HLTAAP002
Confirm physical health status
Release 1

Learner guide

Aspire learning resources

HLTAAP002

Confirm physical health status

Release 1

Learner guide

Aspire Version 1.1

Aspire learning resources

Aspire is committed to developing quality resources that meet the needs of our customers. However, occasionally Aspire finds, or is notified of, errors. Please refer to our website at www.aspirelr.com.au to see if there are any updates that may be relevant to you.

Every effort has been made to ensure the information in this book is accurate; however, the author and publisher accept no responsibility for any loss, damage or injury arising from such information.

Except where an information source is acknowledged, the names and details of individuals and organisations used in examples are fictitious and have been devised for learning purposes only. Any similarity to actual people or organisations is unintentional.

All websites referred to in this unit were accessed and deemed appropriate at time of publication.

Aspire Training & Consulting apologises unreservedly for any copyright infringement that may have occurred and invites copyright owners to contact Aspire so any violation may be rectified.

HLTAAP002 Confirm physical health status Release 1

Level 1, 464 St Kilda Road
MELBOURNE VIC 3004 AUSTRALIA
Phone (03) 9820 1300

First published April 2017
Cover design Rewind Creative
Printer Doculink Australia Pty Ltd, 1d/28 Rogers Street, Port Melbourne VIC 3207

e-ISBN 978-1-76059-733-7 (PDF version)
ISBN 978-1-76059-731-3

Contact details

Participant

Name:

Start date:

Phone number:

Email:

Work Location

Name:

Address:

Postal address:

Workplace supervisor name:

Phone number:

Fax:

Email:

Registered Training Organisation (RTO)

Name:

Address:

Postal address (if different):

Phone number:

Fax:

RTO contact name:

Mobile:

Email:

Contents

Before you begin

This learner guide is based on the unit of competency *HLTAAP002 Confirm physical health status*, Release 1. Your trainer or training organisation must give you information about this unit of competency as part of your training program. You can access the unit of competency and assessment requirements at: www.training.gov.au.

How to work through this learner guide

This learner guide contains a number of features that will assist you in your learning. Your trainer will advise which parts of the learner guide you need to read, and which practice tasks and learning checkpoints you need to complete. The features of this learner guide are detailed in the following table.

Feature of the learner guide	How you can use each feature
Learning content	▶ Read each topic in this learner guide. If you come across content that is confusing, make a note and discuss it with your trainer. Your trainer is in the best position to offer assistance. It is very important that you take on some of the responsibility for the learning you will undertake.
Examples and case studies	▶ Examples of completed documents that may be used in a workplace are included in this learner guide. You can use these examples as models to help you complete practice tasks and learning checkpoints. ▶ Case studies highlight learning points and provide realistic examples of workplace situations.
Practice tasks	▶ Practice tasks give you the opportunity to put your skills and knowledge into action. Your trainer will tell you which practice tasks to complete.
Video clips	▶ Where QR codes appear, learners can use smartphones and other devices to access video clips relating to the content. For information about how to download a QR reader app or accessing video on your device, please visit our website: www.aspirelr.com.au/help 
Summary	▶ Key learning points are provided at the end of each topic.
Learning checkpoints	▶ There is a learning checkpoint at the end of each topic. Your trainer will tell you which learning checkpoints to complete. These checkpoints give you an opportunity to check your progress and apply the skills and knowledge you have learnt.

Foundation skills

As you complete learning using this guide, you will be developing the foundation skills relevant for this unit. Foundation skills are the language, literacy and numeracy (LLN) skills and the employability skills required for participation in modern workplaces and contemporary life.

The following table outlines specific foundation skills noted for your learning in this learner guide.

Foundation skill area	Foundation skill description
Learning	▶ Understanding your job role, organisational procedures and legal responsibilities ▶ Managing your work and seeing how well you are going and making goals for yourself at work ▶ Seeking professional development opportunities for continuous improvement
Reading	▶ Understanding how documents are presented and being able to navigate through documents ▶ Understanding industry- and job-specific terminology ▶ Interpreting key information in relevant documents ▶ Understanding routine workplace checklists and documentation
Writing	▶ Planning, drafting and writing reports and documents ▶ Communicating through written letters, email and online ▶ Recording progress; reporting incidents
Oral communication	▶ Clarifying instructions ▶ Providing information ▶ Supporting others through encouragement, negotiation and conflict resolution ▶ Using body language to model desired behaviour and responding to others' body language
Numeracy	▶ Calculating costs, weights, measurements of height and distance ▶ Interpreting measurements
Teamwork	▶ Working well with other people by cooperating, collaborating, encouraging and building rapport
Planning and organising	▶ Planning your workload and commitments ▶ Implementing tasks ▶ Completing work on time ▶ Knowing how to deal with hazards and risks
Making decisions	▶ Understanding and applying decision-making processes ▶ Reviewing the impact of your decisions
Problem-solving	▶ Identifying problems ▶ Working out how to fix a problem using problem-solving processes and reviewing the outcome
Innovation and creation	▶ Recognising opportunities to develop and apply new ideas ▶ Generating ideas by thinking of new ways to do something ▶ Making suggestions to improve work

Foundation skill area	Foundation skill description
Technology and digital literacy	▶ Efficiently using digitally based technologies and systems correctly and safely ▶ Accessing, organising and presenting information ▶ Using equipment correctly and safely

What do you already know?

Use the following table to identify what you may already know. This may assist you to work out what to focus on in your learning.

Topic	Key outcomes	Rate your confidence in each section
Topic 1 Obtain information about physical health status	1A Obtain accurate information about physical health status	☐ Confident ☐ Basic understanding ☐ Not confident
	1B Work with a detailed understanding of the structure and functioning of body systems	☐ Confident ☐ Basic understanding ☐ Not confident
	1C Use information to identify any actual or potential problems regarding health status	☐ Confident ☐ Basic understanding ☐ Not confident
	1D Take into account factors that may have impacted on an identified physical condition	☐ Confident ☐ Basic understanding ☐ Not confident
Topic 2 Check physical health status	2A Make checks of client health status before delivery of health intervention	☐ Confident ☐ Basic understanding ☐ Not confident
	2B Clarify significance of physical health status in relation to a particular intervention	☐ Confident ☐ Basic understanding ☐ Not confident
	2C Consult appropriate people	☐ Confident ☐ Basic understanding ☐ Not confident

Topic	Key outcomes	Rate your confidence in each section
Topic 3 Identify variations from normal physical health status	3A Identify signs and symptoms of variations from normal health status	☐ Confident ☐ Basic understanding ☐ Not confident
	3B Identify potential factors responsible for significant variations from normal health status	☐ Confident ☐ Basic understanding ☐ Not confident
	3C Identify potential risk factors associated with variations from normal health status	☐ Confident ☐ Basic understanding ☐ Not confident
	3D Recognise and refer potentially serious issues in line with organisation requirements	☐ Confident ☐ Basic understanding ☐ Not confident

Topic 1

In this topic you will learn how to:

1A **Obtain accurate information about physical health status**

1B **Work with a detailed understanding of the structure and functioning of body systems**

1C **Use information to identify any actual or potential problems regarding health status**

1D **Take into account factors that may have impacted on an identified physical condition**

Obtain information about physical health status

The human body is made up of 11 major systems, including the cardiovascular system, digestive system and respiratory system. A person's health may be affected if one or more of these systems is not functioning properly. Therefore, it is important to understand the structure and physiology of each system and how they interact. By understanding normal functioning, you are in a position to recognise variations and act accordingly. This usually involves observation, questioning and review of documentation to identify a person's physical health status or any health issues they may be experiencing. In this topic you will learn about working with a detailed understanding of the structure and functioning of the body systems, considering a range of factors that may have impacted on an identified physical condition, and obtaining information through observation, questioning and review of documentation to identify any actual or potential problems regarding health status.

1A Obtain accurate information about physical health status

Obtaining information about health status, or potential problems regarding health status, requires effective observation, questioning and review of relevant documentation. It is important to understand how to conduct an observation and ask the right questions of a person if symptoms do become apparent. A review of health documents may also provide information about changes in health status.

The type of health information you have access to will vary according to your work context. You should clarify with your supervisor what observations you can safely make within your role and position description, and what documentation you have available to you. Always report any potentially serious findings to the appropriate person according to the organisational requirements of the location in which you are working.

Observe and ask questions

Here are basic considerations that apply to observing and questioning people with care needs.

Considerations when observing and questioning people
▶ Be alert for signs and symptoms that suggest potential or actual health conditions.
▶ Observable physical symptoms include: temperature, inflammation, swelling, pain, dizziness and coughing, a running nose and sensory and comprehension difficulties.
▶ Know the extent of your role and who to report to if you identify a sign or symptom of illness or disease.
▶ Know emergency procedures according to organisational protocol.
▶ When inquiring about health status, there may be limiting factors; for example, the person may be anaesthetised, unconscious or speak a different language.
▶ Be aware of cultural considerations, such as those related to privacy and discretion.
▶ Ask questions clearly and unambiguously to obtain concrete information, such as ‘Where do you experience the pain?’ or ‘Can you tell me how bad the pain is?’
▶ Always document your observations and report to the appropriate person.

Basic observations to determine health status

Here are some basic observations you can make in a health role to determine the health status of a person with care needs. Observe whether they appear comfortable sitting or moving around, and whether they seem focussed and aware as to where they are and what is going on around them. Normal breathing can be checked by observing chest rises when a person lies on their back. Blood pressure should be checked using a sphygmomanometer – around 120 over 80 is normal. A person's pulse should be in the 60–100 beats per minute range, with 60 indicating a more efficient heart.

Observe whether a person is:

- comfortable
- comfortable when moving
- able to see and hear adequately
- too hot or too cold
- alert, conscious, confused or dizzy
- 36–37.5 degrees Celsius measured orally
- exhibiting a normal pulse rate
- breathing at a normal rate
- in the normal blood pressure range
- looking healthy, including weight.

Questioning for health status information

When questioning a person about any physical concerns to identify potential or actual conditions, you must communicate clearly. Listen to everything the person tells you and observe gestures and body language. For example, if a person is in pain, they may express discomfort in their facial expression.

It is important to remain calm when discussing physical conditions. You need to reassure the person and minimise anxiety and stress, so the problem does not worsen. Ask clear, direct questions such as the following and record the responses.

Questions for determining health status
Where is the pain?
How strong is the pain?
Is the pain sharp or does it ache?
Do you feel hot?
Do you feel cold?

Identify communication barriers

Some people may have difficulty understanding you, or you may have difficulty understanding them. This may be due to their health condition or due to a language barrier, or a hearing or cognitive impairment. If the person is unconscious or anaesthetised, you will need to rely on signs such as eye movement, pulse, respiration (breathing) and body temperature.

Be mindful of cultural and religious differences between yourself and the person. For example, women of the Islamic faith are often very modest and private. If discomfort is on part of the body that a person feels uncomfortable talking about, treat them sensitively and be aware of their needs.

There is assistance available if a person speaks a language other than English. Interpreting and translating services can be accessed, such as those offered by the Government's Translating and Interpreting Service (TIS National).

Adjust your style of communication

If a person with care needs is hearing impaired, you may need to rely on an interpreter, depending on the severity of the impairment. You can use gestures and body language, such as pointing to the site of discomfort. You can also use pictures and simple diagrams, but make sure the person can see your face – they may be relying on facial gestures and lip-reading to understand what you are saying.

You may work with people who have intellectual disabilities, which can also affect your style of communication. Use clear verbal and body language, and assistance from another person (possibly a family member), so the communication between you and the person is unambiguous. Details about how to communicate with the person should be included in their care plan, if applicable.

Review of documentation

Accessing the person's past medical and health history records may provide some valuable information to assist you in obtaining accurate information about their health status. Check with your supervisor about the access you have to this material.

A medical or health history includes information of any previous disease or illness. When a person is assessed for care a medical history is recorded, which includes a description of any previous disease or illness. This information may be obtained through a questionnaire or interview process.

Check the dates on the document to see when the recording was completed. It is important to read the details of past illness and disease, as there may be a relationship between a past experience of illness and a present condition. Medications that the person has taken, or is currently taking, will be included in the medical history as well as any allergies.

The information provided in these documents provides accurate details on the health status of the person at the time of the assessment. Clarifying the person's medical and health history is a very important step to take before any intervention is undertaken or a service delivered.

Medical and health history may include the following:

- History of a presenting problem
- History of actual or potential problems associated with activities of daily living
- A person's concerns and beliefs regarding their problem
- Past health history
- Medications taken or currently being taken
- Allergies
- Family circumstances
- Basic dietary information

Refer to the person's care plan

A care plan is a written guide that explains the care that a person with health care needs receives. Care plans are designed to meet each person's specific needs, and are usually devised by a health professional based on assessment observations.

Using observation and the diagnosis of any medical conditions, a plan is devised that focuses on priorities and goals appropriate for the person. The care plan addresses their strengths and problem areas, and stipulates how and when care should be provided.

The care plan also addresses which staff should carry out which interventions. Simple interventions are usually managed by care staff, while more complex interventions may need to be managed by a health professional, perhaps with the assistance of a carer. A care plan is devised after observations, questioning and review of existing documentation.

Observations that may be used in devising a care plan:

- Ability to respond
- Movement
- Pain
- Discomfort
- Skin quality
- Activities of daily living
- Ears, nose, eyes and mouth
- Blood pressure and heart rate
- Respiration
- Digestion, including appetite and bowel movements

Example

Obtain accurate information about health status

The following examples illustrate the degree of care that two different workers take when obtaining information about people's health status.

Observe and question with care

- It is Julie's first visit to the health clinic where Sally works. As she introduces herself to Julie, Sally is alert for signs and symptoms of potential or actual conditions in the way Julie walks and moves into the room. Sally asks for Julie's permission to ask questions and take notes about her health and medical history relevant to her care needs. Sally notes the gestures and body language Julie uses when answering the questions and discusses her health concerns. Sally adjusts her communication and speaks more clearly when she notices that Julie cannot hear all of her questions.

Review documentation

- Kevin is obtaining information from Marcia about her health by asking questions and observing her during their meeting to access her care needs. He thinks he has a good understanding of her current health status, and is ready to prepare a care plan document. However, another colleague interrupts Kevin to give him a file containing Marcia's health and medical history that Kevin. On reviewing the documentation, Kevin is able to add some important information to his health assessment, including information about past medications that will have an impact and need to be considered in his health assessment of Marcia.

Practice task 1

Observe and record how other health care workers in your work context obtain information on the health status of people with care needs. Your reflection and comments should cover the following questions.

1. What health information can be obtained through observation of a person?

2. What communication strategies are important when questioning a person for health information?

3. Explain the obligation to keep records of health observations.

4. When obtaining information about health status, why is it important to review a person's documentation, such as a health and medical history record or care plan?

Click to complete Practice task 1

1B Work with a detailed understanding of the structure and functioning of body systems

The body is a network of complex systems that work independently, yet are dependent on one another. It is crucial that you have a thorough understanding of these body systems so you can understand the difference between normal functioning and variations from normal functioning. When presented with health status information you will be able to interpret a person's anatomical and physiological information, with an understanding of the structure and function of the human body. Each of the body systems are made up of cells, tissues and organs. There are also special senses important for the functioning of the body.

The major body systems include:

- Cardiovascular system
- Respiratory system
- Musculoskeletal system
- Endocrine system
- Nervous system, including sensory system
- Digestive system
- Urinary system
- Reproductive system
- Integumentary system
- Lymphatic system
- Immune system

Use correct anatomical and medical terminology

People working in the care needs field use specific words and abbreviations to communicate health information. This allows for a shared understanding when describing and sharing information about the health status of a person. Using abbreviations speeds up the time taken to read and record health documentation.

Health terminology is used extensively in all areas of health, by health professionals and allied health workers. It is used for written documentation including reports, when communicating face to face and by electronic means, such as over the phone or email. To work effectively in any health field requires an understanding of the terminology used to describe the human body.

The use of particular language and medical abbreviations will be determined by the particular service in which you work. Here is a sample:

Common abbreviations	Meanings
ante	Before
b.m	Bowel movement
CNS	Central Nervous System
d/c	Discontinue
EENT	Ear, eyes, nose and throat
GI	Gastro intestinal
H2O	Water
Non rep.	Do not repeat

Common abbreviations	Meanings
PH	Past history
q.d	Every day
stat	At once/immediately
TPR	Temperature, pulse, respiration
WBC	White blood cell

Word roots, prefixes and suffixes

Most of the words used are based on medical prefixes, suffixes and word roots. Once you learn some of these word parts, unfamiliar words become familiar and some meaning is provided. Any medical dictionary or online dictionary will help you find the meanings of health terminology, including prefixes, suffixes and word roots.

Common word roots	Meanings
Arthro	Joint
Cardio	Heart
Derm	Skin
Gastro	Stomach
Haemo	Blood
Myo	Muscles
Neuro	Nerves

Cardiovascular system

The cardiovascular system (or circulatory system) comprises the heart, blood and blood vessels. The purpose of the cardiovascular system is to transport oxygen, food and other necessary substances to cells and tissue in the body, remove waste products from cells, regulate body temperature and transport cells that defend against disease and infection. Below is a description of each of the major organs in the cardiovascular system.

The heart

The heart is a muscle that pumps blood through the body. There are four chambers of the heart: the right atrium, the left atrium, the right ventricle and the left ventricle. If the heart ceases to function properly, or stops, a person's life is in danger.

Blood enters the heart through the vena cava (the major vein) into the right atrium, then into the right ventricle, then to the pulmonary arteries into the lungs. The blood is oxygenated in the lungs, then moves back into the left atrium, then into the left ventricle, and finally out of the aorta (the major artery) and into all parts of the body.

Blood

Blood is made up of plasma, red and white blood cells. Plasma is a watery substance that carries blood cells, food, chemicals, hormones and waste products throughout the body.

Red blood cells (erythrocytes) assist in the transportation of oxygen throughout the body. White blood cells (leukocytes) protect the body against infection.

Platelets are also found in the blood and assist in the clotting process.

Blood vessels

Blood is carried from the heart and through the body by blood vessels, which include arteries, veins and capillaries. Arteries carry blood away from the heart. From the aorta, the arteries branch into smaller channels throughout the body, the smallest of which is an arteriole.

From the arterioles, blood travels into capillaries; tiny channels that carry blood to the cells and tissue. Veins then carry the blood back towards the heart, via the smallest veins (venules), which are connected to capillaries. Branches of venules form veins that travel back to the heart. The inferior vena cava and the superior vena cava are the two main veins that empty deoxygenated blood back into the right atrium of the heart.

Common cardiovascular problems

Some common problems associated with the cardiovascular system are outlined below.

Angina and angina pectoris

Angina may indicate the presence of coronary artery disease. The discomfort of angina is caused by an insufficient flow of blood to the heart.

Cardiac arrest

Cardiac arrest occurs when the heart stops beating, causing failure of blood circulation, which restricts oxygen delivery to the rest of the body. Brain damage can result if not treated immediately. Cardiac arrest is best prevented by healthy lifestyle choices, but if it occurs, it must be treated immediately; for example, performing cardiopulmonary resuscitation (CPR) in combination with using a defibrillator.

Congestive cardiac failure (CCF)

Congestive cardiac failure (CCF) is a common heart problem where the pumping of the heart cannot meet the needs of the body. CCF is caused by many diseases and its course varies depending on the individual and their circumstances. CCF causes fatigue, difficulty breathing, difficulty exercising and swelling. CCF can be treated with medication, by altering lifestyle choices or by a heart transplant.

Cardiomyopathy

Cardiomyopathy refers to the condition where a person's heart is not working efficiently and effectively. The signs and symptoms of cardiomyopathy vary depending on the severity of the disease.

Coronary artery disease

Coronary artery disease occurs when the arteries to the heart narrow, which slows the flow of blood to the heart. Treatment options include medication and bypass surgery.

Heart murmur

A heart murmur (or additional sound made by the heart) is caused by faulty blood flow within the heart and may indicate a defective heart valve. Common causes include old age or pathogens.

Stroke

A stroke occurs when the flow of blood to the brain is interrupted or stopped. Brain damage may occur as a result.

Thrombosis

Thrombosis is when a blood clot forms in a blood vessel and restricts blood circulation, which in turn affects oxygen delivery and circulation. Thrombosis can occur if the vessel becomes injured. Vitamin K injections can reduce clotting, but cause increased blood flow, which needs to be managed.

Respiratory system

The respiratory system is responsible for providing oxygen to the body, which is essential for survival and removing carbon dioxide from the body.

The main structures of the respiratory system include the:

- lungs
- pharynx
- larynx
- trachea
- right and left bronchus
- bronchioles
- alveoli
- diaphragm.

The process of breathing

When we inhale, air enters the nose or mouth and travels into the pharynx (throat). It then passes into the larynx (voice box), and into the trachea (windpipe). There are two branches of the trachea: one branch extends into the right bronchus, which enters the right lung and the other to the left bronchus, entering the left lung. The bronchus then divide into smaller branches called the bronchioles, which subdivide again into the alveoli, which are tiny air sacs. Clusters of alveoli meet with capillaries and undergo an exchange of oxygen and carbon dioxide. Capillaries then transport the oxygen and carbon dioxide through the blood and back to the heart.

The lungs are comprised of alveoli, capillaries and nerves. They are separated from the abdomen by the diaphragm, which is a muscle that expands and contracts, causing the lungs to expand and contract. When the diaphragm relaxes, the lungs decrease in size and the carbon dioxide is moved out of the lungs. When the diaphragm contracts, the lungs increase in size and oxygen enters the lungs and moves into the body.

Common respiratory problems

Some common problems associated with the respiratory system are outlined below.

Asthma

Asthma occurs when airways narrow and restrict a person's breathing. An asthma attack is when there is a sudden shortness of breath, wheezing and coughing. The pulse can also increase. Allergies and stress can provoke asthma. Asthma can be managed with medications.

Bronchitis and chronic bronchitis

Bronchitis is inflammation of the bronchi, commonly caused by smoking, infection or air pollution. Bronchitis makes breathing difficult, which tires the person. It limits the amount of oxygen the body receives. Quitting smoking and avoiding toxins is the best prevention. Bronchitis can be treated with antibiotics, oxygen therapy or breathing exercises.

Bronchospasm

Bronchospasm is the sudden contraction (spasms) of the bronchiole muscles. The spasms restrict airways and increase mucous production. Oxygen is reduced and coughing increases. Bronchospasms occur in asthma, bronchitis and anaphylaxis (severe allergic reaction) and may be caused by food or environmental allergens or hormone changes.

Chronic obstructive pulmonary disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a general term that can refer to any one of many respiratory conditions. Emphysema and bronchitis are both examples of COPD.

Emphysema

A person with emphysema has damaged lungs (often as a result of the long-term effects of smoking), which cannot process air efficiently and effectively. A person with emphysema will have trouble breathing and may suffer from fatigue.

Lung cancer

Lung cancer (uncontrolled growth of abnormal cells in the lung/s) is more common in middle-aged and older adults and is most often caused by lifestyle choices such as smoking or exposure to toxins such as asbestos.

Sleep apnoea

Apnoea refers to a period where a person does not breathe. Sleep apnoea refers to any of a number of conditions that prevent people from breathing for a short period of time while they are sleeping. Treatments include changes to lifestyle such as losing weight or decreasing alcohol consumption.

Upper respiratory tract infections (URTIs)

Upper respiratory tract infections (URTIs) affect the nose, sinus, larynx and pharynx. Symptoms include coughing, a running nose, sore throat, headaches and nasal congestion. Sinusitis, bronchitis and ear infections can result from URTIs if the condition becomes complicated. These infections are typically viral. Treatments include medication and rest.

Musculoskeletal system

The musculoskeletal system incorporates two major systems: the muscular system and the skeletal system. The structures of the musculoskeletal system are the bones, joints and muscles. The purpose of the musculoskeletal system is to assist movement of the body, protect the internal organs and tissue, give the body form and produce body heat.

The muscular system is comprised of muscular tissue and works with the skeletal system to enable people to move around. The nervous system directs messages to muscles, which stimulate muscle contraction, causing movement.

Movement can be voluntary, such as touching an object, or involuntary, such as the action of breathing. When muscles contract, energy is produced, creating body heat. For example, when you shiver from cold, your muscles are contracting very quickly and therefore generating heat faster.

The muscular system helps to:

- allow body movement
- enable effective communication; for example, facial muscles are used to smile and frown
- control the movements of the lungs
- regulate the flow of food from our mouths to our sphincter (anus)
- regulate temperature and produce heat
- allow for posture and hold the body upright.

Skeletal system

The skeletal system is made up of all the bones in the body, from the cranium (skull) to the phalanges (toes). The skeleton and bones play a number of roles. Some bones, such as the skull and the rib cage, protect internal organs such as the brain and lungs. Other bones, such as the vertebrae, help a person stay upright. The skeleton acts as a frame for the body's tissues and skin, and also makes ambulation (movement) possible.

The main components of the skeletal system are described below.

Bones

Bones give the body structure and protect the internal systems. There are 206 bones in a human body. Bones are rigid structures made of living cells. Periosteum is a membrane that covers the bones and provides food and oxygen via blood vessels. Bone marrow is the substance in the hollow of the bone and is where blood cells are created.

There are four main types of bones in the body:

- Long bones – weight bearing; for example, leg bones.
- Short bones – more square in shape than long bones, facilitating skill and movements such as writing; for example, the bones in the fingers, ankles and toes.
- Flat bones – these protect organs; for example, the skull, ribs, pelvic bones and shoulder blades.
- Irregular bones – for example, the vertebrae of the spinal column.

Joints

A joint is where bones connect and allow movement. Cartilage is connective tissue in the joint that prevents the bones from rubbing and deteriorating. Synovial fluid lubricates some joints so the movement is smooth. Bones are held together by connective tissues called ligaments. Tendons are the strong connective tissue that connects muscle to bone.

Common musculoskeletal system problems

The following outlines some common problems associated with the musculoskeletal system.

Arthritis

Arthritis is inflammation of the joint/s. Symptoms include pain and reduced mobility in affected joints.

Osteoarthritis occurs due to ageing and joint injury. The disease occurs in the fingers, thumb, hips, knees and spine. There is no cure, but treatment includes pain relief, exercise, rest, weight control and a healthy lifestyle.

Rheumatoid arthritis is an autoimmune disease that can occur at any age and affects mainly women. The disease occurs in the joints and other parts of the body, and can be chronic or flare up occasionally. Joints inflame, causing swelling, pain and stiffness. Rest, exercise, good posture, adequate sleep, reduced stress, walking aids and safety measures for fall prevention are the best preventative measures.

Fractures

Fractures occur in bones due to high impact or stress. Medical conditions such as osteoporosis weaken bones and increase susceptibility to fractures. Pain, swelling, loss of function and limited movement may indicate bone fractures. Fractures can be detected or confirmed using an X-ray or CT scan. Immobilisation of the bone, using a sling or a cast, is usually required to promote healing.

Immobility

Immobility can be caused by paralysis, amputation or brain damage. A person may require a walking aid or a wheelchair. Physical activity is encouraged and assistance with moving limbs to promote blood flow may be required.

Muscular dystrophy

Muscular dystrophy is the name given to a group of muscular disorders that cause the voluntary muscles to waste away and weaken.

Osteoporosis

Osteoporosis occurs when bones become porous and brittle, making them more prone to breakages. Spine, hip and wrist fractures are particularly common. Women are more prone to osteoporosis than men. The risk of osteoporosis is increased by drinking alcohol, smoking, lack of physical activity and lack of vitamin D (from sunlight). Vitamin D and calcium supplements can be taken to help strengthen bones. Exercise, including weight bearing exercise and strength building, is encouraged.

Soft tissue injury

Soft tissue injury is damage to muscles, tendons or ligaments. It is caused by sprain or strains and results in pain, swelling, bruising or loss of function. The RICE principle should be applied when soft tissue injuries occur: rest, ice, compression and elevation.

Endocrine system

One of the major functions of the body's systems is to keep the body in balance. The medical term that describes the processes used to regulate the body is homeostasis. The endocrine system has a major role in homeostasis.

The endocrine system produces and secretes hormones that are distributed throughout the body. These hormones regulate growth, metabolism, heart rate, organ function, bone density and mood.

The endocrine system produces hormones that regulate activity in the body. Major endocrine glands are described below.

Endocrine glands

- Pituitary gland – located in the brain, this gland secretes hormones that control growth, thyroid stimulation, adrenal stimulation, reproductive function and kidney function.
- Thyroid gland – located in front of the larynx in the neck, this gland regulates metabolism.
- Parathyroid glands – located on each side of the thyroid in pairs, these glands regulate calcium production.

- Adrenal glands – located on top of each kidney, these glands regulate energy production in emergencies, including heart rate, and hormones that regulate carbohydrate metabolism and salt and water metabolism in the kidneys.
- Pancreas: located in the abdomen, this gland secretes insulin to regulate blood sugar used by cells.
- Testes: the male sex glands that produce testosterone.
- Ovaries: the female sex glands that produce oestrogen and progesterone.

Common endocrine system problems

Some of the problems associated with the endocrine system are outlined below.

Diabetes mellitus

Diabetes occurs when a person has high blood sugar because their body cannot produce insulin or cells cannot respond to the insulin that is produced. Diabetes causes increased thirst and hunger, and frequent urination. If left unmanaged, it can be very dangerous. Diabetes is managed by effective lifestyle choices – exercise, diet and education of diabetes support and medication, including insulin injections.

Type 1 diabetes is when the body does not produce insulin – insulin injections are required to manage the condition.

Type 2 diabetes is when the body cannot use insulin efficiently, even though insulin is produced – healthy lifestyle choices help to manage this condition.

Gestational diabetes may occur in women during pregnancy when the hormones that help the baby grow interfere with the mother's insulin. In some cases, gestational diabetes can become type 2 diabetes.

Hypothyroidism

Hypothyroidism occurs in people who have an underactive thyroid, which can lead to depression, exhaustion and weight gain.

Osteoporosis

Oestrogen levels affect bone mass. Post-menopausal women have reduced levels of oestrogen. As a result, they often have reduced bone density, which can lead to osteoporosis.

Nervous system

The nervous system controls and directs body function. The main parts of the nervous system are the:

- central nervous system – encased in bone in the brain and the spinal column
- peripheral nervous system – the nerves elsewhere in the body, including ganglia (collections of cells) and in major organs such as the skin, eyes and ears.

Nerves carry messages to and from the brain. The axon of a nerve is encased in the myelin sheath, which enables the message to be conducted efficiently.

The main parts of the peripheral nervous system are the somatic nervous system and the autonomic nervous system. The somatic nervous system is under voluntary control, whereas the autonomic nervous system is involuntary.

The autonomic nervous system is divided into the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system speeds up body function in stressful, frightening or excited situations – think 'fight or flight'. The parasympathetic nervous system slows the body systems down, relaxes the body and aids normal functioning of body processes such as digestion.

The components of the brain

The brain coordinates all of the activity in the body. The components of the brain are outlined here.

The cerebrum

- The largest part of the brain. It is divided into the left and right hemisphere and produces thoughts, among other functions.

The cerebral cortex

- The outer cerebrum. It controls executive functioning, such as reasoning, memory, consciousness, speech, hearing, vision and sensations.

The amygdala

- Located in the centre of the brain, it generates emotion and memory.

The hypothalamus

- Located in the brain centre, it controls body temperature.

The cerebellum

- The cerebellum regulates movement and balance, and is located at the base of the brain.

The brainstem

- This is the connection between the cerebrum and the spinal cord, it directs heart rate, breathing and swallowing.

The spinal cord

- This directs messages to and from the brain and is encased by protective tissue.

Common nervous system problems

Some of the common problems associated with the nervous system are outlined below.

Dementia

Dementia is one of the most common disorders that affect older Australians and refers to a group of illnesses that cause a progressive decline in a person's cognitive and social functioning. Alzheimer's disease is the most common form of dementia. Dementia affects memory and can result in comorbid disorders such as depression. The illness generally begins with mild symptoms, which deteriorate over time, and it results in death. There is no cure for dementia, but its progress can be slowed by increased physical, social and cognitive activity.

Motor disorder

A motor disorder arises as a result of any one of a number of conditions (including HIV, Huntington's disease and Parkinson's disease) that reduces a person's ability to control and regulate their movements.

Seizures

A seizure refers to when brain activity is disturbed, which disrupts attention and causes involuntary behaviour. Epilepsy is a condition when a person has repeated seizures. Seizures often begin with a tingling sensation or a detection of a stimulus that isn't there. Seizures can result in physical injury.

During a partial seizure, only part of the brain is affected, which may cause only part of the body to react.

In a generalised seizure, the whole brain is involved. The first part of a generalised seizure is the tonic phase, in which a person loses consciousness and the body becomes rigid. During the clonic phase, the muscles contract and relax, which causes jerking.

A generalised absence seizure is usually brief and occurs when a person loses consciousness for 5–30 seconds. Medication is used to manage and reduce the incidence of seizures.

Stroke

A cerebrovascular accident or stroke occurs when the flow of blood to the brain is interrupted or stopped. An ischemic stroke occurs when a blood vessel to the brain is blocked by a blood clot. Haemorrhagic stroke occurs when a blood vessel in the brain bursts and leaks. Symptoms of a stroke vary according to where in the brain the incident occurred. Symptoms may include changes in speech, hearing, vision, comprehension or movement. Stroke is a medical emergency, where early treatment and management lowers the risk of death or disability.

The eye

The sensory system is part of the nervous system and refers to the senses of sight, hearing, touch, taste and smell.

The eye is used for vision. Light enters the eye, passing through the lens and the pupil. The iris, a muscle around the pupil, contracts depending on the amount of light entering. Light passes through the vitreous humour and onto the retina, which is at

the back of the eye. The retina contains layers of cells and nerves that carry the image created by the light particles to the vision processing centres of the brain. The main structures of the eye are outlined below.

Main structures of the eye

- Sclera – the white of the eye made of connective tissue.
- Choroid – this contains the iris, ciliary muscles and blood vessels.
- Iris – the coloured part of the eye containing the pupil.
- Pupil – this constricts and dilates to allow light to enter the eye.
- Retina – the inner layer containing receptors and nerves.
- Lens – this focuses light entering the eye on the retina.

Common eye problems

Some of the common problems associated with the eye are outlined below.

Cataracts

- Cataracts are clouding of the eye lens, which obstructs the light that enters the eye. Senile cataracts occur in old age and congenital cataracts occur before or soon after birth. Left untreated, cataracts can cause blindness. Cataracts can be treated surgically or non-surgically using eye drops.

Myopia

- Myopia (short-sightedness) occurs when the light that enters the eye does not directly focus on the retina. This causes distant objects to be out of focus and close objects to be in focus. Myopia can be corrected with glasses or laser surgery.

Impairment

- Visual impairment is when vision is affected. This may be slight vision impairment or blindness. Vision impairment can occur at birth or later in life due to injury or disease, such as macular degeneration. Glasses can be worn and aids used depending on the extent of the impairment.

The ear

Ears are used for hearing. The three main structures of the ear are the outer ear (pinna), middle ear (ossicles) and the inner ear (semi-circular canal and cochlea).

Sound waves travel into the ear through the pinna, which is the external and visible part of the ear. The sound waves move through the auditory canal and vibrate against the tympanic membrane (eardrum). The vibrations then move into the middle ear, where the ossicles are found.

The ossicles (small bones) amplify the vibrations and include the malleus (hammer), incus (anvil) and stapes (stirrup). The sound vibrations are sent to the semi-circular canal and the cochlea, which are both part of the inner ear. The cochlea is a snail-shell-like organ that contains fluid and cilia (very tiny hairs), which when moved by the vibrations send messages to the brain via the auditory nerve.

The ears are responsible for processing aural (sound) information as well as maintaining balance.

Types of hearing impairment

There are two main types of hearing impairment, which are conductive and sensorineural.

Conductive hearing loss is caused by blockages or damage to the ear canal, or problems with the eardrum.

Sensorineural hearing loss is a result of damage to the cochlea or the hearing nerves. Some people are born with sensorineural hearing loss. Others develop it as a part of the ageing process or through exposure to toxins and pathogens such as illness, disease and drugs. Head injuries are another cause of sensorineural hearing loss.

Common ear problems

Some of the common problems associated with the ear are outlined below.

Impairment

Hearing impairment refers to reduced hearing or the inability to hear. Hearing impairment can occur at birth or later in life due to injury, infection or old age. Treatment for hearing impairment varies depending on the level of impairment, but includes cochlea implants and hearing aids. Hearing impairment can be managed, and compensated for, by using hearing aids and communication strategies, such as sign language and lip-reading.

Ménière's disease

Ménière's disease is a chronic disease that affects the inner ear caused by increased fluid in this region. Ménière's disease can result in hearing loss, tinnitus and vertigo, which is severe dizziness causing nausea. Attacks of vertigo can be fleeting or last many hours.

Otitis media

Otitis media is infection of the middle ear, between the tympanic membrane and the inner ear. The infection causes pain, but usually heals within two and six weeks. Fever can occur and so can tinnitus (ringing in the ears). Middle ear infection is common in childhood. Permanent hearing loss can occur due to otitis media if it is left untreated. Antibiotics treat otitis media.

Digestive system

The digestive system processes food, helps to distribute nutrients throughout the body and excretes waste products. Digestion can be divided into physical/mechanical digestion and chemical digestion.

During digestion food enters the mouth. Chewing breaks the food down and stimulates the production of saliva, which moistens food to allow it to be swallowed and combines the food with chemical enzymes that break the food down into smaller chemicals. Food then travels down the pharynx and into the oesophagus. As the food travels, muscles contract, pushing the food down the pharynx and the oesophagus into the stomach. The stomach then churns the food to break it into smaller particles.

Gastric juices containing chemicals turn the food almost to liquid in the stomach, and break food chemicals like protein into smaller chemicals, ready for absorption. Food is then pushed into the small intestine where bile, another gastric juice, is added to chemically digest fats.

Several other chemicals enter the small intestine via the pancreas organ. These do the final chemical breakdown of food. Villi (tiny hair-like projections) then absorb food from the small intestine into the capillaries. Any undigested food or waste materials moves into the large intestine (colon). This semi-solid material is faeces, and is eliminated from the body via the rectum, then the anus.

Common digestive system problems

Some of the common problems associated with the digestive system are outlined below.

Constipation

Constipation occurs if the stool (faeces) is hard and dry and becomes difficult to pass. A lot of effort is required to pass the stool, and large stools can cause pain to the anus. Common causes of constipation include low-fibre diets, not defecating when needed, decreased fluid intake, ageing, lack of activity and some illnesses. Dietary changes, increased fluid and activity can prevent and relieve constipation and medication or enemas can relieve constipation.

Diverticulitis

Diverticulitis occurs when the small pouches on the lining of the intestine become inflamed. These generally occur on the large intestine (colon). A low-fibre diet or a diet high in processed foods contributes to diverticulitis. Symptoms include bloating, cramping, fever, nausea and vomiting. Diverticulitis can be treated with bed rest, improved diet and increased fluids.

Gallstones

Gallstones are hard deposits in the gallbladder that vary in size. Gallstones can be either cholesterol or bilirubin, which is formed when blood cells are destroyed. Ageing, being a woman, family history of gallstones, diabetes, bone marrow transplants and rapid weight loss can contribute to the risk of developing gallstones. Gallstones can be removed surgically, but can be prevented by healthy lifestyle choices.

Gastroenteritis

Gastroenteritis (gastro) is inflammation of the stomach, which causes vomiting, diarrhoea and cramping. Virus, bacteria or parasites can cause gastroenteritis. The immune system can naturally treat gastroenteritis; however, fluid intake needs to be kept high to avoid dehydration.

Gastro-intestinal bleeding

Gastro-intestinal bleeding affects either the upper or lower digestive tract. Bleeding occurs from the rectum or the pharynx. The causes of upper and lower gastro-intestinal bleeding vary, but include haemorrhoids, ulcers, cancer, polyps, infection or gastritis. Treatment options vary depending on the cause of the bleeding.

Common dental problems

Some common dental problems can be associated with the digestive system. These are outlined below.

Gingivitis

- Gingivitis is inflammation of the gums where they become red or purple, bleed and are very tender. It is caused by long-term plaque deposits that become hard (tartar) and irritate the gums. Bacteria are therefore attracted to the site. Gingivitis can be caused by poor dental health, pregnancy, uncontrolled diabetes and some illnesses. To prevent gingivitis, teeth should be brushed often and regular visits to the dentist should be made.

Halitosis

- Halitosis (bad breath) is caused by bacteria from food debris at the back of the tongue. Mouthwash and good dental hygiene can be used to prevent and manage halitosis.

Urinary system

The functions of the urinary system are to manage the fluid of the body, essential for the workings of all cells and body systems. The urinary system processes and expels waste fluids and toxins from the body, helps to maintain blood pressure, levels of chemicals in the blood and blood volume.

When considering the urinary system, reference is also often made to the genitourinary system, which is the organ system of the reproductive organs and the urinary system. These are grouped together due to their proximity to each other.

The structures of the urinary system are described below.

Kidneys	Ureter
The body has two kidneys (left and right), which are located in the middle of the torso just below the rib cage toward a person's back; kidneys process fluids and toxins and filter waste products from the blood.	The ureter connects and transports fluids from the kidneys to the urinary bladder.
Urethra	**Urinary bladder**
The urethra connects the bladder to an external opening that allows the urine to be passed from the body; the structure of the body varies slightly between men and women: a man's urethra is located in his penis, while the opening to a woman's urethra is located in front of the vaginal opening.	Once fluids have been processed by the kidneys, they are stored in the urinary bladder before they are excreted from the body.

Common genitourinary conditions

Some of the common conditions associated with the genitourinary system are outlined below.

Cystitis

Cystitis is an infection of the urinary tract that can be caused by sexual activity or poor hygiene.

Dysuria

Dysuria is difficult or painful urination. This can be caused by kidney stones, cystitis, kidney infection, sexually transmitted disease or prostatitis (in men). Treatments vary depending on the cause.

Enuresis

Enuresis (bedwetting) may occur in people with dementia as their cognitive ability declines. Persons with physical disabilities may also wet their beds if they are unable to get to a toilet in time.

Haematuria

Haematuria occurs when there is blood in the urine, possibly due to a urinary tract infection, bladder or kidney stones.

Incontinence

Incontinence is when a person cannot control their bowels or bladder. Acute incontinence or loss of control of the bladder (or bowel) can occur as a result of an injury or illness; it can be cured. Chronic incontinence develops over time and can only be managed.

Prostate cancer

Prostate cancer is cancer of the prostate, which is a male reproductive gland. The cancer can be slow growing or aggressive. Prostate cancer affects urination, sexual intercourse and erectile function. Screening for prostate cancer is recommended to allow for the best chance of treatment. Prevention includes frequent ejaculation, medications and a diet high in omega-3 fatty acids. For aggressive cancers, prostate removal, radiation or chemotherapy are recommended treatments.

Urinary tract infection (UTI)

A urinary tract infection (UTI) is a bacterial infection of the urinary tract. A lower UTI is cystitis (bladder infection). An upper UTI is kidney infection. UTIs commonly occur in women. Symptoms of cystitis are a burning of the bladder and constant need for urination. Pain in the lower back and pelvic bone area can arise. Upper UTI infection can result in flank pain, fever and nausea. E.coli is the bacteria predominantly responsible for UTI. For women, the risk of contracting lower UTI increases if sexually active. Urinary catheters also increase the risk. Good hygiene and urinating after sexual intercourse can decrease the risk of contracting UTI. A UTI can also be treated with antibiotics and managed by increasing fluid intake and vitamin C.

Reproductive system

As the name suggests the male and female reproductive systems are responsible for reproduction. These systems also help with development – in particular with the development of secondary sex characteristics such as pubic hair in both males and females, and breasts in females.

The reproductive system that facilitates reproduction is different for men and women. Here is a description of the male and female reproductive systems.

Male reproductive system

The male reproductive system is made up of:

- testes (gonads)
- a duct system
- accessory glands including the prostate gland
- a penis.

The testes are the male sex glands. They produce sperm and testosterone.

The testes are contained in a sac called the scrotum. Sperm travel from the testes to the epididymis and into another tube called the vas deferens. These join seminal vesicles, which store and produce semen.

Semen carries the sperm via the ejaculatory duct and through the prostate gland, which is below the bladder. This joins the urethra in the penis. The semen travels out of the penis during an orgasm.

Female reproductive system

The female reproductive system is made up of:

- genitalia (including the vagina, vulva and clitoris)
- ovaries (female sex glands)
- fallopian tubes
- a uterus.

The ovaries secrete the female sex hormones oestrogen and progesterone.

There are two ovaries. Ova (eggs) are contained in the ovary. During each menstrual cycle, ovulation causes one egg to be released. The ovum travels down the fallopian tube, of which there are two, to the uterus. If in reproduction, where male and female sex cells unite, the egg is implanted into the wall of the uterus, which then grows and develops to form a baby. During childbirth, the baby travels down the cervix (the neck of the uterus) into the vagina, which is a muscular canal, and out of the body.

Common male reproductive system problems

Some of the common problems associated with the male reproductive systems are outlined below.

Erectile dysfunction

- Erectile dysfunction is when a man has difficulty gaining or maintaining an erection. The cause can be psychological, such as stress, or physical, such as diabetes, problems with the prostate or cardiovascular conditions.

Prostate cancer

- The prostate can develop complications for males later in life. Australian statistics suggest that the number of men who die from prostate cancer each year is equal to the number of women who die from breast cancer.

Common female reproductive system problems

Here is information about common problems associated with the female reproductive system.

Endometriosis

Endometriosis occurs when the tissue from the uterus is lodged on other organs, causing bloating, pain and, if not treated, infertility.

Ovarian cysts and tumour

Ovarian cysts are sacs of fluid found on the ovaries. Cysts can range in size and are typically benign (non-malignant) but can be malignant (cancerous). They can be painful. In some instances cysts can be removed with surgery.

Ovarian tumours are a group of neoplasms affecting the ovary/ies. They can be malignant or non-malignant.

Polycystic ovary syndrome

Polycystic ovary syndrome (PCOS) is a hormonal condition that can lead to women:

- developing the male sex characteristic of facial hair
- gaining weight and becoming obese
- ceasing menstruation
- becoming infertile.

Reproductive system problems during pregnancy

During a pregnancy and childbirth, the following health problems can occur.

Ectopic pregnancy

- Ectopic pregnancy occurs when the fertilised egg is implanted in the fallopian tube rather than the uterine wall. Ectopic pregnancies need to be terminated early to protect the mother's health.

Placental abruption

- A placental abruption may occur in the third trimester of pregnancy when the placenta and the foetus separate prematurely, causing bleeding and contractions.

Placenta previa

- Placenta previa is when the placenta blocks the mouth of the uterus by attaching over the cervix. A caesarean section is usually required if a mother has this condition.

Pre-eclampsia

- Pre-eclampsia is serious during pregnancy and includes high blood pressure, protein in the urine and swelling of the hands, feet and face.

Premature membrane rupture

- During labour, premature rupture of membranes may occur when the amniotic sac breaks early (before labour has started) and releases fluid into the uterus.

Integumentary system

The integumentary system is made up of the skin, glands, hair and nails. This system plays a number of roles. The skin in particular acts as a barrier to protect the internal organs, helps make use of vitamin D, an essential vitamin that helps build and maintain bones, and allows us to sense heat, cold, sharp surfaces and other environmental factors that need to be reacted to.

Skin is the largest organ of the body and covers and protects the body. It contains sweat glands that help maintain body temperature, which is essential for survival. Skin regulates water leaving the body. Nerve endings in the skin are used for sensing pressure, pain, touch, temperature and help prevent injury.

The following are layers of the skin.

Epidermis

- The outer layer contains both living and dead cells and few nerve endings. The very top layers of cells are dead and assist in protection.

Dermis

- The middle layer is made of connective tissue like collagen and elastin and contains nerve endings, blood vessels, sweat cells, oil glands and hair follicles.

Subcutaneous or Hypodermis

- The inner layer (fatty tissue) stores energy for the dermis and insulates the body.

Common integumentary system problems

The skin is our outermost layer and usually comes in contact with projectiles and other sharp objects before other body systems do. Wounds, lesions and wound infections are common. A lesion is the term for damaged skin tissue, with one type of lesion being an open wound.

When skin is ruptured, if the open wound is not cleaned, closed and protected as soon as possible, bacteria may enter the site and cause infection. Open wounds are a big risk of transfer of infection from a person to others, and hygiene is very important.

Diabetes, repeated injury, wound trauma, poor blood circulation, surgery or a weak immune system can increase the risk of wound infection. Discharge (pus) and an unpleasant odour can indicate that a wound is infected. Wounds can be treated, cleaned and protected to prevent infection, but if infection occurs, medication can be administered.

Skin cancers are very common in Australia, and are commonly caused by over exposure to the sun. There are many outside occupations that put people at a higher risk if they don't use skin protection. Also many fair skinned people who have inherited skin colour from their parents are also at a higher risk.

Other common problems associated with the integumentary system are outlined below.

Burns

Burns are injuries that affect the epidermal and the dermis layers of the skin. They can be caused by heat, radiation, electricity, chemicals, light or friction. First aid can be used to treat burns, although severe burns need to be treated in hospital, often with skin grafts.

Carcinoma and melanoma

A carcinoma is a form of cancer that begins in the skin or in tissues that line or cover body organs. A melanoma is a type of skin cancer, usually caused by over exposure to UV radiation from the sun or a tanning salon. Occupation and inherited skin colour (fair) can be an increased risk factor.

Dermatitis

Dermatitis is inflammation of the skin and can result in skin that is red, swollen, itchy, infected or cracked; for example, eczema. Dermatitis can be caused by allergens, using soap and detergents, wearing jewellery, wearing wool and fragrances. Treatment depends on the cause, but includes topical creams, oral medications and antihistamines.

Fungal infection

Fungal infections of the skin are usually characterised by itchy, red patches that may develop into pus-filled blisters. Common fungal infections include tinea and athlete's foot.

Impetigo

Impetigo is a common bacterial skin infection caused by strep or staph bacteria. Bacteria enter broken skin and cause infection. Symptoms include small blisters, rashes and itching. Antibiotic creams and oral medication limit infection.

Excess sebum

Sebum is an oily secretion of the sebaceous glands, located in the skin.

Ulcer

An ulcer is an inflamed lesion.

Lymphatic system

The lymphatic system plays an important role in defending the body and its cells against pathogens (disease-causing organisms). It filters, removes and reacts to pathogens. The lymphatic system forms part of the immune system.

The lymphatic system drains fluid (lymph) from body tissue into the blood. Leukocytes (white blood cells) combat disease and injury by flooding to the appropriate site. The main components of the lymphatic system are listed below.

Components of the lymphatic system

- Lymph nodes are found throughout the body (behind the knees, armpits and in the groin) and produce lymphatic fluid, which contains leukocytes.
- There are two lymphatic ducts in the body (right lymph duct and thoracic duct), which are vessels that empty lymph into one of the subclavian veins.
- Capillaries and blood vessels are located throughout the entire body.
- The thymus is located in the chest. It produces white blood cells that store memory for disease and illness.
- The spleen is located near the stomach. It is the largest mass of lymph cells in the body and plays a part in filtering the blood.
- Red bone marrow is located in the bone hollow where leukocytes (white blood cells) are produced.

Common lymphatic system problems

Glandular fever is an acute viral infection infecting the tonsils and inflaming them, with symptoms including fever, sore throat and fluid around the tonsils and pharynx. People with glandular fever may also have enlarged lymph nodes (lymphadenopathy), enlargement of the spleen (splenomegaly) or jaundice (yellow discolourations of the skin and eyes).

Other common problems associated with the lymphatic system are outlined below.

Hodgkin's lymphoma

- Hodgkin's lymphoma is cancer of the lymphatic system originating from the white blood cells.

Lymphadenopathy

- Lymphadenopathy is the term used to describe a swollen lymph node.

Lymphoma

- Lymphoma is a cancer of the lymph nodes. Non-Hodgkin's lymphomas are found in the lymph nodes or lymphatic organs and can develop in the liver, stomach, nervous system or in other organs.

Oedema

- Oedema is swelling caused by too much fluid in the tissues.

Splenomegaly

- Splenomegaly is an enlargement of the spleen caused by infection.

Tonsillitis

- Tonsillitis is caused by either bacteria or viruses infecting the tonsils and inflaming them.

The special senses

The special senses include vision, hearing, taste, smell and equilibrium and are considered special due to their ability to enhance human life. These senses are used to detect changes and react appropriately to external stimuli, such as temperature, fumes and gases. The senses act as the body's alarm system that keep us safe by communicating and sending the body messages about the external environment in which we live.

Below is a description of each of the special senses.

Vision

Vision allows us to sense the world around us. The eyes provide vision to allow us to participate in communication by seeing nonverbal signs such as gestures and facial expressions; recognising danger; and participating in activities of daily living.

Hearing

The ears are responsible for processing aural (sound) information as well as maintaining balance. Hearing, like vision, is important for communicating.

Taste

The sense of taste is the ability to detect the flavours of food and other substances. Taste is a chemical sense, meaning that chemical particles move directly into the body to be received by taste receptors.

Smell

Smell is closely related to taste as it is also a chemical sense, and taste and smell affect each other. Without smell it is difficult to taste, for instance. Chemical compounds enter the nose and are received by the olfactory bulb. The olfactory nerve sends the messages to the brain to interpret what is being smelled.

Equilibrium

Equilibrium means balance. The ears play a role in creating and maintaining equilibrium. The inner ear contains fluid, which along with our vision, helps us determine whether we are moving, stationary, upright or lying down.

Touch

Touch is another sense, although it is not considered a 'special sense', and refers to the ability to sense heat, cold, pain and contact. Nerve endings in the skin and other parts of the body send messages to the brain to interpret what is being felt.

Immune system

The immune system protects the body from disease, illness and infection caused by pathogens including bacteria, viruses and parasites.

To be immune is to be protected from illness, disease and infection. Specific immunity protects against specific threats. Non-specific immunity is a reaction to any substance the body does not recognise.

Some people develop auto-immune diseases that occur when the body attacks its own immune cells. Some common auto-immune diseases include: AIDS, lupus, Addison's disease, diabetes mellitus, celiac disease, Crohn's disease, fibromyalgia, multiple sclerosis, and rheumatoid Arthritis.

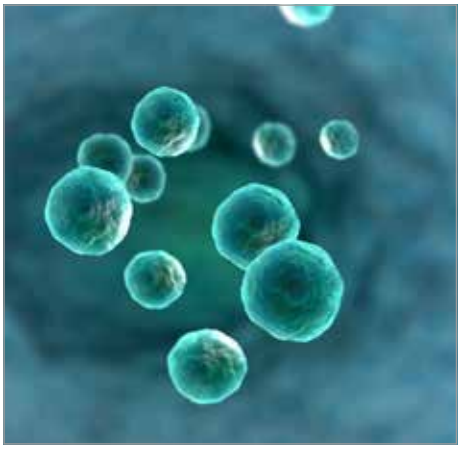
Cells and substances important in the function of the immune system are listed below.

Cells and substances important to the immune system

- Antibodies – parts of the body that detect and destroy abnormal substances
- Antigens – unwanted substances which stimulate greater production of phagocytes and lymphocytes to fight the infection
- Phagocytes – white blood cells that ingest and destroy abnormal or unwanted substances

- Lymphocytes – white blood cells (leukocytes) that produce antibodies
- B lymphocytes (B cells) – these produce antibodies that circulate in plasma and target specific antigens
- T lymphocytes (T cells) – these destroy invading cells.

Cells, tissues and organs



At its most basic level the body is made up of cells, the smallest unit of living matter. Cells are the building blocks of the human body, and are microscopic and too small to be seen by the naked eye. The cells of the body can differ in shape and are specialised for their function but they all require water, food and create waste. Every cell has a nucleus, which is the control centre for the cell. The nucleus houses chromosomes that contain our genes, which carry the genetic information that make us what we are and tell our body how to function. Cytoplasm surrounds the nucleus and contains structures with specific functions.

Protoplasm refers to the structures, liquid and substances in the cell. The cell membrane surrounds the cell, containing all of its contents. Cell reproduction occurs as the cells divide in half to produce two identical cells, which enables growth and repair.

Tissue and organs

Cells form together in large numbers to make tissue. Epithelial tissue covers both internal and external structures of the body; for example, the skin, the lining of the intestine and the lining of the stomach. Connective tissue joins and anchors to other tissue, such as bones, tendons, ligaments and cartilage. Muscle tissue facilitates movement. Nerve tissue carries messages to and from the brain.

Organs are more complicated structures and perform specific and vital functions in the body. Organs are usually made up of more than two types of tissue groups. Major organs of the body include the heart, kidneys, bladder, lungs, brain and skin.

Understanding what cells, tissues and organs do

Below is a summary of information about cells, tissues and organs.

Cells

The human body is made up of trillions of cells. The five main cell types are:

- red blood cells, which move oxygen throughout the body
- white blood cells, which protect the body from pathogens
- nerve cells, which help transmit information to and from the brain
- bone cells, which generate bones
- stomach cells, which help break down food.

Tissues

Cells and extracellular materials form together to make up tissues. The four types of tissues are:

- epithelial tissue, which provides a covering to organs
- connective tissue, which links other tissues
- muscular tissue, which assists with the movement of limbs and other body parts as well as the contraction and expansion of major organs such as the heart, stomach and lungs
- nerve tissue, which helps transmit messages to and from the brain.

Organs

An organ is a unit that:

- is made up of at least two different types of tissues
- is recognisable as a separate part
- can be distinguished from other structures
- has a specific function or functions.

How the systems of the body interact

The body is a unified and complex assembly of functioning parts or body systems. Each of the body systems and the organs and structures that make up these systems, are designed to perform specific complex functions. All of the systems work together to ensure the healthy survival of the human body, and the immune system protects the body from disease, infection and illness. The interrelationship between body systems becomes more obvious when a disease or illness affects one body system and other systems are also affected. All of the body's systems work together, as outlined below. Note that skeletal and muscular systems have been combined in this example into musculoskeletal.

Body system	Interaction with other body systems
Cardiovascular The cardiovascular system is responsible for transporting blood throughout the body. It works in conjunction with the respiratory system to help move oxygen throughout the body.	**Respiratory** – The cardiovascular system helps the respiratory system transport gases. **Musculoskeletal** – The cardiovascular system delivers and removes material to and from the musculoskeletal system. **Endocrine** – The cardiovascular system transports hormones for the endocrine system. **Nervous** – The cardiovascular system delivers oxygen and hormones to and from the brain and spinal cord. **Digestive** – The cardiovascular system transports nutrients for the digestive system. **Urinary** – The cardiovascular system helps maintain kidney function. **Reproductive** – The cardiovascular system helps with the blood flow needed to maintain and sustain an erection. **Integumentary** – The cardiovascular system controls sweat production. **Lymphatic** – The cardiovascular system provides the lymphocytes for the lymphatic system.
Respiratory The respiratory system is responsible for ensuring the body has sufficient oxygen intake to oxygenate the blood and that it expels carbon dioxide.	The respiratory system provides oxygen to the entire body and removes carbon dioxide from cells
Musculoskeletal The musculoskeletal system incorporates two major systems: the muscular system and the skeletal system. The skeleton acts as a frame for the body's tissue and skin – the muscles make ambulation and movement possible.	**Cardiovascular** – The musculoskeletal system helps move blood throughout the system. **Respiratory** – The musculoskeletal system helps the lungs function. **Endocrine** – The musculoskeletal system protects some of the organs of this system. **Nervous** – The musculoskeletal system provides structure for the nervous system. **Digestive** – The musculoskeletal system allows the mouth to chew and protects some organs. **Urinary** – The musculoskeletal system controls the movements of the bladder using the sphincter muscle. **Reproductive** – The muscles of the musculoskeletal system facilitate the movement of the foetus through the birth canal. The musculoskeletal system helps with penile erection and subsequent ejaculation **Integumentary** – The musculoskeletal system moves the facial muscles to enable communication. **Lymphatic** – The musculoskeletal system assists the flow of lymphatic fluid. The musculoskeletal system helps with immunity.

Body system	Interaction with other body systems
Endocrine One of the major functions of the body's systems is to keep the body in balance. The medical term that describes the processes used to regulate the body is homeostasis. One of the systems that play a major role in homeostasis is the endocrine system.	**Cardiovascular** – The hormones of the endocrine system regulate and impact on heart rate. **Respiratory** – The hormones of the endocrine system assist with air flow to the respiratory system. **Musculoskeletal** – The endocrine system helps maintain and develop muscles and releases adrenaline to the muscles of the body. **Nervous** – The endocrine system makes sure the cells in the body have the required balance of minerals, enabling the nervous system to function effectively. **Digestive** – Hormones from the endocrine system affect the way food is digested within the body. **Urinary** – Hormones from the endocrine system regulate urinary excretion. **Reproductive** – Hormones from the endocrine system facilitate puberty, impact on sex drive and regulate pregnancy and lactation. **Integumentary** – The endocrine system affects the growth and distribution of hair. **Lymphatic** – The endocrine system helps activate the lymphatic system's immune response.
Nervous The nervous system is responsible for communicating information received by the senses to the brain. It is responsible for processing information and communicating required responses to the muscles and bones.	**Cardiovascular** – The nervous system regulates heartbeat within the cardiovascular system. **Respiratory** – The nervous system regulates breathing and respiration within the body. **Musculoskeletal** – The nervous system instructs the muscles how to move. **Endocrine** – The nervous system controls and stimulates glands in the endocrine system. **Digestive** – The nervous system controls appetite and faecal movements. **Urinary** – The nervous system controls urinary functions. **Reproductive** – The nervous system helps with lactation. **Integumentary** – The nervous system regulates sweating and temperature. **Lymphatic** – The nervous system works in conjunction with the lymphatic system to respond to pathogens.

Body system	Interaction with other body systems
Digestive The digestive system breaks down food into energy and basic nutrients. The food is broken down into simple forms, such as glucose, amino acids and protein. This converted food is then absorbed into the blood stream from the small intestine and nutrients are carried to the cells throughout the body.	The digestive system provides nutrients to all of the different body systems.
Urinary The urinary system consists of the kidneys, ureters, urinary bladder and urethra. The urinary system filters and eliminates wastes from the body.	The urinary system assists each body system by disposing of waste.
Reproductive As the name suggests the male and female reproductive systems are responsible for reproduction. These systems also help with development – in particular with the development of secondary sex characteristics such as pubic hair in both males and females, and breasts in females.	**Cardiovascular** – Pregnancy is associated with an increase in blood volume carried around the body by the cardiovascular system. **Respiratory** – Sexual arousal can place greater demands on the respiratory system by increasing the body's need for oxygen. **Musculoskeletal** – Facilitates growth and development of the foetus. **Endocrine** – Communicates with this system to help regulate hormone levels in the body. **Nervous** – The nervous system controls appetite and faecal movements. **Digestive** – The digestive system may contribute to heartburn and constipation during pregnancy. **Urinary** – Pregnancy can place pressure on the bladder and the urinary tract causing incontinence. This can continue after birth and is known as stress incontinence. **Integumentary** – The integumentary system is responsible for changes in the composition and distribution of hair. **Lymphatic** – The lymphatic system protects sperm from the female's immune system, which could otherwise be rejected by the lymphatic system.

Body system	Interaction with other body systems
Integumentary The integumentary system is made up of the skin, glands, hair and nails. This system plays a number of roles. The skin in particular acts as a barrier protecting internal organs, helps make use of vitamin D and is a major organ that allows us to sense heat, cold, sharp surfaces and other environmental factors.	**Cardiovascular** – The cardiovascular system is protected by the skin which ensures that blood stays within the system. **Respiratory** – Hairs in the nose are part of the integumentary system which helps to helps filter air for the respiratory system. **Musculoskeletal** – The integumentary system protects the muscles and helps with Vitamin D intake, a nutrient that helps with calcium absorption. Calcium is needed to build and maintain healthy bones and vitamin D is needed for healthy bone function. **Endocrine** – The integumentary system absorbs vitamin D, which is used by the lymphocytes to help the immune system function effectively. **Nervous** – The skin acts as a receptor for vital information, such as temperature and pain, for the nervous system. **Digestive** – Vitamin D is absorbed into the integumentary system which helps the intestines absorb calcium. **Urinary** – The skin helps with the removal of waste through sweating. **Reproductive** – The skin is a vital organ during foreplay. **Lymphatic** – The skin contains special cells that support the role of the lymphatic system.
Lymphatic The lymphatic system plays an important role in defending the body and its cells against pathogens. It filters, removes and reacts to pathogens. The lymphatic system forms part of the immune system.	**Cardiovascular** – The lymphatic system deals with pathogens in the blood. **Respiratory** – The lymphatic system removes waste from the lungs assisting the respiratory system. **Musculoskeletal** – The lymphatic system aids production and repair of muscles. **Endocrine** – The lymphatic system transports hormones used by the lymphatic system. **Nervous** – The lymphatic system works with the brain to stimulate defence mechanisms against infection. **Digestive** – The lymphatic system transports digested fats and aids waste. **Urinary** – The lymphatic system assists the kidneys to remove waste. **Reproductive** – Immunity is passed onto the baby via his or her mother's milk. **Integumentary** – The integumentary system is responsible for changes in the composition and distribution of hair.

Example

Interaction of the body systems

When Laura was obtaining health information from Clive, he said he had been experiencing sinus pain over the previous two weeks. From Laura's understanding of the respiratory system and skeletal systems she knew that sinus were small cavities situated in the skull. When an infection usually from a cold virus gets inside a sinus space, pressure can build resulting in a headache. Laura was able to confirm with Clive that he had a cold and then developed the headache.

Practice task 2

1. What is the order for increasing size and complexity of the following structures: organ, cells, body systems and tissues?

2. Why is it important that all the body systems work together?

3. What is the name of a disease of the respiratory system which occurs when lungs are damaged and cannot process air efficiently and effectively?

4. What is the name of the disorder that occurs when bones become porous and brittle, making them more prone to breakages?

5. Name the problem that is caused by an insufficient flow of blood to the heart and which may indicate the presence of coronary heart disease.

6. Name the physical problem that occurs when the flow of blood to the brain is interrupted or stopped.

7. Name the health problem that that occurs when a person has high blood sugar because their body cannot produce or cannot respond to insulin.

8. Choose one of the following body systems and identify its function and two of its major organs:
   - Digestive system
   - Urinary system
   - Reproductive system
   - Integumentary system
   - Lymphatic system
   - Nervous system
   - The special senses
   - The immune system

9. Why are abbreviations for medical terminology used when working in a health care setting?

Click to complete Practice task 2

1C Use information to identify any actual or potential problems regarding health status

There is a range of information that must be obtained about a person's health status before any health service or intervention can take place. Accurate information can be obtained from observation, questioning the person with care needs and review of the documentation, such as care plans or health and medical history information. Always be mindful of your scope of practice, and clarify with your supervisor if unsure. This will assist you understand the interventions you can and cannot perform.

Once this information has been gathered, make sure you ask the person with care needs what their concerns and beliefs are regarding their health. Attention also needs to be paid the specific information of medications and allergies on the history documentation because these could have serious implications for the health service or intervention.

Clarify available health information

Once a thorough review of available health information has been conducted, it may be necessary to ask additional questions to clarify certain important factors.

Sometimes, when asked to discuss any concerns the person may have, the opportunity is provided for you to clarify facts and explain about current health status. It may also open the possibility that other health information may be provided that had not been previously mentioned or recorded.

If a person experiences anxiety describing their concerns, you need to attend to their immediate needs and be mindful of their experience. Maintain a calm voice and use clear and concise explanations to ensure they understand what is happening and to minimise their anxiety. Denial of a present or potential health problem may be a means for the person to process the information, which may take some time. Be aware of their personal reaction to their physical status so you can respect their feelings and beliefs.

Concerns and beliefs regarding actual or potential health problems:

- Anxiety about condition
- Denial of condition
- Hypochondria (a belief that physical symptoms indicate a serious medical condition, even if there is no medical evidence to support the existence of illness)
- Not understanding or conceptualising diagnosis (possibly due to cultural beliefs)

Use all relevant information

Past health history of substance abuse may affect the present or potential health problem. While substances such as alcohol and tobacco are both legal and commonly consumed, there are health implications associated with prolonged use. For example, cigarette smoking is one of the most common causes of preventable death in Australia and is linked with several specific preventable diseases such as lung and throat cancer. Alcohol consumed in excessive amounts can be very damaging to the body but a moderate amount of alcohol is common amongst Australians. Illegal drug substances such as marijuana, ecstasy, speed, ice, cocaine and heroin affect healthy body systems.

Medications and allergies

It is important to know if a person requiring care is currently taking any medication or has any allergies. This information will assist in identifying any actual or potential health problems. Refer to the care plan for reference to medications and allergies. Allergies to food, medication or environmental substances may be known or unknown, so it is important to thoroughly assess whether any known allergies exist before an intervention or service delivery takes place.

Medications may be bought over the counter at a pharmacy or supermarket, or be prescribed by a doctor. With both over-the-counter and prescription medications, it is important to understand the correct dosage, along with any side effects and interaction effects (how medication reacts with other medications that are being taken). Side effects of taking the medication may impact on the person's physical health status, and may be mild, serious or even fatal.

An allergy occurs when a person's immune system overreacts to an allergen, such as pollen or food. Allergies to dust mites, pollen, air pollution and pets are common.

Food allergies can range from mild to severe. A mild allergic reaction to food may cause nausea, vomiting and diarrhoea. A severe allergic reaction is anaphylaxis, which can be fatal and includes red itchy skin, swollen throat and low blood pressure. This may be caused by food, venom from insect bites or medications.

Family circumstances information

Family circumstances that may affect the person's health status are broad and depend on the individual's cultural, family and personal background and belief system. These factors may play a role in a person's health and need to be considered.

Family circumstances may include:

- diet and general health habits
- abuse or trauma, causing physical, emotional or cognitive problems
- stress and anxiety; for example, caused by money problems
- loneliness or isolation
- grief caused by loss of a partner of other person
- stress or grief caused by physical relocation
- stress or anxiety due to environmental disasters, such as flooding, bushfires or drought.

Example

Use all relevant health information

In preparation for her health appointment with Samuel late in the day, Chris was preparing by pre-reading and getting all of the documentation together she would need. She looked in the files for any previous records, including a health and medical history information that was dated six months previously. She read the documents and made some notes on items she wanted to clarify with Samuel. This included a note on his prescription for medication for high cholesterol. Chris needed to know if he was still taking this medication, because she would need to take this into consideration when providing her health service. She also wanted to ask Samuel about how his family circumstances may have changed now that his partner had passed away just under 12 months ago. Chris knows that all of this information will be useful when identifying any potential or actual health problems Samuel's may currently be experiencing.

Practice task 3

1. List three types of documented health information that can be used to identity any potential or actual problems in a person with care needs.

2. Explain why it is important to ask the person with care needs to tell you about any concerns they have about their health.

Click to complete Practice task 3

1D Take into account factors that may have impacted on an identified physical condition

In the past, people waited until they were unwell before seeking medical advice. However, in more recent times, healthcare professionals have recognised that it is easier and more cost-effective to help a person maintain their good health than it is to cure a person who is already unwell.

Ideas about health and illness have also changed. Health and illness were once seen as being separate – a person was either sick or they were well. Now, ideas about health and illness are less fixed; there are different degrees of health, ranging from extreme ill health (approaching death) through to the highest possible levels of wellbeing.

Optimum health is when a person enjoys good physical, mental and social health, which includes communicating and interacting with others.

General body processes

The processes that enable the body systems to function normally are described below.

Metabolism

Metabolism is the chemical reaction that occurs in all cells that essentially allows the cells to live. Metabolic processes within cells include:

- digestion
- transportation of substances
- breaking down of waste material
- harvesting energy
- using energy to construct proteins and other necessary substances.

The digestive system of the body absorbs food and liquid, which is metabolised by cells in a form that the body can use.

Nutrition

Nutrition provides cells with the necessary materials needed for cell life; that is, it is the process of food material being converted into living tissue. A healthy diet based on the Healthy Eating Pyramid is an example of good nutrition and enables the body to function normally and efficiently.

Body temperature regulation

Body temperature regulation (thermoregulation), refers to the body's ability to maintain temperature within certain boundaries. This is an example of homeostasis – the balance between a person's internal and external state. This is essential to allow all of the cells, tissues and organs to operate under ideal conditions and perform their functions.

Biological maturation

Biological maturation is the normal ageing and development of the body and all the structures in the body. Under normal genetic and environmental conditions, the body should mature in a predictable manner following certain milestones for growth and development; for example, most children reach puberty by the time they are 13. Internal and external processes may affect biological maturation in different ways.

Inheritance

The characteristics and traits a parent passes to their offspring are known as inheritance or heredity characteristics and traits.

Ageing

Ageing is the process of growing from young to old. Ageing changes are physical, psychological and social.

Homeostasis

When obtaining information about physical health status, you need to take into account the range of factors that may impact on an identified physical condition. Homeostasis is the balance between internal body systems and external factors and when working normally means that the body can maintain health and prevent disease. When a disease or condition affects the body's ability to achieve homeostasis, many body systems can be affected and not function correctly.

Factors that are external and internal have potential impacts on a person's physical condition that you need to understand. External impacts can be due to specific health interventions or from environmental influences affecting the workings of the human body. Internal impacts on health status can be due to physical, mental or emotional factors.

A healthy body works to its full potential and has the conditions it needs to perform its main functions. Homeostasis is achieved through body processes that work to adapt to the changing environment to allow the body to work at its best. The basic processes of life; metabolism, responsiveness, movements, and reproduction, have to be maintained and allowed to happen. In humans, growth, respiration, digestion, and excretion all have to work normally to maintain the human body.

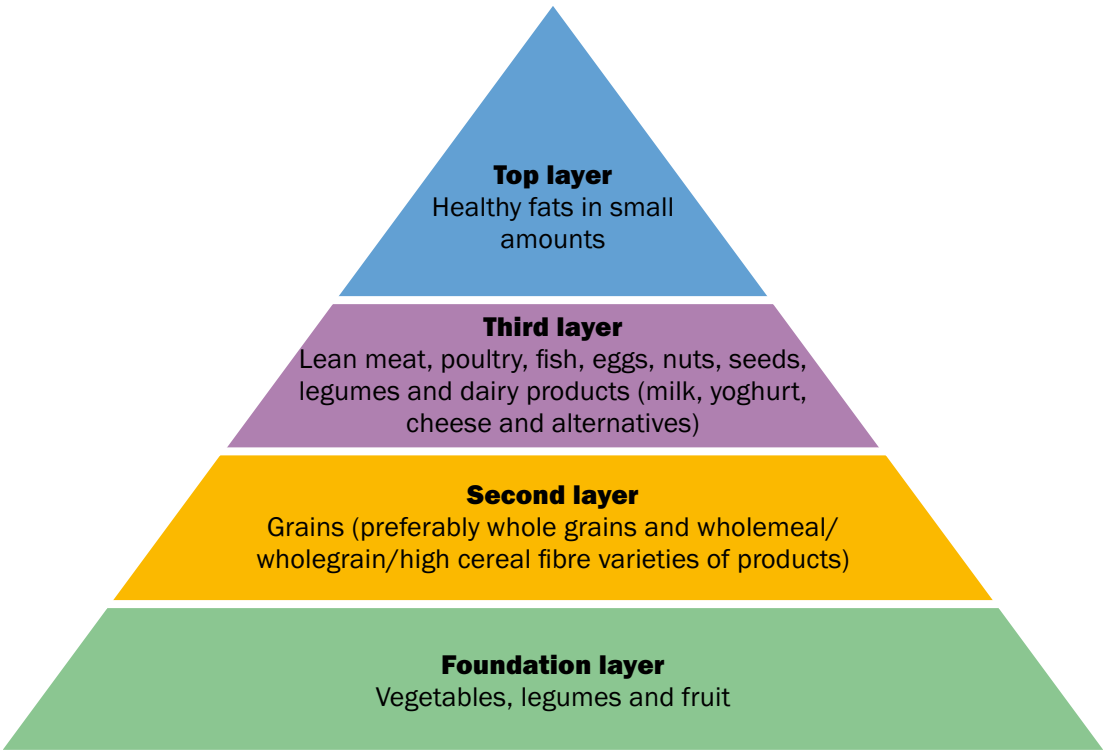
Diet and nutrition

Nutrition affects general health and how the body systems operate. We obtain the energy to live from the food we eat. This energy enables the cells, tissues and organs that make up the systems of our body to function correctly. For example, a diet high in cholesterol can be dangerous for the cardiovascular system, as arteries can become clogged, and result in a disease called atherosclerosis. Diets high in fibre from grains, fruit and vegetables assist the digestive system and prevent constipation. Diets that are high in omega oils (found in fish and some vegetables) may increase brain function and are better than saturated fats for decreasing the incidence of heart diseases like atherosclerosis.

Australia has a very high incidence of obesity. Over 25 per cent of Australian men and women are classified as obese and over 30 per cent are classified as overweight. Obesity has serious health consequences, which affect a number of body systems, including the cardiovascular, respiratory, skeletal and digestive systems. Moods and emotions may also influence the foods we eat such as sugar and fats.

Diet and nutrition are very important factors in maintaining homeostasis and allowing the body to perform its functions to its best capacity. Nutrition Australia recommends the following for a healthy diet.

The Healthy Eating Pyramid



Source: Nutrition Australia (http://nutritionaustralia.org/national/resource/healthy-eating-pyramid)

Alcohol, tobacco, trauma and other substances

Consuming alcohol, tobacco and other substances, like illegal drugs, has a great impact on healthy body functioning. It can also lead to trauma like accidents, and affect close relationships.

Many young people smoke tobacco or try alcohol before the legal age, and many continue to consume these substances throughout life, sometimes excessively. Alcohol consumed in excessive amounts may cause brain damage, heart disease, high blood pressure and liver damage, and can increase the risk of developing a number of cancers. Risks can accumulate throughout a lifetime. Drinking alcohol can also result in road accidents, injury, trauma, violence, falls and accidental death.

Smoking causes many diseases. In Australia, it is the leading cause of preventable death, killing over 15,000 people every year. Smoking also often results in a number of disabling health problems, like cancer and emphysema.

Illegal drug substances such as ice (methamphetamine) and heroin affect healthy body systems. They may cause illness, disease, mental illness, injury and death. The National Drugs Campaign provides a detailed description of the effects of illicit drugs.

The environment

There are environmental factors that promote good health and others that cause illness and disease if exposed to them excessively.

Sunshine is an interesting environmental factor, as we need sunlight for healthy vitamin D levels. Vitamin D facilitates calcium metabolism, which is necessary for bone density and strength and prevention of osteoporosis. However, exposure to too much direct sunlight over time may lead to skin cancer, which Australia has one of the highest incidences of in the world. Ultraviolet radiation comes from sun exposure and tanning studios (solariums) and is responsible for skin damage. If exposed to the sun in the middle of the day or for an extended amount of time, protective clothing, sunscreen and a hat should be worn.

Other environmental hazards

Other environmental factors that affect health include temperature, air pollution, dust particles, coal dust, radiation, asbestos and chemicals like pesticides.

More information is provided below.

Temperature

Heat can cause heat stroke, which prevents regular functioning of body systems. Dehydration can also occur if a person does not drink enough water. Dehydration and heat stroke can both be fatal, particularly for older people. Extremely cold conditions can cause hypothermia. Body systems cannot function adequately if they drop below 35 °C. Hypothermia is complicated by consuming alcohol.

Air pollution

Air pollution is particularly prevalent in big and densely populated cities. Air pollution contains toxins that can cause chronic chest disease like bronchitis, chronic obstructive pulmonary disease (COPD) or restriction of the airways. Exposure to cigarette smoke can also cause COPD.
Dust particles cause chronic chest diseases like bronchitis and asthma. House dust mites exist in every household, and particularly favour dark, warm conditions, such as those found in mattresses and carpets. Dust mite allergies are common, particularly among young people and people with asthma. Coal dust is also responsible for poor health. Pneumoconiosis (lung disease) is caused by exposure to coal dust.

Carcinogens

Asbestos is a naturally occurring mineral that was once popular in the construction industry. It is no longer used as it was found to cause lung cancer and asbestosis, which is a form of pneumoconiosis (a disease of the lungs).

Some chemical pesticides may cause cancer and other diseases like nerve damage and birth defects, particularly among farmers.

Radiation

Chronic exposure to low levels of radiation can cause cancer, where cell growth in the body is affected and mutations can occur. Acute exposure to high levels of radiation can cause burns or radiation poisoning, which results in skin damage, loss of hair, nausea and weakness.

Physical activity

Physical activity is very important for maintaining good health. Exercise makes body systems work harder, so they become stronger and more efficient.

Physical activity improves muscles and bones, cardiovascular function, metabolism, digestion and sleep, and reduces tension. It is recommended that people do regular aerobic exercises like walking, jogging, swimming or bike riding. Weight-bearing exercises using weights or the weight of the body are also important for building muscle and bone strength. Lack of physical activity contributes to obesity, heart disease, osteoporosis, stress, anxiety and depression.

Internal factors affecting health

You also need to consider that health status involves the complexity of the physical human body systems as well as other internal factors. Impacts on a person's physical condition can be internal, and not as obvious or measurable like a physical symptom. Internal impacts can be due to physical, mental or emotional factors.

Internal factors to consider are described below.

Interrelationship between body systems

Often when a disease or illness affects one body system, other systems are also affected. Examples include:

- Heart disease can cause swelling of the legs and ankles.
- Diabetes can cause kidney failure.
- Kidney failure can affect heart function, and heart failure can cause kidney failure.
- Infection anywhere in the body can cause septicaemia (infection of the blood).
- Sinusitis can cause headaches.
- Tonsillitis can poison the entire body.
- A pituitary gland tumour can cause gigantism (excessive growth).
- Anxiety can lower the immune system, which leads to a breakdown in all body functions.
- Depression can lead to drug abuse, poor nutrition and lack of sleep, which all have adverse effects on body function.

Emotional responses

It is well established that emotionality affects body function. Negative emotions, like anxiety, lower immunity, which can increase susceptibility to illness and disease.

Depression can lead to illness and disease. Depression affects appetite and sleep patterns, and increases the tendency to use drugs – these factors lower immunity. Chronic anger also has been found to affect the cardiovascular system by accelerating the heart rate, changing the electrical stability of the heart and causing systemic inflammation. Fear can contribute to the wear and tear of the body. Therefore, negative emotions can lead to stroke, heart failure and diabetes.

Alternatively, positive emotions promote good health. Enthusiasm, optimism, engagement in life and an ability to cope with stress have been found to reduce the risk of heart disease. Positive emotions strengthen the immune system, which helps protect the individual from illness and disease. There is a strong relationship between positive emotions, exercise and good nutrition.

Patterns of thinking

Patterns of thinking are closely related to emotional responses. Negative patterns of thinking may lead to anxiety, depression or chronic anger. An example of a negative thinking pattern is: 'I am a failure'. Positive patterns of thinking lead to emotions such as enthusiasm, optimism and happiness. An example of a positive thought pattern is: 'I am a worthwhile person'. Positive thought patterns lead to positive emotions and therefore positive health status, and vice versa.

Reaction to disease

How the body reacts to disease can be affected by various factors, including general health, age, diet, exercise, climate, mental and emotional patterns, severity of illness or disease, access to health services and speed of treatment for disease or illness.

An example of a disease is cancer, which occurs when cell division is out of control and a mass of cells grow together, called a tumour. A benign tumour is slow growing and localised, and is usually not fatal. A malignant tumour is fast growing and the cancer spreads to other cells and tissue. This spreading process is called metastasis. Treatments need to occur early for the best chance of effective intervention.

Pathogens

A pathogen is an infectious agent, commonly known as a germ that causes a disease. A pathogen can be viral, bacterial, fungal or parasitic.

We encounter millions of microorganisms every day, however, only a few cause infectious diseases. The immune system protects the body from a large number of infectious pathogens as it is quick to detect when a pathogen is harmful. There are many diseases caused by bacterial infection, viruses and fungi. Parasites are less common but malaria is common across northern Australia is carried by mosquitoes which are called 'vectors' for this disease.

Genetics

Genetic factors can predispose a person to a disease. Cancer, heart disease and diabetes all have a genetic basis. Some diseases are genetic, in that the disease is carried on the gene. Haemophilia is a genetic disease where essential blood-clotting factors do not function. Huntington's disease is a genetic disease that affects muscle coordination, cognitive ability and psychiatric health. Down syndrome is a chromosomal disease, where a person is born with an extra chromosome 21. Down syndrome affects cognitive ability and physical growth.

Age

A person's health is affected by their age. It is no surprise that the older a person is, the higher the risk of disease and illness. Disease and illness can be managed in older age by living a healthy lifestyle (diet, exercise and limited intake of alcohol, tobacco and other substances), staying positive and making sure illness and disease is treated as early as possible. Some diseases and illnesses are more common during childhood, such as eczema and common colds, and may decrease or disappear with age.

Cellular adaption

The body is affected by changes in the environment. The cells of the body may respond to adverse environmental changes. The adaptation may be physiological; for example, the skin may change colour and tan when exposed to the sun. The change may also be pathological or abnormal; for example, a skin cancer may develop as a result of sun exposure and damage. One way the body's cells adapt is to decrease its size and its functional parts – this is called atrophy. When the individual cells increase in size or number, this is called hypertrophy. All these responses are a result of adaptation to environmental changes.

Degenerative changes in the body

Many of the diseases common in Australia are a result of a progressive change in the tissues of the body. Many of these diseases are genetic, which means that we inherited a predisposition or genetic code for a disease at birth from our parents. This is sometimes seen in several generations of a family where there has been evidence of a certain disease. Some degenerative diseases might be caused by environmental toxins or exposures as a result of a lifestyle choice or occupational hazard. Some other diseases might result from another medical condition causing damage to the body's organs.

These groups of diseases are not infectious and increase in incidence with ageing, so these diseases are common in older age. Advances in medical technologies means we have a better understanding of the effects of these diseases, but they continue to place a huge burden on the health system for the research, care and treatment of these diseases. The following degenerative diseases are common in Australia.

Common degenerative diseases

- Alzheimer's disease
- Parkinson's disease
- Osteoarthritis
- Rheumatoid arthritis
- Multiple sclerosis
- Huntington's disease
- Atherosclerosis
- Cancer

Example

Put the facts together

Fiona has been able to put together a thorough and accurate record of Ruby's health. She has been able to interpret and use the information provided by Ruby to identify several health issues. Fiona can see that Ruby is in the obese weight range. She has been given examples of the types of foods Ruby eats and can see that all of these factors might contribute to Ruby having difficulty walking. A doctor has identified osteoarthritis and this is likely to be related to the obesity.

Practice task 4

Read the case study, then complete the tasks that follow.

Case study

A person's health information indicates some potential health problems. This person, aged 65, is overweight, does not exercise and their diet is poor, with little or no fruit and vegetables. This person has a family history of heart disease, smokes and has elevated blood pressure. They also have swollen ankles and feet.

1. What health problem do you think may be likely for the person, and would they involve degenerative changes in vital organ systems?

2. What internal factors might be influencing the health status of this person?

3. What loss of normal control mechanisms could occur in the body of this person, if their immune system is not able to cope with the carcinogens in cigarette smoke?

4. Cells in a person's heart can increase in size if the person has prolonged untreated hypertension. What cellular adaption is this an example of?

5. Make a general comment on the effect this person's diet may be having on the functioning of their body.

Click to complete Practice task 4

Summary

1. To obtain accurate physical health status information, it is necessary to observe and question a person carefully.
2. When questioning, use communication strategies like listening and using clear, concise language.
3. Reviewing documentation also provides valuable information and insights.
4. Make sure you always work within your scope of practice/job position, and consult your supervisor if unsure.
5. Learn to use correct terminology and language suitable for your work context.
6. There are 11 major body systems. It is crucial that you have a thorough understanding of these body systems so you can understand the difference between normal functioning and variations from normal functioning.
7. Body systems interrelate and affect each other.
8. All 11 body systems have specific functions and particular common problems or diseases.
9. The body has an immune function that is designed to protect the body from illness and disease.
10. Cells are the building blocks of the body, and tissues and organs are more complex structures.
11. All aspects of a person's life should be considered when collecting health information including their particular concerns regarding their health.
12. The body uses several processes that regulate and control normal functioning, including metabolism and thermoregulation. When the body is at homeostasis, body systems function normally. When homeostatic imbalance occurs, disease and illness is more likely.
13. Diet and nutrition play an important role in healthy functioning of the body as does a balance with physical exercise.
14. Mood, cognitive patterns and other internal factors affect body systems and how they function.
15. Environmental factors such as exposure to toxins and carcinogens can affect the functioning of body systems.
16. Pathogens are harmful microorganisms that can lead to disease and infection.
17. Degenerative diseases are commonly found in older Australians.

Learning checkpoint 1
Obtain information about physical health status

This learning checkpoint allows you to review your skills and knowledge in obtaining information about a person's physical health status.

Part A

1. What practices should be used when observing and questioning people about their health status to identify an actual or potential condition? Provide at least three techniques.

2. Give three examples of information that can be found on a person health and medical history document.

3. Why is medical terminology used in the health field?

4. Define homeostasis and explain why it is important for the body.

5. Explain the difference between cells, tissues and organs.

6. Why is the cardiovascular system so important to the body?

7. What are the main structures of the respiratory system?

8. What are the primary functions of the musculoskeletal system?

9. What is the purpose of the digestive system?

10. How does the integumentary system (for example, the skin) perform its protective function?

11. What is the function of the sympathetic nervous system?

12. What is the primary function of leukocytes (white blood cells)?

13. How does the immune system function?

14. What are pathogens? Give some examples.

15. Name three external factors that affect health status.

16. Name three internal factors that affect health status.

17. Explain the term ‘carcinogen’ and give two examples of carcinogens that may affect a healthy body.

18. Describe three cardiovascular conditions and their possible symptoms.

19. Write a paragraph that explains what prostate cancer is. In your explanation, describe how it can be prevented.

20. Write a paragraph that explains what a UTI is. In your explanation, describe how it can be prevented.

21. Complete the table below by providing a list of the major organs found in each of the body systems listed.

Body System	Major Organs
Endocrine system	
Urinary system	
Female reproductive system	
Male reproductive system	
Lymphatic system	
The special senses	

22. Why is important to make careful documentation on a person's medications?

23. Give an example of a pathogen that is responsible for Gingivitis.

24. What is the name of a common eye disorder that results in vision impairment?

25. The skin becomes thinner as we age. Is this an example of atrophy or hypertrophy?

26. List the six main body processes that enable the human body to function normally.

27. Why is obtaining information on dental care important when determining health status?

Part B

Read the case study, then answer the questions that follow.

Case study

Barbara has a patient attending for a health appointment later in the day. She wants to read up on her knowledge of heart attacks, because the health and medical history documentation states that the person recently had a myocardial infarction. Sally wants to be sure she understands the cardiovascular system and the diseases that can occur. This information may affect the delivery of health service and the questions she may need to ask.

1. Describe the major structures and functions of the cardiovascular system.

2. What other body systems work together with the cardiovascular to enable it to perform its job?

3. What key factors play a role in the health and performance of the cardiovascular system?

4. List and explain the four main cardiovascular diseases and their treatments.

Topic 2

In this topic you will learn how to:

2A Make checks of client health status before delivery of health intervention

2B Clarify significance of physical health status in relation to a particular intervention

2C Consult appropriate people

Check physical health status

It is important to know the health history of a person with care needs before a service or intervention takes place. Familiarise yourself with their documentation and/or care plan and clarify your scope of practice so you know the interventions you can and can't perform. Understand the implications for the limits of your authority and capabilities.

Checking health status requires you to clarify any variation from health that you identify, and think about the actions you may need to take before beginning your health intervention or delivery of a health service. You need knowledge of the body systems and to be able to identify the health problems associated with each of them.

If you suspect a health problem after checking physical health status, or that the person's physical health status is not as it should be, find out who you should consult to clarify the problem. Any variation from normal functioning should be accurately reported as soon as possible.

In an emergency situation, you must know what to do. Refer to your scope of practice, job description and organisational protocol. Your workplace policies and procedures can also guide you in these situations, and in undertaking your day-to-day duties.

2A Make checks of client health status before delivery of health intervention

Before beginning any intervention or delivering any health service, you are required to check the health status of each person you are providing health care services to. Checking health status requires a thorough understanding of the person's medical and health history to know whether their status has changed. It also involves observing, questioning and recording all relevant information. To do this effectively, you need to use knowledge of the workings of the human body systems, and be able to identify any potential or actual health problems prior to delivery of your health service.

Always seek advice from your supervisor or an appropriate health professional, particularly if you have any doubts or concerns.

Check health information

In order to make decisions regarding a person's health status you need to have collected and reviewed all relevant information, including observations, questions, and documents completed previously, such as health and medical history and/or care plans. These documents can be updated with current information gained from the appointment.

Once this is done you need to be able to apply the findings, to your knowledge of the workings of the human body. For every body system disorder or problem you identify, you need to check if any action needs to be taken prior to your health intervention or delivery of service. Many common disorders or diseases require some adjustment in the delivery of service. It may mean that in some cases the intervention cannot go ahead. This will depend on your scope of practice and your area of health work – always check with others for clarification. Here are steps to follow in the process of checking the health status of a person.

Checking health status to determine health intervention
Obtain health information from observation, questioning and reviewing documentation.
Interpret information and gather findings.
Identify any actual or potential health problems.
Clarify significance of health problem in relation to health intervention. Ask for advice from appropriate person as required.
Make a decision as to proceed with health intervention in line with job role.

Cardiovascular problems and their impacts

The following lists some common cardiovascular system problems and the actions you should take if such a problem presents. The actions taken will depend on your position description in the health field and your scope of practice for that area of health.

Congestive cardiac failure

- The person should maintain bed rest and limit activity.
- Whilst in hospital, ensure the person changes position regularly for good skin care.

Angina pectoris

- Ensure exertion is limited; overeating and stress should be avoided.
- Make sure room temperature is comfortable.
- Light exercise is possible, on the advice of a doctor or occupational therapist.

Thrombosis

- The person should move or be moved regularly.
- If sitting for long periods, encourage standing or changing position.

Cardiac arrest

- Emergency Procedures – begin CPR.
- Call 000 as soon as possible.

Digestive system problems and their impacts

The following are some common digestive system health problems and the actions you should take relevant to your area of work if such a problem presents.

Gastroenteritis

- Ensure person receives plenty of fluid.
- Follow standard organisational protocols for infection control.
- Inform person to report signs of blood.

Constipation

- Person should record frequency, if required in the care plan.
- Provide special dietary advice such as increased fibre, increased fluid and prune juice can be given.

Dysphagia (problems swallowing)

- Refer to the care plan if food needs to be puréed or if thickener needs to be added.

Eye problems and their impacts

Below are some common health problems relating to the eye and the actions you should take if such a problem presents.

Myopia

- Short-sightedness may mean the person requires glasses.
- Ensure you are close enough to the person when you are showing or explaining something.

Impaired vision

- Ensure the person has access to their visual aid/s, such as a guide dog or cane.
- Speak to the person when you are approaching them to introduce yourself and explain why you are there.

Integumentary problems and their impacts

Below are some common health problems relating to the integumentary system and the actions you should take if such a problem presents.

Burns

- Hold the burn under cold, running water for at least 20 minutes.
- For minor burns, keep the area cool and protected. Use a first aid kit.
- Call 000 if the burn is severe.

Dermatitis

- The person should avoid detergents, soap, perfumes, wool and wearing jewellery.
- Ensure the person has access to medicated creams, if required.

Open wounds

- If trained in first aid, you may be required to dress an open wound if a medical professional is not available.
- Ensure the wound is kept clean and protected.

Impetigo

- As impetigo is contagious. Limit skin contact and monitor broken skin, as this can allow impetigo to spread.
- Ensure antibiotic creams or ointments are used as prescribed.

Musculoskeletal system problems and their impacts

You may need to provide health care services to people who are immobilised by musculoskeletal system problems. If this is the case, they will need adequate transport and perhaps access to an elevator. If lifts or hoists are used to move the person, only do so if you have been trained how to use the equipment. Ensure equipment such as wheelchairs or wheelie walkers do not block walkways or fire exits.

Here are other common health problems relating to the musculoskeletal system and the actions you should take if such a problem presents.

Osteoarthritis

- Ensure the person is able to handle equipment, such as cutlery, independently.
- Monitor pain and encourage rest if activities cause strain.

Soft tissue injury

- Practise RICE: rest, ice, compression and elevation.
- Gentle massage if applicable.

Fractures

- Ensure fractures are kept secure and protected.
- Make sure medical supervision of any wounds or surgery.

Osteoporosis

- Avoid falls. Check walkways for slippery or uneven surfaces.
- Where necessary, ensure rails are present in toilet or bathroom.
- Assist with posture, where possible.

Nervous system problems and their impacts

Below are some common health problems relating to the nervous system and the actions you should take if applicable to the type of health service you provide.

Cerebrovascular accident (stroke)

- Detect if a person has sudden trouble speaking, appears confused or numb, has trouble walking, appears dizzy or has a sudden headache. These are warning signs of a stroke.
- Emergency procedures – Ring 000 as soon as symptoms become apparent.
- Make sure the person is comfortable and apply first aid.

Seizures

- Refer to organisational policy about what to do if a seizure occurs. Activities to be avoided should be detailed in the individual care plan if seizures are likely to occur.
- Ensure the person has access to medication, if necessary.
- Seek medical advice after the seizure has occurred, if necessary.

Dementia

- Specialised activities are usually offered to persons with dementia.
- Be mindful of the person's experience and emotional response.

Respiratory system problems and their impacts

The following presents some common health problems relating to the respiratory system and the actions that may be necessary or may need to be considered.

Asthma

- Ensure the person has access to medication, according to their individual care plan.
- Ensure the person avoids exertion, if advised.
- If a severe attack occurs, encourage the person to remain calm, and follow emergency procedures.

Bronchitis

- Ensure the person follows any prescribed treatments, such as using a bronchodilator, or taking corticosteroids or antibiotics.
- Refer to the person's individual care plan to know about mutual agreements regarding smoking, or if restrictive practice limits smoking. Giving up smoking is the most important step to assist in treating chronic bronchitis.

Other health problems and their impacts

Below are some other common health problems relating to the different body systems and a description of their significance for different work roles. The actions taken will depend on your job role and health service/intervention.

Ear health

Hearing impairment

Significance for your position:

- Ensure the person is wearing a hearing aid, if applicable.
- Speak directly to the person so they can see your face while you talk and observe your facial expression – they may lip-read or follow body language to compensate for hearing loss.

Endocrine system

Diabetes

Significance for your position:

- Refer to the person's individual care plan for arrangements regarding special diet.
- Ensure the person has access to medication.
- If blood sugar is too high or too low, encourage the person to monitor blood sugar and take insulin if necessary. Blood sugar is measured in millimoles per litre, and normal levels are 4–.8 mmol/L.

Genitourinary conditions

Urinary tract infection (UTI)
Significance for your position:

- Ensure a toilet is accessible.
- Ensure the person is able to drink plenty of fluids.
- Ensure the person takes their medication if prescribed.

Dental conditions

Gingivitis
Significance for your position:

- The inflammation of the gums may bleed, so apply infection control protocols.
- Teeth should be brushed often.
- Regular visits to the dentist should be made.

Halitosis
Significance for your position:

- Use mouthwash often.
- Teeth should be brushed often.

Pain caused by ill-fitting dentures
Significance for your position:

- Be alert for signs, e.g. sore mouth, ulcerations.
- Encourage dentist visits and assist with making appointment, if necessary.

Tonsillitis
Significance for your position:

- Medication should be taken as prescribed, and the whole course completed.
- Bed rest and fluids, if feeling unwell.

Lymphatic system

Glandular fever
Significance for your position:

- Needs medical supervision.
- Can be contagious so follow hygiene protocols.
- Bed rest and good diet required.

Reproductive system

Prostate cancer

Significance of your position:

- Refer to supervising doctor for instructions.
- Ensure access to toilet.
- Ask questions about stage of cancer.

Endometriosis

Significance for your position:

- Surgery may be required or has been performed.
- Pain medication provided, as recommended by supervising doctor.

Immune system

Rheumatoid arthritis

Significance for your position:

- Medication is required to manage disease.
- Rest, exercise, good posture, adequate sleep, reduced stress.

Allergies

Significance for your position:

- Can be mild to severe.
- Severe reactions may require an emergency steroid injection or anaphylaxis injection.

Example

Awareness of common health problems

Nesbit is a health worker who works with people with intellectual disabilities. He knows that two of the older people in his care have diabetes, and need their blood glucose levels checked regularly to manage the disorder. Nesbit understands that this condition is serious, and although the people in his care cannot communicate well verbally, he has learned how to look for changes in their behaviour that may indicate a problem with the management of their diabetes. Nesbit always makes sure he has access to a kit with some glucose sweets and equipment to check the blood glucose levels. He also carries emergency contact details, just in case.

Practice task 5

1. What actions should you take where the person you are providing health care to has the cardiovascular condition of thrombosis?

2. What actions should you take where the person you are providing health care to has constipation?

Click to complete Practice task 5

2B Clarify significance of physical health status in relation to a particular intervention

If, after collecting and clarifying a person's health status, it is revealed that their health status is not what it should be, then actions need to be taken. Any action taken should be within your job role and scope of practice. This may or may not involve using first-aid skills. You should immediately report any serious health concerns and, if necessary, take emergency actions if it is life threatening. You should consult with a supervisor to clarify the health problem and determine if this will impact on the delivery of health services or interventions. As soon as is possible, an accurate report should be made and provided to supervisors and others, in accordance with the organisations policies and procedures.

Emergency procedures

It is important that you understand organisational protocols and procedures for what to do in an emergency and you should receive training for these situations during your job induction. Your supervisor should show you the location of equipment and numbers as a part of your WHS training. If you are unclear about any aspect of emergency procedures, be sure to clarify it with your supervisor.

Having a current first aid certification or similar training is often a prerequisite of a job in the health sector. Do not rely on others to be available in time of emergency, as it is your duty of care to be able to respond as necessary.

A defibrillator is a first-aid device that sends an electric shock to start the heart pumping in the event of cardiac arrest. A person has the best chance of survival when they receive a shock from the defibrillator within the first five minutes of collapse. An ambulance may not reach the person in time to provide life-saving treatment, which is why death frequently occurs. A defibrillator can be used by anyone with basic first-aid training, and is safe to use as it scans the patient for a shock response and will only administer a shock if needed.

Minimise risk of an emergency situation

In your role, there may be precautions you can take to avoid or minimise risk in an emergency intervention. You cannot anticipate or avoid all emergencies or health concerns, but the following steps may help minimise risk. These will vary according to the specific role you play in providing care needs.

Steps to help minimise risk in an emergency intervention

1. **Refer to care plan**
   Refer to the person's care plan and your supervisor before undertaking activities to ensure they are appropriate for the person's needs and abilities.
2. **Report changes**
   Report any changes or variations from normal health status immediately to your supervisor or a relevant health professional.
3. **Ensure access to medication**
   If a person requires medication, such as ventilation for asthma or insulin for diabetes, ensure the person (or relevant professional) has easy access to the medication.
4. **Check accessibility**
   Ensure destinations for outings are suitable for peoples' needs; for example, a person in a wheelchair requires ramp access and suitable transport.
5. **Check for hazards**
   Ensure destinations for outings are safe and hazard free; for example, protect a person with osteoporosis from falling by ensuring walkways are flat and not slippery.
6. **Check suitability of food**
   Ensure food provided is suitable for the people you support; for example, a person who has difficulty swallowing should have puréed food; a person with allergies may have special requirements. Health notes should contain notes on allergies, particularly in relation to medications.
7. **Locate first aid equipment**
   Ensure you can locate first-aid equipment; for example, know if there is a defibrillator at the destination of the activity.

Non-emergency situations

You may often observe variations from normal functioning when working with people with care needs. These may not be emergency situations, but you must still take timely action to address any variations to ensure the person receives the appropriate treatment and that their condition does not deteriorate or become life threatening. These variations may still impact on the health service you are going to deliver, and may require adjustments for the person with care needs.

Non-emergency situations are described here, along with suggestions about the significance of the observation. For each case, it is advised that you speak to your supervisor or an appropriate health professional, as the person may need to see a doctor immediately.

Handling items

Observation:
The person is having trouble handling cutlery, pens or tools.

Significance:
The person may have joint pain or osteoarthritis.

Walking

Observation:
The person appears in pain when they walk and sit down.

Significance:
The person may have mobility issues due to osteoarthritis, osteoporosis, fractures, neural damage or soft tissue pain.

Sight

Observation:
The person is having trouble seeing or focusing.

Significance:
The person may have an eye problem such as macular degeneration, myopia or cataracts. Be vigilant for other signs that may indicate a stroke.

Hearing

Observation:
The person is having trouble hearing.

Significance:
The person may have an ear problem such as otitis media or hearing impairment. Be vigilant for other signs that may indicate a stroke.

Eating

Observation:
The person is having trouble eating.

Significance:
The person may have digestive problems such as diverticulitis, gastroenteritis, gallstones, swallowing problems or constipation; or musculoskeletal problems such as osteoarthritis, osteoporosis or rheumatoid arthritis. Be vigilant for other signs that may indicate a stroke. They may also have sore gums from poor fitting dentures.

Drinking

Observation:
The person is not drinking fluids.

Significance:
The person may be dehydrated, be experiencing dysphagia or may be experiencing pain when urinating, due to bladder infection or prostate cancer.

Urination

Observation:
The person is not passing urine.

The person is urinating frequently.

Significance:
The person may be dehydrated or may be experiencing pain urinating, due to bladder infection or prostate cancer.

The person may have a bladder infection or have increased their fluid intake.

Passing stool

Observation:
The person is not passing stool.

The person is passing stool frequently.

Significance:
The person may be constipated.

The person may have diarrhoea due to gastroenteritis.

Confusion

Observation:
The person is confused and disoriented.

Significance:
The person may be experiencing early signs of dementia, may have low blood sugar and be diabetic or may be experiencing a stroke.

Protocol for dealing with emergencies

Organisations of all sizes need to have procedures in place to deal with emergency situations. You need to familiarise yourself with details of these procedures. Here is an example of the steps that a health service provider may use when training staff in emergency incidents.

When an incident occurs
1. Contact your supervisor where possible during, and always after, an incident.
2. Contact any other health professional if they are in the building as soon as possible.
3. If you are off premises, phone the nurse-on-call service as soon as possible.
4. If you are off premises and you suspect a potential emergency situation, call the ambulance on 000 immediately.

Example

Take action in emergencies

Naoko works in an aged care facility. She and a volunteer have organised a craft activity for the residents. Naoko has checked to see that all the residents are comfortable and the task suits their abilities. She needs to assist one person, Dorothy, to be more comfortable by placing a cushion behind her back. Dorothy has osteoporosis and sometimes feels uncomfortable sitting in the one position for a long period of time.

While the residents are doing the craft activity, the volunteer approaches Naoko to say that an older person, Sascha, was mid-conversation when she suddenly stopped talking and appeared confused. Naoko knows from Sascha's care plan that she has no history of dementia or diabetes, so Naoko approaches Sascha to assess the situation and realises that she is very confused. She appears disorientated and does not respond to questioning, before suddenly losing consciousness.

Naoko reacts immediately by putting in place the emergency action plan she has been trained to use under these circumstances.

Practice task 6

1. What important emergency training should be provided when you first start work in a new organisation?

2. What might be the significance of changes in health status, such as a person being confused or disorientated?

Click to complete Practice task 6

2C Consult appropriate people

There are times when it is essential that you consult appropriate people to clarify implications and significance of physical health status, especially if you are uncertain about your own capability or authority to take action. The different roles and limitations of a healthcare team or organisation will vary and change over time. It is important for you to perform your job effectively and safely, including knowing what to do when you need clarification or assistance.

Health services environments are usually structured around a team so that no individual staff member is ever alone – you should always have someone to refer to. That person may be physically present or you may need to contact them. It is crucial in your role that you refer to somebody if an incident occurs, or if there is a variation from normal health status and you need to ask for clarification about the health service you are going to provide.

Scope of practice

It is vital that you know the legal and ethical limits of your role or scope of practice. When you first apply for a job, you will refer to a position description that describes the role and responsibilities in detail. Keep your position description at hand until you become familiar with your new role.

Understanding what you can and cannot do is part of your duty of care. During your induction and training, you will become familiar with organisational protocol and exactly what your role entails. You need to understand the specific scope of your role, who to report to and how to report incidents or variations from the norm. Ensure you clarify ambiguous points regarding health status or variations from normal functioning with your supervisor.

Position description

You should read your position description for guidelines on your role. Sometimes a position description needs updating in response to organisational and legislative change. You should discuss this with your manager if this is the case. A position description will include details on who you report to and responsibilities and specifications of the position. It may include goals of the position and salary details. The details of your position description indirectly provide you with information on the limits of your role or authority.

Here is an example of a position description of a leisure and recreation officer.

Position description: Leisure and recreation officer	
Supervisor	**Manager of client services**
Responsibilities	▶ As part of a team, plan, implement and evaluate a leisure program that meets clients' needs and requirements. ▶ Ensure leisure activities are suitable for group or individual settings and cover multiple disciplines. ▶ Ensure activities are suitable for the clients' physical abilities, emotional capabilities, cognitive capabilities, skills and are culturally sensitive. ▶ Ensure effective documentation of leisure activities and interactions is maintained. ▶ Ensure activities meet organisational guidelines and protocols. ▶ Attend regular staff and team building meetings. ▶ Work within organisational work health and safety guidelines. ▶ Work to keep clients safe. ▶ Report any unknown hazards, incidents or problems to your supervisor.
Relevant knowledge and qualifications	▶ Passionate about enhancing the lives of our residents. ▶ A friendly, flexible and patient approach. ▶ Certificate III Aged Care. ▶ Certificate IV Leisure and Health. ▶ Eligible for membership of the Diversional Therapy Association of Australia.

Supervision and reporting

You need to know who to report to before you commence your position. This is stated in your position description, so refer to it if you have any doubts.

If your supervisor is not available, you need to know who to contact in their absence. However, always contact an ambulance first if you observe signs or symptoms that indicate a serious problem.

You should also refer to your supervisor for information about:

- details of your position description
- legal limitations of your role
- the hierarchy of control in the organisation
- reviewing a care plan prior to commencing activities
- which tasks you have been trained to perform, such as lifting a person with care needs
- how to document and report incidents.

Report incidents

You must know your organisation's procedures for how to report and document incidents or variations from normal health status. A report may be verbal to your supervisor, or a written report.

You must report all emergency incidents or extreme changes from normal functioning as soon as you recognise them. Any other changes in health status that are not life threatening should be recorded on the person's health and medical history or care plan, as applicable. The person you contact will vary depending on the situation and your workplace. Some guidelines for reporting an incident follow.

When filing or verbally making a report, you must:

- be prompt and accurate
- provide the full details, including the person's name and location
- report only what was actually observed, avoiding judgments and interpretations
- report changes or variations from normal health status
- record safety measures that were taken
- be specific, clear and concise, but do not omit important information
- write in ink if it is not an electronic document
- record the time and date according to organisational protocol and sign all entries (if not an electronic record).

Digital health records

There is a move towards keeping healthcare records on a computer system. Healthcare records stored in this way make it easy to control access with login requirements. This is a better way to control the privacy of the person when compared with written records.

Training for use of this type of record keeping will usually occur once the worker has commenced their job. In specific areas of health work there may be an inbuilt mechanism for the use of objective language, as many systems offer a drop down menu of phrases which can be used to describe changes in a person's health status and care needs. Another advantage is that all records needed to provide an accurate picture of a person's condition and needs are located together.

Appropriate people

Your supervisor is the first person to refer to in a situation where a person's health status has changed. If they are not available, you should contact another supervisor or manager, or call emergency services (depending on the level of urgency).

You can phone emergency services on 000 at any time of the day or night for medical assistance. You will be asked details such as your name, location, phone number, the situation, how you have responded and how you are able to respond until the paramedics arrive.

Some health facilities may have an emergency button available for you to press to summon colleagues in an emergency situation. Most places of work have a list of emergency numbers located in several convenient places around the workplace.

If you are not sure if the changes in a person's health status are significant, refer to your supervisor, manager or a professional for clarification. It is always better to be wrong about an emergency than the consequences that may follow when procedures are not followed correctly or not at all. Remember to accurately report all incidents to your supervisor and make a written report, no matter how significant, as soon as possible.

Impacts caused by health interventions

It is vital to understand the importance of consulting others when uncertain of your job limits or capabilities.

There are implications for a wrong decision, or lack of action, based on inaccuracy or poor analysis of information. The health worker may inadvertently miss some vital information or continue with an intervention or procedure that leads to a negative impact on the person under their care. It is the care worker who is responsible and they may be held accountable. This is referred to as an iatrogenic intervention (an impact caused by a health worker).

One of the many important factors to consider when analysing a person's health status is the medications they may be taking and any listed allergies. When you are obtaining and checking a person's health status, it is vital to check and confirm medications in relation to the cautions and contraindications for a particular medication. Interaction effect refers to how medication reacts with other medications that are being taken.

Example

Consult appropriate people

Tony works as a health care worker in a multidisciplinary clinic. He reports to the clinic manager, who has other qualifications including advanced first-aid knowledge as a nurse.

Tony is about to start delivering a health service to William. However, he notices that when William stands up, his movement is slow and he needs to sit down again. When Tony asks William how he is feeling, William reports that he has a lot of pain in his back and knees.

Tony phones his supervisor, Margie, for guidance, who confirms that even though the situation isn't an emergency, she will come and look in on William. After some discussion, Margie offers to take William to a doctor to be assessed. William agrees and is grateful as he has not experienced pain this bad before.

When William has left, Tony files an incident report explaining exactly what happened, follow-up with William by phone to find out the outcome of the doctor's visit.

Practice task 7

1. What should you do as soon as you notice changes from a person's normal functioning?

2. What do you need to understand in order to deal with uncertainty and limits on your own capability or authority?

3. What is an iatrogenic intervention?

4. How do computerised health records protect the confidentiality of people's health records?

Click to complete Practice task 7

Summary

1. Knowledge of the body systems and how they work helps you understand common health problems and variations from normal functioning.
2. Be aware of common health problems that may present themselves during a health status check.
3. Clarify if health disorders or diseases will affect the health intervention or service.
4. Serious health concerns need to be reported both verbally and in written form.
5. There are basic actions you can take to ensure that a person is safe and comfortable if there is a variation from normal functioning.
6. Precautions can be taken to minimise the risk of an emergency intervention.
7. Know organisational emergency procedures well before delivering a service or intervention.
8. Know who to consult if variation from normal functioning does occur.
9. Seek clarification about your role and scope of practice.
10. Keep a copy of your job/position description noting where it outlines the role you perform and scope of practice.
11. Take the impacts of health intervention seriously.
12. Pay particular notice to health information relating to medications and allergies.

Learning checkpoint 2
Check physical health status

This learning checkpoint allows you to review your skills and knowledge in checking a person's physical health status.

Part A

1. Choose two of the common health problems discussed in this Topic. Complete the table following, inserting relevant details in each column about each health problem you have chosen.

Common health problem	Symptoms that may indicate the health problem	What I can do within my scope of practice	Who I should refer to
1.			

Common health problem	Symptoms that may indicate the health problem	What I can do within my scope of practice	Who I should refer to
2.			

2. Imagine you are responsible for the emergency procedures training at your workplace. What information should be included in the training?

3. Explain how iatrogenic health interventions can be avoided by checking and clarifying with a supervisor.

Part B

Read the case study, then answer the questions that follow.

Case study

Andre is meeting a person with health care needs for the first time. Another health care worker had made the referral and a referral letter was provided. This new person has a history of a heart disease and is currently under medication for a blood clot he had several months ago.

Andre will need to check the current health status of this person before delivering any health service. He will need to rely on his knowledge of the human body and clarify if the blood clot might alter the delivery of his service. He is even considering the likelihood that he may not be able to do any intervention today. If Andre is unsure of the implications of the health problem and the consequences of the intervention, he will discuss it with his supervisor. He does not want to proceed unless he is sure that the thrombosis will not be affected and result in an emergency situation.

Justify why Andre has decided to check the health status of the person with health needs so carefully and his planned course of action.

Topic 3

In this topic you will learn how to:

3A **Identify signs and symptoms of variations from normal health status**

3B **Identify potential factors responsible for significant variations from normal health status**

3C **Identify potential risk factors associated with variations from normal health status**

3D **Recognise and refer potentially serious issues in line with organisation requirements**

Identify variations from normal physical health status

You may be the first to recognise the signs and symptoms of a health problem in a person with care needs. You will have identified variations from normal functioning through using the methods relevant to your job role, taking into account factors that may have been responsible for the variations observed. By determining the level of risk of this variation you will be able to decide on the next course of action. You may need to clarify the situation with a relevant health professional, and in the case of potentially serious issues, call an ambulance. You must know how to respond if you do notice variations from normal functioning. Always refer to organisational policies, procedures and protocols, as this is part of your duty of care in keeping the people you provide care to safe. Ensure you refer to the person's care plan or other documentation, which should stipulate any specific risks.

3A Identify signs and symptoms of variations from normal health status

There are many common health problems you may encounter in your work context. You will need to clarify with relevant health professionals that the health problem is what you suspect. A sign is an objective, observable indication of abnormal functioning, and a symptom is experienced by the person and is subjective. For example, vomit is a sign and nausea is a symptom indicating gastroenteritis.

You may or may not know what a specific sign or symptom indicates. However, as you become more experienced in the delivery of your health service, you will become more practised in identifying variations and their causes. Together with your awareness of the health history and current physical health status of people you provide care to, you can identify any changes from their normal health status.

In any case, you must follow your organisation's protocols for reporting any variation in health status. This usually involves an initial verbal report to an appropriate person, such as a supervisor or health professional, who can further assess the person, followed by a written report to record what you have noted. Remember, any sign or symptom that is noted must be acted on as soon as possible to ensure the person receives the best care and that any condition does not worsen or become life threatening.

Use standard methods and protocols to identify variations

The methods used to identify variations from health will vary according to the job role and area of health in which you work. You will need to practice and learn the methods relevant to your work as a way of delivering your service or intervention to persons with care needs. Protocols will differ between workplaces, but generally each area of health has a set of standard methods used to assess for health status. These methods may also identify variations from normal functioning that can benefit from the intervention or service that you may offer.

Following is a list of some of the standard methods for assessing the health status of functioning of the body systems. These cover several areas of health practice and may not be applicable to every person. Always refer to your scope of practice and the protocol of your organisation to determine the appropriate action to take if a variation is identified.

Documentation

Health and medical history or care plan

Always review existing health information and update as required based on current information identified. Note medications, allergies and other family or social circumstances if applicable.

General appearance

Assessment of the persons physical, emotional and behavioural state

Use observation and questioning skills to identify their mood, personal hygiene and communication. Do they look unwell or in pain, lethargic or active, agitated or calm? How do they move, what is their posture like?

Vital signs

Measurements taken using equipment

Check: height, weight, flexibility, muscle mass, posture, symmetry, gait, movement, temperature, respiratory rate, heart rate, blood pressure, pain.

Physical assessment

Physical examination using observation, inspection, palpation

- Airways: noises, secretions, cough
- Breathing: breath sounds, rhythm
- Circulation: pulse, skin colour and temperature, nail bed colour
- Disability: aids required such as glasses, hearing aide, mobility aides, orthotics, abnormal gait or movement
- Skin: colour, turgor, lesions, bruising, wounds, pressure injuries
- Nutrition: appetite, weight for age, food intolerance, allergies, nausea, vomiting, hydration state
- Elimination: bowel and bladder routine, incontinence

Social wellbeing

Social and cultural factors including family circumstances

Mood, emotional state, sleeping habits, coping strategies, support networks, own opinion of their health, living arrangements, siblings partner or other support persons, specific cultural requirements

Focussed assessment

Focussed assessment

This will be determined by the specific area of health and involves more detailed testing relevant to the job role and training.

Use correct medical and anatomical terminology when taking measurements

When communicating health information it is important that it is understood by others. Correct terminology should be used when identifying and recording results from health assessments so that if a variation is identified and further action is taken, the information is clear and unambiguous. Other health professionals who may view these records will expect there to be the abbreviations, measurements and other medical terminology used.

Terminology used for assessing health	Meanings of terms
< >	less than, more than
@	at
%	per cent
abdo	Abdomen
b.m	Bowel movement
BP	Blood pressure
CXR	Chest X Ray
DOB	Date of birth
ECG	Electrocardiogram
EENT	Ear, eye nose and throat
FUO	Fever of undetermined origin
Hb	Haemoglobin
IM	Intramuscular
l/min	Litre per minute
PMH	Past medical history
O2	Oxygen
P	Pulse
S/s	Signs and symptoms
UTI	Urinary tract infection

Signs and symptoms of cardiovascular problems

Outlined below are some common cardiovascular problems that affect various body systems and the signs and symptoms that may indicate the condition. Some conditions represent an emergency, whereas others can be regarded as chronic and controlled with medication.

Angina pectoris

- A tightness, pressure, burning or squeezing sensation in the chest
- Chest pain, which may spread to other parts of body
- Shortness of breath
- Faintness
- Anxiety
- Sweating
- Nausea
- Rapid heart rate
- Pale skin

Cardiac arrest

- Chest pain
- Shortness of breath
- Faintness
- Nausea and vomiting
- Loss of consciousness
- No heart rate

Thrombosis

- Swelling
- Leg pain
- Soreness to touch
- Discolouration of skin
- Cramping
- Warmth

Congestive cardiac failure (CCF)

- Difficulty breathing and having a cough (early sign)
- Breathing problems (asthma, chronic bronchitis) worsen
- Inability to exercise due to fatigue and shortness of breath
- Build-up of fluid in the lungs causing dyspnoea (difficulty breathing) and frothy pink liquid is possibly coughed up
- Limbs swell
- Tissue around the eyes becomes puffy

Signs and symptoms of respiratory system problems

Outlined below are some common respiratory system problems that affect various body systems and the signs and symptoms that may indicate the condition.

Bronchospasm (asthma and anaphylaxis)

- Wheezing
- Difficulty breathing
- Tightness of chest
- Coughing
- Difficulty speaking

Upper respiratory tract infection

- Cough
- Sore throat
- Running nose and nasal congestion
- Headache
- Low-grade fever
- Facial pressure
- Sneezing

Bronchitis

- Slight fever and chills
- Production of coloured sputum
- Discomfort in the chest
- Fatigue

Signs and symptoms of musculoskeletal system problems

Outlined below are some common musculoskeletal system problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Arthritis

- Joint pain
- Joint stiffness
- Warmth in joints
- Redness around joints
- Loss of joint function

Fractures

- Pain
- Deformity
- Swelling
- Bruising
- Loss of function

Soft tissue injury

- Pain
- Redness
- Swelling

Osteoprosis

- Back pain
- Curved upper back
- Fractures occurring after a minor injury

Signs and symptoms of endocrine system problems

Outlined below are some signs and symptoms that may indicate the condition of diabetes, a common endocrine system problem that affects various body systems.

Diabetes Type 1

- Recognised in childhood or adolescence, often in combination with an illness
- Nausea, vomiting and dehydration

Diabetes Type 2

- Signs and symptoms may be slow to present, often precipitated by obesity

Signs and symptoms common to Types 1 and 2 diabetes

- Fatigue
- Unexplained weight loss
- Polydipsia (excessive thirst)
- Polyuria (excessive urination)
- Polyphagia (excessive eating)
- Infection
- Agitation
- Blurry vision

Signs and symptoms of nervous system problems

Outlined below are some common nervous system problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Stroke

- Signs and symptoms depend on the part of the brain affected, but could include:
  - paralysis of part of the body
  - difficulty speaking
  - blurry vision
  - difficulty comprehending
  - confusion
  - disorientation
  - loss of consciousness.

Dementia

- Early memory loss:
  - Difficulty finding words
  - Forgetting names and appointments
  - Change of personality
  - Difficulty completing familiar tasks
  - Mood swings
  - Wandering
  - Suspiciousness and paranoia
- Intermediate memory loss:
  - Worsening of symptoms
  - Inability to complete activities of daily living
  - Behaviour disorders
  - Difficulty sleeping
  - Depression
  - Anxiety
- Severe memory loss:
  - Worsening of symptoms
  - Complete dependence for activities of daily living
  - Inability to walk unassisted
  - Difficulty swallowing
  - Poor bladder control

Seizures

- Jerking of single part of the body or the whole body
- Lip smacking
- Staring
- Loss of bladder control
- Biting tongue

Signs and symptoms of eye health problems

Outlined below are some common eye problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Common eye problems

Cataracts
- Blurry vision
- Loss of contrast sensitivity

Myopia
- Blurry distance vision – difficulty seeing objects and people in the distance

Visual impairment
- Blurry vision – difficulty seeing
- Increased accidents such as bumps due to loss of vision

Signs and symptoms of ear health problems

Outlined below are some common ear problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Hearing impairment

- Difficulty hearing
- Often asking people to repeat what they have said
- Not understanding something, due to not hearing properly or mishearing

Otitis media

- Ear pain
- Fullness in the ear
- Ringing in the ear
- Hearing loss
- Discharge from the ear
- Nausea
- Vertigo

Signs and symptoms of digestive system problems

Outlined below are some common digestive system problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Constipation

- Difficulty and pain passing stool
- Cramping
- Bowel pain

Diverticulitis

- Pain in the abdomen
- Bloating
- Constipation
- Cramps

Dysphagia

- Difficulty swallowing
- Coughing when swallowing
- Choking
- Gagging
- Chest discomfort
- Regurgitating food, often at night

Gallstones

- Pain in upper right abdomen
- Frequent attacks of pain that often begins after a meal
- Nausea
- Vomiting
- Fever
- Indigestion

Gastroenteritis

- Nausea
- Vomiting
- Diarrhoea

Signs and symptoms of urinary system problems

Outlined below are some common urinary system problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Dysuria

- Pain, burning or discomfort during urination
- A person may be reluctant to urinate often or when necessary

Incontinence

- Urine leaks from the bladder
- Inability to get to the toilet in time resulting in accidents

Urinary tract infection

- Polyuria (excessive urination)
- Pain in bladder
- Pain in kidney
- Blood in the urine

Prostatic cancer

- Symptoms and signs often do not present
- Urination may be affected
- Impotence
- Urinary tract infection
- Fatigue

Signs and symptoms of reproductive system problems

Outlined below are some common obstetric emergencies that affect various body systems, and the signs and symptoms that may indicate each condition.

Ectopic pregnancy

- Missed period
- Sore breasts
- Frequent urination
- Fatigue
- Nausea
- Vaginal bleeding
- Painful bowel movements
- Dizziness (sign of internal bleeding)
- Shoulder pain

Placental abruption

- Contractions
- Uterine pain
- Abdomen tenderness
- Vaginal bleeding
- Pallor

Placenta previa

- Bright red vaginal bleeding

Pre-eclampsia

- High blood pressure
- Protein in the urine

Signs and symptoms of integumentary system problems

Outlined below are some common integumentary system problems that affect various body systems, and the signs and symptoms that may indicate the condition.

Burns

- Redness
- Open skin
- Blistering

Dermatitis

- Itchy skin
- Redness
- Broken skin
- Scaly skin

Wounds

Open wounds

- Bleeding
- Infection

Wound infection

- Swelling and inflammation of the wound
- Leaking of yellow or greenish fluid (pus)
- Bleeding at the wound site
- Pain
- Fever

Impetigo

- Blistering rash
- Mainly affects the face, but can affect any part of the body
- Mild itchiness

Signs and symptoms of dental problems

Outlined below are some common dental problems that affect various body systems of people with natural teeth and those with edentulous (non-natural teeth), and the signs and symptoms that may indicate the condition.

Gingivitis

- Red, swollen gums
- Bleeding gums
- Discharge from gums
- Persistent bad breath
- Loose teeth
- Receding gums

Halitosis

- Constant bad breath
- Inability to taste
- Dry mouth
- Coating on tongue

Pain caused by ill-fitting dentures

- Gum shrinkage leading to 'sloppy' fit
- Rubbing on gums causing a callous
- Ulcerations and fungal infections
- Speaking difficulties
- Eating less or eating only soft foods leading to digestive problems or malnutrition
- Soreness at corners of mouth where mouth doesn't seal correctly

Example

Identify a skin problem

Elizabeth works at an aged care home. She has been in this role for 15 years. While arranging and delivering services for the people she supports, Elizabeth is alert to any signs and symptoms which may suggest a health condition. One day, Elizabeth is serving morning tea to the residents. When she brings a cup of tea to Jean, Elizabeth notices that the skin on Jean's right hand is red and inflamed. She is not sure but suspects Jean may have dermatitis. She asks Jean about the redness and she tells Jean she would like to advise the registered nurse (RN) about it. Jean tells Elizabeth that her hand started itching that morning and that she is finding it hard not to scratch.

When she has finished serving tea, Elizabeth locates the RN (Elizabeth's supervisor), and tells her about the redness she observed on Jean's hand. The RN thanks Elizabeth for passing on the information and says she will visit Jean and assess the situation. Elizabeth records her observations in Jean's progress notes at the end of her shift, so her co-workers are aware of the situation.

Practice task 8

1. What is the difference between a sign and a symptom in relation to a health problem?

2. Name the digestive disorder that has the following list of signs and symptoms: difficulty swallowing, coughing when swallowing, choking, gagging and regurgitating food.

3. Identify three oral health diseases of the mouth. One condition must relate to the oral health of people who are edentulous.

4. Rory knows that John has been vomiting and feeling unwell overnight. He monitors John throughout the next day to try to determine if the vomiting is a sign of something serious, and if any further action needs to be taken. Rory needs to ensure that John does not get worse and his condition is managed.
   What possible condition could John have that shows the signs of nausea, vomiting and diarrhoea? What tests or measurements would need to be taken to determine exactly what the condition is?

Click to complete Practice task 8

3B Identify potential factors responsible for significant variations from normal health status

Understanding the underlying factors that can cause a disease or health problem is part of obtaining all of the information required to assess health and identify any variations from the normal functioning of a person. The factors that may be responsible for a significant variation in a person's normal health status may be internal or external.

When you note a change in a person's health status, consider the internal and external factors that may be at play. If you know the person's history and current health status, this will help you determine the factors responsible. Examples of external and internal factors follow.

External factors	Internal factors
▶ Diet and nutritional factors ▶ Use of alcohol, tobacco and other substances ▶ Environmental factors impacting health ▶ Level and type of physical activity	▶ Interrelationship between body systems ▶ Emotional responses ▶ Patterns of thinking ▶ Disease process ▶ Pathogens – virus, bacteria, parasite or fungi

Individual variation

It is important to be aware of how a person responds emotionally to their physical health status. The person may be understating the experience or experiencing denial. Make sure you factor in this possibility when you are speaking to the relevant health professional about a variation in a person's health status.

The disease process may vary in every person, even those with the same illness or condition, and a person's overall quality of life and mental state may affect how the disease progresses. For example, some people become very proactive after being diagnosed with a serious illness and change their diet, physical activity levels and patterns of thinking. This can, in some cases, positively affect how an illness progresses or does not progress.

If a person has been diagnosed with a disease or illness, monitor the disease progress. If the disease worsens, notify the relevant health professional and supervisor immediately.

Pathogens are often the cause of diseases. If you know that a person has been exposed to a particular pathogen, such as the flu virus, notify the relevant health professional and be watchful for signs and symptoms. Hygiene is very important in healthcare environments in order to minimise the spread of pathogens. Be sure to follow organisational protocols for hygiene at all times.

Factors responsible for abnormal readings

Another potential factor that may be responsible for a significant variation from normal health status in a person, is an abnormal reading when using assessment equipment. If a health professional is present, it is unlikely that you will need to read equipment. However, if it is your job to do so, and you have received the correct training, you may be required to check blood pressure, pulse rate, respiration, hearing loss, posture or strength. You may have duty of care responsibilities for a person who relies on accurate readings of their health; for example, a person with diabetes who needs to measure blood sugar levels accurately. It is therefore important to be aware of the following factors responsible for abnormal readings.

Difference in temperature measurements

When a person shows an abnormal temperature reading, be sure to consider internal and external factors. Internal factors may include the presence of illness or whether the person has overexerted themselves immediately before the reading. External factors may include room temperature or the person being over or underdressed. Adjust environmental factors, if possible, before doing a second reading.

Clarify with the relevant professional if you are still concerned that a person's temperature is too high or too low.

Effect of exertion and anxiety on pulse rate or blood pressure

You may obtain an abnormal reading when checking a person's pulse rate or blood pressure. Note what the person was doing prior to the observation. For example, did they just walk upstairs? If you are checking the pulse, be sure you have your fingers in the correct position, and you are not reading your own pulse rate.

Consider whether the person is anxious; for example, anxiety about having the observation made can cause a person's heart to race, which will give a high reading. Note all unusual observations and report them accordingly.

Faulty equipment or improper use of equipment

If a reading is abnormal, be sure to check the state of the equipment; for example, that it is intact and that you are using it correctly. If you are using equipment, you should be trained to expect an approximate or 'normal' result, so significantly abnormal results may indicate that there is something wrong with the equipment or how you are using it. All equipment should be stored correctly after being cleaned and disinfected according to protocol.

Failure to correctly calibrate equipment

An abnormal result may indicate that the equipment is not calibrated correctly. Calibration refers to checking the equipment's accuracy to confirm readings are reliable. For example, if you get two unexpected abnormal readings from a sphygmomanometer (used to measure blood pressure), take the person's blood pressure with a different machine. If the reading is what you consider within the normal range, take it again on the second machine to confirm the reading.

Most equipment has self-calibration tests to ensure they are in good working order. Always check with your supervisor or relevant health professional if you are unsure whether a piece of equipment is correctly calibrated.

Impact of environmental factors on equipment

Environmental factors, such as how the equipment is stored, temperature levels in which the equipment is used and if the equipment has been wet, may affect readings. If the reading is significantly abnormal, check with your supervisor.

Examples

Factors causing variation

The following illustrates examples of factors that can cause variation in normal health status.

Diet and nutrition

Food preparation

Bill, an older person, gags every time he swallows something, and has recently lost weight. His carer Shelly thinks he may have dysphagia, so she refers to Bill's care plan. This should indicate if he has a history of dysphagia, and any special instructions for care; for example, a recommendation for how his food should be prepared. It states that Bill experiences intermittent bouts of dysphagia and that when this is noted, his food must be puréed until he is able to eat regular food again. When Shelly checks what meals have been provided, she realises that they have not been puréed, so he has been struggling to eat and gagging as a result. She reports to her supervisor that she believes he is experiencing dysphagia and that he requires puréed food. The supervisor arranges an assessment of Bill's condition as soon as possible.

Physical activity

Physical activity influences a person's health

Tony runs a physical activities program for adults with intellectual disabilities. He observes that Jessie, a 25-year-old person, appears to be rapidly putting on weight. As Jessie is already in the overweight weight range, he is concerned that she may become obese or suffer associated health problems from the weight gain. He checks her file and notes that she has put on 10 kg in the past month. He has also noticed that Jessie is withdrawn and not taking part in any of the physical activities she used to love. When Tony asks her if she is okay and if she would like to join in the game of table tennis, she says that she's sad, doesn't want to talk about it and just wants to sit by herself.

When her mother comes to collect Jessie in the afternoon, Tony mentions his concerns. Her mother also expresses concern that Jessie is not her usual self and says she has been withdrawn and inactive since their family dog died six weeks prior. Tony tells Jessie's mum that he believes that her saddened mood may be the cause of her inactivity, and he is concerned that further weight gain may be harmful to Jessie's health, along with her continued withdrawal. Jessie's mum says that she will talk to her and Tony offers her the number of a counsellor who may be able to help. Tony feels that if they can lift Jessie's mood, she may return to her usual self and begin to again take part in the physical activities she enjoys, and not continue to put on weight. He makes a note in Jessie's file to follow up with her mother, and arranges to talk to his manager to see what other assistance they can provide to Jessie and her mum.

Examples

Disease process

Internal factors can influence a person's health

Karina notices that Audrey, one of the residents, is having difficulty walking when she arrives at the planned activity. Karina goes to assist and notices that Audrey's legs are quite swollen. When Karina asks how Audrey feels, she says, 'I don't feel very well and don't think I'll be able to take part in the class today, as I am short of breath and quite tired. I think I'll just watch today.' Karina is quite concerned by this description, as she knows these signs can indicate congestive heart failure. Her concern then increases when she hears Audrey have a coughing attack, and notices a marked puffiness around her eye area. She immediately calls the registered nurse, who in turn organises for Audrey to be assessed by a doctor, as this is the first time Audrey has displayed these symptoms.

Emotional response

An emotional response can influence health

Peter, a middle-aged man, presents for a health appointment and appears to be sad and distressed after an appointment with a medical specialist. Donny knows that Peter has multiple sclerosis (MS) and was expecting test results back. Donny approaches Peter and asks if he is okay and if he would like to take part in the tai chi activity that is about to start. Peter replies, 'I suppose I should join in as I won't be able to for much longer', and then bursts into tears. Donny takes him aside and asks what has upset Peter so much. He tells Donny that he is finding it hard to come to terms with his recent diagnosis of MS, and that it is progressing more rapidly than the doctors hoped. He says that he doesn't feel too bad physically, but that he is constantly upset at the thought of his future and what he will not be able to do, and often does not want to get out of bed in the morning. Donny talks with Peter for a while, before again suggesting that he take part in the tai chi, as he knows Peter enjoys and is good at it. He also asks Peter if he would mind if he tells his supervisor, Carol, about their conversation, as he knows Carol will be able to provide him with advice and assistance to help him come to terms with his diagnosis.

Practice task 9

Read the scenario, and then complete the table that follows.

Scenario

As part of your role in checking the physical health status of people you provide health care to, it is important to clarify the significance of physical health status in relation to a particular intervention in line with your job role and your organisation requirements.

You have made the observations indicated in the table. Beside each observation, in your own words, indicate what you need to do or who you need to refer to for each of your observations.

Observation	What to do/who to refer to
A person is having trouble handling cutlery, pens or tools.	
A person is having trouble walking.	
A person appears suddenly dizzy, confused and can't talk.	
A person begins vomiting.	
A person appears to be having leg pain.	
A person is having trouble breathing.	
A person is uncomfortable in the chair they have been sitting in all morning.	
A person is passing urine frequently.	
A person is having severe chest pain and then collapses; no heartbeat is detected.	
A person becomes unconscious.	
A person's gums bleed and are discoloured.	

Click to complete Practice task 9

3C Identify potential risk factors associated with variations from normal health status

It is important to be able to identify potential risk factors associated with variations from normal functioning. These may be risks for the person with care needs or for other residents or staff. Consult the person's individual care plan or health and medical history record to see whether they are at risk of a particular health problem and be vigilant when looking for cues and indicators that suggest health problems.

Apply your knowledge to your own work context by thinking about potential risks that may arise for both the persons you are responsible for and your co-workers.

The most common risks that increase the chance of contracting or developing a health problem include:

- age
- gender
- family history, such as inherited genetic conditions
- previous history of illness
- lifestyle choices; for example, smoking, over consumption of alcohol or other drugs and risk taking activities.

Risks that increase the likelihood of cardiovascular system problems

The risks that increase the likelihood of common cardiovascular health problems associated with other body systems are summarised below.

Angina pectoris	Cardiac arrest
▶ Diabetes ▶ Hypertension ▶ Smoking ▶ High cholesterol ▶ Family history ▶ Physical exertion ▶ Emotional stress ▶ Exposure to cold ▶ Inactivity ▶ Ageing	▶ Undiagnosed coronary artery disease ▶ Family history ▶ Previous heart arrhythmias, attack or disease ▶ Excessive drug or alcohol abuse

Thrombosis	Congestive cardiac failure (CCF)
▶ Prolonged sitting or bed rest ▶ Recent surgery ▶ Recent trauma to the limb ▶ Obesity ▶ Heart failure ▶ Childbirth ▶ High altitude ▶ Cancer ▶ Inherited blood-clotting conditions ▶ Ageing	▶ Age ▶ Hypertension (high blood pressure) ▶ Diabetes ▶ Obesity ▶ Inactivity ▶ Smoking ▶ Family history of CCF ▶ Previous heart attack or heart conditions ▶ Exposure to certain radiation (such as in cancer treatments)

Risks that increase the likelihood of respiratory system problems

The risks that increase the likelihood of common respiratory health problems associated with other body systems are summarised below.

Asthma

- Family history of allergies or asthma
- Females more likely to develop asthma after 40 than males
- Overactive bronchial tubes
- Smoking
- Exposure to irritants in the workplace
- Dust mites
- Cockroaches
- Obesity

Chronic bronchitis

- Family history
- Being a pre-term baby
- Asthma
- Smoking
- Exposure to chemicals and dust in the workplace, such as asbestos

Risks that increase the likelihood of musculoskeletal system problems

Common musculoskeletal health problems associated with other body systems are increased by the risks summarised below.

Arthritis

- Ageing
- Family history
- Injury
- Overactive immune system

Fractures	
▶ Osteoporosis	▶ Ageing

Osteoporosis	
▶ Female gender	▶ Bed rest
▶ Family history	▶ Diet low in food containing vitamin D and calcium
▶ Ageing	▶ Dieting excessively
▶ Osteoporosis,	▶ Female athletes
▶ Alcohol consumption	
▶ Lack of physical activity	

Risks that increase the likelihood of endocrine system problems

The factors that increase the likelihood of diabetes-related health problems associated with other body systems are summarised below.

Diabetes Type 1	**Diabetes Type 2**
▶ Family history	▶ Family history
▶ European ethnicity	▶ Hypertension
▶ Slightly more common in males	▶ Alcohol consumption
	▶ Inactivity
	▶ Obesity
	▶ Ageing

Risks that increase the likelihood of nervous system problems

The risks that increase the likelihood of common nervous system health problems associated with other body systems are summarised below.

Stroke

- High blood pressure
- Diabetes
- Alcohol consumption
- Smoking
- High cholesterol
- Being overweight
- Physical inactivity
- Ageing
- Male gender
- Family history
- Previous stroke

Seizures

- Epilepsy
- Family history
- Head injury
- Stroke
- Brain tumour
- Brain infection
- Lead poisoning
- Prenatal development
- Alcohol and other drug use
- Alzheimer's disease

Forms of dementia

- Ageing
- Vascular dementia
- Male gender
- Heart disease
- High blood pressure

Risks that increase the likelihood of eye health problems

The information provided below summarises the risks that increase the likelihood of common eye health problems associated with other body systems.

Cataracts	Myopia	Visual impairment
▶ Trauma to the eye ▶ Eye surgery ▶ Smoking ▶ Diabetes ▶ Exposure to ultraviolet light ▶ Certain medications ▶ Ageing	▶ Family history	▶ Eye injury ▶ Eye infection ▶ Family history ▶ Ageing

Risks that increase the likelihood of digestive system problems

The risks that increase the likelihood of common digestive system health problems associated with other body systems are summarised below.

Constipation

- Lack of fluid
- Poor diet (high in animal fats, low in fibre)
- Caffeine
- Alcohol
- Poor bowel habits
- Certain medications

Diverticulitis

- Diets low in fibre
- Repeated bowel straining

Dysphagia

- Build-up of stomach acid
- Inflammation of the oesophagus
- Oesophageal tumours
- Lymph nodes, tumours or bone spurs that press against oesophagus

Gallstones

- Female gender
- Being overweight
- Fasting or dieting
- Cholesterol-lowering medication

Gastroenteritis

- Exposure to virus
- Exposure to bacteria (often through food or water)

Risks that increase the likelihood of urinary system problems

The information provided below summarises the risks that increase the likelihood of common urinary system health problems associated with other body systems.

Dysuria

- Bladder infection
- Prostate infection
- Sexually transmitted disease
- Lesions on genitals
- Post menopause
- Neurological conditions that affect bladder emptying
- Diabetes
- Cancer

Incontinence

- Stress occurring during physical activity
- Diabetes
- Stroke
- Dementia
- Parkinson's disease
- Multiple sclerosis
- Menopause
- Post-surgery

Urinary tract infection

- Kidney stones that block urinary tract
- Medical conditions that affect incomplete bladder control
- Women who are sexually active
- Diaphragm use (contraceptive)
- Men with enlarged prostate
- Children or babies
- People living in aged care environments

Prostatic cancer

- Ageing
- African ethnicity
- Family history of cancer
- Infection
- Diet
- Exposure to some chemical agents
- Obesity

Risks that increase the likelihood of reproductive system problems

There are risks that increase the likelihood of common obstetric emergency health problems associated with other body systems.

These risks include:

- ectopic pregnancy or previous ectopic pregnancy
- surgery on fallopian tubes
- chronic high blood pressure
- kidney disease
- multiple pregnancies (twins, triplets)
- age – younger than 21 and older than 35
- failure of IUD (contraceptive)
- pre-eclampsia
- diabetes
- family history
- obesity.

Risks that increase the likelihood of integumentary system problems

The risks that increase the likelihood of common integumentary system health problems associated with other body systems are summarised below.

Burns

- Exposure to heat
- Exposure to chemicals
- Exposure to radiation

Dermatitis

- Family history
- Allergies
- Exposure to detergents and soaps

Impetigo

- Exposure to bacteria
- Open wounds that cause infection to spread

Open wounds

- Exposure to sharp implements, including sharp corners or objects
- Falls
- Surgery

Wound infection

- Diabetes
- Surgery
- Poor immunity

Risks that increase the likelihood of dental health problems

The information provided below summarises the risks that increase the likelihood of common dental health problems associated with other body systems.

Gingivitis

- Smoking
- Family history
- Female gender
- Diabetes
- Stress
- Diet low in vitamins

Halitosis

- Poor dental hygiene
- Low carbohydrate diets
- Smoking
- Gum disease (gingivitis)
- Infection
- Bronchitis
- Kidney disease
- Diabetes
- Dental applications (false teeth)

Edentulous (non-natural teeth)

- Age
- Wear and tear
- Poor personal dental care
- Poor dental care and monitoring by a dentist

Risks that stem from common health problems

It is one thing to know about factors that increase a person's risk of contracting an illness or a disease. However, it is also important to understand the risks associated with having the illness or disease. These may be risks for the person, others they live with, people the person has contact with or people who provide for their care needs. More information is provided below.

People with care needs

Risks for the person with care needs

- People with osteoporosis are at risk of falling and fracturing bones.
- People with diabetes are at risk of high blood pressure, dementia, stroke, wound infection, dysuria, incontinence, heart disease, cataracts and dental problems.
- People with diabetes may go into a low blood sugar coma.
- People who are hearing impaired may not hear warnings, such as when crossing the road or fire alarms.
- People with vision impairment may trip and fall, or have trouble being mobile in public spaces.
- People with dysphagia may choke on food or liquid.
- People who have a seizure or become unconscious because of heart problems or stroke may injure themselves when collapsing.

Family, friends and public

Risks for people with whom the person has contact

- Walking aids, such as mobility aids or wheelchairs, may obstruct passages, including fire exits.
- People might contract infectious diseases, such as gastroenteritis or influenza.

Support or care workers

Risks for people working with the person

- Walking aids, such as mobility aids or wheelchairs, may obstruct passages, including fire exits.
- Workers might contract infectious diseases, such as gastroenteritis or influenza.
- Workers could injure themselves when lifting or moving a person who is immobile or who has collapsed.
- Workers could injure themselves when using equipment or machinery.
- Workers could handle sharps that have not been disposed of correctly.

Example

Identify risks that can affect health

Tara is completing an induction at an aged care home where she is accompanying the residents on an outing to the park and beach. Tara is asked to push Daphne in a wheelchair. As the group walks along the headland towards the park, the incline is fairly steep, and Tara's back begins to hurt. When the group returns to the residence, Tara realises she is in a lot of pain in her lower back, and needs to leave her shift early to seek medical attention.

On her next shift, Tara consults her supervisor and advises her of the back problem that resulted from pushing Daphne's chair. Her supervisor suggests that Tara should avoid heavy lifting and pushing the wheelchairs on inclined surfaces, and that she needs to ask another staff member to help. She also reports the incident as a work health and safety risk.

Practice task 10

1. What are the most common risks that increase the person's chance of contracting or developing a health problem?

2. What are two external factors that could result in an abnormal temperature reading?

3. Peter has a person in his care who has diabetes since he was a young child. He manages his diabetes well, but needs to be monitored and reminded to check his blood glucose levels. What health risk does a person with diabetes face?

Click to complete Practice task 10

3D Recognise and refer potentially serious issues in line with organisation requirements

When you recognise a physical health issue in a person under your care, and the care they require is out of your scope of practice, then you must be refer them to another health professional who specialises in that area of health.

If it is a potentially serious health issue, then you must report and refer as soon as possible according to organisational requirements. Your supervisor, as stipulated in your position description, is the person you need to refer to initially. If your supervisor is not available, and a person you are providing support to is experiencing a serious variation from normal functioning, you need to immediately contact a health professional, or in the case of a medical emergency, ring 000.

Your scope of practice defines the actions you are permitted to take within your position. It is important to understand your scope of practice so you also know:

- who you should refer to
- who you should refer to if your supervisor is not available
- who you should refer to for medical advice or in the case of a medical emergency.

Recognise potentially serious problems

The person's health and medical history notes and care plan should indicate what you can expect in terms of their medical history, and any potential health issues they may face. The care plan may also contain details about signs and symptoms that could indicate a potential health problem to be alert to, and precautions to take to avoid a medical emergency or incident.

Ensure the person you are providing support to has access to all necessary medications and equipment at all times, to assist in avoiding a serious health problem. There should be a person responsible for the maintenance and adequate stocking of the first-aid kit. In some workplaces these can be extensive and include a defibrillator.

Medication and equipment may include:

- medical and health notes and care plan
- individual person's medication
- first aid kit with defibrillator
- oxygen
- blood sugar monitor (diabetes)
- insulin (diabetes)
- mobility aid, walking stick or wheelchair.

Report potentially serious problems

Report all changes from normal functioning as soon as you observe them. In the case of a potentially serious variation from normal functioning, call an ambulance immediately. In the event that the person seems to be experiencing symptoms of cardiac arrest, stroke, an asthma attack or has a fall that appears to have caused a fracture or other injury, you must report the incident as an emergency.

While you wait for the ambulance, you need to remain calm and keep the person as calm and comfortable as possible. If they are conscious, reassure them in a calm tone. Ensure the person is kept warm and gently loosen clothing or jewellery if restrictive. If you are trained in first aid, apply it accordingly.

If you are not sure what the symptoms indicate, call the ambulance regardless. You need to take all precautions to ensure the person is kept safe.

Emergency services will require:

- your location
- the number you are calling from
- the person's name
- the person's status
- physical changes the person has experienced
- what you have done for the person
- what you can do for the person until an ambulance arrives.

Report incidents

After an issue or incident has occurred, report it verbally to your supervisor and complete a written report or a digital report, as required. If your supervisor is not available, contact an appropriate health professional or manager. Ensure all reporting adheres to organisational requirements, which may include clinical practice guidelines, protocols and organisation policies and procedures. These requirements will vary according to your workplace, so you must be aware of the specific obligations in each workplace. Some reports may become legal documents, so ensure all reports are completed accurately, clearly and concisely as soon as possible.

Incident report form

Incident report forms are designed to achieve several things: identify the cause or contributing factors to an incident where someone is harmed, provide details of the actions that were taken to prevent harm and care for a person who is harmed, and provide details of actions that have been taken to prevent a recurrence of the same incident or 'near miss'.

Here is a simple incident report form that records an incident in an aged care home.

Incident report form			
Report compiled by: Davey Jacobs		**Contact phone number:** 9999 0000	
Date of incident: 17/10/16		**Time of incident:** 1900 hrs	
Name/s of person/s injured/person/s involved: Mr Keith Wales **Staff/resident:** Resident			
If client, where was staff member at time of incident? In Mr Wales's room			
Part of body injured (tick the correct box and enter L for left side or R for right side, if applicable)			
Head/neck ☐	Shoulder/arm ☐	Hands/fingers ☐	Left/right side ☐
Eyes ☐	Mouth ☐	Hip/leg ☐	Knee ☐
Ankle ☐	Feet/toes ☐	Torso/ribs ☐	Wrist ☐
Description of incident: Sleeping tablet given to wrong resident			
Cause of incident: I was asked to give the sleeping tablet to 'Keith' and I did not check which Keith. I was only looking after Keith Wales today, so thought the tablet was meant for him. I did not check the care plan to see if sleeping tablets were part of his care until after I had given him the tablet. When I realised my mistake, I verbally reported it to RN Kath Williams, supervisor on my shift.			
Treatment given: None			
Witnessed by: Davey Jacobs (aged care worker)			
Corrective action taken (Health and safety officer):			

Arrange referral if necessary

If the situation is not an emergency, your supervisor may suggest a person should see a doctor or relevant health professional such as a dentist, podiatrist, audiologist, physiotherapist, psychologist or psychiatrist. It will be necessary to discuss referral and the best person with the specialist skills to deal with the health issue. Your supervisor will make some recommendations, and they may ask you to arrange the appointment. Ensure that the referral information is recorded on the person's health documentation. If possible follow up with the person the next time you meet with them to determine the outcome of the intervention.

Example

Recognise and refer potentially serious physical health issues

Derek, a person with care needs that James works with, is experiencing heaviness in his chest and pain in his left arm radiating up his neck and to his face. James has been trained in first aid and knows that these symptoms may indicate a heart problem, so he makes sure Derek comfortable and immediately calls for an ambulance. He explains where he is, gives the operator the phone number and everything he knows about Derek's situation and what he has observed.

Derek is becoming quite distressed, so James keeps him as calm as possible until the ambulance arrives. He also calls the supervisor while he waits and advises her what has happened. The supervisor checks Derek's care plan to see if the symptoms relate to a previous health issue. There is no mention of previous history of heart issues, so James and the supervisor remain focused on keeping Derek comfortable, while monitoring his condition until the ambulance arrives.

Practice task 11

1. List three pieces of equipment that should always accompany or be easily accessed for a person with diabetes.

2. Who is the most appropriate professional to refer a person to with the following conditions:
   - Suspected broken bone
   - Deterioration in hearing
   - Slurred speech due to loose or ill-fitting dentures

3. What are two purposes of an incident report form?

Click to complete Practice task 11

Summary

1. In your role, you may be the first to recognise the signs and symptoms of a health problem. The situation must then be clarified with a relevant health professional.
2. Learn the appropriate methods for assessing health status relevant to your area of work.
3. Use common abbreviations and terminology when measuring health.
4. There are several external factors that may be responsible for significant variations from normal health status, which include diet and nutritional factors, use of alcohol, tobacco and other substances, environmental factors, level and type of physical activity.
5. There are a number of internal factors that may be responsible for significant variations from normal health status, which include interrelationship between body systems, emotional responses, patterns of thinking, disease process and pathogens.
6. There are many factors to consider that may be responsible for abnormal readings.
7. There are many risk factors such as age, gender, family history and lifestyle choices that can contribute to the risk of contracting an illness.
8. Learn the major signs and symptoms of each of the body systems relevant for your job role.
9. Staff members need to report and refer all potentially serious health problems as soon as possible according to organisation protocol and procedures.

Learning checkpoint 3
Identify variations from normal physical health status

This learning checkpoint allows you to review your skills and knowledge in identifying variations from the normal physical health status of a person with health care needs.

Part A

1. List some symptoms that may indicate a change in health status that should be reported immediately.

2. List at least three factors which could lead to a false reading, when measurements are being taken to assess a variation in normal health functioning.

3. When reporting symptoms that may indicate a change in health status, what documentation should guide your actions?

4. List the steps an organisation will expect you to take if there has been an incident or variation from normal functioning in the health status of a person you provide care support to.

5. What should you do if you observe a variation in normal functioning in a person that you provide care to when you are on an outing with them?

6. Why is it important to know who you should report the change in health status to?

7. List five risk factors associated with common health problems.

8. What risk factors are there for staff members or other people working with people with care needs, such as residents in an aged care home?

9. What do you need to do to minimise risks?

10. How can you clarify your scope of practice so that you do not act in situations which are beyond your skills and/or level of responsibility?

11. What risk factors apply to a person who has oral health problems?

12. List three common disorders that are linked to diet and nutrition.

13. Why is it important to notify your supervisor as soon as possible if you suspect cancer in a person under your care?

Part B

Locate and read protocols and procedures from your workplace or work placement, and write a summary of the guidelines for each of the following points.

1. Recognising signs and symptoms that suggest variations from normal functioning

2. Identifying potential factors responsible for variations from normal functioning

3. Identifying risks associated with common health problems

4. Recognising and referring potentially serious physical health issues