

Pharmacology Fundamentals

Pharmacology · Answer Key · 15 Questions

1. What is the primary mechanism of action for beta-blockers?

- A) Blocking alpha-adrenergic receptors
- B) Inhibiting phosphodiesterase enzymes
- C) Blocking beta-adrenergic receptors**
- D) Activating muscarinic receptors

2. Which enzyme is the target of ACE inhibitors?

- A) Angiotensin-Converting Enzyme (ACE)**
- B) Cyclooxygenase (COX)
- C) Lipoxygenase (LOX)
- D) Dihydropyridine oxidase

3. What is the therapeutic use of warfarin?

- A) To treat bacterial infections
- B) To reduce inflammation
- C) As an anticoagulant**
- D) To manage pain

4. Which neurotransmitter is primarily involved in Parkinson's disease?

- A) Serotonin
- B) Dopamine**
- C) Acetylcholine
- D) GABA

5. What is the main route of administration for intravenous (IV) drugs?

- A) Oral
- B) Topical
- C) Injection directly into a vein**
- D) Inhalation

6. Which class of drugs is commonly used to treat hypertension by blocking the action of angiotensin II?

- A) Diuretics
- B) Beta-blockers
- C) Angiotensin II Receptor Blockers (ARBs)**
- D) Calcium channel blockers

7. What is the primary function of a prodrug?

- A) To be immediately active upon administration
- B) To be converted into an active drug in the body**
- C) To enhance the excretion of the drug
- D) To prolong the drug's binding to its receptor

8. Which of the following is a common side effect of opioid analgesics?

- A) Diarrhea
- B) Constipation**
- C) Increased appetite
- D) Insomnia

9. What does the term 'half-life' of a drug refer to?

- A) The time it takes for the drug to reach peak plasma concentration
- B) The time it takes for the drug to be completely eliminated from the body
- C) The time it takes for the plasma concentration of a drug to be reduced by half**
- D) The duration of the drug's therapeutic effect

10. Which type of receptor is directly linked to ion channels?

- A) G protein-coupled receptors
- B) Enzyme-linked receptors
- C) Nuclear receptors
- D) Ligand-gated ion channels**

11. What is the primary function of the cytochrome P450 (CYP450) enzyme system in the liver?

- A) Drug synthesis
- B) Drug metabolism**
- C) Drug absorption
- D) Drug excretion

12. Which class of antibiotics works by inhibiting bacterial cell wall synthesis?

- A) Tetracyclines
- B) Macrolides
- C) Penicillins**
- D) Fluoroquinolones

13. What is the main therapeutic effect of statins?

- A) To lower blood sugar levels
- B) To reduce cholesterol levels**
- C) To treat allergies
- D) To prevent blood clots

14. Which of the following is a common antagonist to histamine?

- A) Anticholinergics
- B) Beta-agonists
- C) Antihistamines**
- D) Corticosteroids

15. What is the primary goal of pharmacodynamics?

- A) To study how the body absorbs and distributes drugs
- B) To study how drugs affect the body**
- C) To study how the body eliminates drugs
- D) To study the chemical structure of drugs