

Chapter 14 – Glycolysis, Gluconeogenesis, and the Pentose Phosphate Pathway

14.1 Glycolysis

The following sub-sections are important:

- The Introduction
- An Overview: Glycolysis Has Two Phases
- The Preparatory Phase of Glycolysis Requires ATP
- The Payoff Phase of Glycolysis Yields ATP and NADH
- The Overall Balance Sheet Shows a Net Gain of ATP
- Glycolysis is Under Tight Regulation

14.2 Feeder Pathways for Glycolysis

- This section contains more information that you need, your slides really contain all you will need.

14.3 Fates of Pyruvate under Anaerobic Conditions: Fermentation

The following sub-sections are important:

- The Introduction
- Pyruvate Is the Terminal Electron Acceptor in Lactic Acid Fermentation
- Ethanol Is the Reduced Product in Ethanol Fermentation

14.4 Gluconeogenesis

The following sub-sections are important:

- The Introduction
- Conversion of Pyruvate to Phosphoenolpyruvate Requires Two Exergonic Reactions
- Conversion of Fructose 1,6-Bisphosphate to Fructose 6-Phosphate is the Second Bypass
- Conversion of Glucose 6-Phosphate to Glucose is the Third Bypass

14.5 Pentose Phosphate Pathway of Glucose Oxidation

The following sub-sections are important:

- The Introduction
- The Oxidative Phase Produces Pentose Phosphate and NADPH