GCSE Physical Education—Long term effects of exercise

Long effects of exercise on the musculo—skeletal system

Aerobic exercise: long term aerobic exercise such as training through continuous methods or long distance interval training will allow your muscles to **work for longer** and at a higher intensity before MUSCULAR FATIGUE sets in. **MUSCLE TONE** will increase as fat levels decrease and muscles become more prominent

Anaerobic exercise: Long term anaerobic training will lead to different long term effects. Weight training and running will lead to an increase in **BONE DENSITY**. It will also increase **STRENGTH OF LIGAMENTS AND TENDONS**.

Strength training will also lead to **MUSCULAR HYPERTROPHY**, this is an increase in size and strength of muscle.

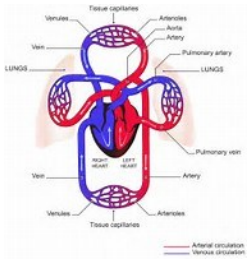
Long term effects of exercise on the CV system

Drop in resting blood pressure *- walls of arteries and veins become more elastic*

Faster recovery rate *- the faster it returns to RHR the fitter you are.*

Decrease in resting heart rate *- can supply the same amount of blood with less beats, more efficient.*

Increase in red blood cells *- these are the cells that carry O2. this will allow quicker delivery of O2 to muscles*



Increased resting stroke volume *- the heart can pump more per beat due to increased size and strength*

Increased capillarisation *- allows for a greater rate of gaseous exchange at the lungs/muscles*

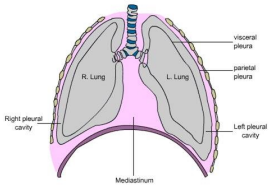
Cardiac hypertrophy*—the size and strength of the heart increases*

Increased MAX Cardiac output *- the hearts ability to pump more blood has increased.*

Long term effects of exercise on the respiratory system

Increased lung capacity/volume and vital capacity

Lungs become more efficient and can intake and uptake more O2 and remove CO2 quicker. Increase In efficiency will lead to a greater vital capacity

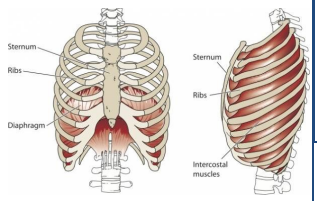


Increased number of Alveoli

More alveoli become available, more sites for gaseous exchange leads to greater VO2 max.

Increased strength of respiratory muscles.

Diaphragm and intercostal muscles increase in strength allowing an increase of airflow during physical activity



Key terms and definitions

Key terms

Alveoli: tiny sacs within our lungs that allow oxygen and carbon dioxide to move between the lungs and bloodstream.

Diaphragm: the primary muscle used in the process of inspiration, or inhalation. It is a dome-shaped sheet of muscle that separates the chest from the rest of the body cavity.

Key terms

Recovery: the time required for the repair of damage to the body caused by training or competition. Alternatively, the period between sets of a given exercise or between intervals in an interval training session/workout.

Key term

Coronary heart disease: when your coronary arteries are narrowed by a slow build-up of fatty material within their walls.