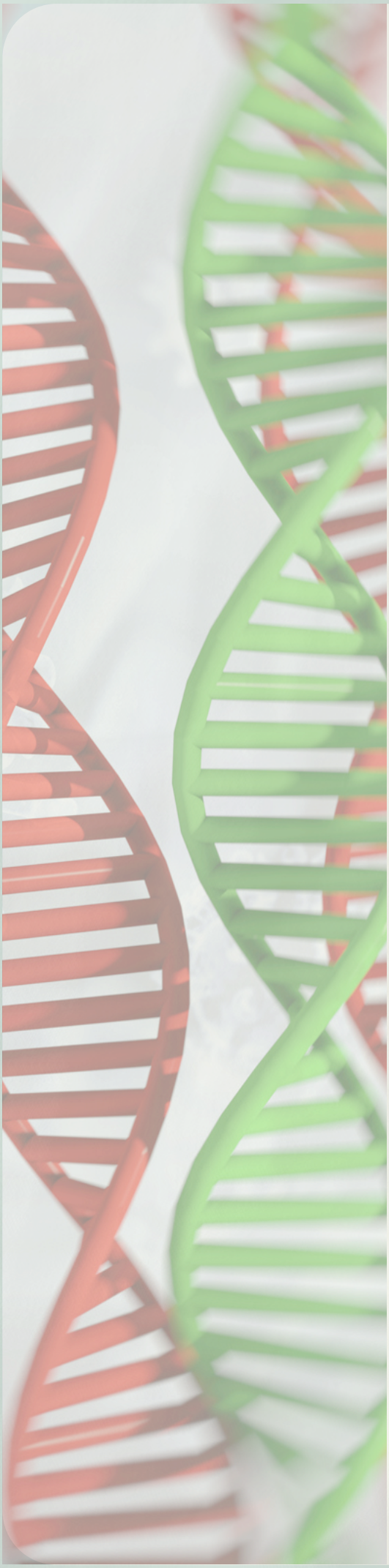

QUIZ TIME

Bio-chemistry

Lec24

Done by:

Lemar mustafa

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Lipolysis

1. Which enzyme initiates lipolysis in adipose tissue?
A. Lipoprotein lipase
B. Hormone-sensitive lipase
C. Pancreatic lipase
D. Gastric lipase

Answer: B. Hormone-sensitive lipase

2. What hormone stimulates lipolysis during fasting?
A. Insulin
B. Glucagon
C. Estrogen
D. Thyroxine

Answer: B. Glucagon

3. Which molecule is released during lipolysis and used for energy?
A. Cholesterol
B. Fatty acids
C. Glycerol
D. Both B and C

Answer: D. Both B and C

4. What is the fate of glycerol released from lipolysis?
A. Converted to glucose in the liver
B. Used for ketone synthesis
C. Stored in adipose tissue
D. Excreted in urine

Answer: A. Converted to glucose in the liver

5. Which enzyme converts triglycerides to diglycerides in lipolysis?
A. Monoacylglycerol lipase
B. Hormone-sensitive lipase
C. Adipose triglyceride lipase
D. Lipoprotein lipase

Answer: C. Adipose triglyceride lipase

Ketone Bodies

1. Which organ is the primary site of ketone body synthesis?
A. Brain
B. Liver
C. Kidney
D. Muscle

Answer: B. Liver

2. Which of the following is NOT a ketone body?
A. Acetoacetate
B. Beta-hydroxybutyrate
C. Acetone
D. Pyruvate

Answer: D. Pyruvate

3. What condition promotes ketogenesis?
A. High carbohydrate intake
B. Fasting
C. Insulin secretion
D. Protein-rich diet

Answer: B. Fasting

4. Which ketone body is exhaled through the lungs?
A. Acetoacetate
B. Beta-hydroxybutyrate
C. Acetone
D. All of the above

Answer: C. Acetone

5. Which tissue cannot utilize ketone bodies for energy?
A. Brain
B. Muscle
C. Liver
D. Heart

Answer: C. Liver

Protein Digestion & Absorption

1. Where does protein digestion begin in the human body?
A. Mouth
B. Stomach
C. Small intestine
D. Liver

Answer: B. Stomach

2. What is the role of hydrochloric acid (HCl) in protein digestion?
A. Hydrolyzes peptide bonds directly
B. Activates pepsinogen and denatures proteins
C. Absorbs amino acids
D. Converts amino acids to glucose

Answer: B. Activates pepsinogen and denatures proteins

3. Which enzyme in the stomach begins the breakdown of proteins?
A. Trypsin
B. Pepsin
C. Chymotrypsin
D. Carboxypeptidase

Answer: B. Pepsin

4. What are the end products of protein digestion in the stomach?
A. Amino acids
B. Proteoses and peptones
C. Dipeptides
D. Tripeptides

Answer: B. Proteoses and peptones

5. Which enzyme activates trypsinogen in the small intestine?
A. Pepsin
B. Enterokinase
C. Chymotrypsin
D. Aminopeptidase

Answer: B. Enterokinase

6. What is the function of carboxypeptidase?
A. Cleaves central peptide bonds
B. Acts on terminal carboxyl group of peptides
C. Converts amino acids to glucose
D. Activates pepsinogen

Answer: B. Acts on terminal carboxyl group of peptides

7. Which intestinal enzyme breaks down dipeptides into amino acids?
A. Aminopeptidase
B. Tripeptidase
C. Dipeptidase
D. Carboxypeptidase

Answer: C. Dipeptidase

8. What is the main mechanism for amino acid absorption in the intestine?
A. Passive diffusion
B. Carrier protein transport system
C. Osmosis
D. Endocytosis

Answer: B. Carrier protein transport system

9. How many ATP molecules are required to absorb one amino acid via the glutathione transport system?
A. 1
B. 2
C. 3
D. 4

Answer: C. 3

10. Why can’t protein digestion occur in the mouth?
A. Lack of enzymes
B. Low pH
C. Presence of saliva
D. Absence of peptide bonds

Answer: A. Lack of enzymes