

MCM Practice Questions: Lecture Day 4

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Lecture 13: TriCarboxylic Acid Cycle

1) An individual with a vitamin deficiency has lactic acidosis. It is revealed that the patient is deficiency in Niacin. Which cofactor of pyruvate dehydrogenase will this deficiency affect?

- (A) TPP
- (B) Lipoic Acid
- (C) CoA
- (D) FAD
- (E) NAD⁺

2) Which of the following TCA enzymes will be downregulated in the presence of NADH?

- (A) Malate Dehydrogenase
- (B) Aconitase
- (C) Succinate Dehydrogenase
- (D) Fumarase

3) An individual is revealed to have a Vitamin B1 deficiency. Which of the following TCA enzymes is going to be impacted?

- (A) Succinyl-CoA synthase
- (B) Isocitrate Dehydrogenase
- (C) Alpha-ketoglutarate Dehydrogenase
- (D) Citrate Synthase

4) I am trying to find a poison that targets enzymes that use lipoic acid as a cofactor. What poison should I look into acquiring?

- (A) Lead
- (B) Arsenic
- (C) Polonium
- (D) Mercury

5) Which one of these TCA cycle intermediates does *NOT* participate in anaplerotic reactions of the TCA cycle?

- (A) Oxaloacetate
- (B) isocitrate
- (C) Alpha-Ketoglutarate
- (D) Fumarate