Health is multi-causal. An individual's level of health status and quality of life are the result of many factors interacting. These factors are referred to as determinants of health. They include the general characteristics of society and the environment, which can influence health behaviours, biological and lifestyle factors in any number of combinations. Some of these factors can be controlled or modified by the individual, such as smoking cigarettes; while others are non-modifiable, they are outside the individual's capacity to control, such as age or heredity.

The determinants of health, some of which are referred to as ‘risk’ or ‘protective’ factors, influence health by degrees. Their effect is usually not absolute but cumulative, that is, it increases according to the time and intensity of exposure.

- individual factors, eg knowledge and skills, attitudes, genetics

Individual behaviours are the most obvious factors that contribute to health risk or health protection. Behaviours such as drinking alcohol or smoking, driving carefully or eating vegetables are easily observable. The population's understanding of risk is widespread and the health of an individual can readily be attributed to behaviours like these.

Less obvious characteristics of an individual, such as knowledge, skills and attitudes, have a major influence on the health behaviours of the individual. Over the longer term it is these determinants that help an individual to sustain healthy behaviour and achieve the best possible health.

Health promoters are particularly interested in influencing the knowledge, skills and attitudes of people in order to produce long-term improvements in their health behaviour.

Knowledge

Mandatory health education, mass media campaigns, improving dissemination of health information by health professionals and global access to health information via the internet have ensured a high degree of general health knowledge among Australian people. Messages about diet, exercise, weight control, drug use, sun safety, driver safety, screening programs, water safety, safe sex and other health issues have been delivered through schools and the media for many years. Nevertheless, there is evidence that while many of these health messages are reaching the population, some specific groups are not hearing or acting upon such important health messages or are not developing deeper knowledge about health issues that affect them. For example, recent surveys found that 14% of Australians approve of smoking and that nearly 50% of women could not identify age as a risk factor for breast cancer.

Having the necessary knowledge to recognise safe health behaviours is not the same as having the necessary skills and attitudes to consistently carry out those behaviours. For example, many people who know they need to do more exercise simply do not find the time or energy to do so.
The factors affecting health and wellbeing

**Healthy conditions and environments**
- Safe physical environments
- Supportive economic and social conditions
- Regular supply of nutritious food and water
- Restricted access to tobacco and drugs
- Healthy public policy and organisational practice
- Provision for meaningful, paid employment
- Provision of affordable housing

**Psychosocial factors**
- Participation in civic activities and social engagement
- Strong social networks
- Feeling of trust
- Feeling of power and control over life decisions
- Supportive family structure
- Positive self-esteem

**Effective health services**
- Provision of preventative services
- Access to culturally appropriate health services
- Community participation in the planning and delivery of health services

**Healthy lifestyles**
- Decreased use of tobacco and drugs
- Regular physical activity
- Balanced nutritional intake
- Positive mental health
- Safe sexual activity

**Quality of life, functional independence, wellbeing, mortality, morbidity, disability**

**Risk factors**

**Risk conditions**
- Poverty
- Low social status
- Dangerous work
- Polluted environment
- Natural resource depletion
- Discrimination (age, sex, race, disability)
- Steep power hierarchy (wealth, status, authority) within a community and workplace

**Psychosocial risk factors**
- Isolation
- Lack of social support
- Poor social networks
- Low self-esteem
- High self-blame
- Low perceived power
- Loss of meaning or purpose
- Abuse

**Behavioural risk factors**
- Smoking
- Poor nutritional intake
- Physical inactivity
- Substance abuse
- Poor hygiene
- Being overweight
- Unsafe sexual activity

**Physiological risk factors**
- High blood pressure
- High cholesterol
- Release of stress hormone
- Altered levels of biochemical markers
- Genetic factors

Skills

Many of the personal and interpersonal skills an individual acquires are modelled by family or taught directly or indirectly at school through programs such as PDHPE or peer support. The capacity to enact these skills and the style in which they are adapted are strongly influenced by the individual’s personality and psychological make-up. There is evidence which indicates that the social group has a strong influence on individual behaviour, so the capacity to clarify personal values and resist negative social pressures can be a strong protective skill.

Communication skills

The ability to listen actively, to empathise with others and to express feelings allows the individual to interact effectively with others, to ask questions and to establish a sense of worth and belonging. Positive self-esteem is a likely outcome.

Assertiveness

The capacity to respect the views and needs of others while expressing clear personal views and needs is vital for ensuring that individual rights are respected and needs met. This is especially the case for personal health and safety.

Literacy

High levels of literacy, including information and communication technologies (ICT) are beneficial for an individual to be able to understand complex health information and to efficiently assess and access information from many possible sources.

Interpersonal skills

Being able to establish and maintain worthwhile relationships plays an important role in developing supportive networks of friends, colleagues and acquaintances. The skills of negotiation, compromise and reasoning are all important in effective relationships. Social support is a high level protective factor for the health of the individual.
Decision making

In modern society, consumers are confronted with almost unlimited choices in all areas of life. The ability to identify options, research and weigh up alternatives, calculate consequences, act and then evaluate can help an individual to make sound health decisions.

Problem solving

This is a complex process made up of a variety of different components. Having the skills to identify or recognise a problem, think laterally to access a range of possible solutions, seek help, plan and then produce a strategy can be of great value when addressing personal health issues.

Coping strategies and stress management

Accumulated stress and anxiety can combine to accelerate the negative effects of other risk factors for health. Developing skills such as positive self-talk, meditation and time management can help to counter the effects of stress.

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>EXAMPLES</th>
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<tbody>
<tr>
<td>Communication skills</td>
<td>Expressing feelings to resolve conflict in a relationship</td>
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<tr>
<td>Assertiveness</td>
<td>Asking a doctor for more details about a diagnosis</td>
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<tr>
<td>Literacy</td>
<td>Reading about a variety of alternative therapies to treat a problem</td>
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<tr>
<td>Social skills</td>
<td>Negotiating with a friend to get help with a problem</td>
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<tr>
<td>Decision making</td>
<td>Weighing up different actions for quitting smoking</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Working out how to increase physical activity levels</td>
</tr>
<tr>
<td>Coping and stress management</td>
<td>Managing time to cope with conflicting pressures from work, school and home</td>
</tr>
</tbody>
</table>

Attitudes

Attitudes have a major influence on the health behaviour of individuals. Some attitudes are individual such as personal attitudes to exercise; while others are generally held across wide sections of society, such as the general acceptance of alcohol. In either case, they influence the health behaviours of individuals and groups.

Despite having adequate health knowledge the impact of attitudes on health behaviours is no better demonstrated than in the risk-taking behaviours of young males. The sense of impunity broadly attributed to this group can be used to partially explain the reckless behaviours that contribute to drink driving and speeding in motor vehicles.

The attitudes of young people are especially important, because health status invariably results from the cumulative effects of behaviours starting at a young age. Anti-smoking campaigns have delivered a globally accepted health message and rates of tobacco use continue to fall consistently, yet why is it that around 20% of adult Australians continue to smoke?

Alcohol consumption across the population is relatively stable, yet why is it that binge drinking continues to be a prevalent behaviour amongst young people with a growing trend amongst young females?

Deaths resulting from motor vehicle accidents have reached historically low levels, and compliance with seatbelt, speeding and licensing laws is consistently high, yet why is it that young males continue to be disproportionately represented amongst accident and death victims?

The state of an individual’s mind will affect their capacity to make a safe or protective decision about health at any given time. The social environment is very influential on individual decision making. For example, the influence of current smokers being in the presence of smokers who are trying to quit. Health promotion campaigns can try to address individual attitudes or broad social attitudes and the social environment in order to influence how people behave and make decisions about their health.
Some people can have a very healthy attitude to one aspect of health, such as their diet, but an unhealthy attitude to another aspect of health, such as sun safety. This makes it very important for each health promotion strategy to address the prevailing attitudes to the specific health issue they are designed to address.

Genetics

Genetic diseases like muscular dystrophy, cystic fibrosis or conditions like haemophilia or colour blindness affect about 3% of the Australian population. Diagnosable conditions such as these obviously have a profound effect on an individual’s health, though they impact only a relatively small percentage of the population.

Far greater numbers of people are affected by genetic characteristics that are not diagnosed conditions, but physical or personal traits combined with environmental factors, such as diet or stress that also affect their health adversely. Many features on their own present no risk to health, but when combined with particular environmental factors they can become dangerous and even deadly. For example, fair skin is not a health risk until it is combined with exposure to UV radiation, especially in a high UV climate. Body shape or metabolism are often inherited, but present no risk until combined with factors such as a high-fat diet or low physical activity. Some personality traits are believed to be inherited, yet when combined with triggers like stress or drugs such as cannabis there can be an increased risk of mental illness.

Medical science has given us a clear understanding that the risk of developing some diseases is increased for people who have a family history of the condition; these include conditions such as premature heart disease, breast cancer and diabetes. The risk varies according to the closeness in proximity of the relationship and the number of relatives who acquired the disease. In some cases these diseases and others can be passed directly via a genetic mutation. However, it is important to note that the majority of people who develop these diseases have no family history of the disease.

While having a family history increases the risk of developing some diseases, it also provides the individual with an early warning. The benefit of this is that by having the right information and attitude, the individual can make the necessary lifestyle adjustments and access appropriate health services to counter the increased risk presented by a family history. In extreme cases, where heredity has lead to a strong pattern of disease, genetic screening can take place to identify precisely whether an individual is carrying a mutated gene that is known to cause a disease. In these cases, surgery or other therapies may be used to reduce or remove the risk entirely.

– sociocultural factors, eg family, peers, media, religion, culture

Sociocultural factors interact in a way that ensures every individual has a unique set of experiences, values and attitudes. Consequently, each individual responds differently to the environment, resulting in unique health behaviours and outcomes.

Family

Families are the main source of education and role modelling for young people. It has been said that the human being learns more before the age of five than they do for the rest of their lives. Fundamental values, beliefs and habits are probably well established before an individual has had much opportunity to experience influences from outside the family unit.
In relation to health, families shape young people’s approaches to communication and relationships, for example, their attitudes to gender. Families have particular attitudes to diet, exercise, drug use, sexuality, the law, risk taking, other families, politics and education. They also create the socioeconomic environment in which young people grow up.

By shaping values and beliefs, families have a profound influence on the health behaviour of all individuals. Depending on the behaviours supported by the family, some of the characteristics of families may lead to greater degrees of risk or protection. These include:

- family cohesion
- parental health and disability
- child protection
- established sources of social support
- assault and neglect
- homelessness
- participation and engagement with the local community

**Peers**

The peer group has its greatest influence during the teen, adolescent and young adult stages of life. In particular, attitudes to drug use and risk taking can be influenced, positively or negatively, by prevailing attitudes of the peer group.

Research findings describe two ways that young people come to make decisions about protective or risky behaviours:

- Behavioural intentions: based on personal values, parental expectations and on what the individual thinks others are accepting or doing can predict an individual’s behaviours.
- Behavioural willingness: to behave in a certain way can have a significant influence. The individual’s openness to risk behaviour in certain situations, for example, meeting a potential sex partner or the availability of drugs at a party, can predict what course of action the individual ultimately takes.

The tolerance or intolerance of the peer group and the individual to different levels of risk combine to create a social environment that may tend more towards protection or risk. Supportive and protective peer groups can play a vital role in maintaining the health of their members.

**Media**

The influence of the media in our society, through print, television, cinema, internet, personal communication devices and radio, is powerful and sophisticated. The media can have a significant impact on the health decisions people make. Advertising of products and services, the coverage of health issues on television shows and in movies, delivery of public health promotion campaigns and the nature of images used in the media combine to send a complex array of messages that young people have to process and respond to throughout their lives. Learning the skills to interpret and evaluate media messages is critical to good decision making in modern society.
As marketers learn more about ‘brand loyalty’, they increasingly target younger consumers when advertising their products. Governments and consumer advocacy groups constantly work to balance the adverse effects of the media on community health through regulation, legislation and critical reporting.

Religion

Religion plays a role in the lives of many Australians. The most obvious effect it has on health is the development of spiritual awareness. Most religions teach acceptance of a greater power and the contribution the individual can make by committing to the greater good.

Churches create a sense of belonging and fellowship through worship, youth groups, community activities, support groups, outreach programs and other activities. The strong sense of ‘giving’ promoted by religious groups has a positive influence on the health of young people by encouraging social connectedness, leadership and a sense of contributing to the wellbeing of the community and its members. These are some of the strongest protective factors for health amongst young people.

Culture

Culture can be simply described as ‘patterns of human activity including the values and knowledge shared by a society’. Australia is often described as a multicultural society, referring to the diverse ethnic and cultural backgrounds of its population. Different cultural groups practise different eating patterns, daily rituals, religions, patterns of physical activity, gender roles, patterns of employment, ways of communicating, family structures, attitudes to health and medicine and contrasting approaches to life. For every different approach there is a different interaction with health determinants, including risk and protective factors, which results in a different pattern of health.

Apart from the cultural diversity inherent in Australian society, it is important to understand that each group contributes to a unique ‘Australian culture’. Different groups in society grow together culturally, retaining some of their own uniqueness, but sharing many common lifestyle and cultural characteristics too. For example, people with a specific cultural heritage might prepare foods specific to their culture, but they buy much of the produce from the same shops as other groups. People from different groups might approach medicine and health in different ways, but they share the same healthcare system. People from different backgrounds might be equipped with different skills, but they bring those skills along the same roads to the same workplaces.

In this way Australians from many different cultural backgrounds share many similar cultural experiences.

Sharing a strong ‘cultural identity’ can be a protective factor for an individual’s health by supporting a sense of connectedness and contributing to ‘social capital’.

– socioeconomic factors, eg employment, education, income

Socioeconomic factors are those aspects of life that relate to wealth, level of education, job status and social standing. More than any other factor low socioeconomic status (low SES) has a detrimental influence on health. It often exists

<table>
<thead>
<tr>
<th>POSITIVE MEDIA MESSAGES</th>
<th>NEGATIVE MEDIA MESSAGES</th>
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<tbody>
<tr>
<td>Acceptance of diversity in TV shows</td>
<td>Alcohol advertising</td>
</tr>
<tr>
<td>Physical activity and weight control campaigns</td>
<td>Product placement eg cigarettes in movies</td>
</tr>
<tr>
<td>Road safety campaigns</td>
<td>Junk food advertising on children’s TV</td>
</tr>
<tr>
<td>Advertising of products like nicotine patches and fresh fruit and vegetables</td>
<td>Violence and promiscuity in movies, games and websites</td>
</tr>
<tr>
<td>Reporting that raises awareness of health issues</td>
<td>Use of underweight and over-tanned body images</td>
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▲ TABLE 2.2 Positive and negative media messages

▼ FIGURE 2.7 The ‘On the same wave’ program encourages members of Sydney’s diverse communities to get involved in surf life saving
in combination with other determinants, leading to long-term and complex health problems that are difficult to address and overcome.

It is also important to understand that the relationship between socioeconomic status and health is very complex. While low SES increases the likelihood of poor health or disability, it is also true that poor health or disability increase the likelihood of low SES by affecting education or employment opportunities.

Education, employment and income are closely interrelated. In any investigation of these determinants, their relationship works in a complex web, with one leading to the other and so on. They are difficult to separate. Higher education usually leads to a job with higher income. Higher income increases access to health services, but also to better information and education. This leads to higher income and so the cycle continues.

**Employment**

An individual's pattern of employment, including unemployment, is a major component of lifestyle, influencing many aspects of health behaviour and quality of life. Occupations can be compared and categorised in many different ways. Figure 2.8 shows how different patterns of employment might generally relate to socioeconomic status.

Unemployment is the most critical determinant of health among the socioeconomic factors. It limits the money available for an individual to buy health services and products, such as private health insurance, and it also has harmful psychological and social effects that impact on an individual's mental health, such as causing depression.

Any pattern of employment that limits income, conditions and security, for example, casual or unskilled work, also has the potential to restrict access to health services and so reduce a person's health status.

People working in manual jobs like construction or low-skilled jobs such as labouring or cleaning, suffer poorer health due to different levels of risk from exposure to physical hazards, including chemicals or accidents, and to the emotional effects of having less control over their own job.

In 2007, working professionals made up 41% of the Australian workforce. This high percentage, combined with higher incomes and lower health risks associated with professional occupations has probably contributed to improvements in the nation's overall health status.

**Education**

Higher levels of education contribute to better health status for individuals and their families. They are generally related to higher income and better employment opportunities. Education also provides people with greater knowledge and skills for accessing health services and maintaining a healthy lifestyle. These factors both contribute to improved health status.

**Income**

Income is very closely related to education and occupation. Higher income provides access to better quality goods and services to support health. These include better housing, food, health services and
preventive health measures. Apart from these material advantages financial security can lead to a greater sense of control over work and life that contributes to higher self-esteem and emotional wellbeing.

Some studies have shown that socioeconomic determinants such as owning a car and real estate property to be even more closely related to health than income. They reflect income, but relate directly to health determinants such as living conditions and access to health services. The reasoning is that while income is a strong determinant of health, the way that income is used can be especially influential.

- environmental factors, eg geographical location, access to health services and technology

The natural and man-made environments in which we live have a broad influence on our health and wellbeing. Air and water quality are essential to good health, climate and weather patterns determine the types of physical activities people do and they influence housing patterns. Industry, roads and infrastructure affect communication, travel, access to services, work patterns and general living conditions. In general terms, Australia is modern and clean, but there are many variations to the living environments people experience in different parts of the country.

**Geographic location**

People living in rural communities are likely to experience poorer access to health services and products and lower socioeconomic status. The disadvantage increases with increased isolation. Death from injury is far more prevalent in rural communities, partly due to motor vehicle accidents and partly due to occupational hazards. Living conditions may be poorer due to harsher conditions or greater distances. Social isolation can also be an issue in small communities. On the other hand, rural dwellers often enjoy better air and water quality, less noise pollution and reduced traffic congestion.

Over two-thirds of Australia’s population live in major cities. People living in urban communities are likely to experience better access to health services such as hospitals and doctors and better job opportunities. They also enjoy higher socioeconomic status and overall better quality of housing. Nevertheless, cities present challenges to health, including traffic congestion, poorer air quality, greater exposure to many types of pollution and a much more hectic pace of life which can contribute to increased stress. High-density housing can also contribute to social dislocation and poorer living standards.

**Access to health services**

In most studies of health determinants access to health services is a prominent factor. Widespread access differentiates the most healthy communities from the least healthy communities. Access means the ability to ‘get’ or ‘reach’ something. It can be affected by the factors given below.

**Availability**

The availability of a service is crucial to access. Some services are not made available to particular population groups. For example, younger women cannot normally access breast screening services unless they have a high-risk profile.

**Proximity**

If a service is not available in a particular location, for example, a dentist in a small rural community, then access for families in that community is greatly reduced. Many smaller communities have health services provided on specific days and dates only. The alternative is to travel long distances to bigger centres where services are available. This can be expensive, inconvenient and unsettling.

**Affordability**

Many health services are expensive, especially when specialist doctors, modern technologies, accommodation or expensive medicines are required.
Medicare and the Pharmaceutical Benefits Scheme (PBS) are specifically designed to help with such costs, but they cannot pay for everything. People who can afford to pay for private health insurance will be able to pay for more services and will often be given access to services that people without such insurance find difficult to afford. Some examples include ‘elective’ surgery, treatments provided in private hospitals, services for conditions that are not life threatening and drugs not covered by the PBS.

**Awareness and understanding**

An individual who is unaware of a service or does not understand what that service can actually do to help them, does not have adequate access. Language and communication barriers can lead to reduced access for some individuals or groups. It is very important that health services target their most critical clients and that they advertise in community languages and in settings where they are most likely to be seen. Patients who are disabled, elderly or from non-English speaking backgrounds can be vulnerable to lack of awareness or understanding.

** Appropriateness**

People of different gender, culture, age and disability all have varying needs from health service providers. The gender of a doctor, the cultural sensitivity of a nurse, the location for an older patient or the physical access for a disabled patient could all influence whether the service is effective or not. Patients whose needs are not met by one service will rely on the availability of an alternative service.

**Technology**

In a wealthy, modern nation like Australia the latest technologies are used extensively in the health system. The most significant technologies are outlined below, supporting how extensive their influence has been on the health of the population.

- Screening technologies such as MRI machines and ultrasound devices are used in early detection and screening for a wide range of conditions and symptoms.

- Advanced micro and robotic technologies are used to enhance the capacity of surgeons to improve techniques and to reduce the level of invasiveness for most operations. This dramatically reduces the duration and intensity of recovery for patients and the need for expensive accommodation.

- Databases and online tools are used to manage large amounts of data, to improve diagnosis and treatment, to make data immediately available wherever it is needed, and to access and update patient files. Databases contribute to efficient transfer of information between different departments, health professionals and services across a very large system.

- Communication technologies are being used to improve access in isolated communities and enhance communication and networks throughout the healthcare system. TeleHealth networking uses high definition video conferencing to link health professionals across New South Wales and Australia. Health professionals have access to clinics, seminars, treatments, surgery and other events via the internet, sharing knowledge and experience to overcome many of the issues associated with the great distances between health services throughout Australia.

**analyse how an individual’s health can be determined by a range of factors acting in various combinations**

Health is determined by interactions between individual, sociocultural, socioeconomic and environmental factors. A change or a variation in one of these determinants will result in a variation to the individual’s health outcomes. The determinants create a web of influence, so they are able to influence health directly, or by influencing other determinants.
It is possible to analyse the effect of different interactions between the determinants by changing one variable at a time and reflecting on the likely health effects. Using Figure 2.10 as a guideline, it is possible to see how a change in one determinant might influence other determinants and the health of the individual.

- Example 1: An improvement in individual factors like education might lead to better knowledge and skills. Better skills lead to higher employment status, which can contribute to better access to health services. Cultural differences such as having a non-English speaking background could have a detrimental influence on education or on access.
- Example 2: Sociocultural factors like a Mediterranean diet or enlightened spirituality could have a positive influence on health. Factors such as these might counteract a genetic tendency towards a particular illness. Geographic location could improve or limit access to essential health services.

Review Questions

1. **Explain** the difference between ‘risk’ and ‘protective’ factors relating to health.
2. **Define** five skills that an individual can use to improve their health.
3. **Discuss** the importance of developing skills and attitudes for individuals who are trying to maintain good health behaviours.
4. **Account** for the influence of the peer group on health behaviours of young people.
5. Use specific examples to **compare** the influences of the media and education on the health of young people.
6. **Identify** a variety of applications for technology that could be utilised to improve health, both at an individual and a population level.
the degree of control individuals can exert over their health
- modifiable and non-modifiable health determinants

assess the degree of control individuals have over their health, by exploring questions such as:
- how much control do individuals have over the determinants?

In the simplest terms some factors that are influential on health can be changed while other factors cannot; these are referred to as modifiable and non-modifiable determinants or risk factors. This is a simplistic explanation though. The extent to which a health determinant is modifiable can vary greatly according to the narrow circumstances of the individual or the broader circumstances of the family and community. As for an individual’s health, non-modifiable health determinants include age, gender and family history of disease, ethnicity and cultural background. These factors cannot be changed or altered by the individual.

There are other determinants of health such as peace, political conditions, the provision of health services and the general social structure of a society that can have a profound influence on individual health and are modifiable over time, but are outside the immediate control of the individual.

Some determinants of health are modifiable, but very challenging for an individual to consciously change. Factors such as housing conditions, parenting, education and socioeconomic status have been shown to influence health significantly, yet there are great variations in the capacity of different individuals to change or manipulate them. The more readily modifiable determinants include behaviours relating to diet, exercise, drug use including alcohol and tobacco, use of preventive health services and management of stress.

<table>
<thead>
<tr>
<th>LESS MODIFIABLE</th>
<th>MORE DIFFICULT TO MODIFY</th>
<th>MORE MODIFIABLE</th>
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<tr>
<td>NON-MODIFIABLE</td>
<td>BROADER FOCUS</td>
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<td>cultural heritage</td>
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what can individuals do to modify the determinants they have little control over?

Though non-modifiable determinants of health such as age, gender and family history cannot be changed, they act as early warning systems about increased risk of chronic disease, in which an individual has the opportunity to counter the increased risk by acting on modifiable risk factors or determinants.

The actions an individual could take in these circumstances include:
- self monitoring
- screening programs
- early intervention
- behaviour modification
- developing new skills
- education and increased knowledge
- seeking support from established or new networks
- medical intervention.

For example, a person with a history of skin cancer in the family who works outdoors could modify work hours, change jobs or wear protective clothing. A woman with a history of breast cancer among close relatives could self-monitor and seek mammograms at a younger age than is normally recommended.
Some women in very high-risk family groups have taken the step of having their breasts removed prior to a cancer diagnosis. A person with a history of premature heart disease in the family could undertake a healthy diet and exercise program.

Genetic screening can be used to identify specific mutated genes in the unborn children of families who are known to carry such a gene.

Age and gender signify increased risk of some conditions, but usually when combined with other determinants. For example, health risk is dramatically increased for males with a waist measurement over 94 cm. Being male is non-modifiable but controlling waist size helps to reduce the risk of heart disease or diabetes.

Females who have been exposed to the human papilloma virus experience increased risk of cervical cancer. Being female is non-modifiable, but practising safe sex and being vaccinated are both determinants that a female can control.

— the changing influence of determinants through different life stages

— how does the level of influence of the determinants change over time?

Mothers and babies

Social support and income have a major influence on the health of mothers and their babies. Leaving work to nurture and care for a baby results in reduced income for most mothers, reducing their capacity to provide appropriate food, clothing, shelter and health products. Social support is also an important protective factor against harmful stress and anxiety for mothers.

Access to health services is also a critical determinant of the health of mothers and babies. Greater access to appropriate and targeted health services results in better health outcomes for both. In particular, early screening and vaccinations can contribute positively to a baby's long-term health.

The use of drugs, alcohol or tobacco during pregnancy have detrimental effects on both mother and baby, including reduced birth weight, developmental problems and specific drug-related issues, all of which can significantly harm a newborn baby and may have long-term implications.

Appropriate diet and exercise, including dietary supplementation, are strong protective factors for both mother and baby during pregnancy. After birth, breastfeeding is an important protective factor for a baby.

Babies obviously are unable to modify their behaviours or determine their exposure to health risks. Therefore, a mother and their family must take full responsibility for the health determinants of their baby. The degree of control over the determinants can be very low for mothers who lack adequate social and financial support.

Children and young people

Increasing patterns of poor diet, low physical activity levels and excess body weight have been observed among some children and young people in recent decades. While around 80% of children complete the recommended 1 hour of moderate physical activity daily, around 60% also exceed 2 hours of electronic media use per day.

These determinants are contributing to increased incidence of diabetes and obesity. Social determinants such as family stability and connectedness may also be contributing to increasing levels of mental problems among children.
While rates of exposure to tobacco smoke and UV radiation from the sun have both declined in recent decades, there are two very important issues relating to the determinants of health for children.

In the first instance children are developing skills and habits for leading healthy lives. Health behaviours during childhood can influence future health considerably by establishing risky or protective habits. The way families model nutrition, exercise, drug use and relationships will have long-term effects on the health attitudes and behaviours of the child.

In the second instance children are very much under the influence of their parents and guardians and their environment. The presence of risk or protective factors including diet, tobacco, preventive behaviours, support or violence during childhood heralds the beginning of the cumulative effect of exposure to health determinants over time.

As children grow into young adults they become more independent. While many of the determinants remain the same as for children, increased drug use, sexual activity and driving motor vehicles are factors that present a new regime of risks. Risks associated with binge drinking are frequently reported in the media. Binge drinking dramatically increases the risk of harm when combined with other determinants.

The transition from childhood to young adulthood is a time of increasing experimentation and self-determination. Young people enjoy high levels of health literacy but also feel a sense of impunity from harm. This is also a time of life in which individuals are establishing their own tolerance for risk, so behaviours that compromise health are more common. Many of the determinants of health have a cumulative effect, so young people often don’t feel any sense of urgency to avoid them. The risks of developing cancer or heart disease seem a long way away. At this age, attitudes to nutrition and exercise are influenced more by body image and social pressures.

The degree of control over the determinants is quite low among children, with limited autonomy and income. It is much higher for young adults with their increased right to self-determination, higher levels of education and growing income.

Working-age adults

This is a life stage for people between the ages of 25–64, in which marriage, parenthood, establishment of a career and retirement are most likely to occur. A wide variety of health conditions can emerge during this stage and the foundations for health in older age are laid down.

Patterns of employment are the focus in this stage of life. An individual’s job influences income, access, time availability and social status. Changing or maintaining a career path during this stage can have a profound influence on health status. Equally important health determinants relate to parenting and family roles. The influence of family on mental health, partnership, wealth and wellbeing can be highly protective or harmful. The interaction between work and family will be highly influential on quality of life.

During this life stage, diet can have a significant influence on health. As many as 80% of people in this age group do not eat the recommended servings of vegetables; over 50% are overweight or obese and 30% report being physically inactive or sedentary. Determinants such as these contribute to increasing levels of high blood pressure and blood cholesterol.
Tobacco use remains a harmful risk factor for 25% of this age group, though high-risk levels of alcohol use are less prevalent in this group.

Lifestyle factors are the main determinants of health during this life stage and while they are typically seen as risk factors it is important to realise that lifestyle factors are also the main protective factors. Lifestyle habits and routines become well established and difficult to change during this life stage. Sustainable dietary and exercise habits and not smoking are especially protective for this group and for their health into old age. Consistent improvements in the health status of people aged 65–75 years suggest that the 25–64 year age group are managing their health well.

The risk of developing a chronic disease is increased with the number of risk factors.

Wealth and access are at their highest levels for most people in this stage of life. The relatively high socioeconomic status that characterises this age group leads to increased use of health services and preventive strategies. Many people in this stage of life are enjoying improved health status as a direct result of their ability to access health professionals and pay for health products and services.

This group has the greatest capacity of all age groups to control their health determinants. Wealth, access, socioeconomic status and autonomy provide opportunities for making sound health decisions. As the people in this group grow older, they also become more aware of their own mortality and as they become parents the responsibility for raising children creates pressure to model and promote healthy behaviours.

### Older people

During older age the influence of determinants that have been accumulating for years becomes evident. The impact of longer term tobacco use, overweight, high blood pressure and cholesterol increases the risk of developing chronic diseases prevalent in this age group.

Equally, it is true that long-term protective factors lead to healthier and more productive quality of life. Healthy weight, regular physical activity, balanced diet, social networks, not smoking and access to healthcare services all lead to good health in older age. These determinants reduce the risk of chronic disease, improve mobility, reduce disability and facilitate higher levels of participation in community and family activities.

Control over the determinants begins to decline during this stage of life with reduced income and increased levels of disability and dependence. The degree to which older Australians can exert control over the determinants is greatly influenced by what they have done in previous stages of life and the level of social support available to them.
Investigate how the determinants of health explain why some individuals and groups have better or worse health than others.

Health is a word used so frequently in everyday life that its meaning would seem to be self-evident. This is far from the truth. Studies have shown that even when a patient sits with a doctor to talk about health that the two parties often hold very different views about what health is. Different people interpret health in different ways, resulting in as many meanings for health as there are people.

This can best be explained by understanding the theory of ‘social construction’. This theory explains that groups of people make up views of the world which reflect their own interests and beliefs. For each individual, with different experiences of age, gender, culture, biology, environment, family, employment and so on there is a different reality about what health is and what health means to them.

Social structures like the law or religion or social class have developed and will continue to change over time. These structures have been formed and influenced by economic, social, political, environmental, biological and technological pressures. Health can be viewed in exactly the same way. Health is a ‘social construct’ that has developed due to the influence of a multitude of social determinants.

- recognises the interrelationship of determinants

There are many factors that can influence the health of an individual and these can occur at many different levels, as shown in Figure 2.14. The determinants of health are closely interrelated and they can occur together in the same person. They can occur in many different combinations and they can interact. The risk of developing a chronic disease is significantly increased when a combination of risk factors is present. For example, a tobacco smoker has a greater risk of developing heart disease than a non-smoker, but if the smoker also suffers high blood pressure, then the risk is multiplied again.

The relationship between different determinants is not always easy to analyse or measure. Some determinants seem so remote from each other that they would not be expected to interrelate. Some determinants co-exist so closely that it is difficult to analyse exactly how they affect each other. The following analysis provides some insight into the complex web of influence created by the interrelationship of the health determinants.
Upstream and downstream determinants

The broad features of the environment and society are referred to as **upstream determinants**. They form a background for the way variations can occur in other determinants, but do not affect health directly. Some examples of upstream determinants include political stability, safety, the quality of the broader natural environment and general levels of technology and transportation.

In contrast, **downstream determinants** affect the individual more closely and immediately. These include health behaviours like tobacco use, violence, family stability, housing conditions, diet and physical activity.

For example, an upstream determinant like political stability could facilitate better trade, which could improve the supply of good quality foods and health products. An example of a more downstream determinant might be the use of sun protection strategies by an individual.

**Individual and socioeconomic determinants**

Low socioeconomic status limits the individual’s ability to buy healthy products and services. This might influence diet or exercise patterns. Individual factors such as a positive attitude can counter low SES by helping the individual to retain a sense of purpose and to maintain good mental health. Individual skills such as time management and budgeting could also interact to reduce the impact of low income on health. Low SES can lead to reduced educational opportunities, creating a combined effect that is harmful to health status, while high SES could do the opposite.

**Individual and environmental determinants**

Environmental factors are often background factors that are difficult for the individual to manage. Lack of social networks due to geographic isolation could be overcome by developing skills in information and communication technology. For example, an isolated person might develop computer skills to improve communication and establish a sense of connectedness via the internet.

Poor individual skills in hygiene or household management could result in poor living conditions, which could increase the risk of developing a respiratory condition.

The relationship between access to health services and literacy skills is an intimate one. In an increasingly sophisticated society, a lower level of literacy almost always equates to poorer access to health information.
Individual and sociocultural determinants

Many life skills are learnt from the family. Cooking skills and interpersonal skills are examples of individual factors that have been shaped by sociocultural influences. Personal identity is closely linked to cultural identity. The way an individual interprets and responds to cultural background can have a protective or harmful influence on their mental health and self-esteem. Many health behaviours are the direct result of what is accepted as ‘normal’ within the prevailing culture. For example, tobacco use is more highly accepted among some groups than others, while attitudes to sex can differ widely among different cultural groups.

Environmental and socioeconomic determinants

The most common way of measuring and reporting socioeconomic status is to attribute the same SES to groups in similar geographic locations. Clearly income and wealth have a big influence on where a person lives, so groups who share common environments often share common socioeconomic characteristics. Individuals who live in rural or outer suburban areas are confronted by poorer access to health services, often due to limited transport and facilities. Geographic location has a profound effect on lifestyle and employment patterns. These factors both influence health directly. In particular, a political or social environment that contributes to the increased likelihood of unemployment will influence socioeconomic conditions.

Environmental factors like access to health services are influenced by sociocultural factors, such as language skills. Speaking English as a second language is likely to reduce access to information. Different cultural groups interact with the natural environment in different ways. For example, many Australians enjoy recreational time engaging in outdoor activities around waterways in a warm climate. This can contribute to increased physical activity, but also to increased risk of skin cancer and injuries.

Family relationships are often influenced by geographic location. Young people from rural communities often leave their families to pursue educational and career opportunities. Moving away from the family home can have a range of influences on lifestyle and health outcomes.

Sociocultural and socioeconomic determinants

Different cultural groups have different attitudes to family structure and to family members sharing homes and living spaces. There can be obvious financial advantages to having more family members in the one house, but there may also be other health impacts relating to stress and relationships.

Close relationships often exist between immigration and socioeconomic status. Most Australians born overseas are selected on the basis of being financially secure, though refugees and some other groups may experience low SES. The combination of low SES and adapting to a new lifestyle and unfamiliar surroundings can have a significant influence on health status.

Other complex interrelationships

The health determinants create a complex web of influence that is multi-dimensional and difficult to measure. Australia’s Bureau of Statistics attributed 32% of the total burden of disease in Australia to the combined effect of 14 measured determinants but deemed the influence of upstream determinants particularly difficult to determine (Begg et al 2007).
Data can indicate with some accuracy the likelihood of smoking, poor diet, age, gender or geographic location contributing to increased risk of developing a chronic disease because these are easily identified determinants in individuals. However, the influence of determinants such as political stability, the natural environment or buildings on an individual’s health might be more difficult to pinpoint.

In general terms the broader physical, social and political conditions set the foundations for socioeconomic and social structures to be established. These broad characteristics of a society affect the individual's exposure to risk factors. The individual responds to that level of exposure based on personal characteristics such as psychology, skills and attitudes, biological and genetic factors.

Ultimately, the complex interrelationship of so many social determinants, each unique to the individual whose health they influence, supports the notion that health is indeed a social construct.

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challenges the notion that health is solely an individual’s responsibility

The question of who is responsible for an individual’s health is an important one in deciding how to solve health problems and provide support and resources for improving health status. As late as the 1970s and 1980s Australia’s major attempts at promoting health were based on the assumption that individuals were able to improve their own health simply by improving their own knowledge and behaviour, but without any changes to environments, structures or policies. Even the most recent campaigns focus as much on individual behaviour change as they do on changes to policy or structure. The result is a large ongoing treatment bill for chronic disease.

It is still common for people who influence policy to view health as solely an individual responsibility. Unfortunately, this view creates a ‘blame mentality’.

Attributing blame for poor health creates a negative attitude to the sufferers of disease and can lead to a narrow view of how health can be improved, focusing predominantly on treatment of poor health when it inevitably occurs.

No one is in charge of what goes into my mouth except me. No one is in charge of what goes into kids’ mouths except their parents. It is up to parents more than anyone else to take this matter in hand … if their parents are foolish enough to feed their kids on a diet of Coca-Cola and lollies, well they should lift their game and lift it urgently.

— Tony Abbott, Federal Health Minister, December 2005. ABC, 4 Corners TV Program on Childhood Obesity

Based on the view of health presented in Tony Abbott’s quote, the only way to address the problem of childhood obesity would be to blame children and parents for their behaviours. The only option for addressing the issue would be to treat the illness and repeatedly focus on raising awareness and implore them to change their habits. Tony Abbott’s view clearly ignores the fact that other determinants, including advertising, marketing, taxation, parental working patterns, exercise facilities and time constraints all play a role in this particular health problem.

<table>
<thead>
<tr>
<th>VIEWING HEALTH SOLELY AS AN INDIVIDUAL RESPONSIBILITY</th>
<th>VIEWING HEALTH AS A SOCIAL CONSTRUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on individual behaviours</td>
<td>Focus on policies and environments</td>
</tr>
<tr>
<td>Addresses downstream determinants</td>
<td>Addresses upstream determinants</td>
</tr>
<tr>
<td>Only one option for HP action</td>
<td>Multiple options for HP action</td>
</tr>
<tr>
<td>Action in health sector only</td>
<td>Action across sectors</td>
</tr>
<tr>
<td>Responsive to awareness and information</td>
<td>Responsive to education, laws, taxes, policy, environments, social support</td>
</tr>
<tr>
<td>Leaves the social determinants the same</td>
<td>Works to exploit the social determinants</td>
</tr>
<tr>
<td>Repeatedly informs each new generation</td>
<td>Embeds health in public policy</td>
</tr>
<tr>
<td>Threatens equity</td>
<td>Reduces inequity</td>
</tr>
<tr>
<td>Leaves each individual and family to its own resources</td>
<td>Reduces the gap between the most advantaged and the most disadvantaged</td>
</tr>
<tr>
<td>Deregulated environment</td>
<td>More regulated environment</td>
</tr>
</tbody>
</table>

SOURCE: TONY ABBOTT, FEDERAL HEALTH MINISTER, DECEMBER 2005. ABC, 4 CORNERS TV PROGRAM ON CHILDHOOD OBESITY

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TA B L E 2.5
Health as an individual responsibility or social construct
Alternatively, viewing health as a social construct takes into account the influence of many different health determinants. Accepting this fact, including the non-modifiable and the upstream determinants, demonstrates that factors other than individual behaviours influence health. This view does not ignore individual responsibility, but it opens up other options for addressing the problem. They may include regulations to restrict junk food advertising or increased taxes on junk foods.

A complicated argument exists between governments and health promoters about the right balance between holding individuals accountable for their own health and attributing more responsibility to governments for working on the social determinants. The two contrasting approaches have vastly different implications for population health.

In Australia, there are some easily observed examples that demonstrate the difference between these two approaches.

There is evidence which indicates that raising public awareness of risk behaviours and expecting individuals to take full responsibility and change their behaviours without support does not work effectively.

Socioeconomic disadvantage is clearly the most influential determinant. Without social and financial support, safer environments and policies that empower individuals to make healthy decisions, most people continue to make poor health decisions because there are too many barriers to overcome. Table 2.6 shows

![Figure 2.16](image)

**Tobacco Use** among young people has plummeted due to the influence of heavy regulation, taxation, control of environments, packaging laws, sales legislation etc. The social determinants have been addressed by governments over an extended period of time.

**Obesity**, especially among young people has increased dramatically as a result of a less regulated junk food environment in which marketing is less regulated and the social determinants have not been effectively addressed.

*Figure 2.16*  
Treating illness without improving living conditions is futile.
how people with fewer resources and greater inequities are less likely to change their health behaviours. It is pointless to raise people’s awareness of a health problem, treat that problem, then return those people to the same environment that contributed to their poor health in the first place.

Health decisions are not made in isolation. Many factors interact to influence the decisions people make about their health. Individuals (excluding young children, the mentally ill and the very elderly) should certainly be accountable for their health behaviours. However, if governments are not prepared to take some responsibility for enacting policies that support individuals and groups to make good decisions, then the health of the population is unlikely to improve. For example, many former smokers would still smoke if cigarettes were still cheap. Many injecting drug users would still be at risk of HIV if it were not for needle exchange programs.

When governments (from the top down) and individuals (from the bottom up) share the responsibility for health there is a far more positive influence on health outcomes. This has been referred to as the ‘Nutcracker effect’. The most important step in achieving the best possible health outcomes for populations and individuals is to acknowledge the influence of the health determinants and to address them across sectors. Combined action to address both the upstream and downstream determinants shares the responsibility for health between individuals and governments.

<table>
<thead>
<tr>
<th>1998</th>
<th>2001</th>
<th>2004</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (lowest)</td>
<td>30.0</td>
<td>25.8</td>
<td>27.3</td>
</tr>
<tr>
<td>2nd</td>
<td>27.0</td>
<td>25.1</td>
<td>23.6</td>
</tr>
<tr>
<td>3rd</td>
<td>28.4</td>
<td>23.7</td>
<td>21.7</td>
</tr>
<tr>
<td>4th</td>
<td>25.8</td>
<td>23.6</td>
<td>18.2</td>
</tr>
<tr>
<td>5th (highest)</td>
<td>23.1</td>
<td>18.4</td>
<td>15.1</td>
</tr>
</tbody>
</table>


Activity 1 (Page 37)

For each skill described in Table 2.1 (page 38), write a paragraph to demonstrate how a young person could use the skill to address a personal health issue.

Activity 2 (Page 38)

Complete a personal attitude audit. Select five health issues that are important to you. For each one, write a paragraph explaining your attitude to this issue.

Compare your attitude with a class mate. Examine the differences in your attitudes to each issue and identify any patterns that exist between your attitudes and behaviours to that of your class mate.

Activity 3 (Page 38)

As a class, identify a variety of attitudes that contribute to specific unhealthy behaviours. Consider whether these attitudes are prevalent in specific groups or across the whole population.

In pairs, design health promotion strategies that counter the negative or risky attitudes you have identified.
**Activity 4 (Page 39)**
Produce a personal profile based on each of the sociocultural determinants. Under each heading—family, peers, media, religion and culture—write one or two paragraphs stating the sociocultural determinant and a description of the health-related behaviour, and conclude with a health outcome.

Share your profile with the class to understand how sociocultural determinants influence each individual in a different way.

**Activity 5 (Page 42)**
Draw a continuum depicting the gradient from very high to very low income. Against the continuum list the goods and services that might be accessible, inaccessible or based on an individual’s choice or decision at each level of income.

**Activity 6 (Page 44)**
Construct and play a health determinant game.

Step 1: In groups, produce three scenario cards to describe each category of determinants. Mark the back of each card as either individual, sociocultural, socioeconomic or environmental. There should be twelve cards in total. Follow the example below:

<table>
<thead>
<tr>
<th>Card 1: Individual</th>
<th>Card 1: Sociocultural</th>
<th>Card 1: Socioeconomic</th>
<th>Card 1: Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>back: Individual</td>
<td>back: Sociocultural</td>
<td>back: Socioeconomic</td>
<td>back: environmental</td>
</tr>
<tr>
<td>front: Has a uni degree in science</td>
<td>front: Shares home with a large family</td>
<td>front: Works 8 hrs a week at Bunnings</td>
<td>front: Sophisticated computer user</td>
</tr>
</tbody>
</table>

Step 2: Swap all your cards with another group. Place the cards in category piles (that is, one pile for each category) with the scenario face down.

Step 3: Start by turning up one scenario card from each pile. With four cards face up, discuss how the determinants would interact to influence an individual’s health.

Step 4: Pick just one pile and turn up the next card. Predict how this change in one determinant could influence the health of the individual.

Step 5: Continue to turn up one card from a different pile. Each time a new card is turned up, discuss how a change in one determinant affects the interaction between all the determinants.

**Activity 7 (Page 50)**
For each category of individual, sociocultural, socioeconomic and environmental, draw up a flowchart or write a paragraph to demonstrate how your own health is influenced by the relationship between the determinants.
Activities cont.

Activity 8 (Page 50)
Create a web diagram to demonstrate how your own health can be viewed as a ‘social construct’. Start with the upstream determinants and work through the social determinants to the downstream risk factors and individual characteristics.

Activity 9 (Page 53)
Select a high-risk health behaviour such as tobacco use, high-fat diet, unsafe sex, binge drinking, dangerous driving, illegal drug use, or physical inactivity. Identify a variety of determinants that interact to contribute to this problem.

Design a multi-faceted approach to this health problem by describing at least one strategy to address each of the determinants you have identified.

Review Questions

1. **Clarify** the meaning of the term ‘viewing health as a social construct’.
2. **Demonstrate** how the determinants of health are interrelated.
3. **Compare** the different influences of upstream and downstream health determinants.
4. **Interpret** the interrelationship of the various determinants of health by producing a mind map or a flow chart.
5. **Explain** why the question of who is responsible for health is such an important one.
6. **Examine** the problems associated with attributing responsibility for health solely to individuals.
7. **Assess** the value of challenging the notion that health is solely an individual’s responsibility.