MCM Practice Questions: Lecture Day 5

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Lecture 15: Glycogen Metabolism

1) Sally ate a well balanced lunch 3 hours ago. How is her blood glucose level maintained?

(A) Gluconeogenesis

(B) FA beta-oxidation

(C) Liver glycogenonlysis

(D) Muscle Glycogenolysis

2) The lack of what enzyme in muscles prevents muscle tissue from releasing glucose into the bloodstream?

(A) G-6-P Dehydrogenase

(B) G-6-P Phosphatase

(C) Glycogen Phosphorylase

(D) Glycogen Debranching Enzyme

3) An individual is working out. During her cool down, she starts experiencing painful cramps in her legs and arms. She goes to the ER where tests show normal blood glucose, increased myoglobin, and increased creatine kindase. Further testing shows she has McArdles Disease. What enzyme deficiency is responsible for this disorder?

(A) G-6-Phosphotase

(B) Glycogen Phosphorylase

(C) Branching Enzyme

(D) Debranching Enzyme

4) High levels of G-6-P will stimulate Glycogenesis in which tissues?

(A) Brain

(B) Liver

(C) Muscle

(D) A & B

(E) B & C

(F) A, B & C

5) Which of the following hormones does *not* affect muscle glycogen metabolism?

(A) Glucagon

(B) Insulin

(C) Epinephrine

(D) Renin

6) Karan is trying cliff diving. Due to the inherent element of danger, his adrenal glands start secreting epinephrine. This will activate liver glycogen degradation. When epinephrine acts through Alpha-1 Adrenergic receptors in the liver, what enzyme is activated when epinephrine binds to its GPCR?

(A) Phospholipase A1

(B) Phospholipase C-beta

(C) Phospholipase B

(D) Phospholipase A2