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# B1: PHYSIOLOGICAL INDICATORS
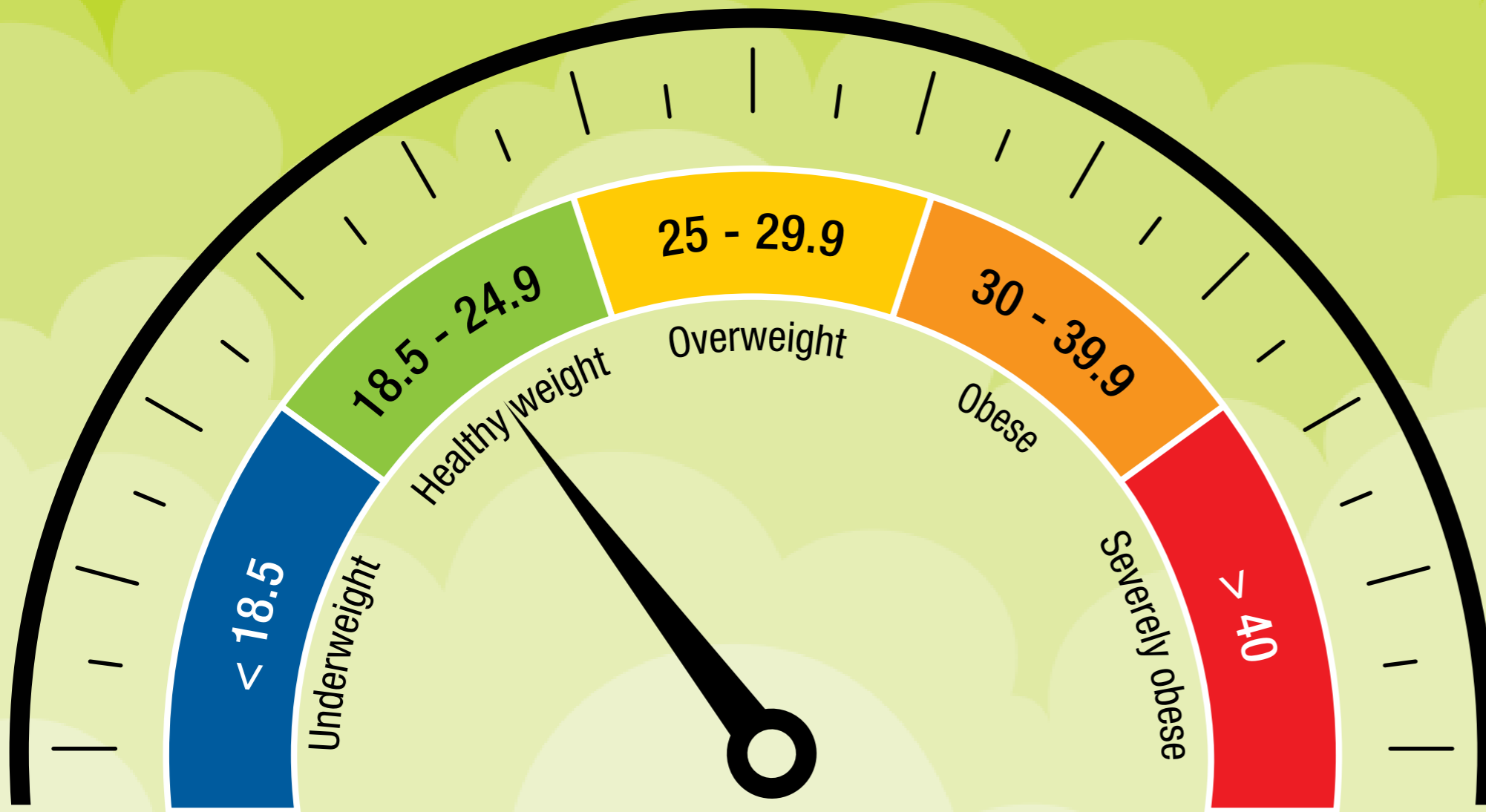
| Physiological Indicator | Classification of data | Impact on current physical health (short-term risks) | | Potential risks to physical health (long-term risks) | |
|---|---|---|---|---|---|
| Resting heart rate (pulse) | • Normal range = 60 to 100 bpm<br>• Heart rate may be temporarily elevated by stress or anxiety<br>• The fitter you are the lower your resting pulse rate | **Low pulse rate**<br>• Can suggest the individual is very fit<br>• When very low, can cause fainting, light headedness | **High pulse rate**<br>• Will become hot, sweaty and out of breath quickly when exercising leading to reduce exercise tolerance<br>• Dizziness<br>• Palpitations<br>• Often linked to lifestyle e.g. smoking, drug use, alcohol consumption, low physical activity levels | **Low pulse rate**<br>• If extremely low may indicate heart failure | **High pulse rate**<br>• Damage to arteries causing raised BP and cardiovascular disease<br>• Could suggest an underlying health issue e.g. cardiovascular disease<br>• Increased risk of premature death |
| Resting heart rate (pulse) | • The faster the heart rate recovers after exercise, the fitter the person is | | | | |
| Blood pressure | • Low blood pressure = 90/60mmHg or lower<br>• Ideal blood pressure = between 90/60mmHg and 120/80mmHg<br>• Pre-high blood pressure = between120/80mmHg and 140/90mmHg<br>• High blood pressure = 140/90mmHg or higher | **Low blood pressure**<br>• Feeling dizzy, light-headed, fainting<br>• Increased risk of falls, accident or injury<br>• Tiredness<br>• Cold and clammy skin | **High blood pressure**<br>• Headaches<br>• Tiredness<br>• Shortness of breath<br>• Blurred vision | **Low blood pressure**<br>• Heart problems<br>• Stroke | **High blood pressure**<br>• Cardiovascular disease<br>• Stroke<br>• Kidney disease<br>• Vision loss<br>• Vascular dementia |
| Body mass index (BMI) | • Underweight = below 18.5 kg/m$^2$<br>• Healthy weight = between 18.5 kg/m$^2$ and 24.9 kgm$^2$<br>• Overweight = between 25 kg/m$^2$ and 29.9 kg/m$^2$<br>• Obese = between 30 kg/m$^2$ and 39.9 kg/m$^2$<br>• Severely obese = 40 kg/m$^2$ or above | **Underweight**<br>• Muscle weakness and anaemia<br>• Weakened immune system<br>• Weakened bones<br>• Reduced energy and tiredness<br>• Slow wound healing | **Overweight/obese**<br>• Physical discomfort<br>• Reduced energy levels<br>• Mobility problems<br>• Difficulty accessing public spaces | **Underweight**<br>• Osteoporosis<br>• Hormone imbalances<br>• Periods stop<br>• Decreased fertility | **Overweight/obese**<br>• Tye 2 diabetes<br>• Cardiovascular disease<br>• Stroke<br>• Joint problems<br>• Respiratory problems |

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| Physiological Indicator | Classification of data | Impact on current physical health (short-term risks) | Potential risks to physical health (long-term risks) |
|---|---|---|---|
| Resting heart rate (pulse) | | Low pulse rate      High pulse rate | Low pulse rate      High pulse rate |
| Resting heart rate (pulse) | | | |
| Blood pressure | | Low blood pressure      High blood pressure | Low blood pressure      High blood pressure |
| Body mass index (BMI) | | Underweight      Overweight/obese | Underweight      Overweight/obese |

# B1: PHYSIOLOGICAL INDICATORS

## Body Mass index (BMI) Chart



< 18.5
Underweight

18.5 - 24.9
Healthy weight

25 - 29.9
Overweight

30 - 39.9
Obese

> 40
Severely obese

$$BMI = \frac{Weight\ in\ kg}{Height\ in\ m^2}$$

## Blood pressure chart

### Blood pressure chart for adults



High blood pressure

Pre-high blood pressure

Ideal blood pressure

Low

Systolic (top number)

190 180 170 160 150 140 130 120 110 100 90 80 70

40 50 60 70 80 90 100

Diastolic (bottom number)
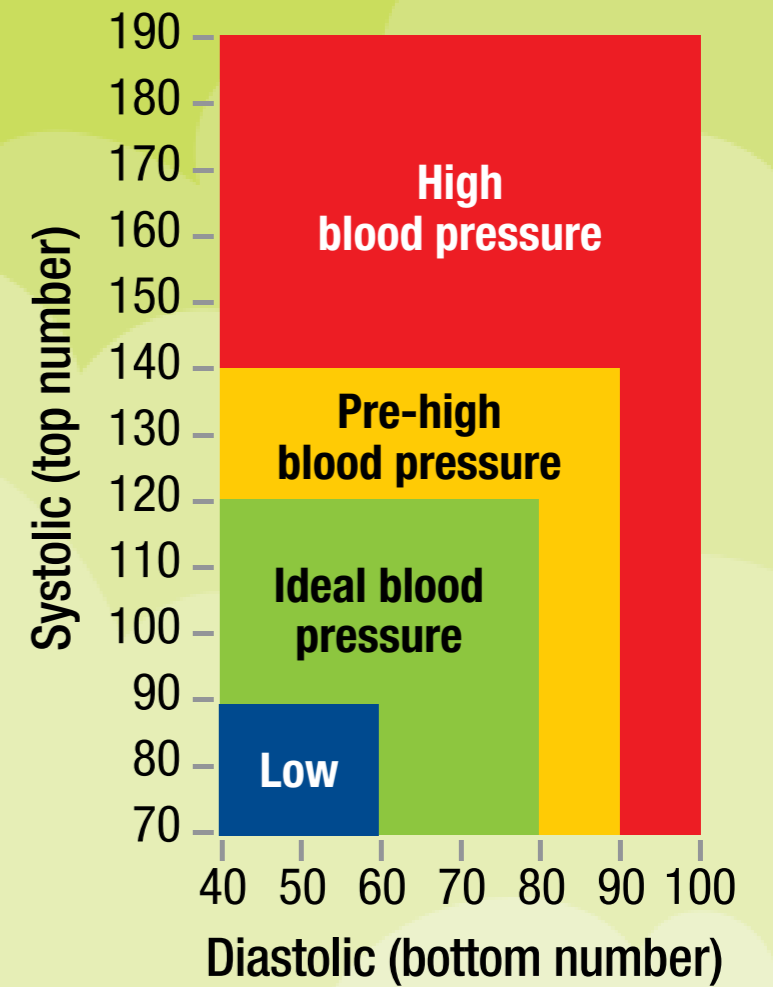
# B1: PHYSIOLOGICAL INDICATORS

## Body Mass index (BMI) Chart

**Fill in the BMI ranges**

Underweight

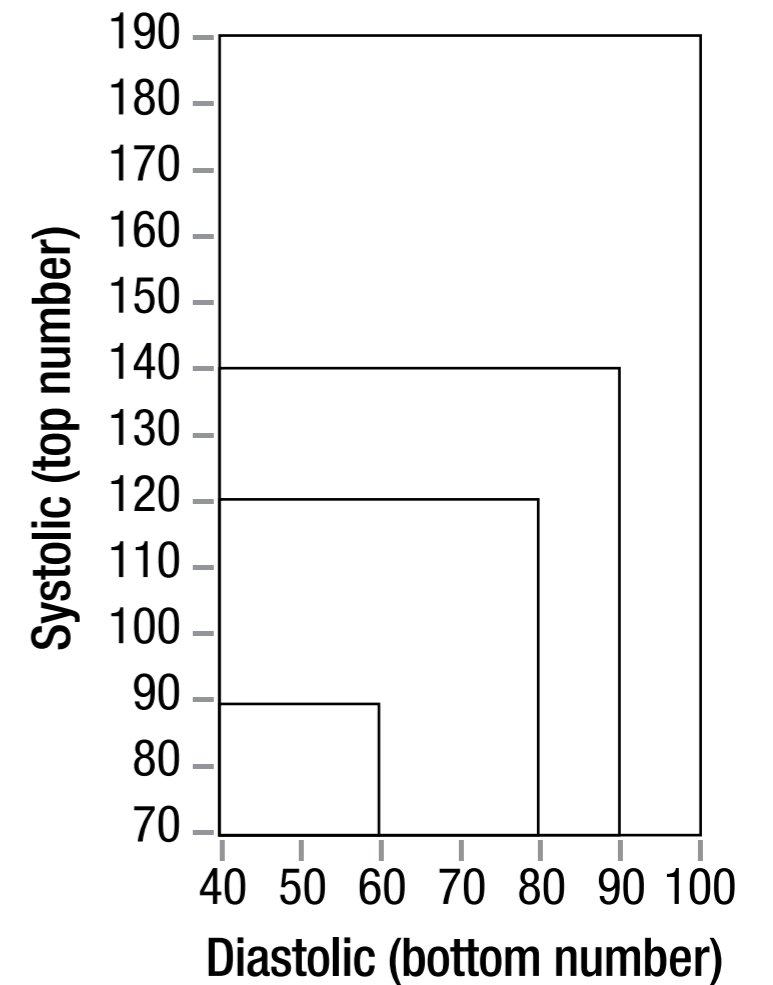Healthy weight

Overweight

Obese

Severely obese
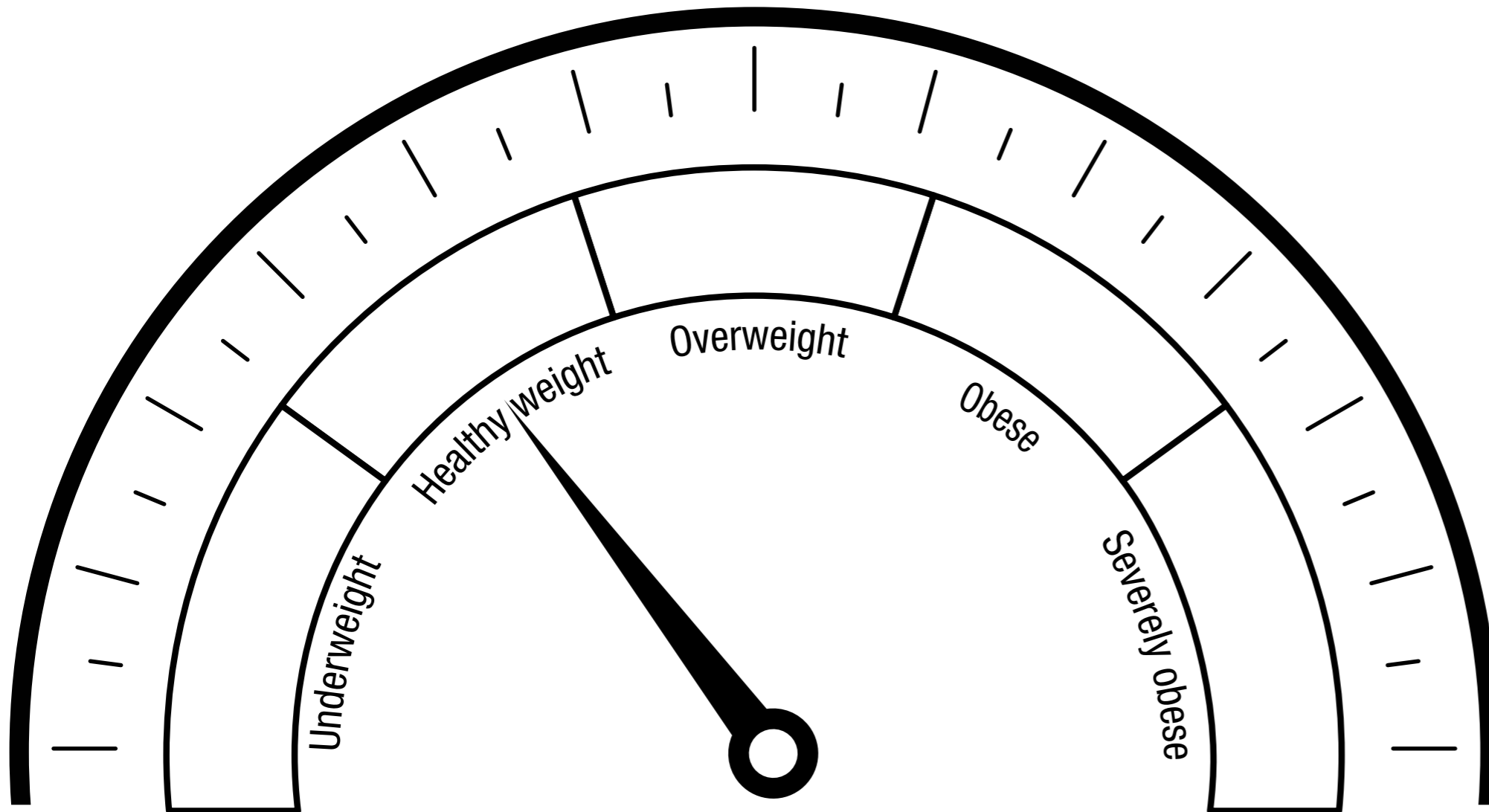
$$BMI = \frac{\text{Weight in kg}}{\text{Height in m}^2}$$

## Blood pressure chart

**Add the BP classification**

### Blood pressure chart for adults

Systolic (top number)

190
180
170
160
150
140
130
120
110
100
90
80
70

40  50  60  70  80  90  100

Diastolic (bottom number)

# B2: LIFESTYLE INDICATORS

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| Lifestyle indicators | Government Recommendation | Impact on current physical health (short-term risks) | | Potential risks to physical health (long-term risks) | |
|---|---|---|---|---|---|
| **Nutrition** | **Follow the Eatwell Guide**<br>• Meals based on Eatwell Plate<br>• Consume 5 portions of fruit and vegetables a day<br>• Limit fat, sugar and salt<br>• Drink 6-8 glasses of water a day<br>• Consume around 2000 calories daily for women and 2500 for men | **Malnutrition**<br>• Weight loss, muscle weakness and anaemia<br>• Reduced energy and tiredness<br>**Overnutrition**<br>• Weight gain<br>• Joint problems<br>• Sleep disturbance<br>• Shortness of breath | **Good nutrition**<br>• High levels of energy<br>• Healthy weight maintenance | **Malnutrition**<br>• Weakened immune system<br>• Weakened bones<br>**Overnutrition**<br>• Risk of obesity<br>• Higher risk of type 2 diabetes<br>• Higher risk of cardiovascular disease | **Good nutrition**<br>• Improved immune system<br>• Lower risk of illness and disease |
| **Physical activity** | **Adults (aged 19-64) each week should do:**<br>• At least 150 minutes moderate intensity activity, 75 minutes vigorous activity, or a mixture of both<br>• Strengthening activities on two days<br>• Reduce extended periods of sitting | **Physical inactivity**<br>• Low energy levels<br>• Weight gain<br>• Loss of mobility<br>• Muscle and joint pain | **Regular physical activity**<br>• Improves stamina, suppleness and strength<br>• Helps with weight management | **Physical inactivity**<br>• Cardiovascular disease<br>• Obesity<br>• Blood clots | **Regular physical activity**<br>• Lowers risk of chronic illness such as heart disease, type 2 diabetes, cancer and high blood pressure<br>• Improved immune system |
| **Smoking** | • Do not smoke tobacco in any form<br>• Avoid spending time in smoky places (passive smoking) | • Bad breath<br>• Staining of fingers, nails & teeth | • Reduced sense of taste & smell<br>• Increased heart rate<br>• Smoker's cough | • Raises blood pressure<br>• Increases risk of heart disease and stroke<br>• Causes mouth, throat and lung cancers | |
| **Alcohol and substance misuse** | • It is safest not to drink more than 14 units of alcohol a week on a regular basis<br>• If you regularly drink as much as 14 units of alcohol per week, it is best to spread your drinking evenly over 3 or more days<br>• Aim to have several alcohol-free days<br>• Avoid the use of illegal substances (drugs)<br>• Take prescription medication as instructed and only when prescribed for you | | | | |

## Eatwell Guide



Eatwell Guide

## Scan here to see a full screen version



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**Apply it:**

State the correct classification for a BMI of 33 kg/m² (1 mark)

Obese

What is the normal range for resting pulse rate? (1 mark)

60-100 bpm

**Apply it:**

Rabina loves exercise. She likes to spend her free time working out in the gym and she plays football for a local team. Explain how Rabina's physical activity means she has a low resting pulse rate. (2 marks)

Exercise strengthens the heart muscle, so it can pump a greater volume of blood with each heartbeat. This means more oxygen gets delivered to the muscles, so the heart needs to beat fewer times per minute.

**Apply it:**

John has high blood pressure. Explain two potential long-term risks of John's high blood pressure on his physical health (4 marks)

High blood pressure can cause kidney disease, as it damages both the filtering units in the kidneys and the blood supply to the kidneys. He could have a stroke. High blood pressure can damage blood vessels causing blood clots to form resulting in a stroke.

# B2: LIFESTYLE INDICATORS

| Lifestyle indicators | Government Recommendation | Impact on current physical health (short-term risks) | Potential risks to physical health (long-term risks) |
|---|---|---|---|
| Nutrition | The Eatwell Guide: | Malnutrition<br><br>Overnutrition          Good nutrition | Malnutrition<br><br>Overnutrition          Good nutrition |
| Physical activity | Adults (aged 19-64) each week should do: | Physical inactivity          Regular physical activity | Physical inactivity          Regular physical activity |
| Smoking | | | |
| Alcohol and substance misuse | | | |

**Apply it:**
State the correct classification for a BMI of 33 kg/m² (1 mark)

What is the normal range for resting pulse rate? (1 mark)

**Apply it:**
Rabina loves exercise. She likes to spend her free time working out in the gym and she plays football for a local team. Explain how Rabina's physical activity means she has a low resting pulse rate. (2 marks)

**Apply it:**
John has high blood pressure. Explain two potential long-term risks of John's high blood pressure on his physical health (4 marks)