Endo - metabolism

Archive

Lecture 1&2

Bioenergetics & ETC

Done by :

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metabolism-lecture (1&2)

1.A patient has been exposed to a compound that increases the protons permeability across the inner mitochondrial membrane.
what would be expected to happen?
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

Explanation : increasing the permeability means that there is less energy produced, as a compensation mechanism the cell does more and more ETC utilizing more oxygen

2.Super high energy molecules stored energy in which of the following:
A- bond
B- electrons
C- atoms

Answer : A

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3.All of the following are high energy molecules except:

A- NADH

B- FADH2

C- Dihydroxyacetone phosphate

D- 1-3 bisphosphoglycerate

E- phosphoenolpyruvate

Answer : C

4.Regarding the proton pump activity in ETC, what is correct?

A- Forms a pore within inner mitochondrial membrane

B- Causes asymmetrical transfer of protons through inner mitochondrial membrane

Answer : B

5.Antimycin A block between cytochrome c, then ?

Inhibition of all ATP synthesis

6.Differences in ATP production is due to?

shuttling of NADH molecules

metabolism-lecture (1&2)

7.A patient is poisoned with antimycin A that inhibits cytochrome c of ETC, what changes occur to energy production?

A- no energy production at all

B- energy is produced in less amounts

C- energy is produced in slower rate

D- energy is produced for short period of time

E- energy production is not affected due to increased rates of ETC

Answer : A

8.Energy rich molecule ?

A- NADH/ FADH2

B- phosphoenolpyruvate

C- 1,3 bisphosphoglycerate

D- 1,3 disphosphoglycerate

Answer : A