

Aerobic Respiration



Oxygen debt leads to **Excess Post-Exercise Oxygen Consumption (EPOC)** - there is an increased rate of oxygen intake following activity to pay back the oxygen debt

Anaerobic Respiration



As we exercise anaerobically, our muscles produce energy without the presence of oxygen



There is an increase in the production of CO_2 , causing a build up of lactic acid within the muscles



Oxygen debt occurs as a result of these processes



Anaerobic Respiration - high intensity exercise e.g. weightlifting

EPOC will take place in the form of an increased breathing rate



PE COMPONENT 1 - AEROBIC & ANAEROBIC RESPIRATION

Lactic Acid

Lactic acid builds up following **anaerobic exercise** due to a lack of oxygen being present in the muscles. This is known as **oxygen debt**

This is **toxic** and causes your muscles to ache and **cramp** (and eventually stop working)



Aerobic Respiration - low intensity exercise e.g. long distance running



Recovery Methods

Cool Down - light exercise such as jogging and stretching after anaerobic exercise will keep HR elevated and allow the oxygen debt to be repaid



Ice Baths & Massage - helps to repair muscle tissue and prevent DOMS. These methods are not accessible to everyone and are mainly by elite athletes



Manipulation of Diet - rehydrating and increasing carbohydrate intake after anaerobic exercise will help to replenish diminished stores and accelerate recovery

