

Pharmacology Assessment: NSAIDs and Analgesics

1. What is the key difference between analgesics and anesthetics?
 - a. Analgesics only work on the central nervous system
 - b. Anesthetics only relieve pain
 - c. Analgesics alleviate pain while anesthetics cause loss of sensory perception
 - d. There is no significant difference between them

2. Which of the following best describes efficacy in pharmacology?
 - a. The amount of drug needed to produce an effect
 - b. The maximum effect a drug can produce regardless of dose
 - c. The therapeutic window of a drug
 - d. The rate at which a drug is absorbed

3. How do prostaglandins contribute to stomach protection?
 - a. By increasing hydrochloric acid production
 - b. By promoting mucus secretion and reducing HCl levels
 - c. By inhibiting gastric motility
 - d. By increasing stomach acid production

4. What is the primary reason NSAIDs should be taken with food?
 - a. To increase drug absorption
 - b. To mask the taste of the medication
 - c. To protect the stomach lining from irritation
 - d. To enhance the drug's effectiveness

5. Which pathway of arachidonic acid metabolism produces leukotrienes?

- a. Cyclooxygenase pathway
- b. Lipoxygenase pathway
- c. Glucocorticoid pathway
- d. Prostaglandin pathway

6. What distinguishes narcotic from non-narcotic analgesics in terms of pain relief?

- a. Narcotics only work on peripheral pain
- b. Non-narcotics are more effective for all types of pain
- c. Narcotics can relieve any type of pain while non-narcotics mainly relieve musculoskeletal pain
- d. Non-narcotics only work through central mechanisms

7. What is the role of COX-2 in inflammation?

- a. It is constitutively present in all tissues
- b. It is induced by cytokines at sites of inflammation
- c. It primarily protects the GI tract
- d. It has no role in inflammation

8. Which statement about prostaglandins is correct?

- a. They only cause harmful effects in the body
- b. They have no role in menstruation
- c. They mediate redness, swelling, pain, and inflammatory responses
- d. They only function in the gastrointestinal system

9. What characterizes rheumatoid arthritis as described in the text?

- a. It is an acute inflammatory condition
- b. It is caused by bacterial infection
- c. It is an autoimmune disease with chronic inflammation
- d. It only affects elderly patients

10. How do leukotrienes contribute to asthma?

- a. They reduce inflammation in airways
- b. They are key mediators in asthma pathophysiology
- c. They prevent bronchoconstriction
- d. They have no role in asthma

11. Which statement about COX-1 is accurate?

- a. It is only present during inflammation
- b. It exists as a constitutive isoform in tissue
- c. It has no role in GI protection
- d. It is only induced by injury

12. What is the relationship between potency and drug dosage?

- a. More potent drugs require higher doses
- b. Potency has no relation to required dose
- c. More potent drugs achieve effects at lower doses
- d. Potency only relates to side effects

13. What is the primary difference between morphine and NSAIDs in clinical use?

- a. NSAIDs are used for severe surgical pain
- b. Morphine is preferred for mild headaches
- c. Morphine is used for major surgery and cancer pain, while NSAIDs for superficial pain
- d. There is no difference in their clinical applications

14. How do glucocorticoids compare to other anti-inflammatory medications?

- a. They have no anti-inflammatory effects
- b. They are always the first choice for treatment
- c. They have powerful effects but significant toxicity
- d. They have no side effects

15. What is the mechanism of action for most NSAIDs?

- a. Blocking serotonin receptors
- b. Inhibiting prostaglandin synthesis
- c. Stimulating opioid receptors
- d. Blocking calcium channels

16. Which statement about pain is correct?

- a. It has no biological purpose
- b. It serves as a warning signal for tissue damage
- c. It is always chronic
- d. It only occurs in the peripheral nervous system

17. What characterizes the antipyretic effects of analgesics?

- a. Only narcotics have antipyretic effects
- b. Non-narcotics have antipyretic effects
- c. All analgesics lack antipyretic effects
- d. Antipyretic effects are unrelated to pain relief

18. How does IL-1 affect body temperature?

- a. It has no effect on body temperature
- b. It decreases body temperature
- c. It activates the hypothalamic thermoregulatory center
- d. It only affects local temperature

19. What is the main concern with narcotic analgesics?

- a. They cause minimal side effects
- b. They have no risk of dependence
- c. They pose a risk of tolerance and dependence
- d. They only affect the peripheral nervous system

20. Which statement about COX inhibitors is correct?

- a. All NSAIDs are selective for COX-2
- b. Most current NSAIDs are somewhat selective for COX-1
- c. COX inhibition has no relation to side effects
- d. COX-2 inhibition causes GI toxicity