

Chapter 24

I. Diet and Nutrition

A. Vitamins

1. coenzymes
2. Water-soluble
3. Fat-soluble

II. Overview of Metabolic Reactions

A. Anabolism and Catabolism

1. anabolism
2. catabolism
3. cellular respiration

B. Oxidation-Reduction Reactions and the Role of Coenzymes

1. Oxidation reactions
2. oxidation-reduction (redox) reactions

III. Metabolism of Major Nutrients

A. Carbohydrate Metabolism

1. Oxidation of Glucose
2. Glycolysis
 - i. Phase 1 Sugar activation
 - ii. Phase 2 Sugar cleavage
 - iii. Phase 3 Sugar oxidation and ATP formation
3. pyruvic acid
4. lactic acid

5. aerobic pathways

6. Krebs Cycle

i. Decarboxylation

ii. Oxidation

iii. Formation of acetyl CoA

7. Electron Transport Chain and Oxidative Phosphorylation

1. electron transport chain

8. Summary of ATP Production