

Essential Concepts in Pharmacology

Pharmacology · Answer Key · 8 Questions

1. Which organ is primarily responsible for the 'first-pass effect' during oral drug metabolism?

A) Liver

- B) Kidney
- C) Stomach
- D) Lungs

2. What is the primary mechanism of action of penicillin antibiotics?

A) Inhibiting bacterial cell wall synthesis

- B) Blocking viral RNA replication
- C) Disrupting fungal cell membranes
- D) Inhibiting mammalian protein synthesis

3. Which medication is used as a specific antagonist to reverse opioid overdose?

A) Atropine

B) Naloxone

- C) Flumazenil
- D) Protamine sulfate

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

A) The time required for half of the drug dose to be absorbed into the stomach

B) The time needed for the plasma concentration of the drug to decrease by 50%

- C) The expiration period of the medication from manufacture date
- D) The duration of time a patient experiences clinical relief

5. Which agent is administered as an antidote for paracetamol (acetaminophen) overdose?

A) N-acetylcysteine

- B) Calcium gluconate
- C) Vitamin K
- D) Activated charcoal

6. Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen work primarily by inhibiting which enzyme?

A) Cyclooxygenase

- B) Acetylcholinesterase
- C) HMG-CoA reductase
- D) Angiotensin-converting enzyme

7. What pharmacological term describes a drug's capacity to cause structural malformations in a developing fetus?

A) Teratogenicity

B) Carcinogenicity

C) Mutagenicity

D) Cytotoxicity

8. What does the term 'bioavailability' describe?

A) The rate at which a drug is filtered out by the renal system

B) The mass of active chemical compound per oral tablet

C) The fraction of an administered drug that reaches systemic circulation unchanged

D) The percentage of drug that binds directly to plasma proteins