



FIG 1.1.1
Health means different things to different people.

UNDERSTANDING HEALTH AND DEVELOPMENT

01

KEY KNOWLEDGE

- > Definitions of health and the limitations of these definitions
- > Physical, social and mental dimensions of health and their interrelationships
- > Measurements of health status, including life expectancy, incidence, prevalence, trends, morbidity, mortality, disability adjusted life years (DALYs) and burden of disease
- > Definitions of physical, social, emotional and intellectual development
- > Characteristics of, and interrelationships between, physical, social, emotional and intellectual development
- > The interrelationships between health and individual human development

KEY SKILLS

- > Define health and individual human development
- > Explain the limitations of definitions of health
- > Describe the characteristics of, and interrelationships between, dimensions of health
- > Describe health status measurement terms
- > Describe characteristics of, and interrelationships between, dimensions of individual human development
- > Explain the interrelationships between health and development

> EXPLORING HEALTH

1.1

WHAT IS HEALTH?

As part of everyday conversation with family, friends, classmates and work colleagues, we talk about health: we communicate how we feel about ourselves and our surroundings. Common greetings include, 'How are you?', 'How are you feeling?' and 'How have you been?' When we respond to these questions, we often discuss our health. We talk about when we are feeling good, when we have recovered from a bout of illness, and when we have played well at sport or started going to yoga classes. We also talk with our family or friends when we are feeling tired or stressed. Our language and social customs reflect how our health plays a significant role in our lives.

Few would disagree that being healthy is desirable, but what do we mean by 'healthy'? What does 'health' mean?

A good place to start is to consider what health means to you. What are your perceptions and images of health? What factors have influenced or shaped them? Think about the following questions:

- > Do you consider yourself a healthy person?
- > How would you describe the health of people you know, such as family and friends?
- > What images do you have of a 'healthy' person? What do you think an 'unhealthy' person would look like? What characteristics would each have?
- > What factors did you take into account when making these judgments about 'healthy' and 'unhealthy'? Do 'healthy' and 'unhealthy' people act, behave or think differently?
- > Is a person in a wheelchair healthy? What about someone who is blind?
- > Is someone who lives in a rural area healthier than someone who lives in the city?
- > Is a wealthy person healthier than a poor person?
- > How do governments and health professionals (like doctors) define health?

If you discuss these points with others in your class, you will begin to see that health means different things to different people. Let us look at some examples to explain this idea:



FIGURE 1.1.2

Do you think the people in these four photographs look 'healthy'?

- > Consider a person who is very sporty or athletic. Their perception of health might be measured by their physical fitness, such as how many laps of the pool they can swim in a specified time, or their ability to compete in a triathlon.
- > Another person might see their measure of health as the number of times they visit a doctor each year, or how often they are sick.
- > An elderly person might view health as simply feeling well and still being able to participate in activities, such as taking a daily walk and enjoying a range of social outings with friends.
- > Someone who has a demanding job might see health as being able to cope with their workload without feeling 'stressed', eating well and managing to successfully achieve a work-life balance.

These examples help to explain the diverse meaning of health to different people; however, they only give us part of the picture. Consider, for example, a skilled triathlete who suffers from depression, or a person who swims and relaxes at the beach for hours with little sun protection. The busy worker might think that they cope better with their job by going to the pub each night after work or smoking a packet of cigarettes each day. In other words, some people may be healthy in some ways but not in others. In addition, what we consider to be 'healthy' does not apply to everyone.

DEFINITIONS OF HEALTH

You are probably beginning to appreciate that people have many views about the meaning of health. Why is how we define health important? Our understanding of health influences the importance we place on investing in health.

Let us look at two important definitions of health: those of the World Health Organization (WHO) and the Ottawa Charter for Health Promotion.

World Health Organization's definition of health

In 1945, after World War II, a group of diplomats met and formed the **United Nations** (UN). One of the first goals of the United Nations was to establish a global organisation to provide leadership on health matters. This resulted in the formation of the **World Health Organization** (WHO).

One of the most widely known definitions of health is the one included in the preamble of WHO's constitution:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Source: World Health Organization, 1946

While this definition has been widely used, it is considered by some to be unrealistic, possibly because it seems difficult to achieve such a 'complete' state.



The Ottawa Charter for Health Promotion's definition of health

In 1986, WHO held the first International Conference on Health Promotion in Ottawa, Canada. An important publication from this conference was a document focusing on **health promotion**: the **Ottawa Charter for Health Promotion**.

The Ottawa Charter for Health Promotion identified the prerequisites for health as:

- > peace
 - > education
 - > income
 - > sustainable resources
 - > shelter
 - > food
 - > a stable ecosystem
 - > social justice and equity,
- and defined health promotion as:

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.

Source: Ottawa Charter for Health Promotion, 1986

What do you consider essential for good health?

ACTIVITY 1.1A

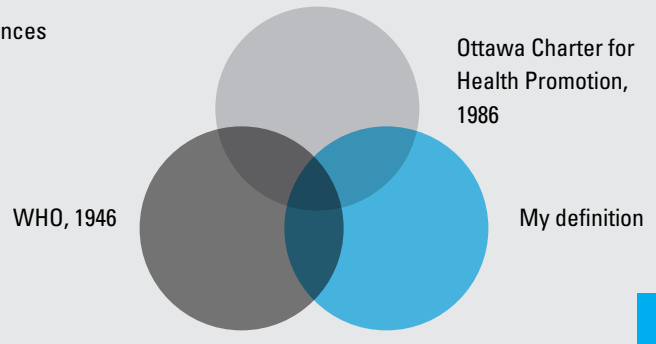
Definitions of health

Reread the definitions of health from WHO and the Ottawa Charter for Health Promotion.

- Find at least one other definition of health. Copy the table below into your workbook, and complete it by identifying the strengths and weaknesses of each definition.

DEFINITIONS OF HEALTH	STRENGTHS	WEAKNESSES
WHO, 1946		
Ottawa Charter for Health Promotion, 1986		
My/other definition		

- Use a Venn diagram to identify similarities and differences among the three definitions.
- Do you think it is important that health is defined? Explain your answer.



THE DIMENSIONS OF HEALTH

Although health is defined in different ways, and each definition has its limitations, we can say that health relates to physical, social and mental components, or dimensions. We also know that these **dimensions of health** are closely interrelated.

The physical dimensions of health

The **physical dimensions of health** relate to the efficient functioning of the body and its systems. A body's physical dimensions of health include its:

- > physical capacity (energy, strength and coordination) to perform ordinary tasks
- > resistance or susceptibility to disease
- > ability to recover from illness and injury
- > ability to maintain an appropriate weight
- > physical fitness
- > nutritional status.

The physical dimension of health is probably the most obvious and the easiest to describe. The first thing most people think of when they think of health is a person's physical wellness and freedom from illness.

The social dimensions of health

The **social dimensions of health** refer to the ability to independently and cooperatively interact with others and participate in the community. People are social beings and their wellbeing requires them to interact with others and adapt to different social environments.

The social dimensions of health include a person's ability to:

- > develop and maintain relationships with family, friends and others
- > communicate positively and effectively with others
- > behave appropriately in a range of social situations
- > be involved in and contribute positively to their community
- > access and use a range of resources that support social wellbeing.

The mental dimensions of health

The **mental dimensions of health** refer to the aspects of health and wellbeing that relate to people's abilities to recognise their own strengths and weaknesses, cope with the normal stresses of life, work productively and make a contribution to their community.

Examples of the mental dimensions of health are:

- > understanding and expressing one's emotions, and being aware of the feelings of others
- > having positive self-esteem and self-confidence
- > being able to deal appropriately with difficult events, to solve problems and to cope with and manage stress
- > setting goals, making decisions and taking appropriate action
- > feeling competent and having a sense of power over one's life
- > having the capacity to love, work and play.

MILLY CONQUERS THE RIDE



Fifteen-year-old Milly Gough was diagnosed with type 1 diabetes at the age of six. Last year the Cobram girl decided that she wanted to do the Great Victorian Bike Ride, cycling 590 km in eight days. She shared her experience with *Diabetes Today*.

'I'm not a very sporty person so it was a big challenge for me. I trained with friends from my school prior to the event. Mum bought me a new bike and all the exciting gear, but it was still a bit daunting.

'As we got closer to the ride everyone was getting anxious, especially me. Not only did I have to worry about making it physically, I had to worry about how I was going to control my diabetes. I was starting to feel that maybe I couldn't do it, there were too many things to worry about:

keeping my insulin cold, changing insulin amounts, doing heaps of BGLs [blood glucose level checks], and Mum stressing over me.

'I was there on the first day, though, along with 4000 other cyclists. The ride was hard, but I had the time of my life. My BGL levels undulated, but I had a daily phone check with Mum to help me sort out the insulin. Because of the constant exercise, as well as the normal carbo meals, I could eat foods like chocolate and icecream which I'm not usually allowed!

'I didn't think I could do the ride because of my diabetes, but I did it. I felt so proud of myself and it has boosted my confidence. I'm definitely going to do it again next year. I wouldn't want to miss it.'

Source: *Diabetes Today*, issue 29, April 2009, p. 4

ACTIVITY 1.1B

The dimensions of health

Read the article 'Milly Conquers the Ride', and answer the questions.

- 1 Identify the challenges that Milly faced. How did she meet these challenges?
- 2 How would describe Milly's health? Explain your answer.

- 3 Identify the dimensions of health apparent in the case study. Give examples.
- 4 How do the three dimensions of health interact with each other in Milly's case? (See page 8 for the interrelationships between the three dimensions.)





Figure 1.1.3
How do these photographs reflect the different dimensions of health?

Interrelationships between the dimensions of health

Health encompasses all three dimensions: physical, social, and mental. How 'healthy' we feel at any given point in time varies depending on some or all of these dimensions. Our state of health is dynamic: it is constantly changing from one day to the next.

In addition, our health results from an interaction between the physical, social, and mental aspects. Each dimension affects the others in some way.

For example, many teenagers play sport and benefit greatly from the physical exercise and from the positive effect sport has on how they feel about themselves and their interactions with peers.

A term that is sometimes used is **optimal health**. Optimal health is the best possible health to which someone can realistically aspire, in some or all of the three dimensions. A person achieves a complete state of optimal health when all three important dimensions are in balance.

HOW TO SAVE A LIFE



Isaac Slade, the lead singer of Colorado-based alternative rock band *The Fray*, explained in an interview the inspiration for their hit song 'How to Save a Life'.

While he was working as a mentor at a camp for troubled teenagers, Slade says, 'One of the kids I was paired up with was a musician. Here I was, a protected suburbanite, and he was just 17 and had all these problems. And no one could write a manual on how to save him.' All he really needed was support but, even though family and friends tried to help, no one knew what to do.

Source: Elysa Gardner, 'Debut "How to Save a Life" Takes on a Life of Its Own', *USA Today*, 7 December 2007

Although the band has explained their initial inspiration for writing the song, they are also interested to hear others' interpretations of the lyrics. They have set up a website where fans can submit music videos they had made for the song.



FIGURE 1.1.4
The Fray's Isaac Slade performs

HOW TO SAVE A LIFE

Step one you say we need to talk
He walks you say sit down it's just a talk
He smiles politely back at you
You stare politely right on through
Some sort of window to your right
As he goes left and you stay right
Between the lines of fear and blame
And you begin to wonder why you came

Where did I go wrong, I lost a friend
Somewhere along in the bitterness
And I would have stayed up with you all night
Had I known how to save a life

Let him know that you know best
'Cause after all you do know best
Try to slip past his defense
Without granting innocence
Lay down a list of what is wrong
The things you've told him all along
And pray to God he hears you

Where did I go wrong, I lost a friend
Somewhere along in the bitterness
And I would have stayed up with you all night
Had I known how to save a life

As he begins to raise his voice
You lower yours and grant him one last choice
Drive until you lose the road
Or break with the ones you've followed
He will do one of two things
He will admit to everything
Or he'll say he's just not the same
And you'll begin to wonder why you came

Where did I go wrong, I lost a friend
Somewhere along in the bitterness
And I would have stayed up with you all night
Had I known how to save a life

Source: Isaac Slade and Joe King

ACTIVITY 1.1C**Interrelationships between the dimensions of health**

Read the lyrics to *How to Save a Life* and/or listen to the song, and answer the following questions.

- 1 In what way did Isaac Slade feel that he was different from the young musician he was mentoring?
- 2 What challenges did Slade face as a mentor? Explain your answer using examples from the lyrics.
- 3 Identify examples of the social dimensions of health for Isaac and/or the young man he was mentoring.
- 4 In what ways do the social and mental dimensions of health interact?
- 5 Why do you think the band opened the song to interpretation?
- 6 Although the lyrics describe a difficult situation, what are some of the positive messages it contains?

**HEALTH STATUS**

How can we describe the **health status** of Australians? How 'healthy' are Australians, particularly young Australians? How long can today's Australians be expected to live? Which diseases and conditions are the greatest burden on the Australian people and the nation's healthcare system?

Answering these important questions helps us understand the health issues facing Australians and how people's health can be improved.

Defining 'health status'

What is meant by the term 'health status'?

In 1998, WHO's *Health Promotion Glossary* provided a definition of health status: 'A description and/or measurement of the health of an individual or population at a particular point in time against identifiable standards, usually by reference to health indicators.'

In the report *Australia's Health 2008*, the **Australian Institute of Health and Welfare** described health status as 'An individual's or population's overall level of health, taking into account various aspects such as life expectancy, amount of disability, levels of disease risk factors and so on.'

Measuring health status

The many ways of measuring health status provide a picture of the health of a population and the different groups within it, such as youth. Next, we will look at ways of measuring health status, including life expectancy, morbidity, mortality, burden of disease and disability adjusted life years (DALYs).

Life expectancy

One of the most commonly used measures of health status is **life expectancy**. Life expectancy refers to the average number of years of life remaining to a person at any specified age.

Life expectancy at birth is the most commonly used measure. Life expectancy at birth estimates the average number of years newborns can be expected to live if existing mortality (death) patterns continue during their lifetime. For example: in 2003–05 Australian females at birth could expect to live an average of 83.3 years and males, 78.5 years. Life expectancy in Australia has increased during the last one hundred years.

However, are people spending these extra years of life in good health or in poor health? While increases in life expectancy are important, so too is the idea that people live their longer lives in good health – healthy life expectancy.

Health adjusted life expectancy

Another common measure of life expectancy is **health adjusted life expectancy** (HALE). This is an estimate of the number of healthy years (years free from disability or disease) that a person born in a particular year can expect to live. The average number of years spent in ill health is subtracted from the overall life expectancy, taking into account the relative severity of the poor health.

The equation used to calculate the health adjusted life expectancy is:

$$\begin{array}{r} \text{Health} \\ \text{adjusted life} \\ \text{expectancy} \\ \text{(HALE)} \end{array} = \begin{array}{r} \text{life} \\ \text{expectancy} \\ \text{(LE)} \end{array} - \begin{array}{r} \text{number of} \\ \text{years living} \\ \text{in unhealthy} \\ \text{states} \end{array}$$

For example, the life expectancy of males born in Australia in 2003–05 was 78.5 years and the estimated HALE was 70.6 years. This means that they could expect to spend an average of 7.9 years of their life in poor health. The female life expectancy for the same period was 83.3 years and the HALE 75.2 years, which means females could expect to live 8.1 years in poor health.

Morbidity

The Australian Institute of Health and Welfare explains that **morbidity** ‘refers to ill health in an individual and to levels of ill health in a population or group’. Factors affecting morbidity include illness, disease, disability and injury.

The Australian Institute of Health and Welfare defines **illness** as ‘a state of feeling unwell’. They define the term **disease** as ‘a physical or mental disturbance involving symptoms (such as pain or feeling unwell), dysfunction or tissue damage’. The two terms are subtly different in meaning, although the term ‘illness’ is commonly used to mean ‘disease’.

Diseases and injuries directly affect health. They cause suffering, disability and premature death. They result in significant financial costs, such as the expenses of running the healthcare system and the loss in productivity when people take days off work because

of illness or to care for people who are ill. Diseases and injuries also reduce the quality of people’s lives.

Two terms that are often used in relation to morbidity are **incidence** and **prevalence**.

According to the Australian Institute of Health and Welfare, the **incidence** of a disease is ‘the number of new cases (of an illness or event, and so on) occurring during a given period’. The following extract shows the term incidence used in context to refer to the number of new cases of Type 1 diabetes.

Australia has a relatively high **incidence** of Type 1 diabetes and there is evidence that it is increasing. Recent studies in New South Wales and Western Australia found that the **incidence** of Type 1 diabetes increased significantly by 2.8 per cent to 3.1 per cent per year between 1985 and 2002.

Source: AIHW, *Young Australians: Their Health and Wellbeing 2007*, p. 40



FIGURE 1.1.5

Morbidity or ill health causes financial costs such as the expense of running the healthcare system.

The Australian Institute of Health and Welfare defines **prevalence** as ‘the number or proportion (of cases, instances and so forth) present in a population at a given time’. So, in the extract below, prevalence is referring to the estimated number of cases of asthma among young Indigenous Australians expressed as percentages.

The estimated **prevalence** of asthma among young Indigenous people in 2004–05 was 16 per cent (12 per cent for males and 19 per cent for females). This compares with 9 per cent for all young Australians.

Source: AIHW, *Young Australians: Their Health and Wellbeing 2007*, p. 40

Mortality

Data on death (**mortality**) and its causes are important measures of health status. The study of mortality looks at how many people die, what causes people to die, the average age at which people die and how many potential years of life are lost when a person dies prematurely.

Among the specific causes of death, coronary heart disease is the greatest contributor to premature **mortality** among males, but breast cancer is the leading cause of potential years of life lost [premature mortality] among females.

Source: AIHW, *Australia's Health 2008*, p. 50

Burden of disease and the disability adjusted life year (DALY)

The **burden of disease** is the effect of a condition or disease on health – through years lost from premature death and years spent in poor illness or poor health.

To try to calculate which conditions have the greatest effect on our health – the greatest burden of disease – a measure called the **DALY**, which stands for **disability adjusted life year**, is used. One DALY is one year of ‘healthy life’ lost due to a disease or injury. In simple terms, if a person who has been healthy all of her life dies from cancer 30 years before her estimated life expectancy, she has lost 30 years of healthy life, or 30 DALYs.

DALYs not only measure premature death (years of life lost – YLL), they also take into account the quality of life lost from living with a disability or injury (years of life living with a disability – YLD). A simplified equation to calculate the DALY is:

$$\begin{array}{l} \text{DALY} \\ \text{disability} \\ \text{adjusted} \\ \text{life year} \end{array} = \begin{array}{l} \text{YLL} \\ \text{years of} \\ \text{life lost} \end{array} + \begin{array}{l} \text{YLD} \\ \text{years of life} \\ \text{living with} \\ \text{a disability} \end{array}$$

The total burden of disease and injury among young Australians aged 15–24 in 2003 was estimated to be 196 557 DALYs. DALYs show us both the total burden of disease across Australia and allow us to look at specific population groups, diseases and conditions. Using DALYs as a common measurement, health professionals are able to compare very different diseases and injuries, and even lifestyle risk factors such as alcohol, smoking and high cholesterol.

The ability to measure and compare the effects of very different diseases, and to see which have the greatest burden of disease and who they affect, allows governments, hospitals and medical practitioners to allocate resources, such as research funding, prevention programs and medical facilities, in the most effective way.

Health status trends

We often see the term **trends** used when discussing the measures of health status. Trends refer to tendencies or directions, such as increases, decreases, improvements, reductions and other changes over time. For example:

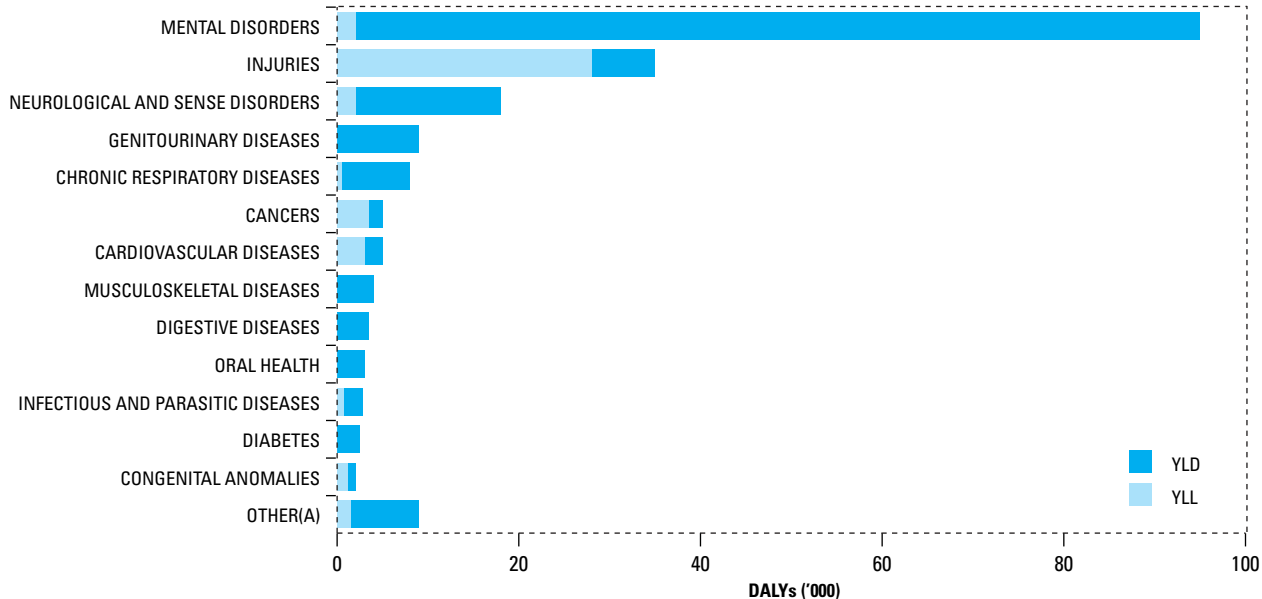
The overview that emerges shows that health status is steady or improving and few of its indicators show unfavourable **trends**. Mortality especially is reducing and the levels of certain illnesses and diseases have reduced. Determinants of health show a more mixed picture with smoking-related indicators having improved levels, but rates of overweight and obesity increasing.

Source: AIHW, *Australia's Health 2008*, p. 476

<0139> filler

FIGURE 1.16

Organisations such as QUIT can have a positive effect on health status trends.



Includes acute respiratory diseases, maternal conditions, nutritional deficiencies, endocrine and metabolic disorders, other neoplasms, skin diseases and ill-defined conditions.

FIGURE 1.1.7

The burden (YLL, YLD and total DALYs) of major disease groups for 15–24 year olds, 2003.

Source: AIHW, *Young Australians: Their Health and Wellbeing 2007*, p. 20

TOOLKIT

Describing health status measurement terms

One of the skills you need is the ability to describe health measurement terms. To describe means to provide an outline of something, often including details.

In Activity 1.1D (on page 14), you are to examine the bar graph in Figure 1.1.7. Each bar represents the total number of years of life lost (DALYs) in thousands for a major disease group. For example, the number of years of life lost due to mental disorders is approximately 96 000.

Remember that the total of DALYs is made up of two components – the YLL (years of life lost) plus the YLD (years of life living with a disability) – which are represented by the two colours in each bar, and the proportions of each vary for each disease.

- > For injuries, a larger proportion of total DALYs comes from YLL than YLD. This means that more years are lost due to premature death than from living with the disease in poor health.
- > For mental disorders, the greater proportion of total DALYs comes from the YLD component. More years are lost because of illness and disability than from dying prematurely.

For Question 5, to find an example of each measurement term used in context, you will need to access a current health report, such as a recent report published by the Australian Institute of Health and Welfare, which you can find on the Internet. <www.aihw.gov.au>

(Hint: Use the 'Find' function to scan through PDF documents and quickly find the measurement term.)



ACTIVITY 1.1D**Health status**

- 1 In your own words, explain what is meant by the burden of disease, and what is its relationship to the DALY.
- 2 How is the DALY calculated? What are the advantages of the DALY as a measure of health status?
- 3 Explain what is meant by YLL and YLD.
- 4 Examine Figure 1.1.6.
 - a Write a set of dot points that summarise the information in the figure.
 - b Identify and explain the differences between injuries and diabetes in relation to YLL, YLD and total DALYs.
- 5 The table below lists the key health measurement terms. Complete the table by writing a definition of each term, an example of the term used in context (indicating the source) and an explanation of what this means in your own words. Some examples have been done for you.

TERM	DEFINITION	EXAMPLE OF TERM USED IN CONTEXT AND SOURCE	EXPLANATION IN YOUR OWN WORDS
Life expectancy			
Health adjusted life expectancy (HALE)			
Incidence	The number of new cases of an illness or event occurring during a given period.		
Prevalence			
Trends			
Morbidity		'Sexually transmissible infections (STIs) in Australia still remain a major public health concern, contributing to significant long-term morbidity.' Source: AIHW, <i>Young Australians: Their Health and Wellbeing 2007</i> , p. 58	
Mortality			
Disability adjusted life years (DALYs)			
Burden of disease			

?

> 1.1 REVIEW



- 1 Working in small groups, look through magazines to find pictures that represent 'healthy' people. Paste these on a large sheet of paper. Use headings and categories to:
 - a indicate the criteria your group used when assessing the characteristics associated with being 'healthy'
 - b identify the different dimensions of health – physical, social and mental.
- 2 Complete the table below by:
 - a defining social health
 - b finding two further examples from the chapter
 - c thinking of at least two of your own examples for each dimension of health.
- 3 Our health comes from a complex interaction of the physical, social and mental dimensions. Give two examples of how one dimension of health relates to at least one other dimension of health.
For example: Having the support of your family, friends and teachers when completing your VCE

- (social dimension of health) helps you focus and achieve your goals (mental dimension of health).
- 4 Read the extract below and explain the meaning of the highlighted terms in the context:

'Cancer is a major cause of **morbidity** and **mortality** in Australia, but fortunately, cancer **incidence** among young people remains relatively uncommon compared to the general population. Despite this, cancer was the sixth overall leading cause of the **disease burden** among those aged 15–24 years in Australia in 2003, accounting for an estimated 4456 DALYs (2 per cent of total DALYs). Cancer accounted for an estimated 9 per cent of **years of life lost due to premature mortality**, and less than 1 per cent of **years of 'healthy' life lost due to poor health or disability**.'

Source: AIHW, *Young Australians: Their Health and Wellbeing 2007*, p. 42

DIMENSION OF HEALTH	PHYSICAL	SOCIAL	MENTAL
Definition	The physical dimensions of health relate to the efficient functioning of the body and its systems.		The mental dimensions of health refer to the aspects of health and wellbeing that relate to people's abilities to recognise their own strengths and weaknesses, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community.
Examples from chapter	<ul style="list-style-type: none"> > resistance or susceptibility to disease > > 	<ul style="list-style-type: none"> > develop and maintain social relationships with family, friends and others > communicate positively and effectively with others > > 	<ul style="list-style-type: none"> > understanding and expressing one's emotions > >
My examples	<ul style="list-style-type: none"> > > 	<ul style="list-style-type: none"> > > 	<ul style="list-style-type: none"> > >

> EXPLORING HUMAN DEVELOPMENT

1.2

Take a look at Figure 1.2.1. Look closely at the people in the photograph and see if you can classify them in some way – perhaps by age. This gives you an idea of what the **human lifespan** is about. An individual's lifespan is the length of time that the person lives: from the time a person is conceived to when the person dies.

The human lifespan can be divided into segments that correspond to certain ages. There are different ways of dividing the human lifespan, including the number of stages (and sub-stages), the names that the stages are given and the age ranges that correspond to each stage. In this textbook, the following divisions are used:

- > the prenatal period (conception to birth)
- > infancy (birth to 2 years of age)
- > childhood (2 to 12 years of age)
- > youth (12 to 18 years of age)
- > adulthood (18 years of age onwards).

In this section we are looking at the definitions and characteristics of development.

It is important to note that although we use the term 'youth' in this textbook, some references may use terms such as 'teenagers' and 'adolescents' to mean the same thing.



FIGURE 1.2.1

The human lifespan is an important concept in studying health and human development.

GROWTH

The terms growth and physical development are often used interchangeably, but they do have different meanings and it is important to distinguish between them.

The type of growth and the speed at which it happens varies during the human lifespan. Studies of growth patterns have shown four phases: two characterised by rapid growth and two by relatively slow growth.

- 1 The first major growth phase occurs at conception and finishes during the first year after birth. Think about how much growth occurs to make a single cell into a complex human being: a baby who at birth may weigh 3.5 kilograms and be about 50 centimetres long.
- 2 By about the end of the first year after birth, growth begins to slow down, and it remains relatively slow and steady until puberty.
- 3 During puberty, people experience rapid growth changes, referred to as the growth spurt, which last, on average, about two years. The amount and pattern of growth varies between males and females.
- 4 Following the youth period of the human lifespan, growth tapers off. People usually achieve their final height in early adulthood.

The human body is a highly organised structure that is made up of cells, tissues, organs and body systems.

Although growth is said to cease in adulthood, cells continue to die and be replaced to maintain the structure and function of the body. Eventually, this process slows down and the body becomes less able to replace cells; as we get older the total number of cells in the body begins to decline.

DEVELOPMENT

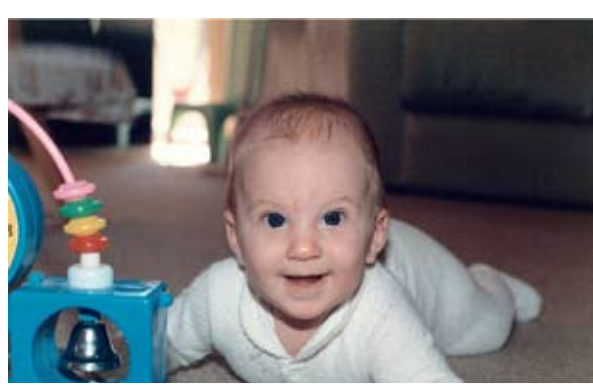
Development refers to a more complex and qualitative change that relates to our physical, social, emotional and intellectual states and capacities. Developmental changes are more difficult to measure or quantify than growth: for example, it is harder to measure sexual maturation or improvements in reasoning ability than it is to tell if someone is getting taller.

Like growth, individual human development is a gradual and complex process that occurs over many years. Unlike physical growth, development continues to occur during adulthood.

The principles of development are explained in Chapter 5.

FIGURE 1.2.2

A lot of growth occurs during a person's life.



THE DIMENSIONS OF INDIVIDUAL HUMAN DEVELOPMENT

The dimensions of individual human development can be classified as physical, social, emotional and intellectual.

Physical development

Physical development refers to changes in the complexity, structure and function of the body. Physical development includes growth.

Some of the changes that occur as part of physical development include:

- > the changes in weight and size that usually occur during the first 15 to 20 years after birth until people achieve their full adult height
- > the rapid physical growth of early infancy and youth, which also occurs, but more slowly, during childhood
- > the changes in body shape and proportions: from having a relatively large head, and short torso and limbs as a child, to having a relatively small head, and long torso and limbs as an adult

- > the changes in body composition, such as to the muscle-to-fat ratio, and changes to the skeleton
- > the changes in the complexity of parts of the body, for example, during puberty as sexual maturation occurs, not only do the sex organs increase in size, but they also become more complex and begin to function
- > the changes in the production of hormones, particularly during puberty and, for women, during menopause.

Social development

Social development refers to changes and improvements in people's abilities to interact with others, relate to other people and learn to live in social groups. The relationships a person has with others are central to social development.

Social development is a lifelong process, which begins at birth when a baby has contact with others, particularly parents and other family members. The social interactions and experiences during infancy, childhood and youth influence how a person relates to others now and in the future.



FIGURE 1.2.3

Social interactions are part of social development.



FIGURE 1.2.4

Self-esteem is an important part of our emotional development

Social development also involves learning complex behaviour. For example, the use of language, both spoken and written, is a significant part of social development.

Socialisation is an important component of social development. Socialisation is the process by which we become aware of and learn the patterns of behaviour expected by a culture or society – how to live in society. Through socialisation we learn social skills and appropriate standards of behaviour.

While our family is a significant influence, we are also influenced by other ‘agents of socialisation’, including individuals such as friends, peers, work colleagues and acquaintances, and organisations such as sporting clubs, religious groups and the media.

Emotional development

Emotional development refers to the capacity to recognise, express and control feelings and emotions. Although infants express or display emotions from birth, as we grow older, we gain greater control over our emotions, the way emotions are expressed increases, and we learn ways of expressing emotions in socially acceptable and appropriate ways. Emotions are important for our interactions with others and how we communicate. They can also motivate our decisions.

The development of **self-concept** and **self-esteem** are important parts of emotional development. Self-concept refers to the set of perceptions or beliefs that a person uses to describe a sense of self, that is, the picture that a person has of himself or herself.

Self-esteem refers to how we feel about ourselves, which might be on a continuous scale from positive to negative.

Intellectual development

Intellectual development refers to changes in mental skills and abilities.

Also called cognitive development, intellectual development involves the capacity to learn information, understand concepts, remember, think logically, reason, be creative and imaginative, and solve problems. The development of language skills is an important part of intellectual development.

Intellectual capacities exist at a simple level in infants, but increase in complexity during childhood, youth and adulthood as people interact with their physical and social environments.

The interrelationships between the dimensions of individual human development

All of the dimensions of individual human development – physical, social, emotional and intellectual – are interrelated. For example:

- > The changes that occur during puberty (physical development) have an effect on a young person’s self-concept and self-esteem (emotional development).
- > Being part of a group, such as an interest group or club (social development) can help a person gain new skills and knowledge (intellectual development).

ACTIVITY 1.2A

The interrelationships between the dimensions of individual human development

1 Define the following terms: physical development, social development, emotional development and intellectual development.

2 Copy the table into your workbook. Complete it by noting examples of likely interrelationships. In the first column, for each type of development, give two examples. Then suggest possible effects that your example might have on the other three dimensions of development. Some parts of the table have been filled in for you.

EXAMPLE OF TYPE OF DEVELOPMENT	POSSIBLE EFFECT ON	POSSIBLE EFFECT ON	POSSIBLE EFFECT ON
Physical development	Social development	Emotional development	Intellectual development
Learning how to write			
Social development	Emotional development	Intellectual development	Physical development
Emotional development	Intellectual development	Physical development	Social development
A young child learning to control his or her emotions			
Intellectual development	Physical development	Social development	Emotional development

3 Look at the photographs in Figure 1.2.5. What interrelationships between the different dimensions of development can you identify?



**FIGURE 1.25**

The dimensions of individual human development are interrelated.

INTERRELATIONSHIPS BETWEEN HEALTH AND HUMAN DEVELOPMENT

Just as there are interrelationships among the dimensions of individual human development, the dimensions of individual human development also interrelate with health.

The interrelationships between health and human development can be described as a complex web. Optimal health is achieving the best possible health

to which someone can realistically aspire, in some or all of the three health dimensions – physical, social and mental health. Now that you have learned about individual human development, you need to appreciate that optimal health also requires optimal physical, social, emotional and intellectual development. Because it is an interrelationship, optimal development also requires optimal health.

TOOLKIT

Explain the interrelationships between health and human development

An explanation is a set of statements that describe facts and clarify their causes, context and consequences. When you explain, you are making something clear and understandable.

When you look at Activity 1.2B, you need to demonstrate your understanding of the key terms and show how they influence each other.



ACTIVITY 1.2B***The interrelationships between health and human development***

For this activity you can work individually, in pairs or in small groups.

- 1 Discuss the meaning of the three dimensions of health and the four dimensions of development.
- 2 Make a list of important words that are associated with each of these concepts.
- 3 Use the ideas developed in Question 1 and Question 2 to create a concept map that compares the characteristics of each type of development with the dimensions of health.

**> 1.2 REVIEW**

- 1 Use a table to identify the similarities and differences between 'growth' and 'development'.
- 2 Read each of the scenarios below and suggest the possible effect(s) on physical, social, emotional and/or intellectual development:
 - a For several months, one-year-old Housai has been able to stand and walk around if holding on to objects such as furniture and being assisted by her parents. She has now started walking independently.
 - b Georgia is five and has started Auskick on Saturday mornings; she is learning how to play Australian rules football. A number of her friends from primary school also go to the Auskick clinic.
 - c Chantelle is in Year 8 at school. At the end of last year, her father was relocated for work, and the family moved from a small country town to Melbourne.
 - d Megan is doing her VCE. After trying for several months, she has now found casual employment at the local fish and chip shop; however, she is finding it a challenge to balance her job and studies.
 - e Dilhani and Abby are best friends. They play in the same basketball team and have been playing basketball for many years. The girls train hard and are trying out for selection in the state team.
 - f Forty-year-old Dennis has been diagnosed with type 2 diabetes. As well as managing his diabetes through a healthy diet, he also tries to be as physically active as possible. Recently, Dennis joined a local gym. He also meets up with several friends from work and they walk during their lunch break.
- 3 Copy and complete the table below by:
 - a completing the definitions of social and intellectual development
 - b thinking of at least three of your own examples for each type of development.

DEVELOPMENT	PHYSICAL	SOCIAL	EMOTIONAL	INTELLECTUAL
Definition	Physical development refers to changes in the complexity, structure and function of the body. Physical development includes growth.		Emotional development refers to the capacity to recognise, express and control feelings and emotions.	
My examples	> > >	> > >	> > >	> > >

> CHAPTER 01

ASSESSMENT SUCCESS

Activity 01A

Working individually, in pairs or small groups, develop a list of statements that represent the different dimensions of health and types of individual human development. Use these as the basis for developing a quiz. Make sure you provide answers too!

Activity 01B

Over a one- or two-week period, browse the newspapers and compile a file of articles that relate to the health status of Australians. You can look at both printed and online newspapers.

For each article, remember to note all the information needed for a reference list or bibliography entry: the journalist's name, the article's title, the newspaper's title, the date and the page number (or the URL if an online article).

Your collection will be a useful resource for you and the class.

Choose one article from your collection, and answer the following questions.

- 1 Write a short paragraph or a set of dot-points summarising what the article is about.
- 2 Explain the age group(s) that the article discusses.
- 3 What type of health data is being reported? For example, is it mortality or morbidity data, or something else?
- 4 Highlight any significant terms used in the article (such as death rates, life expectancy, incidence or prevalence). Explain what each term means in the context of the article.

Activity 01C

Locate an appropriate piece of music or film that you think represents health and/or individual human development.

The piece could be from printed lyrics or script, or any electronic form.

- 1 Explain why you chose this piece.
- 2 Identify and discuss the aspects of health and human development represented, using examples from the selected piece.
- 3 Discuss examples that demonstrate the interrelationships between health and development.



FIGURE 1.2.6

Health and development are often discussed and portrayed by the media.