

HEALTH AND HUMAN DEVELOPMENT – UNIT 3

OUTCOME 1: UNDERSTANDING HEALTH AND WELLBEING

KEY KNOWLEDGE	KEY SKILLS
Concepts of health and wellbeing (including physical, social, emotional, mental and spiritual dimensions) and illness, and the dynamic and subjective nature of these concepts	<ul style="list-style-type: none">• Explain the dynamic and subjective nature of the concepts of health and wellbeing and illness• Describe interrelationships between dimensions of health and wellbeing

HEALTH AND WELLBEING: relating to the state of a person’s physical, social, emotional, mental and spiritual existence, and is characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged

5 DIMENSIONS OF HEALTH AND WELLBEING

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

- It is supported by factors such as:
 - Regular physical activity
 - Consuming a balanced diet
 - Having appropriate rest/sleep
 - Maintaining an ideal body weight
 - Absence of disease, illness or injury

- Appropriate levels of fitness
- Well functioning body, systems and organs
- Adequate energy levels
- Strong immune system
- Ability to complete physical tasks adequately

SOCIAL health and wellbeing relates to the ability to form meaningful and satisfying relationships with others and the ability to manage or adapt appropriately to different social situations.

- It also includes the level of support provided by family and within a community *to ensure that every person has equal opportunity to function as a contributing member of the society.*
- It is supported by:
 - Strong communication skills
 - Empathy for others
 - A sense of personal accountability

- Productive relationships with other people
- Supportive and well-functioning family
- Supportive network of friends

MENTAL health and wellbeing is the current state of well-being relating to the mind or brain and it relates to the ability to think and process information. A mentally healthy brain enables an individual to positively form opinions, make decisions and use logic.

- *Mental health is about the wellness of the mind rather than illness.*
- It is associated with:
 - Low levels of stress and anxiety
 - Positive self-esteem
 - High levels of confidence
 - Positive thought patterns (being optimistic)

DIFFERENCE BETWEEN THESE TWO DIMENSIONS

mental health and wellbeing
– how you’re feeling

emotional health and wellbeing
– how you express these feelings

EMOTIONAL health and wellbeing relates to the ability to express feelings in a positive way. It is about the positive management and expression of emotional actions and reactions, and the ability to display resilience (recovering from misfortune).

- Emotional health is the degree to which you feel:
 - Emotionally secure
 - Relaxed in everyday life

- Recognise and understand the range of emotions
- Effectively respond to and manage emotions
- Have a high level of resilience

SPIRITUAL health and wellbeing is not the material in nature, but relates to ideas, beliefs, values and ethics that arise in the minds and conscience of human beings.

- It includes the concepts of hope, peace, a guiding sense of meaning or value, and a reflection on your place in the world
- Spiritual health can be highly individualised, for example, in some spiritual traditions health may relate to organised religion, a higher power and prayer, in other practices it can relate to morals, values, a sense of purpose in life, connection or belonging.

- Sense of belonging
- Acting according to values and beliefs
- Positive meaning and purpose in life
- Peace and harmony

DISEASE: a physical or mental disturbance involving symptoms, dysfunction or tissue damage

ILLNESS: a subjective concept related to personal experience of a disease

DYNAMIC NATURE OF HEALTH AND WELLBEING

- **DYNAMIC:** continually changing
- Health and wellbeing can negatively alter very quickly – *e.g. events such as accidents, illness, relationship breakdown and stressful events*
- Health and wellbeing can improve quickly – *e.g. migraine → medicine → feeling better*
 - An individual may have a large supportive network of friends (*social health and wellbeing*) who they may often spend time with. However they may move away with their family and become separated from that network of friends. Very quickly they go from having many friends who they can talk to and socialise with, to having no friends, thus resulting in a negative change in social health and wellbeing.

SUBJECTIVE NATURE OF HEALTH AND WELLBEING

- **SUBJECTIVE:** influenced by or based on personal beliefs, feelings or opinions
- Number of factors influence the way people view health and wellbeing – *factors such as age, fitness, body weight, social networks, income, occupation, education and culture*
 - An individual in youth may view health and wellbeing as the ability to stay physically fit through regular physical activity, while balancing school work, extracurricular activities and other responsibilities. Whereas an elderly retired individual may view health and wellbeing as the absence of illness, disease or injury and the ability to function independently on a day-to-day basis.

KEY KNOWLEDGE	KEY SKILLS
Benefits of optimal health and wellbeing and its importance as a resource individually, nationally and globally	<ul style="list-style-type: none"> • Explain the individual and collective importance of health and wellbeing as a resource • Describe global benefits of the pursuit of optimal health and wellbeing

BENEFITS – INDIVIDUALLY

- [key skill: optimal health and wellbeing → able to do something (e.g. work) → links to benefit → links to improved health and wellbeing]
- **Work (productively)** → earn an income
 - Afford nutritious food → maintain appropriate body weight → improved **physical** h/w
 - Afford resources (e.g. food, shelter, healthcare, education) → improved **overall** h/w
- **Gain an education**
 - Improve health literacy → unlikely to partake in unhealthy behaviours (e.g. smoking) → absence of disease → improved **physical** h/w
 - Go to school → interact with others → form supportive network of friends → improved **social** h/w
- **Earn an income**
 - Afford nutritious food → maintain appropriate body weight → improved **physical** h/w
 - Financial stability → low levels of stress → improved **mental** h/w
- **Exercise**
 - Engage in regular physical activity → increase fitness levels → improved **physical** h/w
 - Relieve stress → lower levels of anxiety → improved **mental** h/w
- **Effectively run a household** (e.g. shopping, cleaning, caring for children)
 - Living independently → sense of confidence → improved **mental** h/w
- **Spend time with friends**
 - Socialise → maintain supportive network of friends → improved **social** h/w
 - Fun free time → lower levels of stress and anxiety → improved **mental** h/w
- **Work towards their purpose in life**
 - Taking action to work towards purpose → sense of confidence → improved **mental** h/w
 - Take action → find meaning and purpose in life → improved **spiritual** h/w
- **Increase leisure time**
 - Time to meditate → lower levels of stress and anxiety → improved **mental** h/w
 - Time to exercise and do physical activity → increase fitness levels → improved **physical** h/w
- **Live independently**
 - Living independently → sense of confidence → improved **mental** h/w
- **Sleep well**
 - Good sleep → increased energy levels → improved **physical** h/w
 - Less irritable → able to manage emotional reactions → improved **emotional** h/w

- **Maintain positive thought patterns**

- In the face of setbacks → display resilience → improved **emotional** h/w
 - Content → sense of peace and harmony in life → improved **spiritual** h/w
-

BENEFITS – NATIONALLY

- **Longer healthier lives**

- Individuals are educated on healthy behaviours → absence of disease and illness → improved **physical** h/w

- **Increase social participation**

- Volunteering and civic participation → promotes sense of belonging → improved **spiritual** h/w

- **Reduced stress and anxiety in the community**

- Happier, healthier community → low levels conflict of conflict → reduced stress and anxiety → improved **mental** h/w

- **Higher average incomes**

- More individuals working → higher average incomes → increased taxation revenue → government can put more money towards other aspects of community → improved **overall** h/w

- **Increase productivity**

- Individuals more likely to work with high productivity → benefits community economically → improved **overall** h/w

- **Fewer people relying on social security**

- Individuals motivated and able to work → less people on social security → government can put more money towards other aspects of community → improved **overall** h/w

- **Health system savings**

- Less illness and disease → health system savings → government can put more money towards other aspects of community → improved **overall** h/w
-

BENEFITS – GLOBALLY

- [key skill: shift from individual perspective to global context]

- **Reduces risk of disease transmission between countries**

- Optimal h/w being experienced on global scale → likely absence of disease → reduces risk of disease transmission between countries → can promote global trade → exchange of goods and services → all countries may access the resources necessary to promote **h/w**

- **Promotes sustainability**

- Optimal h/w being experienced globally → likely absence of disease → health system savings → more money can be invested in to sustainable resources and practices (e.g. solar power) → promotes sustainability and creates healthier environment → supports **optimal h/w**

- **Promotes social development**

- Individuals experiencing optimal h/w → acting according to values and beliefs → people want to enhance equality → same mindset occurring globally → create a change such as equal pay for both males and females → promote social development → individuals all feel fairly treated → promoting **optimal h/w**

- **Promotes economic development**

- Individuals experiencing optimal h/w → high level of workforce participation → more people earning income and can afford decent standard of living → promotes economic development → promoting **optimal h/w**

- **Assists in promoting peace and stability**

- Individuals in community experiencing optimal h/w → likely sense of peace and harmony among lives of population → through global population experiencing peace and harmony → assists in promoting peace and stability → decreases chances of war outbreak through absence of conflict between countries → individuals are not required to shift their focus to survival → can do their daily activities and focus on supporting their health and wellbeing → promoting **optimal h/w**

KEY KNOWLEDGE	KEY SKILLS
Prerequisites for health as determined by the WHO including peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity	<ul style="list-style-type: none"> • Identify the WHO's prerequisites for health and explain their links to improved health outcomes

PEACE

- Absence of conflict
 - **PHYSICAL:** Absence of war/conflict, **absence of injury**, individuals not in life-threatening situations
 - **MENTAL:** Community creates a safe and peaceful environment, **low levels of anxiety** due to not fearing of potential dangerous encounters
 - **SPIRITUAL:** Peace amongst the community encourages inner **peace and harmony**

SHELTER

- A structure that provides protection from the outside environment
 - **PHYSICAL:** Protection from adverse weather, good sleeping conditions, enable **high energy levels**
 - **MENTAL:** Shelter is an individual's safe place to call "home", **lowering levels of anxiety**
 - **SOCIAL:** Live in shelter with family, strengthens bonds and relationships allowing for a **supportive and well-functioning family**

EDUCATION

- Empowers individuals and increases their ability to earn an income, understand health promotion messages, exhibit healthy behaviours, and find meaning and purpose in life
 - **PHYSICAL:** Aware of cancer health risks of smoking, decreased chances of developing lung cancer, thus **absence of disease**
 - **MENTAL:** Individual understands how to be healthy, has a **positive self-esteem** as they know they are taking proper care of their body
 - **SOCIAL:** Interacting with others + learning literacy, develop **strong communication skills**
 - **SPIRITUAL:** School encourages students to be ambitious with their future and create goals, thus creating **meaning and purpose in life**

FOOD

- 'The state in which all persons obtain nutritionally adequate, culturally appropriate, safe food regularly through local non-emergency sources' (VicHealth) is referred to as food security.
 - **PHYSICAL:** Adequate food intake, *high energy levels* to complete *daily activities and tasks*
 - **MENTAL:** Individual consumes healthy foods, creates *positive self-esteem* as they are taking care of their body

INCOME

- An underlying factor for many health and wellbeing outcomes
- From an individual perspective, income increases the ability to afford resources such as healthcare, recreation, transport and education.
 - **PHYSICAL:** Can afford medicines to have *absence of illness*
 - **MENTAL:** Financial security for basic necessities of survival, thus *low levels of stress*
 - **SOCIAL:** Can afford to go on a holiday as a family, increase *supportive and well-functioning family*

A STABLE ECOSYSTEM

- A community that consists of all of the living and non-living components of a particular area
- Occurs when balance is achieved between the environment and the species that live in an environment
 - **PHYSICAL:** Clean air, reduced chances of respiratory disease, *absence of disease*
 - **SPIRITUAL:** Natural environment, source for relaxation for meditation, creating *peace and harmony*

SUSTAINABLE RESOURCES

- Defined by the United Nations as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs.'
- Sustainable resources relate to ensuring that resources used to promote health and wellbeing in the present are available for future generations, so they too can experience a good quality of life
 - **PHYSICAL:** Sustainable fishery, past and future generations can consume the good nutrients from fish products to *consume a balanced and nutritious diet to achieve an appropriate body weight*
 - **MENTAL:** Use of solar power, individuals know future generations (which may include their children) will have access to energy, allowing for individuals in the present to have an *optimistic* outlook for the future

SOCIAL JUSTICE

- Equal rights for all, regardless of personal traits such as sex, class and income, ethnicity, religion, age or sexual orientation
- All people are treated fairly, and includes economic justice, as well as the celebration of diversity and promoting health and wellbeing of all people
 - **MENTAL:** Not fearful of discrimination when in public, thus *low levels of anxiety*
 - **SPIRITUAL:** Not discriminated against for being different in any way, creates a *sense of belonging*

EQUITY

- A concept that relates to fairness and justice
- Equity means that there are minimum levels of income and resources that all people should have access to
 - **PHYSICAL:** Equitable access to healthcare, all citizens have basic healthcare allowing for an *absence of disease, illness and injury* amongst population
 - **MENTAL:** Government providing financial support in an equitable manner, individuals from a lower socioeconomic background may have *lower levels of stress*

KEY KNOWLEDGE	KEY SKILLS
Indicators used to measure and understand health status: <i>incidence, prevalence, morbidity, burden of disease, disability-adjusted life year (DALY), life expectancy, health-adjusted life expectancy (HALE), mortality (including maternal, infant and under 5) and self-assessed health status</i>	<ul style="list-style-type: none"> • Describe and apply indicators used to measure health status • Use data to describe and evaluate the health status of Australians • Analyse patterns in morbidity and mortality in Australia over time

HEALTH STATUS: an individuals or a population's overall health, taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors

SELF-ASSESSED HEALTH STATUS: a measure based on a person's own opinion about how they feel about their health and wellbeing, their state of mind and their life in general. It is commonly sourced from population surveys

INCIDENCE: the number of new cases of a condition during a given period of time

PREVALENCE: the number or proportion of cases of a particular disease or condition present in a population at a given time

MORTALITY: refers to death, often in a population

MORBIDITY: refers to ill-health in an individual and the levels of ill-health in a population or group

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

DISABILITY ADJUSTED LIFE YEARS (DALY): A measure of burden of disease, one DALY equals one year of healthy life lost due to premature death and time lived with illness, disease or injury

YEARS OF LIFE LOST (YLL): measure of how many expected years of life are lost due to premature death

YEARS LOST DUE TO DISABILITY (YLD): measure of how many healthy years of life are lost due to illness, injury or disability

LIFE EXPECTANCY: 'an indication of how long a person can expect to live, it is the number of years of life remaining to a person at a particular age if death rates do not change'

HEALTH ADJUSTED LIFE EXPECTANCY (HALE): a measure of burden of disease based on life expectancy at birth, but including an adjustment for time spent in poor health. It is the number of years in full health that a person can expect to live, based on current rates of ill health and mortality

MATERNAL MORTALITY: death of a mother during pregnancy, childbirth, or within six weeks of delivery

MATERNAL MORTALITY RATIO: number of mothers who die as a result of pregnancy or childbirth per 100,000 live births

INFANT MORTALITY: the death of a child between birth and their first birthday

INFANT MORTALITY RATE: rate of deaths of infants between birth and their first birthday, usually expressed per 1000 live births

UNDER 5 MORTALITY: the death of a child under 5 years of age

UNDER 5 MORTALITY RATE: rate of deaths occurring in children under 5 years per 1000 live births

KEY KNOWLEDGE	KEY SKILLS
the contribution to Australia's health status and burden of disease of smoking, alcohol, high body mass index, and dietary risks (under-consumption of vegetables, fruit and dairy foods; high intake of fat, salt and sugar; low intake of fibre and iron).	

SMOKING

- Practice in which a substance is burned and the resulting smoke is inhaled to be tasted and absorbed into the bloodstream – *generally use of tobacco, but can also include marijuana and other drugs*
- *Impact/what it can cause:*
 - Fault in cell division
 - Muscles in airways tighten, lining in airway becomes swollen/inflamed (*producing sticky mucous*)
 - Reduced airflow into lungs, limited ability to utilise oxygen due to damaged lung tissue
 - Inflammation of airways, destroying the air sacs in lungs where gas exchange occurs

ALCOHOL

- **Alcoholism:** person can't stop drinking once they have started, or have a constant desire to drink
- **Binge drinking:** drinking 7 or more drinks for males or 5 or more drinks for females in one sitting
- Alcohol is filtered through the liver
- *Impact/what it can cause - alcoholism:*
 - Scarring of the liver tissue, liver not functioning properly – toxins remain in the body (liver disease; sclerosis of the liver)
 - Strain on relationships, greater risk of suicide (– *depressant drug*)
 - (*Alcohol during pregnancy*) low birth weight, premature birth, FASD
- *Impact/what it can cause - binge drinking:*
 - Psychological effects (*e.g. affected judgement*)
 - Road accidents, injuries, drowning violence

HIGH BODY MASS INDEX (BMI)

- Body mass relates to the amount of body weight an individual is carrying
- Assessments about body mass are generally made using the body mass index (BMI) and waist circumference measurements
- Height to weight ratio – [weight in kg] over [height in metres]²
- *Impact/what it can cause:*
 - Cardiovascular disease
 - Hypertension
 - Type 2 diabetes

BODY MASS INDEX:
Under 18.5: Underweight
18.6 to 24.9: Healthy weight
25 to 29.9: Overweight
30 or over: Obese

UNDER CONSUMPTION OF VEGETABLES

- Nutrient dense
- High in minerals and vitamins, low in kilojoules, high in dietary fibre and antioxidants
- Antioxidants remove free radicals (*they damage body cells*) in the body
- Promote adequate functioning of body systems, including immune system function
- *Impact/what it can cause:*
 - Cancer
 - Cardiovascular disease
 - Neural tube defects
- *Good food sources:*
 - Lettuce
 - Carrot

UNDER CONSUMPTION OF FRUIT

- Provide a range of essential nutrients – vitamins, minerals and fibre
 - Low in fat, good source of antioxidants
 - Promotes adequate function of body systems
- *Impact/what it can cause:*
- Cancer
 - Cardiovascular disease
 - Neural tube defects
- *Good food sources:*
- Apples
 - Bananas
 - (not fruit juice > high levels of sugar)

UNDER CONSUMPTION OF DAIRY FOODS

- Dairy refers to milk, cheese and yoghurt created from animal milk
 - In Australia, most common forms of dairy are products made using cow's milk
 - Provides calcium - a mineral essential for a range of functions in the human body
- *Impact/what it can cause:*
- Weak bones
 - (*long term*) Osteoporosis
- *Good food sources:*
- Milk
 - Cheese

HIGH INTAKE OF FAT

- Fat acts as fuel for energy production; all types of fat = energy dense – *fat contains 37kilojoules/gram*
 - Energy provided by fats is not used – lead to weight gain
 - Excessive consumption of any type of fat can contribute to a high BMI
 - **Types of fat/what they do:**
 - **Monounsaturated fat:** Reduces LDL cholesterol levels
 - **Polyunsaturated fat:** Reduces LDL cholesterol levels, increases HDL cholesterol levels
 - **Saturated fat:** Increase LDL cholesterol levels
 - **Trans fat:** Increase LDL cholesterol levels, decreases HDL cholesterol levels
 - Low-density lipoprotein (**LDL**) – 'bad' cholesterol – gets deposited onto walls of blood vessels – causes other substances (*such as calcium*) to do so as well – lead to atherosclerosis
 - High-density lipoprotein (**HDL**) – 'good' cholesterol – slows process of atherosclerosis
- *Impact/what it can cause:*
- Obesity
 - Cardiovascular disease
 - Atherosclerosis
 - Type 2 diabetes
- *Food sources:*
- **Monounsaturated fat** – avocado, peanuts
 - **Polyunsaturated fat** – fish oil, sunflower oil
 - **Saturated fat** – red meat, butter
 - **Trans fat** – cakes, confectionary

HIGH INTAKE OF SALT

- Main components of salt is sodium
 - Required for optimal human functioning, but too much can contribute to negative health outcomes
- *Impact/what it can cause:*
- High blood pressure – hypertension
 - Cardiovascular disease
- *Food sources:*
- Processed foods (packet chips)

HIGH INTAKE OF SUGAR

- Sugars are a type of carbohydrate found naturally in some foods
 - Is added to many processed foods
 - Required for fuel energy production
 - If eaten in excess = stored as adipose (fat) tissue
- *Impact/what it can cause:*
- Cardiovascular disease
 - Type 2 diabetes
 - Obesity
- *Food sources:*
- Confectionary
 - Carbonated drinks

LOW INTAKE OF FIBRE

- Type of carbohydrate required for optimal health and wellbeing
 - Found in all foods of plant origin
 - Does not get absorbed by the body but rather travels through the digestive system
 - Promotes feelings of fullness, assists in maintaining digestive tract
 - Adds bulk to faeces
 - **Types of fibre/what they do:**
 - **Soluble:** Absorbs water, attaches to particles of LDL cholesterol and helps to excrete them
 - **Insoluble:** Does not absorb water, promotes movement of material through digestive system
- *Impact/what it can cause:*
- Obesity (overeating)
 - Colorectal cancer
- *Food sources:*
 - **Soluble fibre** – oats, flaxseed
 - **Insoluble fibre** – dried beans, peels of fruit

LOW INTAKE OF IRON

- Iron is an essential part of blood
 - Forms the 'haem' part of haemoglobin, which is the oxygen carrying part of blood.
 - Not enough iron = may develop iron-deficiency anaemia
- *Impact/what it can cause:*
- Anaemia (*condition characterised by tiredness and weakness*)
- Individuals with iron-deficiency anaemia struggle to generate enough energy to complete daily tasks such as school, work, sport and socialising
- *Food sources:*
 - Red meat
 - Egg

KEY KNOWLEDGE	KEY SKILLS
<p>Health status of Australians and the biological, sociocultural and environmental factors that contribute to variations between population groups including:</p> <ul style="list-style-type: none"> - males and females - Indigenous and non-Indigenous - high and low socioeconomic status - those living within and outside of Australia's major cities 	<ul style="list-style-type: none"> • Analyse health information to explain factors that contribute to variations in health status between population groups

BIOLOGICAL FACTORS

- Relate to the structure of the cells, tissues and systems of the body and how adequately they function
 - Factors relating to the body that impact on health and wellbeing, such as genetics, body weight, blood pressure, cholesterol levels, birth weight
- **Body weight**
 - BMI = 25-29.9 → overweight
 - BMI = 30+ → obese
 - Waist measurement: *females* > 89 centimetres indicates a higher risk
 - Waist measurement: *males* > 102 centimetres indicates a higher risk
 - Obese - increased pressure on the heart - cardiovascular disease
 - Obese - blood pumps harder, heart is working harder - high blood pressure
 - ↳ **INDIGENOUS**: higher rates of high BMI across all ages; 1.5x higher than non-indigenous
 - ↳ **MALES**: levels of obesity are the same as females, however the proportion of overweight individuals is much higher in the male population
 - ↳ **LOW SES**: as socioeconomic disadvantage increases, overweight/obesity rates increases
 - ↳ **RURAL/REMOTE**: overweight and obesity levels are higher in those living outside major cities
 - **Blood pressure**
 - Measure of systolic pressure (*heart contracts, blood is pushed around body, pressure to blood vessel walls increase*) and diastolic pressure (*heart relaxes, fills with more blood, pressure to blood vessel walls decrease*)
 - 120/80 indicates normal blood pressure – *systolic figure/diastolic figure*
 - High blood pressure = hypertension
 - Hypertension may mean the heart and kidneys (*which regulate blood pressure and filter the blood*) have to work harder and blood flow may be restricted
 - Hypertension - kidneys working hard - may lead to kidney failure
 - Hypertension - heart working hard - may lead to heart attack or stroke
 - ↳ **INDIGENOUS**: 1.2x more likely to report hypertension
 - ↳ **MALES**: more likely to experience hypertension until 65-74 year age group
 - ↳ **LOW SES**: higher rates of hypertension
 - ↳ **RURAL/REMOTE**: 1.2x higher rate of hypertension
 - **Blood cholesterol**
 - Cholesterol is a type of fat required for numerous functions in the body
 - Low-density lipoprotein (LDL) = 'bad' cholesterol
 - High-density lipoprotein (HDL) = 'good' cholesterol

- Too much LDL in blood, tends to be deposited on walls of blood vessels, thus giving blood less room to travel to cells
 - ▶ Narrowed artery built up with plaque (*made up of cholesterol, other fatty substances, tissue and calcium*) - blood works harder to travel - may result in stroke
 - ▶ High LDL cholesterol - causes other substances (*e.g. calcium*) to become embedded on artery walls - leads to hardening and narrowing of arteries → atherosclerosis
 - ↳ **RURAL/REMOTE**: 10% more likely to experience high blood cholesterol
- **Glucose regulation**
 - Glucose is the preferred fuel for energy within cells – *usually obtained from breaking down carbohydrates*
 - Carbohydrates eaten = glucose is absorbed into bloodstream
 - If blood glucose levels consistently high = levels of insulin consistently high – this occurs over a long period of time, cells can become resistant to action of insulin, therefore preventing glucose from being absorbed → impaired glucose regulation or insulin resistance
 - ▶ High glucose levels - may lead to insulin resistance - may lead to type 2 diabetes (*disease where body does not produce enough insulin or body resists insulin*)
 - ↳ **INDIGENOUS**: higher rates of impaired glucose regulation
 - ↳ **MALES**: more likely to experience impaired glucose regulation
 - ↳ **LOW SES**: higher rates of impaired glucose regulation
 - ↳ **RURAL/REMOTE**: more likely to experience impaired glucose regulation
- **Birth weight**
 - Low birth weight < 2.5kg
 - More likely to have an underdeveloped immune system, more susceptible to infections
 - More likely to suffer from premature death/significant disabilities (*e.g. speech/learning disabilities*)
 - ▶ Underdeveloped lungs - difficulty breathing - may lead to infant mortality
 - ▶ Underdeveloped immune system - increase chance of disease and infection - morbidity
 - ↳ **INDIGENOUS**: mothers almost 2x likely to give birth to a low birth weight baby (*maternal smoking, accessing healthcare*)
 - ↳ **LOW SES**: mothers more likely to give birth to low weight babies
 - ↳ **RURAL/REMOTE**: percentage of low birth weight babies is higher in remote/very remote areas
- **Genetics**
 - Genetic material contained in body cells controls many aspects of life that influence health status
 - **Sex**: certain conditions can be exclusive more common to males or females or are more common due to the biological, *or genetic*, differences between the sexes
 - ▶ Women: ovarian cancer, more likely to have breast cancer vs. Men: prostate cancer
 - **Predisposition to disease**: how likely someone is to develop certain conditions, often runs in families and ethnic groups – not necessarily develop, only an increased risk
 - ▶ These diseases include some cancers, cardiovascular disease, diabetes (1 & 2), hypertension, depression, obesity
 - **Hormones**: regulate many processes in the body, control many aspects of health and wellbeing; responsible for the formation of male and female sex characteristics – lead to differences in some of the conditions experienced by males and females
 - ▶ **Oestrogen**: regulation of the menstrual cycle in women, helps maintain bone density in women, plays in a protective role against cardiovascular disease
 - ▶ **Testosterone**: mainly responsible for male sex characteristics and the production of sperm, may also play a role in increased risk-taking behaviours and aggression in males compared to females
 - ↳ **MALES**: store fat around abdomen – puts weight on vital organs
 - ↳ **FEMALES**: loss of bone density (*in menopause*) – higher rates of osteoporosis over 60 years

SOCIOCULTURAL FACTORS

- Social and cultural conditions into which people are born, grow, live, work and age
- **Socioeconomic status**
 - Refers to a person's position in society relative to other people based on income, occupation and education
 - **Income:** can influence people's ability to access resources such as adequate housing, food, healthcare (including private health insurance), recreation, transport and education
 - Lower income - unable to afford nutritious foods - obesity
 - **Occupation:** type of activity involved in the job (desk office job vs. manual labor job)
 - Manual work - increased risk of back pain and soft tissue injuries - morbidity
 - **Education:** those who are more educated are more likely to be health literate
 - Less health literate - live unhealthy lifestyle - prevalence of lifestyle disease
 - ↳ **INDIGENOUS:** more likely to experience lower SES
 - ↳ **FEMALES:** fully employed females typically earn less than males; lower SES compared to males
 - ↳ **RURAL/REMOTE:** over half of outer regional, remote and very remote residents live in areas of socioeconomic disadvantage
- **Unemployment**
 - Puts financial strain on individuals and families
 - According to the AIHW (2006), 'the unemployed have a higher chance of dying and [suffer from] more illnesses than those of similar age who are employed'.
 - Unemployment - low income - depression that may lead to suicide
 - ↳ **INDIGENOUS:** more than 4x as likely to be unemployed
 - ↳ **MALES:** when unemployed can feel inadequate/stressed – greater rates of morbidity/mortality
 - ↳ **LOW SES:** more likely to be unemployed
 - ↳ **RURAL/REMOTE:** higher rates of unemployment
- **Social exclusion**
 - Segregation that people experience if not adequately participating in the society in which they live
 - Includes those who experience feelings of disconnectedness and do not get opportunities to make use of the resources available to them in a society – *education, employment, housing, healthcare, social security services*
 - *Factors causing include:* discrimination, low income, homelessness, family breakdown, disability
 - ↳ **INDIGENOUS:** discrimination, racism, forced removal from natural family, avoid seeking healthcare (*unfair treatment*)
 - ↳ **LOW SES:** socioeconomic disadvantage can lead to social exclusion
- **Social isolation**
 - Not being in regular contact with others
 - Disability, illness, communication barriers – can prevent people from socialising, thus contributing to social isolation – especially among elderly and those from non-English speaking backgrounds
 - Regular social contact gives people opportunity to communicate and socialise (promote all dimensions of health and wellbeing)
 - Language barrier - difficult to communicate - social isolation - impact mental health
 - ↳ **RURAL/REMOTE:** higher rates of community participation, however may still feel socially isolated due to geographic barriers

DIFFERENCE BETWEEN THESE TWO FACTORS

- social exclusion
 - not being included by a population group
- social isolation
 - individual taking themselves out of society

- **Cultural influences**

- Relate to customs, ideas, values, and traditions of a particular society that are passed through generations
- Cultural influences that impact health status include gender stereotypes, food intake, attitudes and beliefs
- ▶ **Stereotype:** Males being 'macho' - risk taking - increased risk of injury
- ▶ **Food intake:** Traditional low fat indigenous diet filled with fruits and vegetables - change in diet towards western food - increased obesity
- ▶ **Attitudes:** Traditional medicine of Indigenous Australians is culturally different from western medicine - can reduce the ability of Indigenous Australians to access culturally appropriate medicine in a society dominated by western practices
 - ↳ **INDIGENOUS:** lower rates of accessing western medicines – require culturally appropriate medicine
 - ↳ **MALES:** ('*macho*') less likely to access healthcare, partake in risk taking behaviours
 - ↳ **FEMALES:** typical 'carers of children'; can cause social isolation

- **Food security**

- 'the state in which all persons can obtain nutritionally adequate, culturally appropriate safe food regularly through local non-emergency services' (VicHealth)
- Quality, availability and affordability of the food supply all affect what people eat
- *Shortage of food:* food insecurity - can lead to deficiency diseases/health complications
- *Too much food:* food plenty - people eating too much, risk of diet-diet-related diseases
- Can also be affected by sociocultural factors such as income and nutritional knowledge
- ▶ Lack of food - low iron intake - develop iron deficiency → anaemia
- ▶ Too much food - overeat - lead to weight gain and obesity
- ▶ Can't afford nutritious food - fast food outlets - increased risk of cardiovascular disease
 - ↳ **INDIGENOUS:** 3.4x more likely to report food insecurity
 - ↳ **LOW SES:** more likely to experience food insecurity – lack of financial resources and sufficient knowledge
 - ↳ **RURAL/REMOTE:** 1.2x more likely to report food insecurity

- **Early life experiences**

- Past early life experiences help to shape each individual – outlook on life and behaviours they engage in throughout their lives
- Behaviours of **women during pregnancy** can create early life experiences for unborn babies: *maternal tobacco, alcohol and drug use, and maternal nutrition and exposure to certain chemicals, bacteria and viruses*
- **Abuse/neglect** during early years = affects brain function and development, contributes to emotional and behavioural problems later in life (*including tobacco and substance use*)
- Slowed **growth during infancy** = impaired cardiovascular, respiratory and kidney function, which can lead to illness in later life.
- ▶ Abuse/neglect in early years - increased risk of emotional and behavioural problems - drug and substance abuse - overdose may lead to premature death
- ▶ Mother engaging in maternal smoking/tobacco - underdeveloped lungs at birth - lead to respiratory diseases
 - ↳ **INDIGENOUS:** more likely to engage in maternal smoking, alcohol and drug use
 - ↳ **LOW SES:** more than 4x more likely to engage in maternal smoking, more likely to begin antenatal care later in pregnancy, also more likely to be overweight or obese during pregnancy
 - ↳ **RURAL/REMOTE:** about a third of mothers who gave birth in 2009 smoked during pregnancy

- **Access to healthcare**

- Health care refers to services that promote and preserve health
- Diagnose, treat and/or manage disease and illness
- ▶ Language barrier - difficult experience trying to receive healthcare - increased risk of morbidity and mortality
- ▶ Unable to afford healthcare - delay/avoid seeing healthcare specialist until its too late – increased risk of morbidity and mortality
 - ↳ **INDIGENOUS:** lack of culturally appropriate medicines
 - ↳ **MALES:** (*'macho'*) less likely to access healthcare
 - ↳ **LOW SES:** less likely to: access preventative healthcare, have private health insurance
 - ↳ **RURAL/REMOTE:** difficult to access healthcare professionals

ENVIRONMENTAL FACTORS

- Relate to the physical surroundings in which we live, work and play
- Physical environment includes water and air, workplaces, housing, roads, nature, schools, recreation settings and exposure to hazards

- **Housing**

- People spend more time in their house more than any other environment
- Poor quality housing can have a significant affect on health status
 - ↳ **INDIGENOUS:** most housing is substandard in regard to shelter, drinking water and sanitation; poorer quality, overcrowding
 - ↳ **LOW SES:** unable to afford high quality housing; inadequate cooking appliances, hazardous physical environment, overcrowding, closer proximity to industrial sites (*noise pollution*)

HOUSING PROBLEM	POSSIBLE IMPACTS ON HEALTH STATUS
Overcrowding	Depression, poor hygiene
Poor sleeping conditions	Stress
Inadequate security	Stress
Poor design and safety	Injury
Pollutants	Asthma, lung cancer
Poor hygiene	Disease
Inadequate water supply	Disease
Poor refrigeration and cooking appliances	Disease, poor nutrition

- **Work environment**

- All working environments have associated risks
- **UV exposure:** working outdoors are more exposed to UV radiation
- ▶ Outdoor work - constant exposure to UV - increased risk of skin cancer
- **Accidents and injuries:** risks associated with the specific environment in which work is carried out
- ▶ Working in mining operation - using heavy machinery - increased risk of injuries
- **Exposure to hazardous substances:** paint, asbestos, fuels, gases, acids and corrosive chemicals
- ▶ Working in manufacturing and building - protective equipment but still risks associated with handling substances - contribute to morbidity and mortality in the workplace
 - ↳ **MALES:** often work in more dangerous environments (heavy machinery, tools, exposure to chemical substances, outdoor work, transport)
 - ↳ **LOW SES:** more likely to work in jobs that have dangerous working environments (exposure to toxic substances, heavy machinery)
 - ↳ **RURAL/REMOTE:** undersupply of work = more likely to accept working conditions that are hazardous

- **Urban design and infrastructure**

- Relate to the features and structures of the suburbs, towns, regions and cities in which people live
- **Geographical location of resources:** close in proximity or being located far from health-promoting resources
- ▶ Live close to fast food outlets - people more likely to consume from there - lead to weight gain and obesity
- ▶ Industrial sites located near residential areas - noise pollution - increased stress and high blood pressure
- **Infrastructure:** including sealed roads, public transport systems, information and communication technologies (*telephone, internet connections*), electricity grids and supply, clean water facilities and sanitation systems, and adequate parks, gardens and recreation facilities, assists in promoting health status
- ▶ Adequately maintained roads and traffic systems - improve safety - decrease risk fo morbidity and mortality from road trauma
- ▶ Unable to access clean water supply - exposed to disease - lead to development of dysentery
 - ↳ **INDIGENOUS:** living outside of major cities – exposed to aspects of physical environment that can increase risk of injuries and death (*road crashes – unsealed roads, poor lighting*)
 - ↳ **LOW SES:** closer proximity to fast food outlets
 - ↳ **RURAL/REMOTE:** unable to access fluoridated water and roads are generally poorer condition; wildlife = more likely to cross path of vehicles, roads poorly lit, long driving times and distances

- **Climate and climate change**

- Australia's varying climates affect health status: rainfall, temperature and wind patterns vary across the country
- **Climate:** Australia is the driest inhabited continent on Earth, and is more susceptible to bushfires than many other countries as a result
- ▶ Dry land - may lead to bushfire - can destroy life and infrastructure, limiting availability of goods and services - may restrict access to food, water, healthcare - increase morbidity and mortality rates in affected area
- ▶ High UV (ultraviolet) levels - exposure to sun - increased risk of skin cancer
- **Climate change:** increasing concern that changes to the environment are contributing to climate change – resulting in extreme temperatures, rising sea levels, and increases in the occurrence of natural disasters and the spread of vector-borne diseases
- ▶ Increased temperature - bushfires (- refer to climate)
- ▶ Increased risk of natural disasters - floods (*common in Queensland*) - widespread damage and loss of life - increased morbidity and mortality
 - ↳ **RURAL/REMOTE:** droughts, floods, fires can disrupt farmers – lead to unstable income – lowers SES and increases stress