

Advanced Pharmacology Principles

Pharmacology · Answer Key · 8 Questions

1. Which process describes the movement of a drug from the site of administration into the systemic circulation?

- A) Metabolism
- B) Excretion
- C) Absorption**
- D) Distribution

2. What is the primary mechanism of action for non-steroidal anti-inflammatory drugs (NSAIDs) like aspirin?

- A) Inhibition of cyclooxygenase enzymes**
- B) Blocking histamine receptors
- C) Stimulating glucocorticoid receptors
- D) Inhibition of voltage-gated sodium channels

3. Which pharmacokinetic parameter is defined as the time required for the concentration of a drug in the plasma to decrease by 50%?

- A) Therapeutic index
- B) Volume of distribution
- C) Half-life**
- D) Bioavailability

4. Which organ is primarily responsible for the first-pass metabolism of orally administered drugs?

- A) Kidneys
- B) Liver**
- C) Pancreas
- D) Lungs

5. In pharmacodynamics, what term describes a drug that binds to a receptor but produces no physiological response, thereby blocking the action of agonists?

- A) Partial agonist
- B) Inverse agonist
- C) Antagonist**
- D) Allosteric modulator

6. Which drug class is commonly utilized to treat hypertension by preventing the conversion of Angiotensin I to Angiotensin II?

- A) Beta-blockers
- B) Calcium channel blockers
- C) ACE inhibitors**
- D) Diuretics

7. The 'therapeutic index' of a drug is a ratio of which two values?

- A) Toxic dose to effective dose**
- B) Peak concentration to trough concentration
- C) Half-life to clearance rate
- D) Absorption rate to elimination rate

8. Which route of administration bypasses the enterohepatic circulation, allowing for 100% immediate bioavailability?

- A) Intramuscular
- B) Sublingual
- C) Intravenous**
- D) Transdermal