3 Factors influencing health status and burden of disease

Unit	3	Australia's health in a globalised world
Area of Study	1	Understanding health and wellbeing
Topic	3	Factors influencing health status and burden of disease
Subtopic	3.2 & 3.3	Smoking and Alcohol

Summary

Tobacco smoking
- is the leading preventable risk factor in Australia.
- is a risk factor for cardiovascular disease, respiratory diseases and many forms of cancer

Alcohol consumption
- is the third most preventable risk factor in Australia.
- is a risk factor for injuries and violence, obesity, foetal alcohol syndrome disorder if consumed during pregnancy, and chronic liver disease
- More than two standard drinks per day is considered harmful to long-term health (Better Health Channel).

Reducing tobacco and alcohol use could contribute to significant health gains in Australia.

My notes

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online only

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at **www.jacplus.com.au**.

Exam practice questions

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 1

Tobacco smoking is a risk factor for   **1 mark**

A. cardiovascular disease.

B. respiratory disease.

C. many forms of cancer.

D. All of the above

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 2

According to the Australian guidelines to reduce health risks from drinking alcohol,   **1 mark**

A. drinking no more than one standard drink on any day reduces the lifetime risk of harm from alcohol-related disease or injury for healthy men and women.

B. drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury for healthy men and women.

C. drinking no more than three standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury for healthy men and women.

D. drinking no more than four standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury for healthy men and women.

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 3

Review the data in the graph.
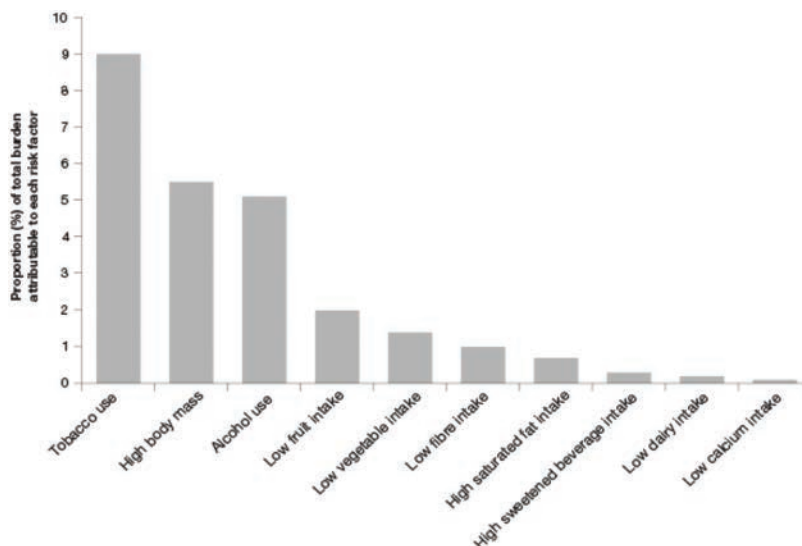
Source: Adapted from *AIHW 2016, Australian burden of disease study: impact and causes of illness and death in Australia 2011*, page 57.

What proportion of total burden of disease is attributed to tobacco and alcohol use? **2 marks**

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Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 4

Tobacco smoking is the leading preventable risk factor for disease in Australia.
Describe three ways tobacco smoking impacts on the health status of Australians. **3 marks**

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Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 5

In 2011, alcohol use was responsible for 5.1 per cent of the total burden of disease and injury in Australia. Describe how reducing alcohol use could decrease the burden of disease in Australia. **2 marks**

Unit	3	Australia's health in a globalised world
Area of Study	1	Understanding health and wellbeing
Topic	3	Factors influencing health status and burden of disease
Subtopic	3.4	High body mass index

Summary

A high **body mass index (BMI)**:

- is the second highest preventable risk factor in Australia
- refers to people who are classified as being overweight (BMI 25–29.9) or obese (BMI 30 and over)
- is a risk factor for cardiovascular disease, some forms of cancer, type 2 diabetes, arthritis, osteoporosis, asthma and mental health issues.

$$BMI = \frac{Weight\ (kg)}{[Height\ (m)]^2}$$

BMI	Classification for adults
Under 18.5	Underweight
18.6–24.9	Healthy weight
25–29.9	Overweight
30 and over	Obese

My notes

online only

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Exam practice questions

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 1
Explain how body mass index may impact on the mental health of children. **2 marks**

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Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 2
People who have a body mass index (BMI) of 27 are considered to be **1 mark**
A. underweight.
B. healthy weight.
C. overweight.
D. obese.

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Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 3

People who have a BMI of 35 are considered to be **1 mark**

A. underweight.
B. healthy weight.
C. overweight.
D. obese.

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 4

Identify two impacts of a high body mass on health status. **2 marks**

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 5

Explain how a high body mass index increases the risk of cardiovascular disease and type
2 diabetes. **4 marks**

Unit	3	Australia's health in a globalised world
Area of Study	1	Understanding health and wellbeing
Topic	3	Factors influencing health status and burden of disease
Subtopic	3.5	Under-consumption of vegetables, fruit and dairy foods

Summary

A variety of fruits and vegetables are a protective factor for many diseases.

- Dietary risks have emerged as some of the most significant preventable risk factors impacting health status in Australia.
- Vegetables and fruits are a rich source of fibre, vitamins, minerals and antioxidants.
- **Under-consumption of vegetables** is a risk factor for obesity, cardiovascular disease, type 2 diabetes and some forms of cancer, particularly laryngeal, mouth and pharyngeal cancer.
- **Under-consumption of fruits** (particularly raw) is a risk factor for obesity, cardiovascular disease, type 2 diabetes and some cancers.

Dairy products such as milk are a rich source of calcium and help to build peak bone mass.

- Dietary risks have emerged as some of the most significant preventable risk factors impacting health status in Australia.
- Dairy foods (e.g. milk, yoghurt and cheese) are rich sources of calcium.
- **Under-consumption of dairy foods:**
  - is a major risk factor for osteoporosis (a leading cause of morbidity in post-menopausal women)
  - has been associated with an increased risk of cardiovascular disease, obesity, colorectal cancer and dental caries.

My notes

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Past VCAA exam questions

Question 1

In 2014–2015, the Australian Bureau of Statistics conducted the National Health Survey. The survey was designed to collect information about the health of Australians. Some key findings for Australian adults included the following:

• less than half (49.8%) met the *Australian Dietary Guidelines* for the recommended daily serves of fruit
• 7.0% met the *Australian Dietary Guidelines* for the recommended daily serves of vegetables
• 5.1% met both guidelines
• 63.4% were overweight or obese

Data: Australian Bureau of Statistics, 'National Health Survey, First Results, Australia, 2014–15', ABS cat. no. 4364.0.55.001; © Commonwealth of Australia 2015

Based on the results of the survey, identify one nutrient that could be deficient in the diet of Australians and outline one possible consequence for health. **2 marks**

Exam practice questions

Question 2

People aged 15 years or over who usually eat the recommended daily intake of fruits and vegetables
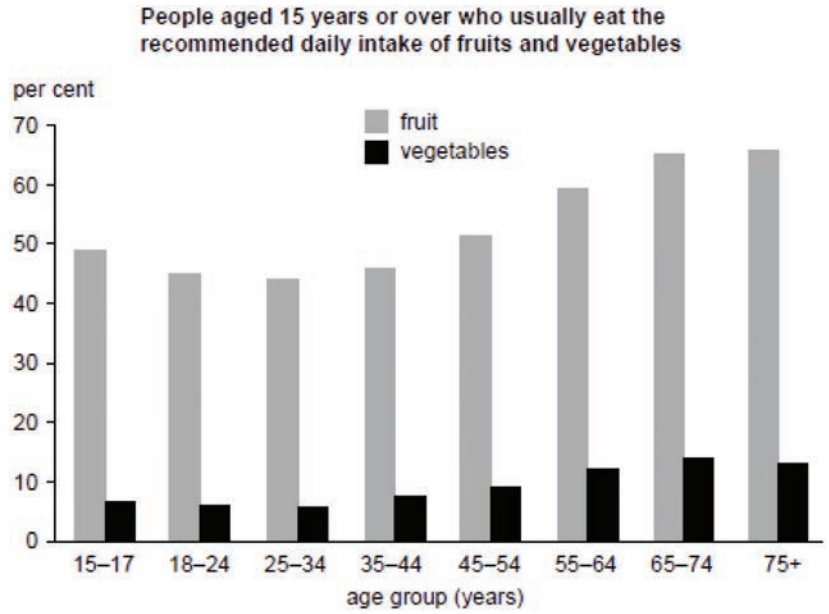
Source: Australian Institute of Health and Welfare, *Australia's welfare 2011*, Australia's welfare series no. 10, cat. no. AUS 142, Canberra, 2011, p. 367

Identify **one** trend from the graph in relation to the percentage of people who usually eat the recommended daily in take of fruits and vegetables. **1 mark**

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Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 3

Fruits and vegetables are a rich source of **1 mark**

A. protein.

B. fibre.

C. fat.

D. All of the above

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 4

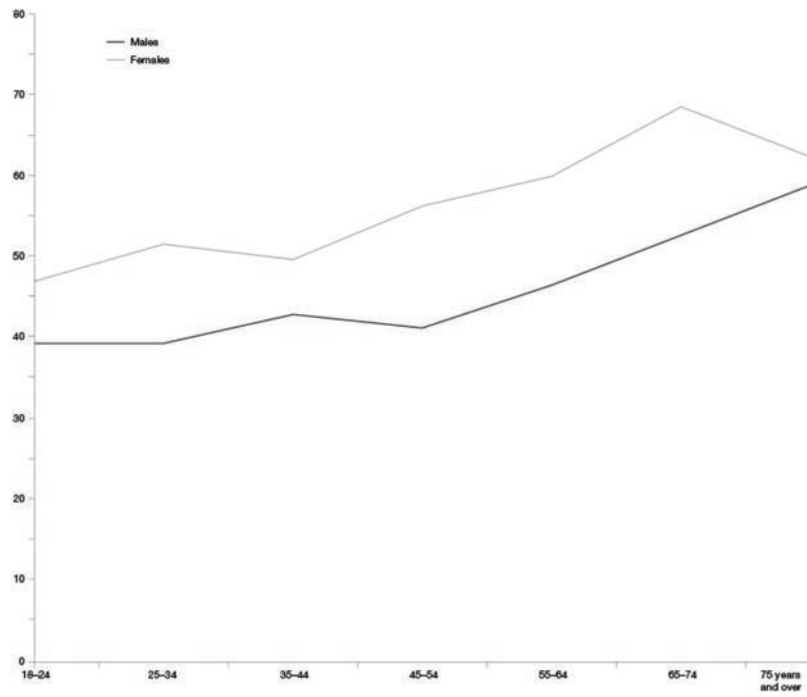A low intake of fruits and vegetables increases the risk of **1 mark**

A. cardiovascular disease.

B. type 2 diabetes.

C. obesity.

D. All of the above

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 5
Persons 18 years & over - Proportion with adequate intake of fruit, vegetables or both (a), 2014–2015
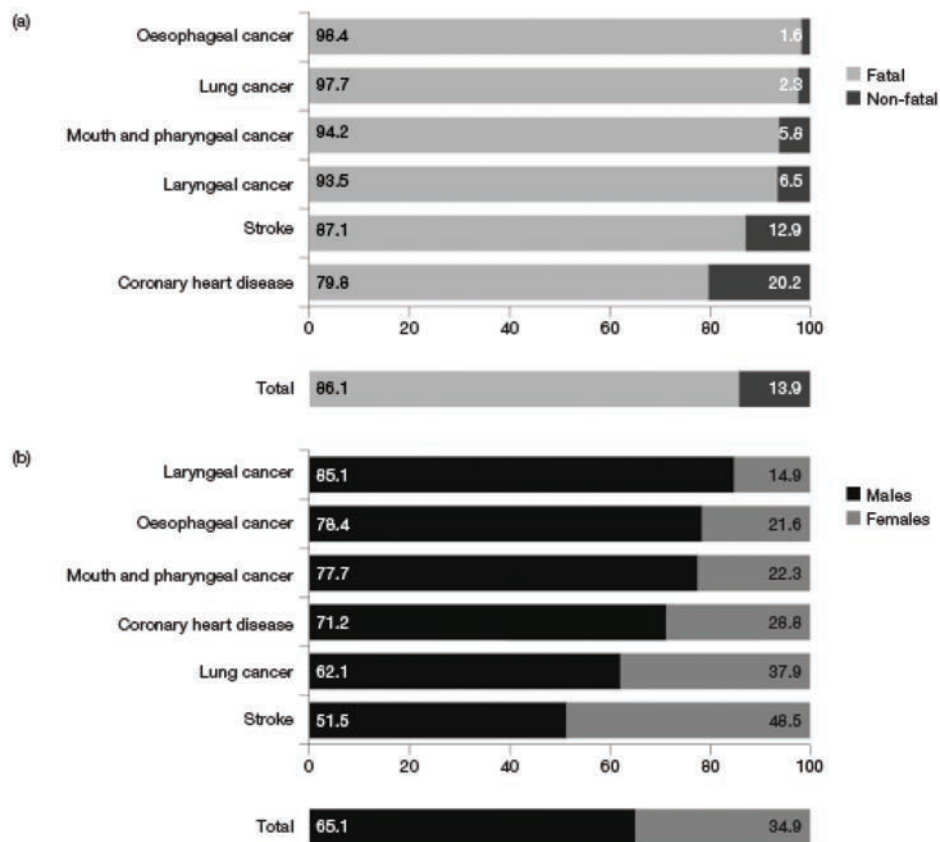

Source: ABS, *National Health Survey: First Results*, 2014–15.

From the data in the graph, describe two conclusions that can be drawn about the adequate consumption of fruits and vegetables. **4 marks**

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Question 6

Proportion (%) of burden attributable to a diet low in fruit, by fatal versus non-fatal burden (a) and sex (b), 2011

Source: AIHW 2016, *Australian burden of disease study: impact and causes of illness and death in Australia 2011*, page 196.

Identify the top fatal burden attributed to low fruit intake and the top non-fatal burden attributed to low fruit intake. **2 marks**

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Question 7

Dairy foods are a rich source of **1 mark**

A. calcium.

B. iron.

C. fibre.

D. All of the above

Question 8

A low intake of dairy foods is a risk factor for **1 mark**

A. cardiovascular disease.

B. dental caries.

C. osteoporosis.

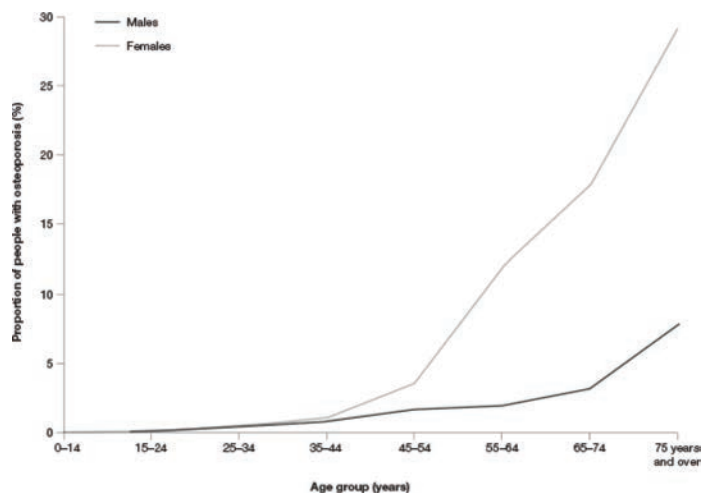D. All of the above

Question 9

Insufficient intake of dairy foods is a major risk factor for osteoporosis. Identify a population group where the prevalence of osteoporosis is high and explain why this group is most at risk. **2 marks**

Question 10
Proportion of males and females with osteoporosis, 2011–12

Source: ABS, *Australian health survey: first results*, 2011–13.

From the data provided, what conclusion can you make about the relationship between age and osteoporosis?   **2 marks**

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Question 11
Describe how an adequate intake of dairy foods assists in reducing the prevalence of osteoporosis. **3 marks**

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Unit	3	Australia's health in a globalised world
Area of Study	1	Understanding health and wellbeing
Topic	3	Factors influencing health status and burden of disease
Subtopic	3.6	Dietary risks of high intake of fat, salt and sugar

Summary

- All fats are a concentrated source of energy.
- A **high intake of fat** is a risk factor for weight gain and obesity, which can lead to cardiovascular disease and type 2 diabetes.
- A high intake of saturated and trans fats increases the risk of cardiovascular disease and colorectal cancer.
- A **high intake of sugar** is a risk factor for weight gain, obesity and dental caries (tooth decay or cavities).
- Salt is a major source of sodium.
- A **high intake of salt** is a risk factor for hypertension, cardiovascular disease and osteoporosis.

A high intake of fat, sugar or salt is a major risk factor for many diet-related diseases.

My notes

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Past VCAA exam questions

Source: *VCAA 2015, Health and Human Development Exam, Q6c*

Question 1

Between 2011 and 2013, the Australian Government conducted the Australian Health Survey (AHS), which collected in-depth data on nutrition. One of the preliminary findings was that the average daily consumption of sodium was 2404 mg per day, significantly higher than the 460–920 mg recommended by the National Health and Medical Research Council (NHMRC).

Outline how excessive sodium consumption can have an impact on health.   **2 marks**

Source: *VCAA 2017, Health and Human Development Exam, Q5c*

Question 2

Oliver is a 51-year-old male. He smokes 10 cigarettes a day and has a minimal alcohol intake. Oliver's body weight is quite high and he has little time to exercise. Oliver has been diagnosed with high cholesterol and he suffers from hypertension, placing him at risk of cardiovascular disease.

Oliver has been advised by his doctor to make changes to his diet to reduce his sodium intake.

Identify one major food source of sodium. Outline the role sodium plays in increasing the risk of cardiovascular disease.   **2 marks**

Source: *VCAA 2017, Health and Human Development Exam, Q6aii*

Question 3

In 2014–2015, the Australian Bureau of Statistics conducted the National Health Survey. The survey was designed to collect information about the health of Australians. Some key findings for Australian adults included the following:

- less than half (49.8%) met the *Australian Dietary Guidelines* for the recommended daily serves of fruit
- 7.0% met the *Australian Dietary Guidelines* for the recommended daily serves of vegetables 5.1% met both guidelines
- 63.4% were overweight or obese

Data: Australian Bureau of Statistics, 'National Health Survey, First Results, Australia, 2014–15', ABS cat. no. 4364.0.55.001; © Commonwealth of Australia 2015

Based on the results of the survey, identify one nutrient that could be in excess in the diet of Australians and outline one possible consequence for health. **2 marks**

Source: *VCAA 2012, Health and Human Development Exam, Section B, Q4b*

Question 4

The Heart Foundation is a non-government agency that provides dietary advice to help maintain healthy weight to lower the risk of contracting a range of diseases. The Heart Foundation advises the following.

- Eat a variety of foods.
- Include vegetables, wholegrains, fruit, nuts and seeds every day.
- Choose healthier fats and oils.
- Try to limit sugary, fatty and salty takeaway meals and snacks.
- Drink mainly water.

Outline one health benefit of limiting the intake of sugary, fatty and salty takeaway meals and snacks. **2 marks**

Exam practice questions

Question 5

A diet high in fat increases the risk of   **1 mark**

A. osteoporosis.

B. anaemia.

C. cardiovascular disease.

D. All of the above

Question 6

A diet high in salt increases the risk of   **1 mark**

A. osteoporosis.

B. hypertension.

C. cardiovascular disease.

D. All of the above

Question 7

In an article to be published in the PLOS (Public Library of Science) Magazine, modelling by the university's Centre for Health Policy concludes that taxing foods that are high in sugar, salt and saturated fats — as well as subsidising fruit and vegetables — would also save $3.4 billion in health care costs.

Source: www.abc.net.au

Explain how taxing foods high in sugar, salt and saturated fat could contribute to saving $3.4 billion in health care costs.   **4 marks**

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 8

All fats are a concentrated source of energy and if overconsumed can lead to weight gain and obesity. Saturated fats and trans fats also have a specific impact on both cardiovascular disease and type 2 diabetes. Describe how saturated fats and trans fats contribute to the development of cardiovascular disease and type 2 diabetes. **2 marks**

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Unit	3	Australia's health in a globalised world
Area of Study	1	Understanding health and wellbeing
Topic	3	Factors influencing health status and burden of disease
Subtopic	3.7	Dietary risks of low intake of fibre and iron

Summary

- Iron is necessary in the production of haemoglobin, the oxygen-carrying component of blood.
- A **low intake of iron** is a risk factor for anaemia, a deficiency in the number and quality of oxygen-carrying red blood cells.

Red meat is an excellent source of iron.

- Fibre promotes a sense of fullness and assists in moving food through the digestive system.
- A **low intake of fibre** increases the risk of:
  - ➤ weight gain and obesity
  - ➤ colorectal cancer and cardiovascular disease.

Raw fruits and vegetables are an excellent source of fibre.

My notes

on line only

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Exam practice questions

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 1

Iron is a major nutrient found in **1 mark**

A. red meat.

B. egg yolks.

C. dark green leafy vegetables, such as spinach.

D. All of the above

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 2

High levels of fibre are found in **1 mark**

A. red meats.

B. processed breakfast cereals.

C. raw fruits and vegetables.

D. All of the above

Source: *Jacaranda (John Wiley & Sons Australia, Ltd), Practice VCE Question*

Question 3

Describe how consuming adequate amounts of fibre each day reduces burden of disease. **2 marks**

| Unit 3 | AOS 1 | Topic 3 | Subtopic 3.7 Dietary risks of low intake of fibre and iron |

Question 4

Describe how a low intake of iron could impact on social and mental health and wellbeing. **3 marks**

Question 5

Review the data table.

Burden (number and percentage of linked disease) attributable to diet low in fibre by disease, 2011

	DALY	
Linked disease	**Number**	**Per cent**
Coronary heart disease	34 206	9.9
Bowel cancer	8982	9.7
Total	**43 188**	**1.0**

Note: The per cent column refers to the proportion of burden attributable to the risk factor within the linked disease of that row.

What proportion of burden of disease attributable to a diet low in fibre is bowel cancer? **1 mark**

Answers and marking guide

3.2 & 3.3 Smoking and Alcohol

Question 1

Correct Answer is D

Tobacco smoking is a risk factor for cardiovascular disease, respiratory disease and many forms of cancer.

Question 2

Correct Answer is B

According to the Australian guidelines to reduce health risks from drinking alcohol, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury for healthy men and women.

Question 3

The total burden of disease attributed to tobacco use is approximately 9 per cent. **[1 mark]**

The total burden of disease attributed to alcohol use is approximately 5 per cent. **[1 mark]**

Question 4

Suitable answers include:

- Tobacco smoking during pregnancy increases the risk of low birth weight babies, which can contribute to higher rates of morbidity and mortality in infants.
- Tobacco smoke can decrease the functioning of the immune system, increasing morbidity from infections.
- Tobacco smoke may interfere with cell division, which can lead to cell mutation and the development of tumors, increasing morbidity from cancer.
- Tobacco smoke can increase blood pressure, which can increase morbidity from cardiovascular disease.
- Tobacco smoke can damage airways, which increases morbidity from respiratory illness.
- Exposure to tobacco smoke in utero and during infancy can increase morbidity from asthma.

Award 1 mark for each description (up to three) of the impact of tobacco smoking on health status.

Question 5

Sample answers could include:

- Alcohol is kilojoule dense. By reducing alcohol consumption, fewer kilojoules will be consumed, reducing burden of disease from obesity and related conditions such as type 2 diabetes and cardiovascular disease.
- Alcohol may increase reckless and violent behaviour. By reducing alcohol consumption, the risk of injuries from falls or violence could be reduced, reducing burden of disease.

Award 1 mark for an impact of alcohol use.

Award 1 mark for a link to burden of disease.

3.4 High body mass index

Question 1

A possible explanation could include:

A child with a high body mass (that is, they are overweight or obese) may have poor body image.

This impacts on their mental health as they may experience bullying and low self-esteem.

Award 1 mark for an example of body mass.

Award 1 mark for relating how this example affects the mental health of children.

Question 2
Correct Answer is C
People who have a body mass index (BMI) of 27 are considered to be overweight. A BMI in the range of 25–29.9 is considered to be in the overweight range.

Question 3
Correct Answer is D
People who have a BMI of 35 are considered to be obese. A BMI of 30 or above is considered to be in the obese range.

Question 4
Suitable responses include:
- higher incidence of morbidity and mortality from cardiovascular disease
- higher incidence of morbidity and mortality from some forms of cancer
- higher incidence of morbidity and mortality from type 2 diabetes
- higher incidence of morbidity from arthritis
- higher incidence of morbidity from asthma
- higher incidence of morbidity from mental health issues.

Award 1 mark for each of two impacts.

Question 5
A high body mass means that the heart has to work harder to pump blood to extra body tissue. This additional strain on the heart could lead to heart failure or heart attack.
A high body mass means that there are additional fat cells within the body. Fat cells restrict the ability of insulin towork effectively, increasing the risk of type 2 diabetes.
Award 1 mark for an example of how high body mass impacts on the body.
Award 1 mark for the link between impact example and cardiovascular disease.
Award 1 mark for a second example of how high body mass impacts on the body.
Award 1 mark for the link between impact example and type 2 diabetes.

3.5 Under-consumption of vegetables, fruit and dairy foods

Question 1
Vitamin C found in fruits and vegetables helps to improve immune function. Insufficient vitamin C can decrease immunity to disease, impacting on physical health and wellbeing.
Award 1 mark for identifying any of the following deficient nutrients:
- fibre
- water
- folate
- vitamin C.

Award 1 mark for outlining a possible consequence on health.

VCAA high-scoring response:
Deficient nutrient: Fibre
Fibre is found in fruits and vegetables, and assists in the removal of waste from the digestive tract by adding bulk to faeces. Deficiency can lead to constipation in the short term, and colorectal cancer in the long term, reducing physical health.

VCAA Examination Report **note:**
Students needed to use the information provided in the survey results to identify a nutrient that could be deficient and a nutrient that could be in excess in the diet of Australians. This question was generally well answered, although students were better able to identify a nutrient that could be in excess than one that could be deficient.

Question 2

In the 25–75+ age group, there is an increase in the percentage of people who eat the recommended daily intake of fruits and vegetables. In the 25–34 group, almost 45% eat the recommended amount of fruit and 5% eat the recommended amount of vegetables. This increases to 65% for fruit and 10% roughly for vegetables in the 75+ age group.

Award 1 mark for identifying a relevant trend for *both* fruits and vegetables.

(No marks were awarded if only fruits or vegetables were discussed.)

VCAA Assessment Report note*:*

This question was generally well answered, although some students did not read the graph accurately.

Question 3

Correct Answer is B

Fruits and vegetables are a rich source of fibre.

Question 4

Correct Answer is D

A low intake of fruits and vegetables is a risk for obesity, cardiovascular disease and type 2 diabetes.

Question 5

Valid conclusions include:

- Females have consistently higher adequate intake of fruits and vegetables than males at all age groups. For example, females at ages 18–24 have approximately 8 per cent higher intake than males of the same age; at 45–54 years, females have approximately 15 per cent higher intake than males; and at age 75 and over, female intake was approximately 2 per cent higher than males.
- Males at age 18–24 have a lower adequate intake of fruits and vegetables than males aged 75 years and over. Males aged 18–24 years intake was approximately 40 per cent, around 20 per cent lower than males aged 75 years and over.

For each valid conclusion selected:

Award 1 mark for a conclusion about fruit and vegetable consumption.

Award 1 mark for accurate use of data.

Question 6

The top fatal burden attributed to low fruit intake is oesophageal cancer. **[1 mark]**

The top non-fatal burden attributed to low fruit intake is coronary heart disease. **[1 mark]**

No marks can be awarded if data links to males and females.

Question 7

Correct Answer is A

Dairy foods are a rich source of calcium.

Question 8

Correct Answer is D

A low intake of dairy foods is a risk factor for all of the above diseases — cardiovascular disease, dental caries and osteoporosis.

Question 9

Females are the population group most at risk of osteoporosis. This is because, after menopause, calcium loss from bones is greater, increasing the risk of osteoporosis.

Award 1 mark for identifying females as the population group most at risk of osteoporosis.

Award 1 mark for linking menopause to calcium loss.

Question 10

Suitable conclusions include:

- As age increases, so does the proportion of males with osteoporosis. At age 0–14, the proportion of males with osteoporosis was 0 per cent; by 75 years and over, the proportion of males with osteoporosis was approximately 8 per cent.
- As age increases so does the proportion of females with osteoporosis. At age 0–14, the proportion of females with osteoporosis was 0 per cent; by 75 years and over, the proportion of females with osteoporosis was approximately 28 per cent.

Award 1 mark for a valid relationship between age and osteoporosis.

Award 1 mark for accurate use of data.

Question 11

Dairy foods are an excellent source of calcium. Calcium is required to harden bones and teeth and build bone density so that maximum bone density can be achieved. Adequate bone density is required to assist in the reduction of the prevalence of osteoporosis.

Award 1 mark for recognising that dairy foods are high in calcium.

Award 1 mark for describing the function of calcium in relation to bone hardening and density.

Award 1 mark for linking calcium function to prevalence of osteoporosis.

3.6 Dietary risks of high intake of fat, salt and sugar

Question 1

Excessive sodium raises blood pressure. High blood pressure can contribute to atherosclerosis and heart disease, negatively impacting on physical health.

Award 1 mark for outlining a function of excessive sodium.

Award 1 mark for how this function impacts on health.

VCAA Assessment Report **note***:*

This question was not answered well. Sodium consumption is a risk factor for cardiovascular disease and is part of the key knowledge associated with Unit 3. Students are reminded that sodium is not related to energy and does not contribute to obesity.

VCAA Assessment Report high-scoring response:

Excessive sodium can impact fluid retention. This can cause blood retention in the body (increasing blood volume), leading to increased rate of high blood pressure, which can cause a stroke. Excess sodium can cause calcium to be excreted, which can cause bone strength to deteriorate increasing the risk of osteoporosis.

Question 2

Table salt is a concentrated source of sodium. Sodium elevates blood pressure as sodium draws excess fluid out of cells, increasing blood volume. High blood pressure is a major risk factor for cardiovascular disease, as high blood pressure makes the heart work harder increasing cardiovascular diseases such as heart failure.

Award 1 mark for any of the following examples of foods high in sodium:

- table salt
- processed foods such as tomato sauce
- snack foods such as potato crisps
- olives
- bread
- processed meats such as salami.

Award 1 mark for the role sodium plays in increasing the risk of cardiovascular disease.

VCAA Examination Report **note:**

The majority of students were able to identify a major food source of sodium; however, many students were unable to explain the role that sodium plays in increasing the risk of cardiovascular disease. Students are reminded that processed food is a group of foods and an example of a relevant processed food needed to be provided.

Question 3

Fat is the most concentrated source of energy. Excess fat in the diet can lead to weight gain and obesity, impacting on physical health and wellbeing by increasing risk of type 2 diabetes, heart disease and some cancers.

Award 1 mark for identifying any of the following excess nutrients:

- fat
- saturated fat
- carbohydrates
- trans fat.

Award 1 mark for outlining a possible consequence on health.

VCAA Examination Report **note:**

Students needed to use the information provided in the survey results to identify a nutrient that could be deficient and a nutrient that could be in excess in the diet of Australians. This question was generally well answered, although students were better able to identify a nutrient that could be in excess than one that could be deficient.

Question 4

Limiting the intake of sugary, fatty and salty takeaway foods will improve cardiovascular health.

Sugary and fatty foods contribute to excess kilojoules, salty foods can contribute to high blood pressure. Both excess kilojoules which lead to obesity and high blood pressure are risk factors for cardiovascular disease.

Award 1 mark for a relevant health outcome.

Award 1 mark for a brief outline of how it will improve health.

Question 5

Correct Answer is C

A diet high in fat increases the risk of cardiovascular disease.

Anaemia is linked to low iron intake and osteoporosis is linked to low calcium intake.

Question 6

Correct Answer is D

Salt contains sodium, which increases the risk of osteoporosis, cardiovascular disease and hypertension (high blood pressure).

Question 7

Foods high in sugar and saturated fat contribute excess kilojoules to the diet and foods high in salt contribute additional sodium to the diet. Excess kilojoules can contribute to excess body fat and sodium raises blood pressure; both are risk factors for cardiovascular disease. By raising taxes on these foods, fewer people may purchase them, improving cardiovascular health and reducing health care costs associated with cardiovascular disease, such as surgery or medication.

Award 1 mark for recognising that sugar and saturated fat contribute excess kilojoules to the diet.

Award 1 mark for recognising that salt is a major source of sodium.

Award 1 mark for describing the impact of high kilojoules and high sodium intake on health.

Award 1 mark for linking taxing these foods to reduced health care costs.

Question 8

Both trans fats and saturated fats raise low density lipoproteins in the blood, encouraging plaque buildup and atherosclerosis; the underlying cause of cardiovascular disease.

Both trans fats and saturated fats increase the impact of impaired glucose regulation, increasing the risk of type 2 diabetes.

Award 1 mark for describing the role of trans fats and saturated fats in the development of cardiovascular disease.

Award 1 mark for describing the role of trans fats and saturated fats in the development of type 2 diabetes.

3.7 Dietary risks of low intake of fibre and iron

Question 1

Correct Answer is D

Red meat, egg yolks and dark green leafy vegetables such as spinach are all excellent sources of iron.

Question 2

Correct Answer is C

High levels of fibre are found in raw fruits and vegetables.

Question 3

Fibre provides a sense of fullness, which prevents overeating and weight gain. Maintaining a healthy weight range can assist in reducing the burden of disease from weight-related conditions such as cardiovascular disease and type 2 diabetes.

Award 1 mark for a description of the function of fibre.

Award 1 mark for explaining how this function reduces burden of disease.

Question 4

A low intake of iron can lead to anaemia, in which a person experiences symptoms such as lethargy and poor concentration. This could impact on social health and wellbeing, as lethargy and tiredness may mean an individual does not have the energy to interact with others. It may also impact on mental health and wellbeing as being anaemic can impact on the ability to concentrate, which may reduce confidence levels when preparing for exams and tests.

Award 1 mark for an example of the impact of low iron intake.

Award 1 mark for explaining how this example impacts on social health and wellbeing.

Award 1 mark for explaining how this example impacts on mental health and wellbeing.

Question 5

Bowel cancer contributes 9.7 per cent of burden of disease attributable to a diet low in fibre. **[1 mark]**

Please note: No marks are awarded for responses of 8982, as this is the number of cases not the proportion or percentage.