Energy System

FOOD

Food is the source of energy for the human bod and it also provides nutrients for growth and repair

FOOD

When food is eaten, this is what happens

- **The food is broken down into soluble chemicals (glucose) by digestion in the gut.**

- **The soluble chemicals pass through the gut wall into the blood.**

- **The blood carries the soluble food chemicals to all of thebody's cells, where they will be used for:**

ENERGY REPAIR GROWTH

Aerobic Respiration with Oxygen

Aerobic respiration involves the release of energy from the slow breakdown of glucose using oxygen, inside the cells.

Anaerobic Respiration without Oxygen

Anaerobic respiration involves the release of a little energy, very quickly from the incomplete breakdown of glucose without using oxygen, inside the cells.

Facts about Aerobic Respiration

- **During aerobic respiration, the heart and lungs supply the muscles with plenty of oxygen.**

- **The carbon dioxide is breathed out via the lungs, while the water is lost as sweat, urine or in the air we breathe out as water vapour.**

- **As long as the msceles are supplied with enough oxygen, exercising aerobically can be carried out for a long period of time.**

Facts about Anaerobic Respiration

- **During anaerobic respiration, your muscles are not supplied with enough oxygen.**

- **The lactic acid builds up due to the shortage of oxygen. This is know as a oxygen debt, which needs to be paid back once exercising has finished.**

- **The lacic acid build-up will soon make your muscles feel tired and painful, so exercising anaerobically can only be carried out for short periods of time.**