's condition using yellow adhesive tape and dirt which formed an abrasive surface.

A following investigation by Cricket Australia, resulted in Bancroft admitting to using sandpaper, which the team used to maintain their bats. It was revealed that the plan was instigated by Warner who instructed Bancroft on how to do it and provided demonstrations and that Smith knew of the plan but didn't stop it from happening. Criticism and disappointment was expressed across the nation, with the Prime Minister, Malcom Turnbull reportedly stating, "This is a shocking disappointment. It's wrong. Our cricketers are role models and cricket is synonymous with fair play. How can our team be engaged in cheating like this? It beggars belief."

Warner received a 12 month suspension and was unable to take on any future leadership positions. Smith received a 12 month suspension and was not able to take on future leadership positions for a minimum of 12 months. Bancroft was given a nine month suspension and also was not allowed to take on leadership positions for a minimum of 12 months. All three players received fines and had to complete cricket community service hours.

The scandal took a significant mental and emotional toll on Warner, Smith and Bancroft as they served their suspension and suffered from loss of sponsorship and wages. Cricket Australia's image become tainted and the country lost faith in their national team.

1. Discuss the unethical behaviours presented by the three players and how it conflicts with the image of cricket in Australia.
2. Analyse the factors that would have played into the decisions and actions of the individual players.
3. Outline the impact on their respective careers, reputations and financial status.
4. Evaluate the reaction of the Australian and wider cricket community to the scandal and explain the impact this had on the players, team and sport.

## Codes of behaviour

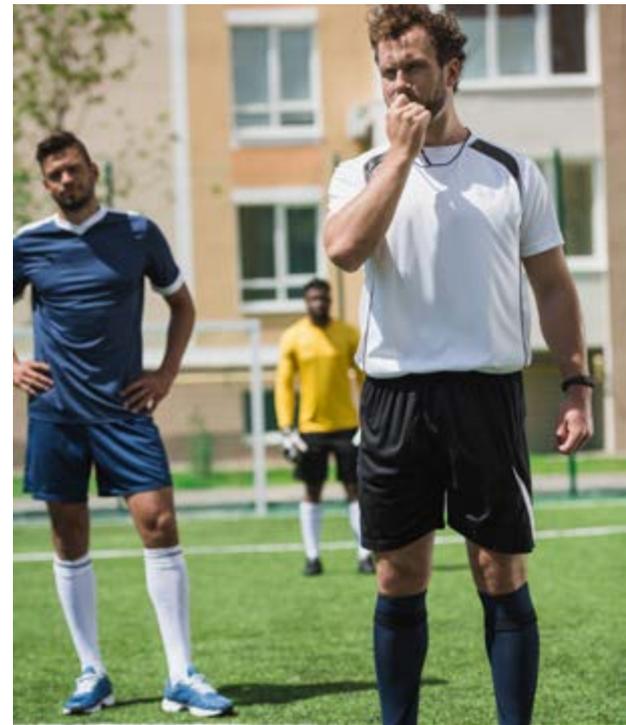
Every sporting club with a positive and enjoyable club culture follows their particular code of conduct. Codes of conduct and behaviour outline the standard and expectations of behaviour of all those associated with the sport. They are an essential part of all sporting organisations. The agreements within a code of conduct cover a variety of issues such as incidents on and off the field, sideline abuse, inappropriate social media use, unfair treatment and poor sportsmanship. Administrators, coaches, officials, players and parents are all required to abide by a clubs code of conduct. Key considerations for a clubs code of conduct include:

- Develop a code of conduct suitable to the club.
- Ensure compliance by having each member signing the code of conduct.
- Follow-up and continually remind members of the codes.

Codes of conduct detail standards of behaviour relating to health and safety, honouring the sport, integrity and respect. Examples relating to different stakeholders are detailed in Table 8.3.

**Table 8.3:** Codes of behaviour.

Stakeholder	Behaviours
<b>Administrator</b>	<ul style="list-style-type: none"> <li>▪ Give all children equal opportunities to participate.</li> <li>▪ Ensure that rules, equipment, length of games and training schedules suit the age, ability and maturity level of participants.</li> <li>▪ Provide quality supervision and instruction for junior players.</li> <li>▪ Help coaches and officials highlight appropriate behaviour and skill development, and help improve the standards of coaching and officiating.</li> <li>▪ Give a code of behaviour sheet to spectators, officials, parents, coaches, players and the media, and encourage them to stick to it.</li> </ul>
<b>Official</b>	<ul style="list-style-type: none"> <li>▪ Modify rules and regulations to match the skill levels and needs of children.</li> <li>▪ Condemn unsporting behaviour and promote respect for all opponents.</li> <li>▪ Encourage and promote the rules, which will make participation more enjoyable.</li> <li>▪ Keep up to date with the latest trends in officiating and knowledge of the rules.</li> <li>▪ Remember, you set an example. Your behaviour and comments should be positive and supportive.</li> </ul>



**Figure 8.28:**

Sports officials and players are required to abide by codes of conduct and behaviour.

**Table 8.3:** Codes of behaviour.*(continued)*

Stakeholder	Behaviours
<b>Coach</b>	<ul style="list-style-type: none"> <li>▪ Remember that children participate for pleasure and that winning is only part of the fun.</li> <li>▪ Never ridicule or yell at a child for making a mistake or losing.</li> <li>▪ Teach players to follow the rules.</li> <li>▪ Avoid overplaying the talented players. The 'just average' need and deserve equal time.</li> <li>▪ Ensure that equipment and facilities meet safety standards and are appropriate to the age and ability of the players.</li> <li>▪ Develop team respect for the ability of opponents and for the judgements of officials and opposing coaches.</li> <li>▪ Keep up to date with the latest coaching practices.</li> </ul>
<b>Player</b>	<ul style="list-style-type: none"> <li>▪ Play by the rules and never argue with an official.</li> <li>▪ Control your temper. Verbal abuse of officials or other players, deliberately distracting or provoking an opponent is not acceptable or permitted in any sport.</li> <li>▪ Be a good sport. Applaud all good plays whether they are by your team or the opposition.</li> <li>▪ Treat all players as you would like to be treated. Do not interfere with, bully or take unfair advantage of another player.</li> </ul>
<b>Parent</b>	<ul style="list-style-type: none"> <li>▪ Remember that children play sport for their enjoyment, not yours.</li> <li>▪ Focus on the child's efforts and performance rather than winning or losing.</li> <li>▪ Encourage children to always participate according to the rules.</li> <li>▪ Never ridicule or yell at a child for making a mistake or losing a game.</li> <li>▪ Respect officials' decisions and teach children to do likewise.</li> <li>▪ Show appreciation of volunteer coaches, officials and administrators.</li> </ul>

Source: Sport Australia.

**Internet activity**

Log on to TitanOnline to complete Activity 8.6 by watching the video on player behaviour and its impact on team performance.

**Learning activity**

1. Describe the potential consequences of unethical sideline behaviour of parents or coaches.
2. Suggest strategies that sporting administrators and officials can utilise to promote appropriate behaviour of players.
3. Expand on the examples listed in the codes of behaviour for each stakeholder.

## Revision questions

1. Outline key differences between an athlete practising a skill at the associative stage of skill acquisition and another athlete practising the same skill at the autonomous stage. Select a sport of your choice to illustrate your answer.
2. Choose a sporting skill of your choice and design a practice drill that can be self-paced. Explain how the drill can be modified to make it externally-paced.
3. Identify how the personality of the athlete affects how they learn a skill.
4. What is meant if a person's preferred learning style is described as a 'kinaesthetic learner'?
5. Define the term 'biomechanics' and provide two examples of how a biomechanical principle can be applied to improve performance in a sport of your choice.
6. Use your knowledge of styles of leadership to analyse and describe the type of leadership to which you would best respond.
7. Compare the potential benefits of adopting ethical codes of behaviour with the potential harm that can result from unethical behaviour.
8. Discuss how inequity in sport influences participation, player potential and levels of performance.
9. Describe technologies that athletes use to provide real-time feedback.
10. Describe the advantages and disadvantages of concurrent feedback.
11. Describe the advantages and disadvantages of delayed feedback.
12. Outline how motivation impacts performance.





## CHAPTER 9

# Outdoor recreation

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Throughout this unit, students will develop a range of skills necessary for participating safely in outdoor recreation pursuits. They identify the suitability of the Australian climate and terrain for participation in outdoor recreation and explore the reasons why people choose to participate in outdoor recreation. Students are introduced to the concept of navigation and learn skills such as compass and map reading, route planning and natural navigation. They study preservation and conservation of natural landscapes, as well as wilderness first aid and weather interpretation skills. Students learn to practise appropriate planning for outdoor recreation, including equipment and safety requirements, and campsite planning.

### Focus areas

- Outdoor recreation opportunities
- Skills involved in outdoor recreation
- Planning in outdoor recreation



**Figure 9.1:**  
Many of Australia's natural environments are famous for their beauty and diversity,

## Outdoor recreation opportunities

Opportunities to engage in outdoor recreation in Australia are varied and relatively affordable. Despite Australia being populated mainly in cities and towns, most people have access to a wide variety of recreational pursuits.

### Did you know?

Over 90% of Australia is covered in native vegetation.

## Suitability of Australian climate and terrain

The majority of Australia enjoys a temperate climate that is ideal for various types of outdoor recreational activities all year round. Australia's environment is blessed with natural beauty, home to many World Heritage listed sites, including some of the oldest rainforests on earth and approximately one third of the world's protected marine areas. Many of Australia's natural environments are famous for their beauty and biological diversity, with tourists coming from around the world to embrace outdoor recreational opportunities in areas such as the Great Barrier Reef, tropical Northern Queensland, Uluru, Kakadu, the Kimberley and Tasmania's wilderness. There are also lesser known, but equally beautiful areas throughout the country, ranging from rugged mountain ranges, beautiful coastlines, pristine waterways and the remote outback. With such a diverse range of climates and terrains throughout Australia, there are ample opportunities for all types of outdoor recreational activities.

## Reasons for participation

People participate in outdoor recreational activities for a number of reasons. These reasons include social benefits, personal growth, physical development, psychological benefits, appreciation of the environment and to provide a personal challenge.

## Challenge

Being challenged is a concept many individuals enjoy and strive for. It involves being outside one's comfort zone and learning new skills in order to handle new situations. Some challenges that individuals may encounter will require them to:

- be resilient
- use problem solving
- trust those around them
- deal with adverse weather conditions
- display leadership skills.

The challenges individuals face through their involvement with outdoor recreational activities can also be categorised as physical or psychological, which will be explored later in this chapter.

## Social benefits

Participation in outdoor recreational activities can provide many social benefits. People might choose to participate in outdoor recreation because their friends encourage them to and to strengthen existing friendships and relationships. Individuals may also make new friends and form new relationships through their involvement in outdoor recreation. Some of these activities require participants to put the safety in the hands of someone else – such as rock climbing or abseiling – which can create an unusual and unique bond between strangers.



**Figure 9.2:** Involvement in outdoor recreation can create a sense of accomplishment.

### Did you know?

84-year-old Donald Cripps set the record as the world's oldest solo BASE jumper in 2013.

### Learning activity

1. Create a list of outdoor recreational activities and categorise them according to:
  - how dangerous they are
  - how much experience is needed to participate safely
  - popularity (in Australia)
  - cost.
2. Discuss the outdoor recreation activities you have participated in and describe the health benefits of such activities.
3. Reflect on the reasons for your choice of these specific activities.

## Personal growth

Outdoor recreation provides multiple opportunities for personal growth and development. Life today, particularly in the western world, is heavily reliant on technology. One major aspect of outdoor recreation is being away from technology. Many people find this challenging, but as challenging as it might be, it provides opportunities for personal growth. Simple concepts such as being able to navigate or use maps – common skills needed for many outdoor pursuits – have become redundant due to the development of GPS systems. Involvement in outdoor recreation can create a sense of personal accomplishment, leading to increased confidence and self-esteem.

## Physical development

The type of recreational pursuit will determine the physical skills and attributes needed. Certain activities such as rock climbing and fishing require a completely different set of physical skills. Activities such as mountain biking, abseiling and whitewater rafting are quite physical and will require individuals to develop their fitness levels. If an individual is participating in outdoor recreation to improve their fitness, it is important to continue to challenge oneself and push past what they have become accustomed to. They should continue to make it challenging so they are getting as much physical gain out of the activity as possible. Activities such as fishing or bushwalking do not require high levels of fitness, but rather require skills specific to the activity, such as casting a line or reading a map.

## Psychological benefits

There are many psychological benefits to be gained from participating in outdoor recreational activities. These activities often require individuals to be immersed in the natural environment, which can allow for a different type of psychological activity than what one can expect to experience in a busy city or crowded office. The psychological benefits of participating in outdoor recreational activities include:

- developing resilience, confidence and self-esteem
- becoming more efficient at problem-solving and decision-making
- identifying ways to be sustainable.

## Appreciation of the environment

Outdoor recreation allows individuals to experience the environment and appreciate the natural landscape. Through involvement in bush walks within national parks for example, individuals learn about how damaging littering can be and the impact of pollution on the natural environment. This can foster a new appreciation of the environment. Also, if individuals practise recreational activities such as surfing, they may become familiar with conservation and ethical issues concerning the water and marine life, and may begin campaigning for these issues.

### Internet activity

Log on to TitanOnline to complete Activity 9.1, a research task on a famous outdoor adventurer.

## Outdoor activities

There are a range of outdoor activities to suit the needs and skills of everyone. Outdoor activities can be physically challenging, such as whitewater rafting, skiing or rock climbing. Outdoor activities can also help with spiritual development and mental clarity, such as surfing or bushwalking. No matter the type of activity an individual participates in, they should always be aware of safety considerations, skills and equipment required.

## Safety considerations

Participating in outdoor activities requires individuals to consider the safety precautions they should be taking. Individuals should dedicate appropriate time to planning and organising. If, for example, there is a group planning to go on an overnight hike through a national park, the group needs to plan:

- who is bringing specific items such as a shovel, garbage bags, tents and toilet paper
- who is notifying the national park and other appropriate authorities
- informing family or loved ones of the plan, in case anything happens.

Other important safety considerations include:

- remaining hydrated
- managing injuries
- avoiding dangerous and unfamiliar areas
- being cautious of wildlife.

Whenever participating in outdoor activities, it is important to have a back-up plan or a plan B in case something should go wrong.

## Skills and techniques

Specific outdoor activities will require certain skills and techniques. For some outdoor activities, these skills and techniques can be developed each time an individual partakes in this activity, such as surfing, bushwalking and mountain biking. However, in some cases, using the correct skills and technique is vital to ensure safety. For instance, using the wrong technique when abseiling or rock climbing may result in injury or death. Developing the correct skills and techniques often requires good instruction, plenty of practice and effective feedback.



**Figure 9.3:** Bushwalking can help with spiritual development and mental clarity.

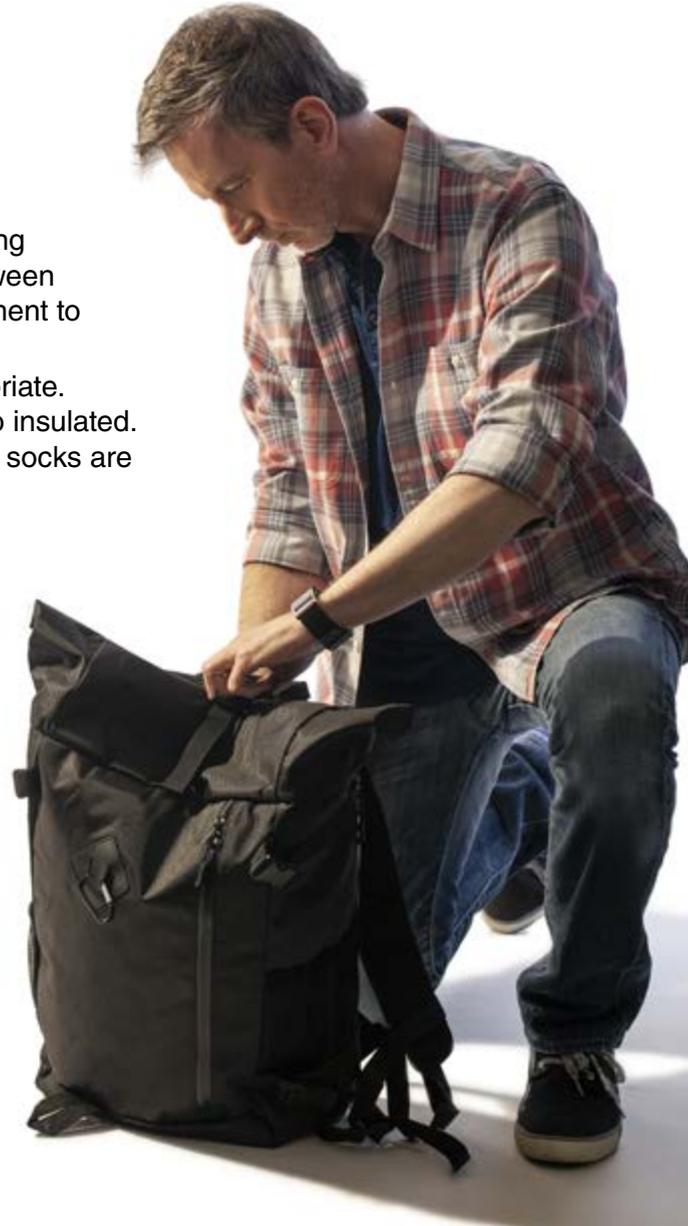


**Figure 9.4:** Using the correct skills and technique is vital to ensure safety when rock climbing.

## Equipment

The equipment used for outdoor recreation can make the difference between completing the activity or not completing it, between getting injured and not getting injured and between enjoying the activity or not enjoying it. The types of equipment to consider are outlined below:

- **Clothing:** clothing should be weather and terrain appropriate. If hiking, clothes should be light and water proof, but also insulated. Ensure shoes fit correctly and have been 'worn in'. Extra socks are always a good idea in case of rain and/or blisters.
- **Backpack:** if doing any activity that requires some sort of backpack, it is important to ensure it is being worn correctly to prevent neck and back soreness and possible injury. Straps should be tightened so the backpack is secure against the back. The pack should not be unbearably heavy, especially if it is going to be worn for several days.
- **Safety equipment:** such as helmets, knee pads, shoulder pads and harnesses should always be worn when it is appropriate. Equipment should be tested to see if it is in working order before being used in the outdoors. First aid kits should be taken and must be checked before leaving for the activity to ensure it is stocked with supplies.
- **Navigational equipment:** such as maps and compass. Make sure the map is up to date and that someone is familiar with how to use a compass.
- **Food and water:** adequate food and water should be taken. If there is safe drinking water throughout the hike for example, there is no need to carry litre upon litre of water as this adds weight to the back. Foods that take up little room and do not have much waste are ideal.



**Figure 9.5:**

A pack must not be too heavy, especially if it is going to be worn for several days.

### Learning activity

1. Assess the suitability of Australia's natural environment for participation in a range of outdoor recreation activities.
2. Identify outdoor recreational facilities that can be accessed in the local area.
3. Analyse the reasons why people choose to participate in a variety of outdoor activities.
4. Describe the feelings people experience from participating in outdoor recreational activities.

# Skills involved in outdoor recreation

Outdoor recreational activities require certain sets of skills. These skills include navigation, preservation and conservation, wilderness first aid and weather interpretation.

## Navigation

Navigation involves knowing how to get from one point to another when in various environments. Navigation includes compass reading, map reading, route planning and natural navigation. A range of bush skills can also be utilised to aid navigation.

## Compass reading

Compass reading is a necessary skill to have in relation to navigation. A compass is a tool that, when used correctly, indicates the direction of north. Being able to establish the direction of north is extremely important for reading and following a map, particularly in the wilderness where there may be no specific landmarks to associate with the map.

A compass will have north, south, east and west pointed out, as well as degrees from 0 degrees to 360 degrees. In the middle of the compass is the needle. The needle will move depending on where the individual holding the compass is and the direction they are facing. There is also a direction of travel marking, which should also be facing away from the compass reader.

When reading a compass, individuals should follow these steps:

- Hold the compass flat in the hand, at a height between the chest and belly button.
- Make sure the direction of travel arrow marking is facing away from the person and should be pointing the same way as the middle finger.
- Ensure the needle arrow matches up with north. North will not always be in the same direction as the direction of travel marking. Do this by twisting the dial until it matches up.
- Note that once the needle is on north and the direction of travel mark is directly in front of the compass reader, the direction will become clear.

If an individual is trying to find the bearing of a specific spot on a map, the compass can be placed on the map, with the direction of travel arrow facing the same way as the specific spot.

It is also important to consider the difference between true north and magnetic north. True north points to north as according to the earth's axis, that is the North Pole. Magnetic north relates to the earth's magnetic field. There will be, depending on where the reading is taken, differences between true north and magnetic north of a few degrees.

### Internet activity

Log on to TitanOnline to complete Activity 9.2, which will further your knowledge of using a compass.

### Practical activity

In groups of 3-4:

1. Design an outdoor recreational activity to participate in at school.
2. List all the equipment required.
3. Complete a risk assessment, identifying all the possible risks associated with the activity and how they will be managed.
4. Devise an emergency plan in case something unexpected occurs.
5. Reflect on the feelings experienced during and after participating in the outdoor recreational activity.

## Map reading

Engaging in outdoor recreation often involves accessing remote areas that will require navigational skills, particularly if destinations are not well sign posted. Topographic maps are valuable as they represent the Earth's features accurately and to scale. These features may include vegetation, cleared areas, roads, trails, waterways, man-made structures and boundaries of properties. These maps also indicate 'relief', which illustrates slopes, depressions, valleys and mountains by the use of contour lines.

Maps provide a great deal of information for people engage recreation. To successfully use a map, one must understand

- commonly used symbols that are shown in the legend
- scales used on a map which enable an individual to calculate distances
- how to orientate a map so that north on the map matches the real north
- how to use grid references to establish locations on the map
- how to calculate bearings that will enable an individual to plot a route.

If using a map to follow a route, it is essential to orientate the map using the compass, so the north on the map is really pointing north. To do this, rotate the circular housing until north is in line with the direction of travel arrow. Then put the compass on top of the map and continue to rotate the map until the grid lines are parallel with the lines on the compass housing (maps always have north to the top). The map is now orientated to the north and objects and landmarks will be able to be identified as they appear on the map.



**Figure 9.6:**

Compass and map reading are essential navigation skills.

## Route planning

Route planning involves devising how to get from point A to point B. There are specific factors that need to be considered when planning a safe route that meets the needs of the group, including:

- the steepness and surface of the terrain
- appropriate areas for rest or camping
- the availability of water
- potential dangers and alternative routes in case of emergencies
- estimated travelling times.

## Natural navigation

Natural navigation involves finding a location, plotting a position or course by using natural references rather than man made equipment such as a compass. To use the sun to navigate (in the southern hemisphere) line up the 12 on a watch face with the sun. Halve the angle between the hour hand and the 12. This direction is north (note: adjust daylight savings out of this exercise for an accurate reading). Many people do not use analogue watches, but even if an individual can tell the time with their phone or a digital watch, one can still draw a watch face in the dirt to complete the task.



**Figure 9.7:**  
The surface of the terrain needs to be considered when planning a route.

### Practical activity

1. Calculate the distance around the school oval.
2. Walk at a comfortable pace for 1km and calculate your walking speed.
3. Obtain a map of the closest national park. Plan a one day walk, outlining a safe, achievable route.
4. Nominate significant landmarks, indicate walking times and plot compass bearings.
5. Identify the starting and finishing grid references.
6. Indicate the terrain at different sections on the route.



**Figure 9.8:**  
Campers and hikers should take care not alter the natural environment.

## Preservation and conservation

Preservation and conservation are very important for the environment. With the destruction of forest and urbanisation constantly threatening natural areas, it is important to respect the environment so that it can be enjoyed by many generations to come.

When participating in outdoor recreation, particularly any activity that involves camping or hiking through national parks, it is essential to be mindful of the flora and fauna and to minimise the impact of hiking and camping.

### Flora and fauna

Flora relates to plant life and vegetation, whereas fauna relates to animals and insects. When participating in outdoor recreation, it is necessary to consider the flora and fauna of the environment and take extra precautionary measures to ensure they are not harmed.

Respect flora by:

- disposing of rubbish appropriately
- using tracks where possible
- avoiding picking flowers or plants
- avoiding restricted areas.

Respect fauna by:

- observing wildlife from a distance – do not follow or approach them
- never feeding the animals, as feeding wildlife damages their health, alters natural behaviours, and exposes them to predators and other dangers.
- protecting wildlife and your food by storing rations and trash securely
- controlling pets at all times, or leave them at home
- avoiding wildlife during sensitive times: mating, nesting, raising young, or winter.

The following table outlines possible harms to flora and fauna and specific measures that can be taken to reduce the risk of causing permanent damage.

**Table 9.1:** Measures to protect flora and fauna.

Risk	Protective measure
<b>Erosion of riverbanks and noise pollution</b>	<ul style="list-style-type: none"> <li>▪ Bans in specific protected areas.</li> <li>▪ Noise regulations.</li> <li>▪ Speed restrictions.</li> <li>▪ Policing of waterways.</li> <li>▪ Licence tests to drive boats.</li> </ul>
<b>Four-wheel driving in off-road environments</b>	<ul style="list-style-type: none"> <li>▪ Stay on tracks where possible.</li> <li>▪ Avoid creating ruts or large holes in tracks.</li> <li>▪ Do not go four-wheel driving during or just after rainfall.</li> </ul>
<b>Sewerage and waste disposal</b>	<ul style="list-style-type: none"> <li>▪ Do not leave anything behind.</li> <li>▪ Recycle and use appropriate waste collection services.</li> <li>▪ Do not leave any sanitary products behind.</li> </ul>
<b>Horse riding in environmental sensitive areas</b>	<ul style="list-style-type: none"> <li>▪ Only use established trails.</li> <li>▪ Ride in small groups.</li> <li>▪ Stay out of protected or sensitive areas.</li> </ul>
<b>Human waste disposal in campsites</b>	<ul style="list-style-type: none"> <li>▪ Keep waste away from waterways.</li> <li>▪ Bury waste at a sufficient depth.</li> <li>▪ Only leave a campsite in equal or better condition as it was found.</li> </ul>
<b>Visiting Aboriginal art rock sites</b>	<ul style="list-style-type: none"> <li>▪ Be culturally aware and respectful.</li> <li>▪ Do not touch the artworks.</li> <li>▪ Keep areas surrounding Aboriginal art rock sites clean.</li> </ul>



**Figure 9.9:**

It is essential to minimise the impacts of camping and be mindful of flora and fauna.



**Figure 9.10:**

Preservation and conservation are very important for the environment.

### Learning activity

1. List and discuss measures that can be taken in order to preserve the natural environment while engaged in outdoor recreation.
2. Demonstrate your route planning skills by planning an overnight hike in a local recreational area. Prepare an alternative plan that you would use if strong storm weather was approached during the hike.

## Low impact hiking and camping

Low impact hiking and camping involves causing little to no damage to the environment. This is important because it prolongs the life of the natural landscape. Specific rules or guidelines hikers and campers can abide by to ensure low impact hiking and camping include the following:

- Do not alter the natural environment.
- Avoid camp fires. If they are essential, keep them under control. Extinguish all fires properly.
- Stay on established trails.
- Do not take souvenirs.
- If there is rubbish, dispose of it properly.
- Take out what you put in.
- Notify authorities if you need rescue.

### Did you know?

Male platypus have spurs on their back legs that hold toxic venom.

### Internet activity

Log on to TitanOnline to



**Figure 9.11:**  
Low impact hiking and camping prolong the life of the natural landscape.

## Wilderness first aid

Injuries in the wilderness differ from other injuries in that they are often difficult to manage because supplies may be limited and access to medical services may also be restricted. Outdoor adventurers have an increased responsibility to be trained in first aid and have relevant skills, knowledge and equipment to meet their own first aid needs for extended periods of time. In a wilderness emergency, first aiders should still follow the DRSABCD procedure, which is explored in detail in Chapter 6 of this textbook. Outdoor adventurers should consider what first aid supplies they will take with them as well as how to improvise in particular first aid situations.

## Essential first aid supplies

The need for a comprehensive first aid kit needs to be balanced with the need to have a manageable backpack. The essentials will be determined by the length of the hike, the terrain, the weather and the health status of the participants. The following list details some of the essential first aid supplies:

- thermal blanket
- adhesive bandages (such as Band-Aids)
- antiseptic
- sting relief spray
- cotton wool
- elastic bandage
- gauze
- tweezers
- water purifying tablets
- diarrhoea tablets
- gloves
- plastic bags
- ice pack
- paracetamol
- tape
- splints.

The chances of needing all of these supplies on the one hike are low, however it is important to have them in case something does happen. Hikers can have a communal first aid kit, where supplies are divided up amongst hikers in multiple, smaller first aid kits, but this does pose a danger if the group becomes separated and an emergency arises.



**Figure 9.12:** Outdoor adventurers have an increased responsibility to be trained in first aid,



**Figure 9.13:** Adhesive bandages and antiseptic are essential first aid supplies for hikers and campers.



**Figure 9.14:**

To manage fractures and sprains, the injured area should be raised and immobilised.

Common first aid injuries that are likely to occur in outdoor recreational activities are outlined in the following text.

- **Burns:** signs and symptoms of burn injuries include blistered skin, pain, swelling and shock. To manage a burn, use DRSABCD, contact medical assistance (if a serious burn), and hold burn under running water.
- **Stings or bites:** signs and symptoms will vary depending what an individual has been bitten or stung by, but generally includes pain, sweating, nausea, swelling and increased pulse. Management techniques include DRSABCD, removing or scraping away the stinger, reassure the casualty, apply ice and seek medical assistance.
- **Bleeding:** bleeding can be a result of cuts, abrasions, contusions and lacerations. Blood pressure can drop and bleeding casualties can enter into shock as a result of the bleeding. Management techniques of bleeding include DRSABCD, applying pressure to the wound, elevating the wound to minimise blood flow to the site and seek medical assistance.
- **Fractures or sprains:** signs and symptoms of fractures or sprains include bruising, pain, protruding bones, swelling and immobility. To manage fractures and sprains, the injured area should be raised, immobilised with a sling, splint or bandaging and medical services should be contacted.

- **Hypothermia:** hypothermia occurs when the body temperature falls below 35°C. Signs of hypothermia include feeling cold, shivering, clumsiness, slurred speech and irrational behaviour. Pulse can become difficult to find and the heart rate slows. Management techniques include DRSABCD, finding a warm place for the casualty, removing wet clothing and replace with dry layers, share body heat, reassure the casualty and seek medical assistance.
- **Hyperthermia:** signs of hyperthermia include feeling hot, exhausted and weak, headaches, nausea, fainting, fatigue, shortness of breath and confusion. Management techniques include DRSABCD, moving the casualty to somewhere cool and out of the heat, applying cold packs to body parts such as neck, groin and armpits, giving fluids to the casualty if conscious and seeking medical assistance.

## Improvisation

Improvisation involves being flexible and responding to a situation on the spot, with little (if any) prior preparation. Common sense, thorough planning and risk minimisation can reduce the likelihood of injury. However, sometimes the best plans can fail and even the most experienced adventurers can find themselves in situations not expected. Improvisation in outdoor recreation means thinking creatively and solving problems using whatever resources are available.

Examples of improvised first aid in outdoor recreation settings may include:

- using a stick or other piece of wood as a splint
- resting a bleeding leg or foot on a backpack to slow the bleeding
- using a rope or t-shirt as a sling.

### Learning activity

1. Develop strategies for the prevention and management of common wilderness first aid situations such as:
  - burns
  - fractures
  - sprains
  - hypothermia.
2. Research the following flora and fauna and discuss where they are found, how dangerous they are and what to do if an individual comes in contact with them:
  - box jellyfish
  - black bean
  - honey bee
  - deadly nightshade
  - saltwater crocodile
  - stinging nettle.



**Figure 9.15:**

Signs of hyperthermia include feeling weak, headaches, nausea and confusion.

### Internet activity

Log on to TitanOnline to complete Activity 9.4, which involves reviewing the first aid video and completing the practical activity.

### Did you know?

Australia is home to the world's most venomous snake, the Inland Taipan.

## Weather interpretation

Outdoor recreational activities are often suited to specific weather conditions, for example some activities are most successful in windy conditions, whereas others may be most successful in clear, sunny weather.

Weather interpretation involves being able to evaluate or estimate what the future weather may be like based on predictions from sources such as the Bureau of Meteorology, National Parks and Wildlife, the internet and television weather reports.

## Meteorological charts

Meteorological charts show predicted weather conditions over a chosen area at a specific time. Various features, such as shading and lines, depict where certain weather conditions are going to occur, such as areas with heavy rain or high tides. Knowledge of meteorological charts may help avoid getting caught in a lightning storm or rising flood waters.

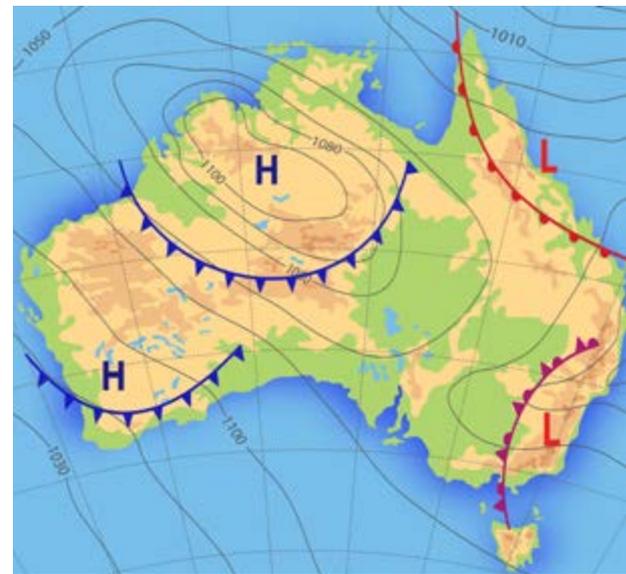
Meteorological charts show the movement of low and high pressure systems. Isobars are lines on these maps that link points of equal atmospheric pressure. The closer the isobars, the stronger the winds.

In high pressure systems, winds move in an anti-clockwise direction and dry, relatively cloud free conditions can be expected. In a high pressure system, the air will sink down from the sky, causing it to warm, usually creating stable weather conditions. In low pressure systems, winds move in a clockwise direction. During a low pressure system, the warm air will rise from the ground. As this air rises, it cools, usually creating clouds, possible rain and unsettled weather.

Another feature identifiable on a meteorological chart is a cold front. A cold front involves cold polar air moving in and replacing warm air. During these situations, strong winds can be expected as well as drastic temperature differences.



**Figure 9.16:**  
Low pressure systems usually create clouds, rain and unsettled weather.



**Figure 9.17:**  
Meteorological charts show predicted weather conditions at a specific time.

### Internet activity

Log on to TitanOnline to complete Activity 9.5 on the use of meteorology data.

## Case study – Outdoor training

Michelle had been bored with her recent training. She had been looking for a new challenge when she heard about Spartan races. Spartan races are conducted over large obstacle courses and involve a combination of running and managing various challenges such as rope climbs, monkey bars, and crawling under and over obstacles.

Michelle was hooked after her very first race. She loved training in the natural environment, usually choosing running tracks with different slopes and running surfaces. Michelle also enjoyed meeting new people who shared her love of Spartan racing. She joined a Facebook group where members post different trails they are planning to run, enabling others to join in. Training in groups made it safer to access remote areas and allowed the group to share their knowledge and resources.

Michelle had planned to meet two other people she had been in contact with online, to do a run through a network of trails in the National Park that she had heard about but never completed herself. Michelle was late, arriving around half an hour after the arranged time, and her calls went straight to voicemail when she tried to contact her friends. The reception in the area was not great and Michelle assumed the other two had already started the run.

Due to bad weather, the three were planning on only doing a short track that would only take a couple of hours. For this reason, Michelle didn't pack any food, only a few lollies for energy, a bottle of water and a basic first aid kit. Michelle decided to start the trail run anyway, despite not being able to get in contact with the other two runners, hoping to catch up to them or contact them if reception improved.

About an hour into her run, Michelle still hadn't seen anyone and was becoming very tired. She had a break and checked her map, only to realise she was completely off course. She made a plan to retrace her route, but after a further half hour she rechecked the map and realised she didn't know where she was. At the four hour mark, Michelle was out of water and lollies, and she realised that no one knew she was out in the bush by herself.

Michelle sat down to try the map again, but it only made her more confused. She suddenly felt a sting on the back of her thigh and scratched it away, looking down at the ground to see a large brown spider scurrying away. The bite was swollen and painful, and it was getting bigger.

1. List the precautions Michelle overlooked that she should have considered before beginning her run.
2. Analyse Michelle's actions. What would you have done differently/the same?
3. Outline how Michelle should deal with the spider bite having limited first aid supplies.
4. Michelle did not notify authorities that she would be running in the national park. Create two endings to this case study:
  - a. One where authorities were notified.
  - b. One where authorities were not notified.



**Figure 9.18:**

One way of using natural signs to predict weather is by assessing the types of clouds in the sky.

## Natural signs

If engaging in outdoor recreation, one should become familiar with natural signs that indicate possible weather conditions. This will help make informed decisions regarding safety. Most people are capable of looking outside and making a general assessment of weather conditions. For example, dark clouds mean it could rain with possible thunder and lightning. One way of using natural signs to predict weather is by assessing the types of clouds in the sky, as each can be associated with certain types of weather. The following table outlines the common features of clouds.

**Table 9.2:** Common features of clouds.

Cloud	Appearance	Associated weather
<b>Cirrus</b>	<ul style="list-style-type: none"> <li>▪ High clouds</li> <li>▪ Look very thin</li> <li>▪ Made of ice</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fine, clear weather</li> </ul>
<b>Stratus</b>	<ul style="list-style-type: none"> <li>▪ Low clouds</li> <li>▪ Cover most of the sky</li> </ul>	<ul style="list-style-type: none"> <li>▪ Associated with overcast weather</li> <li>▪ May be darker in appearance and bring rain</li> </ul>
<b>Cumulus</b>	<ul style="list-style-type: none"> <li>▪ White and fluffy clouds</li> <li>▪ Can also be dark and heavy looking</li> </ul>	<ul style="list-style-type: none"> <li>▪ When white and fluffy, fine weather</li> <li>▪ If dark and heavy, can bring rain or hail</li> </ul>

### Practical activity

1. Practise navigation using a compass and a map.
2. Practise navigation using the stars and the sun.
3. Draw conclusions from interpreting weather reports.

# Planning in outdoor recreation

Planning in outdoor recreation is a vital part of the outdoor experience. Time and care needs to be put into planning to ensure maximum enjoyment and safety for all participants.

## Equipment requirements

When participating in outdoor recreation, there are a number of equipment requirements that need to be considered. It is important to consider and pack the essential equipment when participating in outdoor recreational activities. In many cases, adventurers will need to carry their equipment, so it is necessary to only take what is needed and try to use sustainable resources. Individuals need to consider requirements in relation to first aid, toiletries, sleeping and shelter, cooking, eating, drinking, cleaning and navigation equipment. The following table outlines the essential equipment for most hikes and bushwalks.

**Table 9.3:** Equipment requirements.

Equipment	Specific items
<b>First aid</b>	Adhesive bandages, cloth bandages, bite/sting cream, insect repellent, paracetamol, sunscreen, scissors, flares, personal medications
<b>Toiletries</b>	Toilet paper, feminine products, deodorant, toothbrush and toothpaste
<b>Sleeping and shelter</b>	Tent, mattress, tarp, poles, raincoat, sleeping bag, warm sleepwear
<b>Cooking, eating, drinking and cleaning</b>	Matches, portable cooker, fuel, cutlery, plate/bowl, rubbish bag, cup, non-perishables food, can opener
<b>Navigation</b>	Compass, map, torch/light, watch

Adventurers should create a checklist of everything they need before they start packing for their outdoor experience. This way when they are packing, they can tick each item off as they go.



**Figure 9.19:** Equipment for cooking, eating, drinking, sleeping and shelter will need to be carried to and from the campsite.



**Figure 9.20:** Foods ideal for camping should be nutritious and dense in kilojoules.

### Internet activity

Log on to TitanOnline to complete Activity 9.6 by reviewing the range of online camping resources.

## Clothing requirements

When participating in outdoor recreation, it is important to wear the correct clothes, not only for comfort but for safety as well. Long pants and long-sleeved shirts help to avoid bites and scratches, and protect from weather conditions such as rain or sunburn. However, they should also be light weight to prevent overheating and hyperthermia. Long clothes also protect individuals when participating in activities that require a harness.

Individuals should pack appropriate clothing for when the sun goes down and the temperature drops. This might include packing thermals and an extra pair of thick socks to sleep in. Shoes and footwear should be appropriate for the activity that is being completed. For many outdoor recreational activities, hiking boots or running shoes are most appropriate. If buying a new pair of shoes, adventurers should wear their shoes in before the activity to prevent blisters and aches. Some activities will require water shoes such as flippers or aqua shoes. When hiking, it is important to consider how many pairs of socks to pack. It is always better to pack extra socks than not enough, because hiking in damp or dirty socks can be very uncomfortable.

## Food and water requirements

Deciding on appropriate food to bring on outdoor recreational activities depends on:

- duration of the activity
- physical demands of the activity
- cooking utensils available
- rubbish and disposal facilities.

Foods to avoid when camping include:

- perishables (foods that go off quickly)
- foods with excessive packaging
- foods that need refrigerating
- foods that may cause constipation or diarrhoea
- foods high in salt, as it can cause dehydration.

Foods ideal for camping should be nutritious and dense in kilojoules. This is to help adventurers maintain enough energy throughout their outdoor recreational activities.

Foods should be lightweight and easy to prepare. Include things like trail mix, dried fruits, muesli bars, potatoes, carrot sticks or tinned goods such as tuna.



**Figure 9.21:**  
Long pants and long-sleeved shirts help protect from sunburn.



**Figure 9.22:**  
Before leaving for any hike or camping trip, it is essential to check if there will be access to safe drinking water.

### Internet activity

Log on to TitanOnline to complete Activity 9.7 by reviewing the websites about camping meal preparation.

It is a good idea to create a meal checklist before packing camping food. It would be appropriate to plan breakfast, lunch and dinner, and what ingredients are needed for each meal. Campers should also plan snack foods to give extra energy that are edible 'on-the-go'.

Before leaving for any hike or camping trip, it is essential to check if there will be access to safe drinking water. If not, hikers should bring water purifying tablets. A bottle made from metal such as stainless steel will help to keep the water cooler for longer and is ideal for camping.

Other outdoor activities, such as marathons through national parks or surfing competitions, will entail different food and water requirements. For an activity like a marathon, participants will not be stopping for three meals, but rather need something high in electrolytes and energy, such as a sports drink or protein bar.

## Maintenance of equipment

Maintenance of equipment needed for outdoor recreation is important for a number of reasons. If equipment is not adequately maintained, it can:

- become a safety hazard
- rip, break or tear
- go mouldy.

Different equipment will need specific maintenance. One of the most important things to consider is airing and drying out camping equipment. Even if it does not rain, equipment such as tents, tarps and floor mats will get wet and moisture forms mildew. Once returning from a hike or camp, tents and any other similar materials need to be laid out to dry properly. Some people will apply a spray that deodorises the tent. One should also check for any rips or tears so that they can be repaired or replaced before it needs to be used again.

When camping, it is important to clean your equipment. Use strong cleaners and wipes or paper towels to clean your equipment after camping, cooking with detergent.

Campers should clean their equipment and should check for damage. This is to ensure that equipment is left in the bag for the next trip. Camping equipment instructions on how to maintain them. These instructions will ensure the longevity of the equipment.



**Figure 9.23:** Campers should clean and unpack their backpack after each trip.



**Figure 9.24:**

It's important to notify authorities of camping or hiking plans, as phone reception may not be available in remote areas.

## Safety requirements

When participating in outdoor recreational activities, there are specific safety requirements that should be followed in order to maximise the experience. These include notification of authorities, alternative plans, escape routes and emergency procedures.

### Notification of authorities

Notifying authorities is very important in relation to safety while participating in outdoor recreational activities. Anything can happen during outdoor recreation that can alter the rest of the plan. If authorities have been notified and provided a copy of the group's plan, they will be able to respond quickly if something happens. For instance, if a group is meant to be away for a week, and it has been eight days and they haven't arrived home, authorities can organise a search party if needed. Notifying authorities is also ideal for individuals who may not be very experienced in their outdoor recreational pursuit because authorities can offer advice and tips. Specific information one should know when notifying authorities include:

- how many people in the group
- where they are going
- how experienced they are
- starting and finishing times
- any medical conditions of members in the group that could impact the activity
- emergency contact details.

## Alternate plans

One necessary skill for outdoor recreation is to be flexible. Flexibility is the ability to adapt and change plans should an unexpected turn of events occur. Alternate plans are important to have in mind while participating in outdoor recreation. No matter how well something is planned, there are things that can force the plan to change, such as injury or weather. Alternate plans can include planning a shorter route than originally anticipated.

## Escape routes

It is important to have an escape route, in case something does occur that could cause danger or harm to those participating in the outdoor recreational activity. Planning an escape route usually involves providing the quickest and safest exit in most cases. This may not be possible in situations where water crossings, steep terrain or bushfires are affecting the possible routes. Prior planning and improvisation skills are essential.



**Figure 9.25:** No matter how well something is planned, there are things that can force the plan to change.

### Practical activity

1. Construct an emergency shelter.
2. Demonstrate competence in a range of camp skills, including:
  - setting up a tent
  - cooking a camp dinner
  - starting a camp fire
  - packing a backpack
  - navigation and map reading.

### Internet activity

Log on to TitanOnline to complete Activity 9.8 by investigating the resources about national parks.

## Emergency procedures

All members of a group should be aware of appropriate procedures in case of an emergency. Everyone in the group, not just the leader, should be trained and prepared on how to handle an emergency, in case they become separated from the group and need to fend for themselves. Specific scenarios that could occur and result in the need for emergency procedures include:

- serious injury such as bleeding, fractures or bites
- hypothermia or hyperthermia
- extreme weather conditions, such as hail or bushfire
- running out of food or fresh drinking water
- becoming lost or separated from the group
- equipment failure, such as a harness or compass breaking.

All adventurers should be familiar with:

- DRSABCD
- escape routes
- emergency contact numbers
- map reading skills
- using natural signs to navigate.

While it is important to have an escape route, situations can arise that prevent hikers from using one, such as a bushfire or another hiker having a serious injury making them immobile.



**Figure 9.26:**

All members of a group should be aware of procedures in case of an emergency.

### Learning activity

1. Research identifiable star constellations and how they can be used for navigation.
2. Explain the importance of notifying authorities when participating in outdoor recreational activities.
3. Analyse the types of considerations adventurers should make when planning the type of food to take camping.
4. Discuss maintenance measures campers should practise upon returning home from camping.
5. Describe ideal attire for an overnight, summertime hiking trip in Australia.

## Campsite planning and skills

When camping, it is important to carefully plan the choice of campsite. Hikers need to consider site selection, roles and responsibilities and camp skills. These are necessary to stay safe from natural elements, maintain natural surroundings and be mindful of other campers.

### Site selection

Site selection can greatly add to or detract from the camping experience. Important factors to consider when selecting a campsite are outlined in Table 9.4.

**Table 9.4:** Site selection.

Factor	Explanation
<b>Drainage</b>	Make sure the campsite is dry and has good drainage. Sandy soil is ideal as it helps keep the surface dry. A slight slope will assist with drainage.
<b>Respect for fellow campers</b>	Everyone is participating in outdoor recreation for their own reason, which is why it is important to be mindful around other campers. It is good etiquette to leave space between one's campsite and other camping groups. Be mindful of noise, particularly as it gets dark; not only for other campers but for the wildlife. Make sure to take all rubbish and leave the campsite clean.
<b>Approval from authorities</b>	It is necessary to acquire the relevant passes and approval for camping. Approval from authorities helps protect the flora and fauna and also the campers.
<b>Fire rules</b>	Knowing the rules and regulations regarding fires is vital. Some campsites will have complete fire bans and others will change depending on weather and seasonal conditions.
<b>Overhead hazards</b>	Try to avoid campsites with any overhead hazards such as tree branches or transmission towers, especially if hiking in windy or stormy weather.
<b>Surface check</b>	Check the surface of the campsite and clear it of any small rocks, sticks or glass. If the site has any larger rocks, choose another site so as to not disturb the natural landscape.
<b>Fresh water supply</b>	Make sure there is fresh water available. Make sure to not bathe, wash utensils or brush teeth in fresh running water, particularly not upstream. Keep a safe distance from the water's edge in case of heavy rainfall or flooding.
<b>Protection from wind</b>	Consider the exposure to wind and choose a sheltered site to maximise comfort and safety.



**Figure 9.27:**

Tasks such as cooking, cleaning and putting the tent up are roles that can be divided amongst campers.

## Roles and responsibilities

Designating specific roles and responsibilities to adventurers helps with managing outdoor recreational activities. Roles and responsibilities help hikers understand who is in charge of various elements throughout the adventure. All members should have, at the very least, a basic understanding of first aid and DRSABCD. While camping, everything has to be carried in back packs, so groups can divide camping equipment and individuals can be responsible for specific equipment. Tasks such as cooking, cleaning, fetching drinking water and putting the tent up and down are roles that can be divided amongst campers.

### Learning activity

Develop a detailed plan for an outdoor recreational activity. Include:

- intended duration
- maps
- roles and responsibilities of group members
- safety action plan
- contact details of authorities from which to gain permission.

## Camp skills

Camping requires a specific set of skills in order to be efficient in the natural environment and to ensure safety is not compromised. Some of these skills include camp fire management, sourcing and purifying water, campsite cooking, setting up tents and packing a back pack. Table 9.5 explains these skills.

**Table 9.5:** Camp skills.

Skills	Instructions
<b>Camp fire management</b>	<ul style="list-style-type: none"> <li>▪ Do not damage the environment when collecting fire wood.</li> <li>▪ Use fire pits that already exist.</li> <li>▪ Be aware of fire bans.</li> <li>▪ Do not let the fire burn excessively.</li> <li>▪ Extinguish fires completely before leaving.</li> <li>▪ Keep a safe space between the fire and tents, bush and people.</li> </ul>
<b>Sourcing and purifying water</b>	<ul style="list-style-type: none"> <li>▪ Low lying, dark green, lush vegetation often indicates a water supply.</li> <li>▪ After rainfall, keep an eye out for natural puddles or rock pools</li> <li>▪ If hard to reach, improvise by creating a vessel to drink from; possibly by folding a large leaf or branch in the middle.</li> <li>▪ Placing a plastic bag over big, leafy foliage during rainfall to collect water.</li> <li>▪ Collect water from streams where the water is running, and not where people are swimming or camping.</li> <li>▪ If collecting water that has not come from a running stream, water can be boiled or a purifying tablet can be added.</li> </ul>
<b>Campsite cooking</b>	<ul style="list-style-type: none"> <li>▪ Ideal tools for campsite cooking include:               <ul style="list-style-type: none"> <li>– Camp oven: cast iron pot with a lid.</li> <li>– Billy: small tin with a handle used to boil water or cook certain foods.</li> <li>– Pot grabber: used as a handle that attaches on to camp pots so that they can be moved without burning anyone.</li> <li>– Trangia stove: portable, small stove ideal for camping.</li> </ul> </li> </ul>
<b>Tent set up</b>	<ul style="list-style-type: none"> <li>▪ Select a flat site to erect the tent. Fasten securely.</li> <li>▪ Use a fly sheet to avoid condensation.</li> </ul>
<b>Packing a bag</b>	<ul style="list-style-type: none"> <li>▪ Only pack what is needed.</li> <li>▪ Lay everything out and do a final check before packing.</li> <li>▪ Line the bag with a large garbage bag to protect items from moisture.</li> <li>▪ Place heavier items lower in the pack.</li> <li>▪ Heavy gear should be divided between hikers.</li> </ul>

## Revision questions

1. Identify reasons why people participate in outdoor recreation.
2. List possible social benefits of participating in outdoor recreational activities.
3. Discuss the safety considerations associated with the following activities:
  - a. whitewater rafting
  - b. abseiling
  - c. horse riding
  - d. snorkelling.
4. Highlight the difference between true north and magnetic north.
5. Nominate five items to take in a first aid kit when hiking, justifying your choice.
6. Define what a meteorology chart is.
7. Evaluate areas of consideration when choosing a camp site.
8. Describe how the saying 'failing to plan is planning to fail' applies to outdoor recreation.
9. Discuss appropriate clothing for mountain biking.
10. Create a meal plan for a three day hike. Justify the food choices on the meal plan.
11. Create a fact sheet outlining a survival plan if caught in a national park during a bushfire.
12. Design a manual for a small group going hiking for the first time. Include all the information and advice required.

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