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Aerobic respiration is the cellular process in which glucose is broken down  into carbon dioxide and water in the presence of oxygen and large amounts of ATP is released. This process includes the following steps:

1) Glycosis: Glycolysis is the breakdown of glucose into two molecules of pyruvate. This breakdown occurs through a series of reactions and does not require oxygen. At the end of this stage, we have two molecules of pyruvate, two NADH, two ATP and two molecules of water. This process occurs in cytoplasm of the cell.

2) Pyruvate decarboxylation: This is also known as the link reaction between glycolysis and kreb's cycle. An enzyme complex known as pyruvate dehydrogenase complex cconverts pyruvate into acetyl-CoA and carbon dioxide. It occurs at the membrane of mitochondria and after it acetyl CoA enters the mitochondria for kreb's cycle. During this process one NADH is formed for every pyruvate molecule.

3) Kreb's cycle or tricarboxylic acid cycle: Acetyl CoA which enters the mitochondria in the previous reaction combines with oxaloacetic acid to form citric acid. then through a series of reaction oxaloacetic acid is regenerated and the acetyl CoA is broken down to form carbon dioxide and water. During the process 3 NADH, 1 FADH and 1 ATP are released from one molecule of acetyl CoA. This process occurs in mitochondria.

4) Oxidative phosphorylation or electron transport chain: It occurs at mitochondrial inner membrane. In this process ATP are generated using the electron crriers formed in the previous steps (NADH and FADH). The electrons from these molecules are taken up and transferred through a series of complexes. This results in difference in proton concentration at the two sides of the inner membrane. This difference is used to synthesize ATP, which is the energy currency of the cell.

One NADH results in the formation of 3 ATP, while one FADH results in formation of 2 ATP.