



Endo – biochem

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Lecture 8

Gluconeogenesis

Done by :

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1. The enzyme that allosterically inhibited by accumulation of its own product is :

- A- Hexokinase.
- B- Glucokinase.
- C- PFK-1.
- D- Pyruvate kinase.
- E- PFK-2.

Answer: A

2. During gluconeogenesis, the conversion of glucose 6-P to glucose is catalyzed by glucose-6 phosphatase. Which of the following statement is true about this reaction?

- A) The reaction occurs in mitochondria
- B) Abnormal glycogen accumulation in liver is a result of this enzyme deficiency
- C) Conversion of glucose 6-phosphate to glucose releases a molecule of ATP
- D) It is a highly active enzyme in skeletal muscles
- E) It can't be reversed also by hexokinase and /or glucokinase

Answer: E

3. glycolysis has,
as the rate limiting enzyme, which is inhibited by__-

Answer: PFK-1, Citra

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4. A patient has been exposed to a compound that increases the proton permeability across the inner mitochondrial membrane.

What would be expected to happen?

Select one:

- a. Increased oxygen utilization
- b. Decreased pyruvate dehydrogenase activity
- c. Decreased malate-aspartate shuttle activity
- d. Increased ATP levels
- e. Increased FO/F1 ATP Synthase activity

Answer: A

5. The glycolysis and gluconeogenesis linked by which enzyme?

- A. Phosphoglycerate kinase
- B. hexokinase
- C. pyruvate kinase
- D. PFK-2/FBPase-2

Answer D

6. Wrong about pyruvate carboxylase?

A) Its action in inner mitochondrial space

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7. Enzyme/s is considered as a positive regulator for both glycolysis/gluconeogenesis?)

- A. Phosphoglycerate kinase
- B. hexokinase
- C. pyruvate kinase
- D. PFK-2/FBPase-2

Answer D

8. According to the reactant in gluconeogenesis all are true except?

- A) 2 pyruvate
- B) 2NAD
- C) 4ATP
- D) 4Pi
- E) 2GTP

Answer: D

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