

Chapter 1 Issues for the Practitioner in Drug Therapy

MULTIPLE CHOICE

1. Nurse practitioner prescriptive authority is regulated by:
 - A. The National Council of State Boards of Nursing
 - B. The U.S. Drug Enforcement Administration
 - C. The State Board of Nursing for each state
 - D. The State Board of Pharmacy

ANS: C PTS: 1

2. Physician Assistant (PA) prescriptive authority is regulated by:
 - A. The National Council of State Boards of Nursing
 - B. The U.S. Drug Enforcement Administration
 - C. The State Board of Nursing
 - D. The State Board of Medical Examiners

ANS: D PTS: 1

3. Clinical judgment in prescribing includes:
 - A. Factoring in the cost to the patient of the medication prescribed
 - B. Always prescribing the newest medication available for the disease process
 - C. Handing out drug samples to poor patients
 - D. Prescribing all generic medications to cut costs

ANS: A PTS: 1

4. Criteria for choosing an effective drug for a disorder include:
 - A. Asking the patient what drug they think would work best for them
 - B. Consulting nationally recognized guidelines for disease management
 - C. Prescribing medications that are available as samples before writing a prescription
 - D. Following U.S. Drug Enforcement Administration (DEA) guidelines for prescribing

ANS: B PTS: 1

5. Nurse practitioner practice may thrive under health-care reform due to:
 - A. The demonstrated ability of nurse practitioners to control costs and improve patient outcomes
 - B. The fact that nurse practitioners will be able to practice independently
 - C. The fact that nurse practitioners will have full reimbursement under health-care reform
 - D. The ability to shift accountability for Medicaid to the state level

ANS: A PTS: 1

Chapter 2. Pharmacokinetic Basis of Therapeutics and Pharmacodynamic

MULTIPLE CHOICE

1. A patient's nutritional intake and lab work reflects hypoalbuminemia. This is critical to prescribing because:
- A. Distribution of drugs to target tissue may be affected
 - B. The solubility of the drug will not match the site of absorption
 - C. There will be less free drug available to generate an effect
 - D. Drugs bound to albumin are readily excreted by the kidney

ANS: A PTS: 1

2. Drugs that have a significant first-pass effect:
- A. Must be given by the enteral (oral) route only
 - B. Bypass the hepatic circulation
 - C. Are rapidly metabolized by the liver and may have little if any desired action
 - D. Are converted by the liver to more active and fat-soluble forms

ANS: C PTS: 1

3. The route of excretion of a volatile drug will likely be:
- A. The kidneys
 - B. The lungs
 - C. The bile and feces
 - D. The skin

ANS: B PTS: 1

4. Medroxyprogesterone (Depo Provera) is prescribed IM to create a storage reservoir of the drug. Storage reservoirs:
- A. Assure that the drug will reach its intended target tissue
 - B. Are the reason for giving loading doses
 - C. Increase the length of time a drug is available and active
 - D. Are most common in collagen tissues

ANS: C PTS: 1

5. The NP chooses to give cephalexin every 8 hours based on knowledge of the drug's:
- A. Propensity to go to the target receptor
 - B. Biological half-life
 - C. Pharmacodynamics
 - D. Safety and side effects

ANS: B PTS: 1

6. Azithromycin dosing requires the first day's dose be twice those of the other 4 days of the prescription. This is considered a loading dose. A loading dose:
- A. Rapidly achieves drug levels in the therapeutic range
 - B. Requires four to five half-lives to attain
 - C. Is influenced by renal function

D. Is directly related to the drug circulating to the target tissues

ANS: A PTS: 1

7. The point in time on the drug concentration curve that indicates the first sign of a therapeutic effect is the:
- A. Minimum adverse effect level
 - B. Peak of action
 - C. Onset of action
 - D. Therapeutic range

ANS: C PTS: 1

8. Phenytoin requires a trough level be drawn. Peak and trough levels are done:
- A. When the drug has a wide therapeutic range
 - B. When the drug will be administered for a short time only
 - C. When there is a high correlation between the dose and saturation of receptor sites
 - D. To determine if a drug is in the therapeutic range

ANS: D PTS: 1

9. A laboratory result indicates the peak level for a drug is above the minimum toxic concentration. This means that the:
- A. Concentration will produce therapeutic effects
 - B. Concentration will produce an adverse response
 - C. Time between doses must be shortened
 - D. Duration of action of the drug is too long

ANS: B PTS: 1

10. Drugs that are receptor agonists may demonstrate what property?
- A. Irreversible binding to the drug receptor site
 - B. Up-regulation with chronic use
 - C. Desensitization or down-regulation with continuous use
 - D. Inverse relationship between drug concentration and drug action

ANS: C PTS: 1

11. Drugs that are receptor antagonists, such as beta blockers, may cause:
- A. Down-regulation of the drug receptor
 - B. An exaggerated response if abruptly discontinued
 - C. Partial blockade of the effects of agonist drugs
 - D. An exaggerated response to competitive drug agonists

ANS: B PTS: 1

12. Factors that affect gastric drug absorption include:
- A. Liver enzyme activity
 - B. Protein-binding properties of the drug molecule
 - C. Lipid solubility of the drug
 - D. Ability to chew and swallow

ANS: C PTS: 1

13. Drugs administered via intravenous (IV) route:
- A. Need to be lipid soluble in order to be easily absorbed
 - B. Begin distribution into the body immediately
 - C. Are easily absorbed if they are nonionized
 - D. May use pinocytosis to be absorbed

ANS: B PTS: 1

14. When a medication is added to a regimen for a synergistic effect, the combined effect of the drugs is:
- A. The sum of the effects of each drug individually
 - B. Greater than the sum of the effects of each drug individually
 - C. Less than the effect of each drug individually
 - D. Not predictable, as it varies with each individual

ANS: B PTS: 1

15. Which of the following statements about bioavailability is true?
- A. Bioavailability issues are especially important for drugs with narrow therapeutic ranges or sustained release mechanisms.
 - B. All brands of a drug have the same bioavailability.
 - C. Drugs that are administered more than once a day have greater bioavailability than drugs given once daily.
 - D. Combining an active drug with an inert substance does not affect bioavailability.

ANS: A PTS: 1

16. Which of the following statements about the major distribution barriers (blood-brain or fetal-placental) is true?
- A. Water soluble and ionized drugs cross these barriers rapidly.
 - B. The blood-brain barrier slows the entry of many drugs into and from brain cells.
 - C. The fetal-placental barrier protects the fetus from drugs taken by the mother.
 - D. Lipid soluble drugs do not pass these barriers and are safe for pregnant women.

ANS: B PTS: 1

17. Drugs are metabolized mainly by the liver via Phase I or Phase II reactions. The purpose of both of these types of reactions is to:
- A. Inactivate prodrugs before they can be activated by target tissues
 - B. Change the drugs so they can cross plasma membranes
 - C. Change drug molecules to a form that an excretory organ can excrete
 - D. Make these drugs more ionized and polar to facilitate excretion

ANS: C PTS: 1

18. Once they have been metabolized by the liver, the metabolites may be:
- A. More active than the parent drug
 - B. Less active than the parent drug
 - C. Totally “deactivated” so that they are excreted without any effect
 - D. All of the above

ANS: D PTS: 1

19. All drugs continue to act in the body until they are changed or excreted. The ability of the body to excrete drugs via the renal system would be increased by:
- A. Reduced circulation and perfusion of the kidney
 - B. Chronic renal disease
 - C. Competition for a transport site by another drug
 - D. Unbinding a nonvolatile drug from plasma proteins

ANS: D PTS: 1

20. Steady state is:
- A. The point on the drug concentration curve when absorption exceeds excretion
 - B. When the amount of drug in the body remains constant
 - C. When the amount of drug in the body stays below the MTC
 - D. All of the above

ANS: B PTS: 1

21. Two different pain meds are given together for pain relief. The drug-drug interaction is:
- A. Synergistic
 - B. Antagonistic
 - C. Potentiative
 - D. Additive

ANS: D PTS: 1

22. Actions taken to reduce drug-drug interaction problems include all of the following EXCEPT:
- A. Reducing the dose of one of the drugs
 - B. Scheduling their administration at different times
 - C. Prescribing a third drug to counteract the adverse reaction of the combination
 - D. Reducing the dosage of both drugs

ANS: C PTS: 1

23. Phase I oxidative-reductive processes of drug metabolism require certain nutritional elements. Which of the following would reduce or inhibit this process?
- A. Protein malnutrition
 - B. Iron deficiency anemia
 - C. Both A and B
 - D. Neither A nor B

ANS: D PTS: 1

24. The time required for the amount of drug in the body to decrease by 50% is called:
- A. Steady state
 - B. Half-life
 - C. Phase II metabolism
 - D. Reduced bioavailability time

ANS: B PTS: 1

25. An agonist activates a receptor and stimulates a response. When given frequently over time the body may:
- A. Up-regulate the total number of receptors
 - B. Block the receptor with a partial agonist
 - C. Alter the drug's metabolism
 - D. Down-regulate the numbers of that specific receptor

ANS: D PTS: 1

26. Drug antagonism is best defined as an effect of a drug that:
- A. Leads to major physiologic psychological dependence
 - B. Is modified by the concurrent administration of another drug
 - C. Cannot be metabolized before another dose is administered
 - D. Leads to a decreased physiologic response when combined with another drug

ANS: B PTS: 1

27. Instructions to a client regarding self-administration of oral enteric-coated tablets should include which of the following statements?
- A. "Avoid any other oral medicines while taking this drug."
 - B. "If swallowing this tablet is difficult, dissolve it in 3 ounces of orange juice."
 - C. "The tablet may be crushed if you have any difficulty taking it."
 - D. "To achieve best effect, take the tablet with at least 8 ounces of fluid."

ANS: D PTS: 1

28. The major reason for not crushing a sustained release capsule is that, if crushed, the coated beads of the drugs could possibly result in:
- A. Disintegration
 - B. Toxicity
 - C. Malabsorption
 - D. Deterioration

ANS: B PTS: 1

29. Which of the following substances is the most likely to be absorbed in the intestines rather than in the stomach?
- A. Sodium bicarbonate
 - B. Ascorbic acid
 - C. Salicylic acid
 - D. Glucose

ANS: A PTS: 1

30. Which of the following variables is a factor in drug absorption?
- A. The smaller the surface area for absorption, the more rapidly the drug is absorbed.
 - B. A rich blood supply to the area of absorption leads to better absorption.
 - C. The less soluble the drug, the more easily it is absorbed.
 - D. Ionized drugs are easily absorbed across the cell membrane.

ANS: B PTS: 1

31. An advantage of prescribing a sublingual medication is that the medication is:

- A. Absorbed rapidly
- B. Excreted rapidly
- C. Metabolized minimally
- D. Distributed equally

ANS: A PTS: 1

32. Drugs that use CYP 3A4 isoenzymes for metabolism may:
- A. Induce the metabolism of another drug
 - B. Inhibit the metabolism of another drug
 - C. Both A and B
 - D. Neither A nor B

ANS: C PTS: 1

33. Therapeutic drug levels are drawn when a drug reaches steady state. Drugs reach steady state:
- A. After the second dose
 - B. After four to five half-lives
 - C. When the patient feels the full effect of the drug
 - D. One hour after IV administration

ANS: B PTS: 1

34. Up-regulation or hypersensitization may lead to:
- A. Increased response to a drug
 - B. Decreased response to a drug
 - C. An exaggerated response if the drug is withdrawn
 - D. Refractoriness or complete lack of response

ANS: C PTS: 1

Chapter 3. Impact of Drug Interactions and Adverse Events on Therapeutics

MULTIPLE CHOICE

1. Which of the following patients would be at higher risk of experiencing adverse drug reactions (ADRs):
- A. A 32-year-old male
 - B. A 22-year-old female
 - C. A 3-month-old female
 - D. A 48-year-old male

ANS: C PTS: 1

2. Infants and young children are at higher risk of ADRs due to:
- A. Immature renal function in school-age children
 - B. Lack of safety and efficacy studies in the pediatric population
 - C. Children's skin being thicker than adults, requiring higher dosages of topical medication
 - D. Infant boys having a higher proportion of muscle mass, leading to a higher volume of distribution

ANS: B PTS: 1

3. The elderly are at high risk of ADRs due to:
- A. Having greater muscle mass than younger adults, leading to higher volume of distribution
 - B. The extensive studies that have been conducted on drug safety in this age group
 - C. The blood-brain barrier being less permeable, requiring higher doses to achieve therapeutic effect
 - D. Age-related decrease in renal function

ANS: D PTS: 1

4. The type of adverse drug reaction that is the result of an unwanted but otherwise normal pharmacological action of a drug given in the usual therapeutic doses is
- A. Type A
 - B. Type B
 - C. Type C
 - D. Type D

ANS: A PTS: 1

5. Digoxin may cause a Type A adverse drug reaction due to:
- A. Idiosyncratic effects
 - B. Its narrow therapeutic index
 - C. Being a teratogen
 - D. Being a carcinogen

ANS: B PTS: 1