AQA GCSE Combined Science - Trilogy | 8464

SPECIFICATION POINT 4.2.2.6

# The effect of lifestyle on some non-communicable diseases

## Past-paper questions

| | |
|---|---|
| Tier | **Higher** |
| Question groups | **3** |
| Available paper years | **2018–2024** |

## Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

**Name:** _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

### 4.2.2.6 The effect of lifestyle on some non-communicable diseases

**Question 01**

June 2018 | 8464/B/1H | Original Q2

**0 2** Coronary heart disease (CHD) is a non-communicable disease.

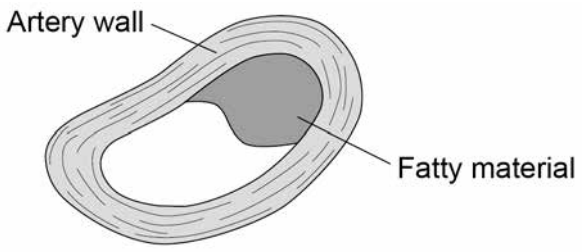
CHD is caused when fatty material builds up in the coronary arteries.

**0 2 . 1** Explain what a non-communicable disease is.

**[2 marks]**

**Figure 4** shows a coronary artery of someone with CHD.

**Figure 4**




**0 2 . 2** Explain how CHD can cause a heart attack.

**[3 marks]**

### 4.2.2.6 The effect of lifestyle on some non-communicable diseases

**Question 01 · continued**



**0 2 . 3** Explain how lifestyle and medical risk factors increase the chance of developing CHD.
**[6 marks]**

**11**

### 4.2.2.6 The effect of lifestyle on some non-communicable diseases

**Question 02**

June 2023 | 8464/B/1H | Original Q1

**0 1** Communicable and non-communicable diseases are major causes of ill health.

**0 1 . 1** Which disease is a **non-communicable** disease?

**[1 mark]**

Tick (✓) **one** box.

- AIDS ☐
- Cancer ☐
- Gonorrhoea ☐
- Malaria ☐

Obesity is a risk factor for many non-communicable diseases.

**0 1 . 2** Give **one** non-communicable disease that obesity is a risk factor for.

Do **not** refer to the diseases given in Question **01.1** in your answer.

**[1 mark]**

**0 1 . 3** National policies are used to help people who are obese to lose weight.

One national policy is to reduce the amount of sugar added to food and drinks.

Suggest **one other** national policy that could help people to lose weight.

**[1 mark]**

4.2.2.6 The effect of lifestyle on some non-communicable diseases

Question 02 · continued



**0 1 . 4** Body mass index (BMI) is one measure of obesity.

BMI is calculated using the equation:

$$\text{BMI} = \frac{\text{body mass in kg}}{(\text{height in m})^2}$$

**Table 1** shows how BMI is used to describe an adult's BMI category.

**Table 1**

| BMI | BMI category |
|---|---|
| <18.5 | Underweight |
| 18.5 to 24.9 | Healthy weight |
| 25.0 to 29.9 | Overweight |
| >29.9 | Obese |

A person is 1.64 m tall and has a mass of 69 kg.

Determine the **BMI category** for this person.

Use the BMI equation and **Table 1**.

**[3 marks]**

The person's BMI category is _____

**Question 1 continues on the next page**

4.2.2.6 The effect of lifestyle on some non-communicable diseases

Question 02 · continued



Scientists investigated the effect of smoking and of BMI on the birth mass of babies.

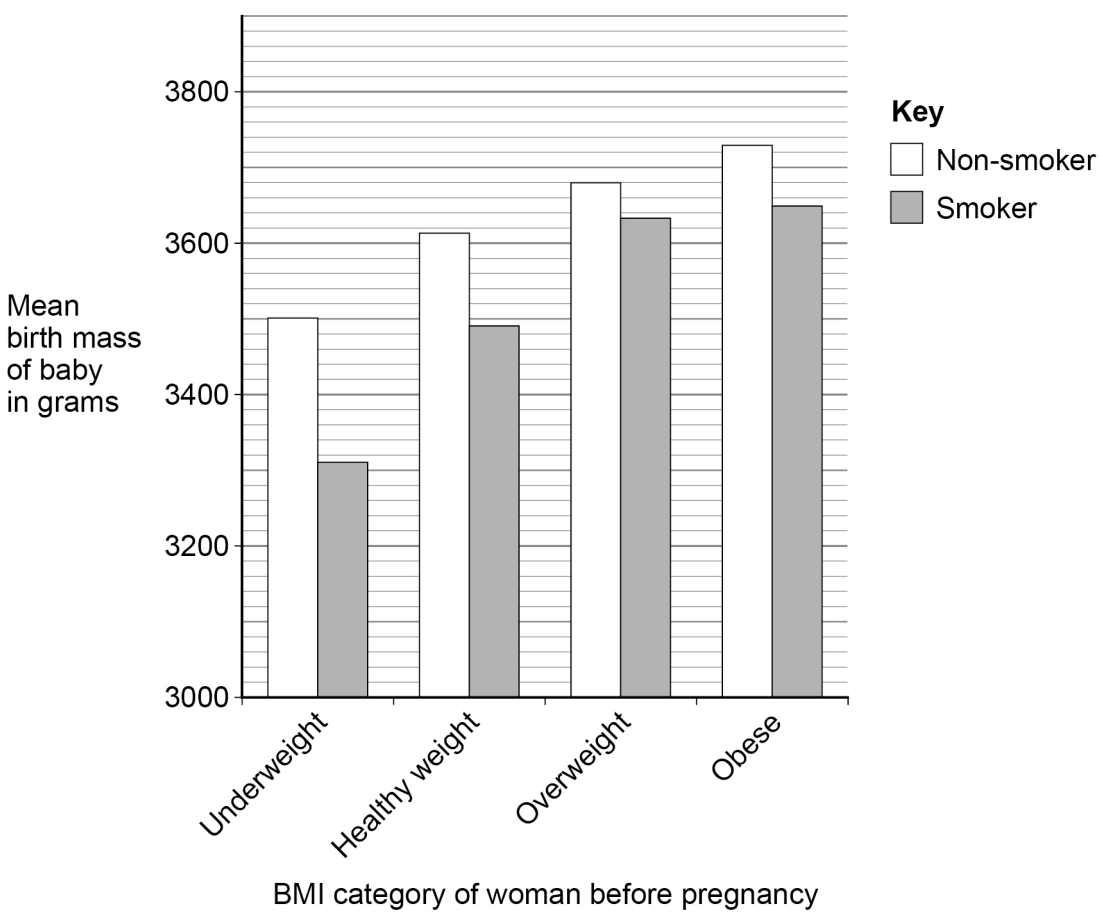
Women's BMI categories were determined before the women became pregnant.

**0 1 . 5** Suggest why BMI categories were determined **before** the women became pregnant.

**[1 mark]**

**Figure 1** shows the results.

**Figure 1**



**4.2.2.6 The effect of lifestyle on some non-communicable diseases**

**Question 02 · continued**



**0 1 . 6** Give **two** conclusions that can be made from **Figure 1**.

**[2 marks]**

1 _____

_____

2 _____

_____

**0 1 . 7** Measles is a communicable disease.

A virus causes measles.

Describe how the measles virus is transferred from person to person.

**[2 marks]**

_____

_____

_____

_____

**Question 1 continues on the next page**

4.2.2.6 The effect of lifestyle on some non-communicable diseases

Question 02 · continued



Athlete's foot is a communicable disease.

A fungus causes athlete's foot.

The athlete's foot fungus infects the skin on feet.

**0 1 . 8** Scientists estimate that 17% of the UK population have athlete's foot.

The estimated UK population is 67 961 900

Calculate how many people are estimated to have athlete's foot.

**[2 marks]**

Estimated number of people with athlete's foot = _____

**0 1 . 9** Athlete's foot fungus grows in moist conditions.

Suggest **one** way a person could reduce their chance of catching athlete's foot.

**[1 mark]**

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4.2.2.6 The effect of lifestyle on some non-communicable diseases

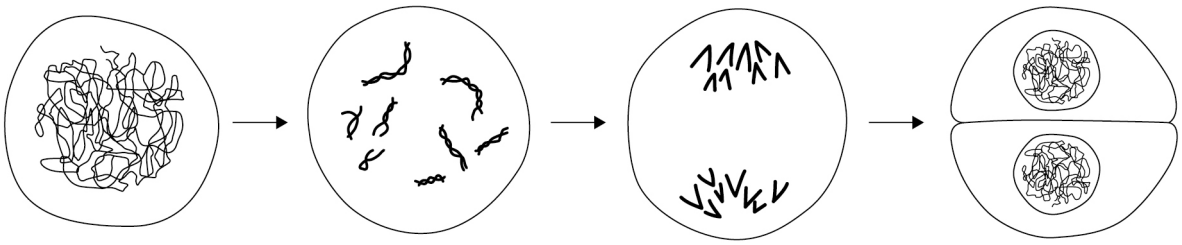
Question 03



**0 6** Smoking increases the risk of lung cancer.

**0 6 . 1** **Figure 5** shows a lung cell dividing.

**Figure 5**



Describe the process of the cell cycle shown in **Figure 5**.

**[4 marks]**

4.2.2.6 The effect of lifestyle on some non-communicable diseases

Question 03 · continued



**0 6 . 2** Lung cancer is malignant.

Explain what is meant by a malignant tumour.

**[3 marks]**

**Question 6 continues on the next page**

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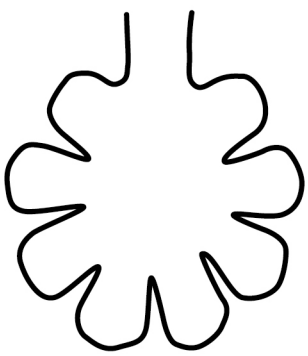
**0 6 . 3** Smoking can damage the lungs in different ways.

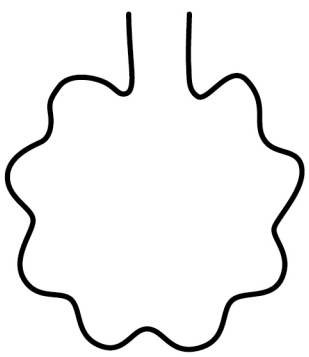
**Figure 6** shows alveoli from the lungs of two people.

**Figure 6**

**Person A**
Alveolus from a person who does **not** smoke



**Person B**
Alveolus from a person who does smoke



Person **A** and person **B** do the same exercise.

Explain why person **B** breathes much faster than person **A** during the exercise.

**[4 marks]**

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