

Chapter 9-1: Chemical Pathways

Essential Questions:

- What is glycolysis?
- What are the 2 main types of fermentation?

- Chemical Energy & Food
 - Glycolysis



- Overview of Cellular Respiration
 - $6 \text{ O}_2 + \text{C}_6\text{H}_{12}\text{O}_6 \rightarrow 6 \text{ CO}_2 + 6 \text{ H}_2\text{O} + \text{energy}$
 - Energy must be released slowly to be effective

Cellular Respiration

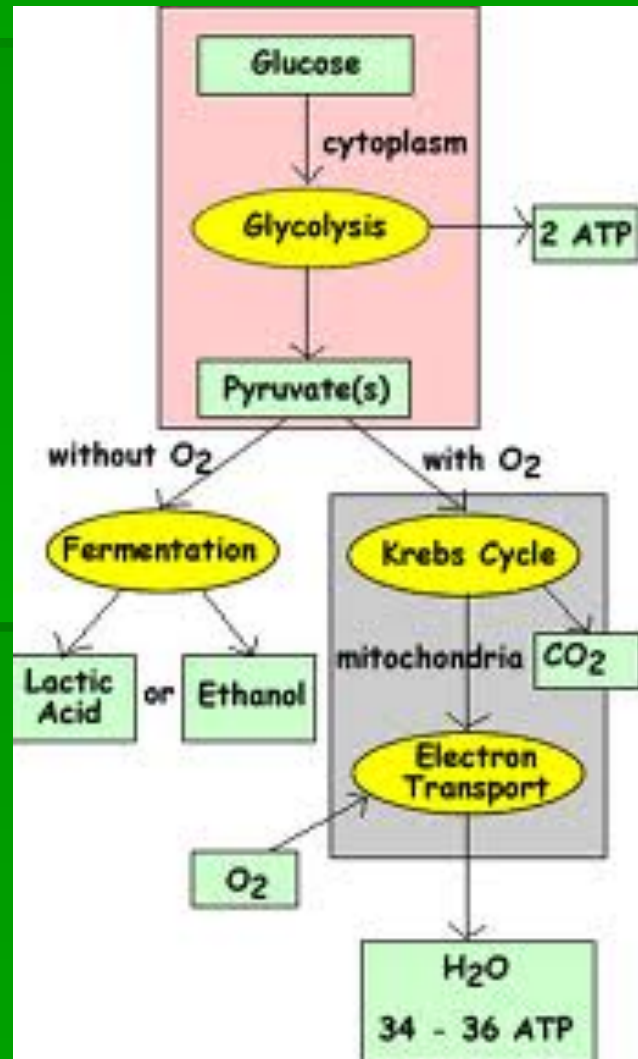
cell food + oxygen \rightarrow energy + carbon dioxide

- Glycolysis

- ATP production – 2 ATP molecules per molecule of glucose

- NADH production – NAD^+ accepts electrons to form NADH

- Fermentation – if oxygen not present – anaerobic



- Alcoholic fermentation – yeasts, etc.
- Lactic acid fermentation
- Lactic acid produced in muscles when body can't supply enough oxygen during heavy exercise

