CIE Biology GCSE

12 - Respiration

Flashcards

Give 7 uses of energy in the body

Give 7 uses of energy in the body

- Protein synthesis
- Muscle contraction
- Cell division
- Active transport
- Growth
- Nervous transmission
- Maintaining a constant internal environment

What is respiration?

What is respiration?

A series of reactions that use enzymes to obtain energy in the form of ATP from larger molecules (e.g. glucose)

Define aerobic respiration

Define aerobic respiration

Chemical reactions in cells that use oxygen to break down molecules to release energy

What is the word equation for aerobic respiration?

What is the word equation for aerobic respiration?

Glucose + Oxygen → Carbon dioxide + Water (+ energy)

What is the symbol equation for aerobic respiration?

(Higher/Supplement)

What is the symbol equation for aerobic respiration? (Higher/Supplement)

$$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O \text{ (+energy)}$$

Define anaerobic respiration

Define anaerobic respiration

Chemical reactions in cells that break down nutrient molecules to release energy without using oxygen

Write the word equation for anaerobic respiration in muscle cells

Write the word equation for anaerobic respiration in muscle cells

glucose → lactic acid + energy

Write the word equation for anaerobic respiration in yeast

Write the word equation for anaerobic respiration in yeast?

glucose → alcohol + carbon dioxide + energy

Write the balanced symbol equation for anaerobic respiration in yeast (Higher/Supplement)

Write the balanced symbol equation for anaerobic respiration in yeast (Higher/Supplement)

$$C_6H_{12}O_6 \rightarrow 2C_2H_5OH + 2CO_2$$

Which type of respiration produces more energy?

Which type of respiration produces more energy?

Aerobic respiration produces more energy

What builds up in muscles during periods of vigorous exercise?
(Higher/Supplement)

What builds up in muscles during periods of vigorous exercise? (Higher/Supplement)

Lactic acid

How is lactic acid removed from the body?

(Higher/Supplement)

How is lactic acid removed from the body? (Higher/Supplement)

Through aerobic respiration in the liver

What happens to the heart and breathing rate immediately after exercise? (Higher/Supplement)

What happens to the heart and breathing rate immediately after exercise? (Higher/Supplement)

They both remain high to increase the rate of aerobic respiration to remove the lactic acid in the liver