Pharmacology 9th edition McCuistion Test Bank

SKU: 9780323399166-TEST-BANK

MULTIPLE CHOICE

1. Which drug will go through a disintegration process after it is administered?
   a. Intramuscular (IM) cephalosporins
   b. Intravenous (IV) vasopressors
   c. Oral analgesics
   d. Subcutaneous antiglycemics

   ANS: C
   When drugs are administered parenterally, there is no disintegration process, which occurs when a drug becomes a solution that can cross the biologic membrane.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 16
   TOP: Nursing Process: Assessment
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

2. The nurse is preparing to administer an oral medication and wants to ensure a rapid drug action. Which form of the medication will the nurse administer?
   a. Capsule
   b. Enteric-coated pill
   c. Liquid suspension
   d. Tablet

   ANS: C
   Liquid drugs are already in solution, which is the form necessary for absorption in the gastrointestinal (GI) tract. The other forms must disintegrate into small particles and then dissolve before being absorbed.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 16
   TOP: Nursing Process: Nursing Intervention
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

3. The nurse is teaching a patient who will be discharged home with a prescription for an enteric-coated tablet. Which statement by the patient indicates understanding of the teaching?
   a. “I may crush the tablet and put it in applesauce to improve absorption.”
   b. “I should consume acidic foods to enhance absorption of this medication.”
   c. “I should expect a delay in onset of the drug’s effects after taking the tablet.”
   d. “I should take this medication with high-fat foods to improve its action.”

   ANS: C

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Enteric-coated tablets resist disintegration in the acidic environment of the stomach and disintegrate when they reach the small intestine. There is usually some delay in onset of actions after taking these medications. Enteric-coated tablets should not be crushed or chewed, which would alter the time and location of absorption. Acidic foods will not enhance the absorption of the medication. The patient should not eat high-fat food before ingesting an enteric-coated tablet because high-fat foods decrease the absorption rate.

DIF: Cognitive Level: Applying (Application) REF: p. 16
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

4. A patient who is newly diagnosed with type 1 diabetes mellitus asks why insulin must be given by subcutaneous injection instead of by mouth. The nurse will explain that this is because
   a. absorption is diminished by the first-pass effects in the liver.
   b. absorption is faster when insulin is given subcutaneously.
   c. digestive enzymes in the GI tract prevent absorption.
   d. the oral form is less predictable with more adverse effects.

   ANS: C
   Insulin, growth hormones, and other protein-based drugs are destroyed in the small intestine by digestive enzymes and must be given parenterally. Because insulin is destroyed by digestive enzymes, it would not make it to the liver for metabolism with a first-pass effect. Subcutaneous tissue has fewer blood vessels, so absorption is slower in such tissue. Insulin is given subcutaneously because it is desirable to have it absorb slowly.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 17
   TOP: Nursing Process: Nursing Intervention: Patient Teaching
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

5. The nurse is preparing to administer an oral medication that is water soluble. The nurse understands that this drug
   a. must be taken on an empty stomach.
   b. requires active transport for absorption.
   c. should be taken with fatty foods.
   d. will readily diffuse into the GI tract.

   ANS: B
   Water-soluble drugs require a carrier enzyme or protein to pass through the GI membrane.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 17
   TOP: Nursing Process: Nursing Intervention
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

6. A nurse is preparing to administer an oral drug that is best absorbed in an acidic environment. How will the nurse give the drug?
   a. On an empty stomach
   b. With a full glass of water
   c. With food
   d. With high-fat food

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ANS: C
Food can stimulate the production of gastric acid, so medications requiring an acidic environment should be given with a meal. High-fat foods are useful for drugs that are lipid soluble.

DIF: Cognitive Level: Applying (Application) REF: p. 17
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

7. The nurse is preparing an injectable drug and wants to administer it for rapid absorption. How will the nurse give this medication?
   a. IM into the deltoid muscle
   b. IM into the gluteal muscle
   c. Subcut into abdominal tissue
   d. Subcut into the upper arm

   ANS: A
   Drugs given IM are absorbed faster in muscles that have more blood vessels, such as the deltoid, rather than those with fewer blood vessels, such as the gluteals. Subcutaneous routes are used when absorption needs to be slower and more sustained.

   DIF: Cognitive Level: Applying (Application) REF: p. 17
   TOP: Nursing Process: Planning
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

8. The nurse is reviewing medication information with a nursing student prior to administering an oral drug and notes that the drug has extensive first-pass effects. Which statement by the student indicates a need for further teaching about this medication?
   a. "The first-pass effect means the drug may be absorbed into systemic circulation from the intestinal lumen."
   b. "The first-pass effect means the drug may be changed to an inactive form and excreted."
   c. "The first-pass effect means the drug may be changed to a metabolite, which may be more active than the original."
   d. "The first-pass effect means the drug may be unchanged as it passes through the liver."

   ANS: B
   Drugs that undergo first-pass metabolism are absorbed into the portal vein from the intestinal lumen and go through the liver, where they are either unchanged or are metabolized to an inactive or a more active form.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 17
   TOP: Nursing Process: Nursing Intervention
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

9. The nurse prepares to change a patient's medication from an IV to an oral form and notes that the oral form is ordered in a higher dose. The nurse understands that this is due to differences in

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a. bioavailability.
b. pinocytosis.
c. protein binding.
d. tachyphylaxis.

ANS: A
Oral drugs may have less bioavailability because a lower percentage of the drug reaches the systemic circulation. Pinocytosis refers to the process by which cells carry a solute across a membrane. Protein binding can occur with both routes. Tachyphylaxis describes a rapid decrease in response to drugs that occurs when tolerance develops quickly.

DIF: Cognitive Level: Understanding (Comprehension) REF: p. 17
TOP: Nursing Process: Assessment
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

10. The nurse is preparing to administer a drug and learns that it binds to protein at a rate of 90%. The patient's serum albumin level is low. The nurse will observe the patient for
a. decreased drug absorption.
b. decreased drug interactions.
c. decreased drug toxicity.
d. increased drug effects.

ANS: D
Drugs that are highly protein-bound bind with albumin and other proteins, leaving less free drug in circulation. If a patient has a low albumin, the drug is not bound, and there is more free drug to cause drug effects. There would be increased absorption, increased interactions with other drugs, and increased toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 18
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

11. The nurse is administering two drugs to a patient and learns that both drugs are highly protein-bound. The nurse may expect
a. decreased bioavailability of both drugs.
b. decreased drug effects.
c. decreased drug interactions.
d. increased risk of adverse effects.

ANS: D
Two drugs that are highly protein-bound will compete for protein-binding sites, leaving more free drug in circulation and an increased risk of adverse effects as well as increased bioavailability, increased drug effects, and increased drug interactions.

DIF: Cognitive Level: Applying (Application) REF: p. 18
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

12. A patient has been taking a drug that has a protein-binding effect of 75%. The provider adds a new medication that has a protein-binding effect of 90%. The nurse will expect

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a. decreased drug effects of the first drug.
b. decreased therapeutic range of the first drug.
c. increased drug effects of the first drug.
d. increased therapeutic range of the first drug.

ANS: C
Adding another highly protein-bound drug will displace the first drug from protein-binding sites and release more free drug, increasing the drug's effects. This does not alter the therapeutic range, which is the serum level between drug effectiveness and toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 18
TOP: Nursing Process: Nursing Intervention/Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

13. The nurse gives a medication to a patient with a history of liver disease. The nurse will monitor this patient for
a. decreased drug effects.
b. increased drug effects.
c. decreased therapeutic range.
d. increased therapeutic range.

ANS: B
Liver diseases such as cirrhosis and hepatitis alter drug metabolism by inhibiting the drug-metabolizing enzymes in the liver. When the drug metabolism rate is decreased, excess drug accumulation can occur and lead to toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Assessment/Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

14. The nurse gives 800 mg of a drug that has a half-life of 8 hours. How much drug will be left in the body in 24 hours if no additional drug is given?
a. None
b. 50 mg
c. 100 mg
d. 200 mg

ANS: C
Eight hours after the drug is given, there will be 400 mg left. Eight hours after that (16 hours), there will be 200 mg left. At 24 hours, there will be 100 mg left.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

15. If a drug has a half-life of 12 hours and is given twice daily starting at 0800 on a Monday, when will a steady state be achieved?
a. 0800 on Tuesday
b. 0800 on Wednesday
c. 0800 on Thursday

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d. 0800 on Friday

ANS: B
Steady-state levels occur at 3 to 5 half-lives. Wednesday at 0800 is 4 half-lives from the original dose.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

16. The nurse is preparing to administer a drug that is ordered to be given twice daily. The nurse reviews the medication information and learns that the drug has a half-life of 24 hours. What will the nurse do next?
a. Administer the medication as ordered
b. Contact the provider to discuss daily dosing
c. Discuss every-other-day dosing with the provider
d. Hold the medication

ANS: B
A drug with a longer half-life should be given at longer intervals to avoid drug toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Planning
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

17. The nurse is caring for a patient who has taken an overdose of aspirin several hours prior. The provider orders sodium bicarbonate to be given. The nurse understands that this drug is given for which purpose?
a. To counter the toxic effects of the aspirin
b. To decrease the half-life of the aspirin
c. To increase the excretion of the aspirin
d. To neutralize the acid of the aspirin

ANS: C
Aspirin is a weak acid and is more readily excreted in alkaline urine. Sodium bicarbonate alkalizes the urine. It does not act as an antidote to aspirin, decrease the half-life, or neutralize its pH.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Planning
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

18. The nurse is preparing to administer a drug that is eliminated through the kidneys. The nurse reviews the patient's chart and notes that the patient has increased serum creatinine and blood urea nitrogen (BUN). The nurse will perform which action?
a. Administer the drug as ordered.
b. Anticipate a shorter than usual half-life of the drug.
c. Expect decreased drug effects when the drug is given.
d. Notify the provider and discuss giving a lower dose.

ANS: D

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Increased creatinine and BUN indicate decreased renal function, so a drug that is eliminated through the kidneys can become toxic. The nurse should discuss a lower dose with the provider. The drug will have a longer half-life and will exhibit increased effects with decreased renal function.

DIF: Cognitive Level: Applying (Application) REF: p. 19
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

19. The nurse understands that the length of time needed for a drug to reach the minimum effective concentration (MEC) is the
    a. duration of action.
    b. onset of action.
    c. peak action time.
    d. time response curve.

    ANS: B
    The onset of action is the time it takes to reach the MEC. Duration of action is the length of time a drug has a pharmacologic effect. Peak action time occurs when the drug reaches its highest blood level. The time response curve is an evaluation of the other three measures.

    DIF: Cognitive Level: Remembering (Knowledge) REF: p. 20
    TOP: Nursing Process: N/A
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

20. The nurse administers albuterol to a patient who has asthma. The albuterol acts by stimulating $beta_2$-adrenergic receptors to cause bronchodilation. The nurse understands that albuterol is a beta-adrenergic
    a. agonist.
    b. antagonist.
    c. inhibitor.
    d. depressant.

    ANS: A
    An agonist medication is one that stimulates a certain type of cell to produce a response.

    DIF: Cognitive Level: Understanding (Comprehension) REF: p. 21
    TOP: Nursing Process: N/A
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

21. The nurse is explaining to the patient why a nonspecific drug has so many side effects. Which statement by the patient indicates a need for further teaching?
    a. “Non-specific drugs can affect specific receptor types in different body tissues.”
    b. “Non-specific drugs can affect a variety of receptor types in similar body tissues.”
    c. “Non-specific drugs can affect hormone secretion as well as cellular functions.”
    d. “Non-specific drugs require higher doses than specific drugs to be effective.”

    ANS: B

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Non-specific drugs can act on one type of receptor but in different body tissues, or a variety of receptor types, or act on hormones to produce effects. Non-specific drugs do not require higher doses.

DIF: Cognitive Level: Applying (Application) REF: p. 21
TOP: Nursing Process: Nursing Intervention: Patient Teaching
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

22. The nurse is preparing to administer the first dose of digoxin (Lanoxin) to a patient and notes that the dose ordered is much higher than the usual recommended dose. Which action will the nurse perform?
    a. Administer the dose as ordered.
    b. Give the dose and monitor for toxicity.
    c. Hold the dose until reviewing it with the provider.
    d. Refuse to give the dose.

    ANS: A
    Digoxin requires a loading dose when first prescribed.

    DIF: Cognitive Level: Applying (Application) REF: p. 19
    TOP: Nursing Process: Nursing Intervention
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

23. The nurse administers a narcotic analgesic to a patient who has been receiving it for 1 day after orthopedic surgery. The patient reports no change in pain 30 minutes after the medication is given. The nurse recognizes that this patient is exhibiting
    a. drug-seeking behavior.
    b. drug tolerance.
    c. the placebo effect.
    d. tachyphylaxis.

    ANS: D
    Tachyphylaxis is a rapid decrease in response, or acute tolerance. Tolerance to drug effects can occur with narcotics, requiring increased doses in order to achieve adequate drug effects. Nurses often mistake drug-seeking behavior for drug tolerance. The placebo effect occurs when the patient experiences a response with an inactive drug.

    DIF: Cognitive Level: Understanding (Comprehension) REF: p. 23
    TOP: Nursing Process: Assessment
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

24. A patient has been taking a drug for several years and tells the nurse it is no longer working. The nurse learns that the patient has recently begun taking an over-the-counter (OTC) antacid medication. What does the nurse suspect is occurring?
    a. An adverse drug reaction
    b. A drug interaction
    c. Drug incompatibility
    d. Drug tolerance

    ANS: B

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Drug interactions are an altered or modified action or effect of a drug as a result of interaction with one or more other drugs. An adverse drug reaction can occur with one or more drugs and has effects ranging from mild to severe toxicity. Drug incompatibility is a chemical reaction of two or more drugs that occurs in vitro. Drug tolerance is the development of reduced response to a medication over time.

DIF: Cognitive Level: Applying (Application) REF: p. 24
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

25. The nurse is preparing to administer two IV medications that should not be given using the same IV tubing. The nurse understands that this is because of drug
    a. adverse reactions.
    b. incompatibility.
    c. interactions.
    d. potentiation.

    ANS: B
    Drugs that are incompatible cannot be mixed together in solution and cannot be mixed in a syringe, IV bag, or other artificial environment. Adverse reactions are symptoms occurring from drug effects. Drug interactions occur in vivo. Potentiation is when one drug causes an enhanced response in another drug.

    DIF: Cognitive Level: Applying (Application) REF: p. 24
    TOP: Nursing Process: Nursing Intervention
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

26. The nurse is teaching a patient who will begin taking ciprofloxacin. What instruction will the nurse include when teaching this patient about this drug?
    a. “Do not take this medication with oral contraceptive pills.”
    b. “Take at least 1 hour after or 2 hours before taking antacids.”
    c. “Take in the morning with your multivitamin tablet.”
    d. “Take with milk to reduce gastric upset.”

    ANS: B
    Dairy products, multivitamins, and antacids should be avoided 1 hour after and 2 hours before taking ciprofloxacin because these products contain divalent cations that form a drug complex that prevents absorption of the ciprofloxacin.

    DIF: Cognitive Level: Applying (Application) REF: p. 24
    TOP: Nursing Process: Nursing Intervention: Patient Teaching
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

27. A patient who takes a drug that undergoes gastric absorption will begin taking an opioid analgesic after sustaining an injury in a motor vehicle accident. The nurse will observe the patient closely for which effects?
    a. Decreased effects of the first drug
    b. Increased effects of the first drug
    c. Decreased effects of the narcotic
    d. Increased effects of the narcotic

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ANS: B
Opioids slow gastric emptying, allowing more time for drugs absorbed in the stomach to be absorbed. The nurse should expect increased effects of the first drug.

DIF: Cognitive Level: Applying (Application) REF: p. 24
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

28. The nurse is preparing to administer furosemide to a patient who takes digoxin. The nurse will plan to monitor the patient for
a. digoxin toxicity.
b. decreased digoxin effects.
c. erythromycin toxicity.
d. decreased erythromycin effects.

ANS: A
The renal loss of potassium can result in hypokalemia, which can enhance the action of digoxin and can lead to toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 25
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

29. A young adult female patient who takes a combination oral contraceptive (OCP) will begin taking an antibiotic. When teaching the patient about this medication, the nurse will
a. recommend using a backup method of contraception.
b. suggest that she switch to an injectable form of contraception.
c. tell her that the antibiotic is less effective if she is taking OCPs.
d. tell her the antibiotic has a greater risk for toxicity while taking OCPs.

ANS: A
Gut bacteria are necessary to hydrolyze estrogen conjugates into free estrogens. Concurrent antibiotic administration can alter these bacteria and prevent the optimal absorption and effectiveness of OCPs. A back-up contraceptive method is recommended.

DIF: Cognitive Level: Applying (Application) REF: p. 24
TOP: Nursing Process: Nursing Intervention: Patient Teaching
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

30. A patient has been taking warfarin (Coumadin), which is highly protein-bound. The patient will begin taking gemfibrozil, which is also highly protein-bound. The nurse will observe the patient closely for
a. decreased effects of warfarin.
b. increased effects of warfarin.
c. decreased effects of gemfibrozil.
d. decreased effects of both drugs.

ANS: B

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The addition of a highly protein-bound drug will compete with warfarin for protein-binding sites, releasing more free warfarin into the system, increasing drug effects, and increasing the chance of toxicity.

DIF: Cognitive Level: Applying (Application) REF: p. 18
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

31. A patient is taking phenytoin to prevent seizures. The nurse knows that phenytoin is highly protein-bound and has sedative's side effects. The nurse reviews the patient's chart and notes a low serum albumin. The nurse will notify the provider and observe the patient for which effects?
    a. Decreased sedative effects
    b. Increased sedative effects
    c. Increased seizures
    d. No change in effects

    ANS: B
    Phenytoin is protein-bound. When patients have a low serum albumin, there are fewer protein-binding sites, leaving more free drug in the system. The nurse should expect an increase in the sedative's side effects.

    DIF: Cognitive Level: Applying (Application) REF: p. 18
    TOP: Nursing Process: Evaluation
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

32. A patient who takes the anticoagulant warfarin will begin taking the anticonvulsant drug carbamazepine. The nurse reviews the drug information for these drugs and learns that carbamazepine is a hepatic enzyme inducer. The nurse anticipates that the provider will make which dosage adjustment?
    a. Decrease the dose of carbamazepine
    b. Increase the dose of carbamazepine
    c. Decrease the dose of warfarin
    d. Increase the dose of warfarin

    ANS: D
    Carbamazepine is a hepatic enzyme inducer, which can increase drug metabolism. Patients taking both drugs usually need a larger dose of warfarin.

    DIF: Cognitive Level: Applying (Application) REF: p. 24
    TOP: Nursing Process: Planning
    MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

33. The nurse is caring for a patient who receives theophylline, which has a narrow therapeutic index. The patient has been receiving cimetidine but will stop taking that drug in 2 days. In 2 days, the nurse will observe the patient closely for
    a. decreased effectiveness of theophylline.
    b. increased effectiveness of theophylline.
    c. decreased toxicity of theophylline.
    d. prolonged effectiveness of theophylline.

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ANS: B
Cimetidine is an enzyme inhibitor that decreases the metabolism of drugs such as theophylline. If the cimetidine is discontinued, the theophylline dose should be decreased to avoid toxicity. The nurse should observe the patient for increased theophylline effects.

DIF: Cognitive Level: Applying (Application) REF: p. 24
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

34. The nurse is caring for a patient who takes digoxin to treat heart failure. The provider orders furosemide to treat edema. The nurse will monitor the patient for digitalis toxicity because of
a. adverse drug reactions caused by giving these drugs in combination.
b. altered hepatic blood flow caused by the furosemide.
c. changes in reabsorption of water and electrolytes in the kidneys.
d. additive effects of these two drugs given together.

ANS: C
Diuretics such as furosemide promote water and sodium excretion from the renal tubules, especially sodium and potassium. Hypokalemia can result, and this will enhance the action of digoxin, and digitalis toxicity can occur.

DIF: Cognitive Level: Applying (Application) REF: p. 25
TOP: Nursing Process: Evaluation
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

35. A patient will receive penicillin to treat an infection. The provider orders probenecid (Probalan), a medication to treat gout, even though the patient does not have gout. Which action by the nurse is correct?
a. Administer the drug since the provider ordered it.
b. Recognize that it is being given prophylactically.
c. Refuse to administer the medication since it is not indicated.
d. Verify that it is being given for its secondary action.

ANS: D
Two or more drugs with the same route of excretion may compete with each other for elimination. Probenecid is given because it inhibits the excretion of penicillin, which may be desirable when the provider wants to prolong the plasma concentration of penicillin. The nurse should always verify an order that may not be clear.

DIF: Cognitive Level: Applying (Application) REF: p. 25
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

36. The nurse is preparing to administer meperidine (Demerol), which is an opioid analgesic, and promethazine (Phenergan), which is an antiemetic and antihistamine. The nurse understands that these drugs are given in combination for which reason?
a. They have antagonistic effects to reduce nausea.
b. They have additive effects to enhance analgesia.

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c. They have potentiating effects to decrease an allergic response.
d. They have synergistic effects to increase sedation.

ANS: D
Meperidine and promethazine have a synergistic effect on each other with a clinical effect that is substantially greater than the combined effect of the two.

DIF: Cognitive Level: Understanding (Comprehension) REF: p. 25
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

37. The provider has ordered amoxicillin with clavulanate (Augmentin) for a child who has otitis media. The child's parent asks why this drug is necessary when amoxicillin is less expensive. The nurse will explain that clavulanate is added to amoxicillin because it
a. binds with albumin to increase the amount of available amoxicillin.
b. broadens the spectrum of amoxicillin by inhibiting bacterial enzymes.
c. inhibits hepatic blood flow, leading to increased serum drug levels of amoxicillin.
d. inhibits the excretion of amoxicillin by interfering with renal function.

ANS: B
Clavulanate is a bacterial enzyme inhibitor, specifically beta-lactamase, which inactivates amoxicillin. When added to amoxicillin, it broadens the antibacterial spectrum.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention: Patient Teaching
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

38. The nurse assesses a patient who is receiving morphine sulfate intravenously using a patient-controlled analgesia pump. The nurse notes somnolence and respiratory depression, which are signs of morphine toxicity. The nurse will prepare to administer naloxone (Narcan) because it
a. has synergistic effects with morphine.
b. is a narcotic agonist.
c. is a narcotic antagonist.
d. potentiates narcotic effects.

ANS: C
Naloxone is a narcotic antagonist, meaning that it reverses the effects of morphine by blocking morphine receptor sites.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

39. The nurse is teaching a patient about a drug that causes photosensitivity. Which statement by the patient indicates a need for further teaching?
a. "I should apply sunscreen with a sun protection factor greater than 15."
b. "I should avoid sunlight when possible while taking this drug."
c. "I will wear protective clothing when I am outdoors."
d. "I will wear sunglasses even while I am indoors."

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ANS: D
Drugs that cause photosensitivity make sunburn more likely, so patients should stay out of the sun, wear protective clothing, and use sunscreen with an SPF greater than 15. It is not necessary to wear sunglasses indoors.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

40. A patient asks the nurse about using OTC medications. The nurse will tell the patient that OTC medications
a. are not as effective as prescription medications.
b. are not as safe as prescription medications.
c. have fewer side effects and drug interactions than prescription medications.
d. should be included when listing any medications taken by the patient.

ANS: D
OTC medications should always be included when listing medications because they can cause drug interactions. OTC medications can be as effective and as safe as prescription medications and have as many side effects and adverse reactions.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

41. The nurse is educating the parent of a 20-month-old toddler about OTC products to treat cold symptoms. Which statement by the parent indicates understanding of the teaching?
a. "I should check with the provider for proper dosing instructions."
b. "OTC medications are less potent and have minimal side effects."
c. "OTC medications can be given to children younger than 2 years old."
d. "Using OTC medications may prevent accurate diagnosis of respiratory illness."

ANS: D
OTC cold medications can mask symptoms and prevent accurate diagnosis of potentially serious illnesses. Their use in children is not recommended.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

42. A patient calls the clinic and tells the nurse that a newly prescribed medication isn't working. What is the nurse's next action?
a. Notify the provider and discuss increasing the dose.
b. Question the patient about compliance with the regimen.
c. Review the drug information with the patient.
d. Suggest the patient discuss changing medications with the provider.

ANS: C

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It is important for patients to understand the therapeutic effects and expected time frame for effects to occur. The nurse should review this with the patient first to make sure the patient's expectations are consistent with the drug's effects. The dose should not be increased or the drug changed until it is determined that the drug is not working as it should. Questioning the patient about compliance first assumes that the patient is doing something wrong. The nurse may question the patient about compliance after reviewing the drug information.

DIF: Cognitive Level: Applying (Application) REF: p. 27
TOP: Nursing Process: Assessment/Nursing Intervention
MSC: NCLEX: Health Promotion and Maintenance

43. The community health nurse is teaching a group of elderly residents in an assisted care facility about medication use. The nurse will remind the residents that OTC medications
a. are not as effective as prescription medications.
b. are not recommended for older adults.
c. are safer than prescription medications.
d. should be reviewed with a provider before taking.

ANS: D
OTC medications should be reviewed as part of a medication history at every encounter with the provider to prevent food and drug interactions. OTC medications may be just as effective as prescription medications, may be used by older adults, and often have serious side effects.

DIF: Cognitive Level: Applying (Application) REF: p. 28
TOP: Nursing Process: Nursing Intervention: Patient Teaching
MSC: NCLEX: Health Promotion and Maintenance

44. The nurse is preparing to teach a patient who will begin taking a monoamine oxidase (MAO) inhibitor. What is most important when teaching patients about MAO inhibitors?
a. Emphasizing the importance of potassium intake
b. Giving detailed drug information
c. Reviewing dietary guidelines
d. Providing a schedule for medication administration

ANS: C
MAO inhibitors have many dietary restrictions with potentially serious adverse reactions, so this should be an important part of teaching.

DIF: Cognitive Level: Applying (Application) REF: p. 26
TOP: Nursing Process: Nursing Intervention: Patient Teaching
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

45. The nurse is teaching a patient about taking a once-daily medication that has a side effect of drowsiness. The nurse learns that the patient works a 7:00 PM to 7:00 AM shift in a hospital. The nurse will recommend that the patient take this medication at which time of day?
a. 0600
b. 0800
c. 1800

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d. 2000

ANS: B
The medication should be given when the patient is at home before sleep.

DIF: Cognitive Level: Applying (Application) REF: p. 22
TOP: Nursing Process: Planning/Nursing Intervention: Patient Teaching
MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

MULTIPLE RESPONSE

1. Which patients are at high risk for drug interactions? (*Select all that apply.*)
   a. Patients who are acutely ill
   b. Patients who are taking multiple medications
   c. Patients who see several specialists
   d. Patients who take supplements and OTC medications
   e. Patients who use one pharmacy for several medications

   ANS: B, C, D
   Patients who have chronic health conditions, take multiple medications, see more than one provider, and use supplements and OTC medications are at higher risk for drug interactions.

   DIF: Cognitive Level: Understanding (Comprehension) REF: p. 24
   TOP: Nursing Process: Assessment
   MSC: NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

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