Factors influencing health status and burden of disease

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

Account for over **25 per-cent of the total burden of disease in Australia**

(figure 3.3, being largely modifiable, these factors highlight areas where significant progress can be made in relation to health status and burden of disease.

**PREVENTION NOT TREATMENT**
3.2 - Smoking

Tobacco smoke can cause a fault in body cells as they divide. This can lead to a tumor and, ultimately, cancer.
Effect of smoking on health status and burden of disease

- Damages airways: Contributes to chronic obstructive pulmonary disease and asthma, which contribute to YLD and YLL
- Increases the risk of low birth weight babies: Increases infant and under-five mortality rates
-速s the process of atherosclerosis: Increases the burden associated with cardiovascular disease through both premature mortality and morbidity
- Damages cells and increases the risk of cancer: Lung, pancreatic, and cesophageal cancers are significant causes of death that contribute to YLL and mortality rates
Alcohol

Alcoholism is when a person can’t stop drinking once they have started, or has a constant desire to drink.

Binge drinking is defined as drinking seven or more standard drinks for males or five or more standard drinks for females in one sitting.

How they affect Physical Health and wellbeing

Alcoholism is more likely to contribute to chronic conditions in the long term such as liver disease, whereas binge drinking often results in health concerns in the short term such as road accidents, injuries, drownings and violence.

Alcohol has strong links to Mental illness.
FIGURE 3.10 Some of the effects of excessive alcohol consumption

- Aggressive, irrational behaviour, depression
- Dementia
- Alcohol dependence, memory loss
- Premature ageing
- Cancer of throat and mouth
- Reduced resistance to infection; increased risk of pneumonia
- Liver damage
- Ulcers
- Heart failure, anaemia; breast cancer
- Lung cancer
- Weight gain and obesity
- Inflammation of the pancreas
- Vitamin deficiency; malnutrition
- In men: impaired sexual performance
- In women: risk of giving birth to low birthweight babies or babies with developmental abnormalities
- Falls caused by impaired sensation
Alcohol and PMSES

Physical - Alcohol contains kilojoules and therefore energy, which means it can increase the chances of an individual gaining weight. Over a period of time, alcohol use can contribute to a person becoming overweight or obese. Obesity is itself a risk factor for a range of other conditions such as type 2 diabetes, cardiovascular disease and some cancers.

Alcohol is filtered through the liver. Excessive consumption can cause scarring of the liver tissue, which can lead to the liver not functioning properly and toxins remaining in the body. Over time, this can lead to chronic liver diseases such as sclerosis of the liver.

Social and Mental -

The behaviour of those affected by alcohol can change, putting a strain on relationships (SOCIAL HEALTH AND WELL BEING) and increasing the risk of mental health issues and associated outcomes including suicide and self-harm (MENTAL HEALTH AND WELL BEING).
Alcohol can temporarily suppress the immune system, increasing your susceptibility to illness while decreasing your ability to fight it.

Long-term and heavy alcohol consumption can increase your risk of developing heart disease.

Alcohol is often linked with bowel irritation and can trigger symptoms of irritable bowel syndrome.

Alcohol irritates the stomach lining which can bring on nausea, vomiting and sometimes diarrhoea. Long-term heavy drinking has been associated with increased risk of stomach cancer.

**Females**

Drinking heavily or in excess can affect a woman’s menstrual cycle and ovulation, making it difficult to conceive a baby. This can be reversed, however, by putting a stop to or reducing alcohol intake.

Alcohol is a diuretic — it acts on the kidneys to make you urinate more often. Drinking too much alcohol means that your kidneys have to work harder to remove toxins from your blood.

Alcohol slows down the central nervous system which in turn impacts on almost all the body’s cells and systems.

Regularly drinking to excess may result in a fatty liver which can adversely affect your liver function.

**Males**

For men, alcohol can be damaging to testicles by causing them to shrink. This decreases testosterone blood levels, which may lead to the development of female characteristics such as enlarged breasts.

Alcohol dehydrates your body and this includes the skin, your body’s largest organ. Over time, drinking heavily can have other, more permanent and detrimental effects on your skin.
High body mass index

High BMI increases the risk of (refer to figure 3.16 in text book for full list)

- **Cardiovascular disease** (which increases the risk of **hypertension** and of high levels of cholesterol in the blood)
- **Mental health issues** (High body mass index can contribute to conditions such as anxiety and depression).
- **Type 2 diabetes** (In type 2 diabetes the pancreas does not produce enough insulin, or the body cannot use the insulin effectively (known as insulin resistance)
- **Some cancers** (including colorectal cancer and breast cancer.)
Jacob’s Story.....

- https://www.youtube.com/watch?v=mNvm0OWQOGA
BMI concept map

- Increases the risk of some cancers, which contributes to premature death and YLL
- Places greater strain on the heart, which increases the incidence and prevalence of hypertension and cardiovascular disease
- Increases the risk of kidney disease, which is a leading cause of death in Australia and reduces life expectancy
- Places greater strain on the joints, increasing the prevalence of arthritis
- Increases the burden associated with mental health issues
- Increases the risk of type 2 diabetes, which contributes significant YLL and YLD
- Increases the risk of various conditions during pregnancy such as gestational diabetes
Dietary risks: underconsumption of vegetables, fruit and dairy foods

Key skill: Understanding the contribution of underconsumption of vegetables, fruit and dairy foods to Australia’s health status and burden of disease

Fruit and vegetables- contains vitamins and minerals that promote immune function and prevent sickness. Contains fibre which makes you feel full and prevents you from overeating and becoming overweight or obese.

Dairy- contains calcium that allows you to maintain bone density and prevent osteoporosis.
Dietary risks: underconsumption of vegetables, fruit and dairy foods

Key skill: Understanding the contribution of underconsumption of vegetables, fruit and dairy foods to Australia’s health status and burden of disease

Fruit and vegetables - under consumption can lead to an increase in sickness due to weak immune system and therefore increase morbidity levels. Under consumption can also lead to overeating due to not feeling full and therefore weight gain and associated diseases such as CVD, which puts you at higher risk of heart attack and increases YLL.

Dairy - under consumption increases risk of weak bones, therefore increases morbidity from osteoporosis later in life.
Dietary risks: underconsumption of fibre and iron

Key skill: Understanding the contribution of underconsumption of fibre and iron

Fibre - promotes digestion function and decreases risk of colorectal cancer.

Iron - promotes haemoglobin levels in the blood, assists oxygen being delivered around the body and prevents you from becoming anaemic and having low energy levels.
Dietary risks: underconsumption of fibre and iron

Key skill: Understanding the contribution of underconsumption of fibre and iron

Fibre- under consumption can lead to reduced bowel function and increased burden of disease through YLD from bowel and colorectal cancer

Iron- under consumption can lead to low oxygen levels in the blood, cause anaemia and contribute to increased morbidity rates.
Dietary risks: high intake of fat, salt and sugar

Key skill: Understanding the contribution of a high intake of saturated fat, salt and sugar to Australia’s health status and burden of disease

Fat - It is nutrient-dense and contributes to weight gain, leading to obesity and associated conditions (cancer, CVD)

Salt - Doesn’t contain energy, but draws fluid out of cells and increases blood volume. This increases blood pressure and can lead to hypertension and heart attack or stroke.

Sugar - Promotes bacteria growth on teeth which produce acids and contribute to decay or dental caries.
Dietary risks: high intake of fat, salt and sugar

Key skill: Understanding the contribution of a high intake of saturated fat, salt and sugar to Australia’s health status and burden of disease

Fat: High intake can cause weight gain around the vital organs which increases blood pressure and puts you at increased risk of YLL through heart attack.

Salt: Too much salt can cause high blood pressure and put you at risk of stroke, this increases mortality rates from premature death.

Sugar: With increases in dental decay, also leads to increases in morbidity rates and gum disease.