

The short and long term effects of exercise



UNTAMED
EDUCATION

3.1.1 Applied anatomy and physiology

Heart Rate

Temperature

Respiratory Change

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DOMS

Hypertrophy

Bradycardia



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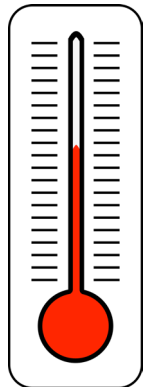
1. Heart rate

- ▶ When you start to exercise the **heart rate** _____.
- ▶ This coupled with an _____ **stroke volume** increases the _____ resulting in an increased **blood flow** and better **oxygen delivery**.
- ▶ The increase in heart rate depends on the intensity of the exercise. _____ **exercise results** in a **large increase** in the heart rate.



2. Increased temperature

- ▶ When _____ is **produced** and muscles contract **heat** is **created**.
- ▶ **Increased muscle** _____ result in a large **increase** in **temperature**.
- ▶ The body redirects the blood to the **surface of the** _____ so it can be removed.
- ▶ _____ **is lost** through evaporation, radiation and convection.
- ▶ The **skin** becomes **hot, red** and _____.



3. Respiratory changes

- ▶ **Breathing rate** _____.
- ▶ _____ of **breathing increases**, resulting in an **increase in tidal volume**.
- ▶ **Increased** _____ **exchange** of oxygen and carbon dioxide at the lungs.



4. Other changes

- ▶ During prolonged performance and _____ respiration lactic acid is produced. This makes the **muscles fatigue** (_____) and you will feel tired.
- ▶ Performers must eventually **stop** due to _____.
- ▶ Feel **light headed**.
- ▶ Experience _____.



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5. Long term effects of exercise

- ▶ **Resting heart rate decreases** (_____). 60 beats per minute in an adult is considered bradycardia.
- ▶ Change in body shape. **Increased** _____ **body mass**.
- ▶ **Improvements in specific components of** _____ such as muscular endurance, cardiovascular endurance, speed, suppleness (flexibility) and strength. These improvements depend on the type of exercise you perform.
- ▶ **Increase in** _____ so you can exercise for longer.
- ▶ **Muscles** increase in **size** and **strength** (_____).

