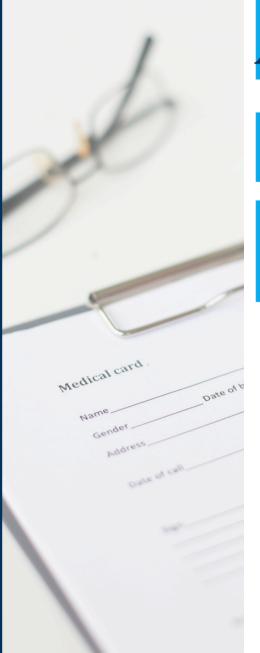
CNS-Biochemistry



Archive

Lecture 2

Brain Energy Metabolism II



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- 1. One of the following is not correct?
- a. the uncoupling between O2 and glucose in brain tissue indicates that not all glucose taken up will be consumed in aerobic respiration for energy generation
- b. circulating lactate can be used as energy substrates in brain
- c. neuronal cells can form lactate from pyruvate in reversible reaction catalysed by lactate dehydrogenase
- d. Astrocytes store small amount of glucose as glycogen
- e. GLuT 155KDa isoform is localized on endothelial cells of blood brain barrie

ليشc؟ لانها وظيفة الAstrocyts مش الneuronal cells و الاسترو تعتبر nonneural

Answer: C

- 2. What is most energy consuming process in the brain? Select one:
- a. Restoring ionic gradient across the plasma membrane after excitation
- b. Passive transport of Na+/K+ pump

Answer: B

- 3. The RQ of the brain is __, which strongly confirms that___? Select one:
- a. 1, the main substrate of the brain is lactate
- b. 1, the main substrate of the brain is glucose

Answer: B

- 4. What cell is responsible for postnatal development of BBB?
- a. neurons
- b. Astrocytes

Answer: B

- 5. The junction between two communicating neurons is?
- a.Synapse
- b. Neuromuscular junction
- c. Dendrite
- d. Axon
- e. Receptor

Answer: A

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- 6. How does the neurotransmitter produce a signal in the postsynaptic cell?
- a. Binding to post-synaptic receptor
- b. Binding to pre-stsynaptic receptor
- c. Binding to auto-receptor

Answer: A

- 7. Postnatal development of BBB?
- A. astrocyte
- B. pericyte
- C. astrocyte + pericyte
- D. microglial

Answer : C

- 8. Not found in cerebral tissue?
- 1)HMG-CO synthase
- 2)glucose
- 3)SCOT
- 4)lactate

Answer: A

- 9. Cerebral tissue / Brain (utilize/consume) Of total body glucose utilication?
- a.Quarter
- b.Two quarter
- c.Third
- d.Half

Answer: A

- 10. Which of the following does not happen in brain?
- a) pyruvate convert to lactate
- b) pyruvate convert to acetyl-COA
- c) lactate convert to pyruvate
- d) glucose phosphorylation to G6P
- e) G6P dephosphorylation to glucose

Answer: E

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11.In breastfed neonate the primary and main source of energy in numerous?

A- glucose only

B- ketone body

C- glucose, acetoacetate, B hydroxybitarate

D-mannose

Answer: C

12.All of the following true about fate of excess 4.4 mmol of glucose, EXCEPT? a. Synthesis glycogen in neuron

b. Utilized in the synthesis of glutamate

c. Utilized in the synthesis of GABA

Answer: A

13.All of the following true about fate of excess 4.4 mmol of glucose, EXCEPT?

a. Component of BBB

b. Utilized in the synthesis of brain neurotransmittereps

Answer: A

14. Which GLU protein is specific for neuron?

answer: GLU3

15. More than 70% of ATP molecules generated in brain tissue are consumed in?

answer: pumping ions actively against their concentration gradients by Na+/K+ ATPase pump

16. What is most energy consuming process in the brain?

a. Restoring ionic gradient across the plasma membrane after excitation

b. Passive transport of Na+/K+ pum

Answer: A

اللهم بارك لنا في أوقاتنا وأعمارنا، ووفقنا لما فيه خير لنا ولأمتنا، ولرزقنا همةً لا تفتر وعزَّما لا يلين، ولنصر أهلنا في غزة نصراً عزيزاً مؤزراً، ولفتح لنا أبواب النجاح والتوفيق برحمتك يا أرحم الراحمين.