

# MCM Practice Questions: Lecture Day 3

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## Lecture 9: Eicosanoids and Lipid Mediators I

**1) Arachidonic Acid is a non-essential FA that is a precursor to eicosanoids. However, in the absence of what acid from the diet, Arachidonic acid becomes an essential FA?**

- (A) Eicosapentaenoic acid (EPA)
- (B) Alpha-Linolenic acid (ALA)
- (C) Docosahexaenoic acid (DHA)
- (D) Linoleic acid (LA)

**2) The healthy ratio of omega-6 : omega-3 FA's ranges from 1:1 - 1:4. Which of the following is one of the benefits of maintaining this ratio?**

- (A) Decreased protection from cardiovascular disease
- (B) Decreased Resolvins
- (C) Proliferation of Proinflammatory cells
- (D) Decreased Neuronal apoptosis

**3) Research has indicated that there is increased thromboxane synthesis in patients afflicted with deep vein thrombosis (DVT). What class of enzymes catalyze the synthesis of these molecules from Arachidonic Acid?**

- (A) Lipoxigenases
- (B) Cyclooxygenases
- (C) Thrombokinasase
- (D) Thromboxxygenase

**4) Which one of the following molecules is a product of the activity of lipoxygenases?**

- (A) Leukotrienes
- (B) Prostaglandins
- (C) Interleukins
- (D) Thromboxanes

**5) A pregnant woman starts uterine contractions. What Prostaglandin promotes this contraction?**

- (A)  $PGI_2$
- (B)  $PGF_{2a}$
- (C)  $PGD_2$
- (D)  $PGE_2$

**6) Aspirin irreversibly inhibits COX-1 and alters the activity of COX-2. What does COX-2 produce after alteration by aspirin?**

- (A) Lipoxins
- (B) Prostaglandins
- (C) Resolvins
- (D) Thromboxanes

**7) While making a paper airplane, you accidentally give yourself a paper cut, triggering an inflammatory response at the wound site. A couple of days later, the wound has healed and the inflammation has subsided. What eicosanoid plays a part in the resolution phase of the inflammatory response?**

1. Leukotrienes
2. Resolvins
3. Prostaglandins
4. Prostacyclins