Respiration and its types

Respiration

It is a process by which organisms obtain energy by combining oxygen and glucose resulting in the release of Carbon dioxide, water, and ATP. Several enzymes facilitate this process. Respiration is necessary for survival as we cannot survive even 2 seconds without respiration.

During the process of respiration, it is many he carbohydrate which gets oxidized to release energy. The reaction has been shown below to explain this process.

Carbohydrate +Oxygen—› Carbon dioxide + Water + energy

As respiration occurs at the cellular level, **Mitochondria is known as the site of respiration.** It is a cell organelle which facilitates the process of respiration.

Respiration may occur in the presence or absence of oxygen. On the basis of this, there are two types of respiration.

Aerobic respiration- This type of respiration takes place in the presence of oxygen. At the end of the reaction, carbon dioxide and water are released as the end products. Most of the organisms respire through aerobic mode where glucose is oxidized to release carbon dioxide, water, and energy.

Anaerobic respiration- This type of respiration occur in the absence of oxygen. Such type of respiration is mostly seen in microbes. At the end of the anaerobic respiration alcohol and carbon dioxide are produced. In some cases, lactic acid is formed at the place of alcohol and carbon dioxide.

This type of anaerobic respiration occurs in our muscle cells when we run too fast or do any of extreme physical activity. We may feel a throbbing pain in the calf muscles. This pain occurs due to deposition of lactic acid in our muscles which is produced due to lack of oxygen during vigorous exercise.

Yeast respires anaerobically and hence, used to produced alcohol by the process of fermentation.