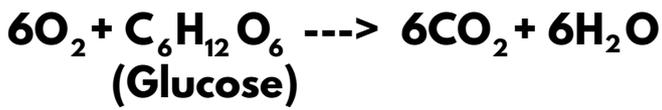


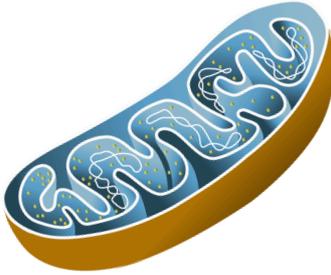
Aerobic



-Uses **Oxygen**

-Creates **more** energy

Mostly occurs in the **mitochondria**



Anaerobic

Animals: $\text{C}_6\text{H}_{12}\text{O}_6 \rightarrow$ Lactic Acid

Yeast + $\text{C}_6\text{H}_{12}\text{O}_6 \rightarrow$ Ethanol + CO_2

Bacteria: (Glucose)

-Performed when **not enough oxygen** is available

-Creates **less** energy

Occurs in the **cytoplasm**

In exercise, typically used as a **last resort** when we can't get enough oxygen



Respiration is an **exothermic** reaction in the body to produce **energy**



B4.2 Respiration



Responses to exercise

In order to increase **oxygen** to muscles:

- Heart rate** increases
- Breathing rate** increases
- Volume of breaths** increase

If not enough **oxygen**, **lactic acid** builds up:

This causes **cramps**, **weakness**, **tiredness** in exercising

Metabolism

All reactions occurring in the cells is '**Metabolism**'

For example:

- Formation of **urea**
- Formation of **proteins** for **repairment** of muscle
- Glucose breakdown** for energy
- Glycogen formation** for energy storage