

Anaerobic and aerobic exercise



UNTAMED
EDUCATION

1.1.3 Applied anatomy and physiology

Glucose

Oxygen

Aerobic Respiration

Anaerobic and Aerobic Exercise

Lactic Acid

Carbon-dioxide

Energy

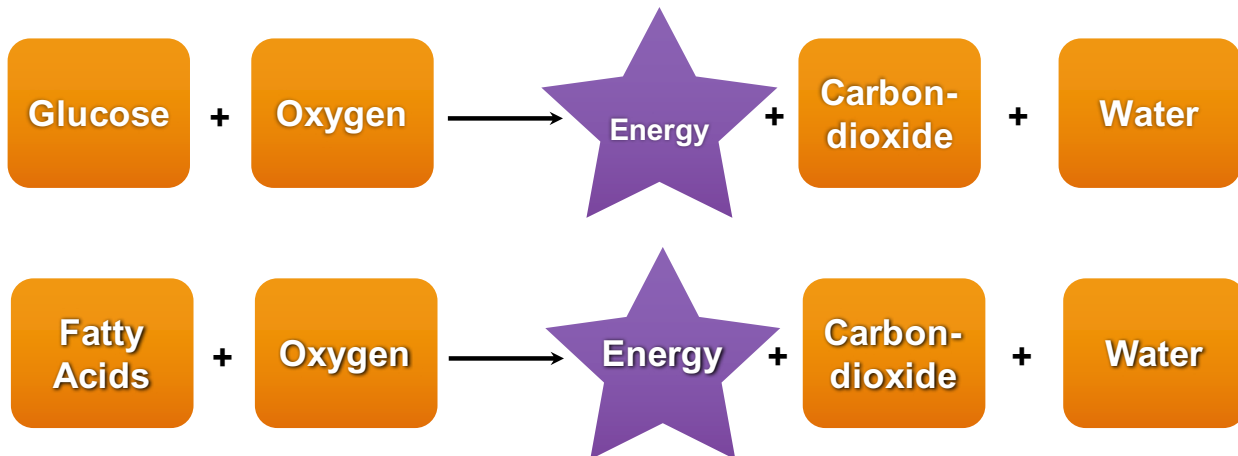
Anaerobic Respiration



Anaerobic and aerobic exercise

1. Aerobic respiration

- ▶ **Aerobic respiration** is when **we use oxygen** to create energy.
- ▶ The two fuel sources most used are carbohydrates (glucose) and fats (fatty acids).



- ▶ **Aerobic respiration** is predominantly used for **low to moderate intensity** and **long duration**.
- ▶ **Few** harmful **waste products** are produced during aerobic respiration.
- ▶ Sports that rely on the aerobic system are **long distance** cycling, running and swimming.

2. Anaerobic respiration

- ▶ **Anaerobic** respiration is when we **do not take enough oxygen** in to **meet high energy demands**.
- ▶ This might be when we are **working at full intensity** i.e. **sprinting** or **throwing**.
- ▶ Glucose is **broken down without oxygen**.
- ▶ As a result a waste product called **lactic acid** is produced which reduces performance.



3. Oxygen debt (EPOC)