



Quiz

Question 1:

Which enzyme catalyzes the conversion of arachidonic acid to prostaglandin H₂ (PGH₂) in the cyclooxygenase pathway?

- a) Lipoxygenase
- b) Phospholipase A₂
- c) Cyclooxygenase-1 (COX-1)
- d) Cytochrome P450

Answer: c) Cyclooxygenase-1 (COX-1)

Explanation: COX-1 is responsible for converting arachidonic acid to PGH₂, the precursor of various prostaglandins.

Question 2:

Which class of eicosanoids is involved in promoting vasodilation, relaxation of vascular smooth muscle, and inhibition of platelet aggregation?

- a) Prostaglandins
- b) Leukotrienes
- c) Thromboxanes
- d) Lipoxins

Answer: a) Prostaglandins

Explanation: Prostaglandins play roles in vasodilation, relaxation of smooth muscle, and inhibition of platelet aggregation.





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Question 3:

What role do lipoxins play in inflammation?

- a) They promote inflammation.
- b) They have anti-inflammatory and pro-resolving effects.
- c) They induce bronchoconstriction.
- d) They activate platelet aggregation.

Answer: b) They have anti-inflammatory and pro-resolving effects.

Explanation: Lipoxins are anti-inflammatory eicosanoids that help resolve inflammation.

Question 4:

Which enzyme is responsible for the synthesis of leukotrienes from arachidonic acid?

- a) Cyclooxygenase
- b) Lipoxygenase
- c) Phospholipase A2
- d) Cytochrome P450

Answer: b) Lipoxygenase

Explanation: Lipoxygenase enzymes convert arachidonic acid to leukotrienes.





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Question 5:

What is the primary mode of action of nonsteroidal anti-inflammatory drugs (NSAIDs)?

- a) Inhibition of leukotriene synthesis
- b) Inhibition of cyclooxygenase (COX) enzymes
- c) Activation of platelet aggregation
- d) Promotion of vasodilation

Answer: b) Inhibition of cyclooxygenase (COX) enzymes

Explanation: NSAIDs inhibit COX enzymes, reducing prostaglandin synthesis and inflammation.

Question 6:

Which class of eicosanoids is involved in promoting platelet aggregation and vasoconstriction?

- a) Prostaglandins
- b) Leukotrienes
- c) Thromboxanes
- d) Lipoxins

Answer: c) Thromboxanes

Explanation: Thromboxanes promote platelet aggregation and vasoconstriction.





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Question 7:

Which eicosanoid pathway produces epoxyeicosatrienoic acids (EETs) that regulate blood pressure and vascular tone?

- a) Cyclooxygenase (COX) pathway
- b) Lipoxygenase (LOX) pathway
- c) Cytochrome P450 pathway
- d) Phospholipase A2 pathway

Answer: c) Cytochrome P450 pathway

Explanation: The cytochrome P450 pathway produces EETs that regulate blood pressure and vascular tone.

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