

Q. What are the different ways in which glucose is oxidised to provide energy in various organisms?

Ans - In diverse organisms different ways are followed. This involves two processes. In the first step the breakdown of glucose, a six-carbon molecule, into three-carbon molecule called pyruvate. Further, the pyruvate is broken down into energy.

Aerobic respiration-

This respiration takes place in presence of air. This takes place in mitochondria. It breaks up the three-carbon pyruvate molecule to give three molecules of carbon dioxide.

Anaerobic respiration-

This respiration takes place in the absence of oxygen further the pyruvate may be converted into ethanol and carbon dioxide.

Q. Difference between aerobic and anaerobic respiration? Give example of organisms showing anaerobic respiration.

| Aerobic Respiration | Anaerobic Respiration |
|--|--|
| It takes place in presence of oxygen. | It takes place in absence of oxygen. |
| Complete breakdown of food particles occurs. | Food particles are partially broken down. |
| Carbon dioxide and water are its products. | Ethanol, carbon dioxide and lactic acids are products. |
| Produce more energy. | Produce less energy. |

Yeast and bacteria are the organisms that undergoes anaerobic respiration.