NAME:

Quiz 23

Your brain cannot use fatty acids from the bloodstream for energy. Compare the energetics of β-hydroxybutyrate metabolism to an acyl-CoA with the same number of carbon [acyl group = 4:0] to determine what the brain misses out on...

**β-hydroxybutyrate** 

- a. Predicted number of redox reactions
- b. # of NADH produced
- c. # of FADH<sub>2</sub> produced
- d. # of CO<sub>2</sub> produced
- e. # of electrons transferred
- f. # of Q  $\rightarrow$  QH<sub>2</sub>
- g. # of CytoC(Fe<sup>3+</sup>)  $\rightarrow$  CytoC(Fe<sup>2+</sup>)
- h. # of  $O_2 \rightarrow 2H_2O$
- i. proton gradient
- j. ATP produced

Acyl-CoA [4:0]

a. Draw Acyl-CoA [4:0]

- b. Predicted number of redox reactions
- c. # of NADH produced
- d. # of FADH<sub>2</sub> produced
- e. # of CO<sub>2</sub> produced
- f. # of electrons transferred
- g. # of  $Q \rightarrow QH_2$
- h. # of CytoC(Fe<sup>3+</sup>)  $\rightarrow$  CytoC(Fe<sup>2+</sup>)
- i. # of  $O_2 \rightarrow 2H_2O$
- j. proton gradient
- k. ATP produced