

Endo – Metabolism

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Lecture 11

Fatty acid 1

Done by :

Razan fawwaz

metabolism-lecture (11)

1. All of the following are link between carbohydrate and fatty acid except :

- A- DHAP.
- B- GAP.
- C- Acetyl CoA.
- D- Phosphoenolpyruvate

Answer: D

2. Function of thiolase enzyme is :

A- Cleavage of the bond between alpha acyl Co-A and beta acyl Co-A.

3. The allosteric regulator of acetyl CoA carboxylase :

- A- Citrate.
- B- Fatty acids.
- C- Acetyl CoA.
- D- Malonyl CoA.
- E- PDH.

Answer: A

metabolism-lecture (11)

4. Rate limiting enzyme of fatty acid synthesis:

- A) citrate lyase
- B) acetyl CoA carboxylase
- C) malonyl CoA carboxylase
- D) acetyl transacylase
- E) acyl transacylase

Answer: B

5. which one of the following can add to carbon molecule to elongation of fatty acid chain:

- A) Acetyl CoA
- B) Malonyl CoA
- C) Pyruvate
- D) Glucose

Answer: B

6. carbohydrate and fat metabolism linked by ?

- A. DHAP
- B. 1,3-bisphosphoglycerate

Answer: A

metabolism-lecture (9)

7. A 40 years old pregnant woman has a sugar craving, Her serum glucose increases which cause release of insulin which is known to increase the activity of acetyl Co carboxy lase, the rate limiting step in fatty acid biosynthesis. Which of the following best describes this regulatory enzyme? Select one:

- A. It catalyzes a reaction that requires biotin and ATP
- B. It is activated by malonyl CoA
- C. It catalyzes a reaction that condenses acetyl group with malonyl group
- D. It is activated by carboxylation
- E. It converts malonyl CoA to acetyl CoA

Answer:A

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Lecture 12

FA2

Done by :

Mohammad Alzoubi

metabolism-lecture (12)

The final product for complete oxidation of odd chain fatty acids yields which(1
:of the following? Select one

- A) Acetyl CoA and propionyl CoA
- B. Acetyl CoA only
- C. Succinyl CoA
- D. Propionyl CoA only
- E. Palmitoyl CoA

Answer:A

2)Adult Refsum disease caused by defect in which enzyme:

- A) peroxisome
- B) alcohol dehydrogenase
- C) Phytanic acid oxidase
- D) keto thiolase

Answer:C

Which one of the following can Add to carbon molecule to elongation of fatty(3
acid
:chain

- A) Acetyl CoA
- B) Malonyl CoA
- C) Pyruvate
- D)Glucose

Answer: B

:Absence of peroxidase enzyme leads to(4

.Zellweger's syndrome -

Endo – biochem

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Lecture 13 +14

PPP

Done by :

Mohammad Alzoubi

metabolism-lecture (13)

: G6PDH deficiency associated with all the following, except(1

- A) Kidney failure
- B) Fasting hypoglycemia
- C) Hyperlipidemia
- D) muscle weakness

Answer:A

2) Regarding non oxidative phase of PPP, which one is true :

- A) transketolase will trans 3 carbon atoms
- B) transaldolase will trans 2 carbon atoms
- C) mediated by NADPH
- D) produce intermediates in glycolysis

Answer : D

3) NADPH is generated by action of?

- *A) Glucose_6_phosphate dehydrogenase

? Why is pentose phosphate pathway is not processed in muscular tissues(4

- A) muscle do not need NADPH for their activity
- B) muscles do not require the produced pentoses
- C) muscles have small amount of non-oxidative phase of the pathway
- D) muscles have small number of dehydrogenases

Answer:D

Hemolytic anemia occurs in patients who are diagnosed with favism(5

? only when they eat

- A) Broad beans
- B) Meat
- C) Bread
- D) Bananas
- E) Rice

Answer: A

metabolism-lecture (13)

6) Favism is caused by deficiency in?

- A) Glycogen synthase
- B) Fructokinase
- C) Galactokinase
- D) G6PD
- E) Glucokinase

Answer: D

7) About oxidative phase of PPP, the true statement is :

- +A) will produce NADP
- B) mediated by NADPH / NADH
- C) will produce energy that can be utilized in ETC
- D) Glucose 6-phosphate dehydrogenase is the regulatory enzyme

Answer: D

Lecture 14

Eicosanoids

Which of the following eicosanoids cause vasoconstriction :

- .A- LTD4 , LTE4
- .B- PGE2 , LTD4
- .C- PGI2 , PGE2
- .D- LTB4 , TXA2

Answer: A

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Lecture 15

metabolism-lecture (15)

Which of these amino acids are essential for infants :

- A- Lysine and Leucine.
- B- Tryptophan.
- C- Methionine.
- D- Arginine and Histidine.
- E- Valine.

Answer: D

All of the following are essential amino acid except:

- A) Serine
- B) Lysine
- C) Valine
- D) Threonine
- E) Leucine

ANSWER: A

In case of liver cirrhosis, ammonia is not detoxified and can causes brain encephalopathy.

Which of the following amino acids can covalently bind ammonia, transport and store in a non-toxic form?

- A) Serine
- B) Aspartate
- C) Cysteine
- D) Glutamate

Answer: D

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:amination of glutamate give glutamine, which is non-toxic

All of the following are inhibitors of glutamate dehydrogenase except?

- A) ADP*

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Metabolism

Amino Acid

Done By:

Fatimah Atawi

metabolism

All of the following are inhibitors of glutamate dehydrogenase except?

A) ADP*

How many ATP are converted to AMP and PPi to form arginosuccinate in urea cycle?

Select one:

- a. 1
- b. 2
- c. 6
- d. 4
- e. 3

Answer:A

Which out of the following amino acids is not converted to succinyl CoA?

- a. Isoleucine
- b. Histidine
- c. Methionine
- d. Threonine
- e. Valine

Answer:b

metabolism

All of the following are essential amino acid except:

- A Serine
- B) Lysine
- C) Valine
- D) Threonine
- E) Leucine

Answer: A

In case of liver cirrhosis, ammonia is not detoxified and can causes brain encephalopathy.

Which of the following amino acids can covalently bind ammonia, transport and store in a non-toxic form?

- a. Aspartate
- b. Cysteine
- c. serien
- d. Glutamate

Answer: D

Which of the following can be formed by hydroxylation of phenylalanine?

- a. Serine
- b. Tyrosine
- c. Tryptophan
- d. Leucine
- e. Glycine

Answer: B

metabolism

It is known that amino acids may be glucogenic, ketogenic or mixed. Which of the following amino acids is not converted to acetyl co A upon metabolism?

- a. Tyrosine
- b. Leucine
- c. Tryptophan
- d. Lysine
- e. Valine

Answer: E

The chemical formula of urea is $\text{NH}_2\text{CO}\text{NH}_2$. the source of the two nitrogen of urea are derived from?

- a. Pyruvate and ammonia
- b. Glutamate and ammonia
- c. Argininosuccinate and ammonia
- d. Alanine and ammonia
- e. Aspartate and ammonia

Answer: E

Which of these amino acids are essential for infants :

- A- Lysine and Leucine.
- B- Tryptophan.
- C- Methionine.
- D- Arginine and Histidine.
- E- Valine.

Answer: D