

# GIT-biochemistry

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## Archive

### Lecture 1

major type of digestion and nutrients

Done by :

banan al-khawaldeh

# Biochem - lecture (1)

1. One of the following is incorrect regarding sucrase-isomaltase complex :

- A- Hydrolyze all sucrose.
- B- Hydrolyze all alpha 1-6 glucose-glucose bonds.
- C- Hydrolyze 80% of the maltose.
- D- Highest in ileum.
- E- Two times in size compared with trehalase.

Answer: D

2. 20% of maltose is digested by?

- 1. The isomaltase-maltase
- B. The sucrase-maltase
- C. Pancreatic A-amylase
- D. Sucrase-isomaltase
- E. Glucoamylase

ANSWER: E

3. Fructose moves from intestinal epithelial cells to portal blood via?

- A. GLUT5
- B. GLUT2
- C. GLUT1
- D. GLUT3
- E. GLUT4

ANSWER: B

# Biochem - lecture (1)

4. Which enzyme is secreted actively  
Amylase



# GIT-biochemistry

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## Archive

### Lecture 2

major type of digestion and nutrients II

Done by :

banan al-khawaldeh

# Biochem - lecture (1)

1. pancreatic enzymes:

- A- Contain enzymes that digest fatty acids.
- B- CCK-PZ increase aqueous secretion from duct.
- C- pH is 6-7,8.
- D- Pancreatic juice have low  $\text{HCO}_3^-$ .
- E- Secretin absorbed from blood stream.

Answer. A

2. lysophospholipid

- a. digested from phospholipid
- b. Digested from cholesterol
- c. Digested by colipase

Answer: A

3. The enzyme that tolerates high acidity

- a. Lipase
- b. amylase
- c. Pepsin
- d. Lysozymes

answer : c

4. One of the following is true about enteropeptidase

It cleaves the protein inside the chain not outside

## Biochem - lecture (1)

5. In Chymotrypsinogen activation which two amino acids of the followings are removed?

- A. Threonine<sup>147</sup>- Asparagine<sup>148</sup>
- B. Tyrosine<sup>147</sup>-Arginine<sup>148</sup>
- C. Serine<sup>147</sup>- Arginine<sup>148</sup>
- D. Tyrosine<sup>14</sup>- Asparagine<sup>15</sup>

ANSWER: A

6. Emulsification of fat, choose the wrong statement?

- a. The charged hydrophilic side of bile salt will be projecting from the surface of micelles
- b. Micelles are soluble in water
- c. The hydrophobic side of the bile salts mix with fat droplet
- d. Gastric lipase digest the fat in micelle producing fatty acids and 2-monoacylglycerols
- e. This process mixes two different substances that normally do not mix together

ANSWER: D



# Biochem - lecture (1)

7.phospholipase A2?

- a. remove fatty acids from compounds
- b. digests dietary triacylglycerols producing 2 free fatty acids and 2-monoacy glycerol
- c. Digests phospholipids to free fatty acid and a Lysphospholipid

Answer: C



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## Archive

### Lecture 3

Drug metabolism and  
Cytochromes P450  
& Bile

Done by :

Orjwan Mawajdeh



## Biochem - lecture (3)

1. One of the following is incorrect regarding the formation of bile acid from cholesterol:

A- Double bond is removed.

B- Monooxygenases introduce one or two additional OH group into steroid ring.

C- B and C rings are altered from trans to cis.

D- Terminal C atom is oxidised to a carboxylate group  $\text{COO}^-$

E- Side chain is shortened by three C atoms.

Answer: C

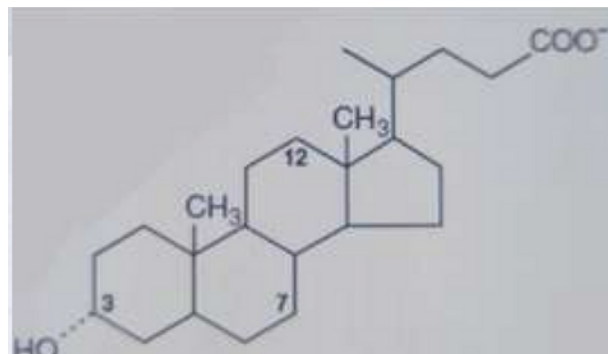
2. Name of the structure:

a. Lithocholic acid

b. heme

c. cholesterol

d. choline acid



Answer: a

3. The secondary bile salt that is excreted by feces:

Lithocolic acid

## Biochem - lecture (3)

4. CYP450 Oxidation mechanism choose the wrong statement?

- A. NADPH donates its electrons to FADH<sub>2</sub>
- B. When the iron in the Fe<sup>+2</sup> state it can bind oxygen
- C. The first electron donated to CYP450 convert ferrous to the ferric state
- D. The aim of CYP450 oxidation is introducing OH group to hydrophobic substrate
- E. The second electron donated to CYP450 passes to oxygen

ANSWER: C

5. Emulsification of fat, choose the wrong statement?

- A. The charged hydrophilic side of bile salt will be projecting from the surface of micelles
- B. Micelles are soluble in water
- C. The hydrophobic side of the bile salts mix with fat droplet
- D. Gastric lipase digest the fat in micelle producing fatty acids and 2-monoacylglycerols
- E. This process mixes two different substances that normally do not mix together

ANSWER: D

# Biochem - lecture (3)

\*\*\*\*answer of question 5 from slides

The hydrophobic side of the bile salts mix with fat droplet and the charged hydrophilic side will be projecting from the surface of micelles thus making the micelles soluble in water and ensure that large fat drops cannot reform because like charges repel each other. Pancreatic lipase digest the fat in micelles then the micelles travel through a layer of water to the microvilli on the surface of the intestinal epithelial cells, where the fatty acids, 2-monoacylglycerols, and other dietary lipids are absorbed, but the bile salts are left behind in the lumen of the gut.

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## Archive

### Lecture 4

Rey's syndrome and inborn errors of metabolism affecting the liver

Done by :

Raghad Mohammad



## Biochem - lecture (4)

1. One of the following is incorrect regarding hemochromatosis :

- A- The absorb and retain between 5 to 20 times more iron than the body.
- B- People with hemochromatosis absorb up to 30 percent of iron.
- C- Defect in HFE gene.
- D- HFE located at the short arm of chromosome number six.
- E- These who inherit the defective gene from only 1 parent show normal level of iron absorption.

Answer: E

2. Reye's syndrome, choose the wrong statement?

- A. Symptoms include vomiting, lethargy, and severe fever
- B. Extremely rare that can affect the brain and liver
- C. Aspirin trigger Reye's syndrome during viral disease
- D. Most commonly in kids between 4 and 14 years old
- E. Is a life threatening disorder

Answer: A

3. All the following are correct about (Von Gierks disease) EXCEPT:

- a. normal in structure but present in abnormally
- b. Deficiency of Alpha 1,4 phosphatase
- c. deficiency of liver Glucose 6- phosphatase

Answer: B

## Biochem - lecture (4)

4. Anderson disease, it caused by deficiency in which enzyme :  
Anderson disease, it caused by deficiency in which enzyme :

- a. Branching enzyme
- b. Debranching enzyme
- c. G6p
- d. Alpha1-4glucoside

Answer:a

اللهم يسر امورنا  
لا تنسونا من صالح دعائكم 🙏