CVS-Biochemistry

Archive

Lecture 1

Biochemistry of cardiac muscle-1

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1.Creatine kinase is important in phosphocreatine production, what statement is correct?
A. CK not associated with myofilaments
B. isozyme is found in mitochondria (mi-CK) and accounts for more than 50%
C. The mi-CK isoform is coupled to the outer membrane
D. replenishing ATP in ATPase active sites, such as myosin heads.
E. low Ck/ATP not fatal

Answer : D

2. Phosphorylation/dephosphorylation in PDH is regulated by kinase and phosphates, what is correct?
A. Mg++ and Ca++ activate inhibiting enzyme
B. low ATP/ADP and decrease acytel co/coa inhibit inhibiting anzyme
C. low NADH/NAD and decrease purvate concentration activate inhibiting enzyme
D. Increased ATP/ADP and increased Co/acytel coa inhibit activating enzyme

Answer : D

3.Which of the following correctly describes phosphorylation[]dephosphorylation of PDH ?
Low ATP/ADP and Low acetyl CoA/CoA inhibits the inhibiting enzyme

4.An explanation for the no changes in mechanical capacity of heart even with increased oxygen consumption during utilization of fatty acids
Increased oxidative stress caused by oxidation of fatty acids

5.pyruvate dehydrogenase multienzyme complex IS a key regulatory enzyme in glucose utilization: it can be inhibited by all of the following except?
a. ATP/ADP
b. NADH+H+INAD
c. Acetyl CoA/COA
d. Citrate/pyruvate
e. NADPH+H+/NADP

Answer : E

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6. PFK-I is catalyzing the conversion of fructose 6-phosphate into fructose l,6 biphosphate, all of the following can inhibit this enzyme except? Select one:

a. decrease ADP/ATP ratio
b. increase NADH+H+/NAD ratio
C. decrease Activity of PI3 kinase
d. increase Activity of electron transport chain
e. decrease Activity of PFK-2

Answer : C

7.in the high altitude, you stayed for an hour, the following changes will happen in metabolic pathways of your cardiomyocytes except? Select one :

a. increase Glycolysis
b. decrease B oxidation of fatty acids
C. increase production of phosphocreatine
d. Accumulation of NADH+H and lactic acid
e. decrease Oxidative electron transport chain activity

Answer : C