Chapter 06, Antibacterial Drugs: Sulfonamides

1. A client, diagnosed with a urinary tract infection, indicates the use of an herbal product to help prevent and relieve the symptoms. Which herb has the client most likely been using?
   A) Ginger
   B) Feverfew
   C) Saw palmetto
   D) Cranberry

   Answer: D

   Rationale: Cranberries and cranberry juice are commonly used remedies for preventing and relieving symptoms of UTIs. However, if an individual suspects a UTI, medical attention is necessary.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 72, Herbal Considerations

2. The nurse is preparing to administer sulfadiazine to a client who is also taking warfarin. The nurse would be alert for which potential adverse effect?
   A) Prolonged clotting times
   B) Increased risk of infection
   C) Decreased antibiotic effect
   D) Decreased white blood cell count

   Answer: A

   Rationale: When warfarin and sulfonamides are given concomitantly, an increase in action of the anticoagulant is seen, leading to an increase in clotting time, such as PT/INR, and an increased risk of bleeding. An increased risk of infection and a decrease in the white blood cell count would occur when a sulfonamide is given with methotrexate. The combination of warfarin and sulfonamide does not impact the effect of the antibiotic.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)

   Reference: p. 71, Interactions

3. A nurse is to administer sulfasalazine to a client with ulcerative colitis. Which interventions would be most important while caring for this client?
   A) Stop dosage if skin turns orange-yellow color.
   B) Regularly inspect client's stool samples.
   C) Give the drug on an empty stomach.
   D) Administer cranberry juice to the client.

   Answer: B

   Rationale: While providing care to a client receiving sulfasalazine therapy for ulcerative colitis, the nurse should regularly inspect all stool samples and record their number and appearance. Yellow skin or urine in clients receiving sulfasalazine is normal, and the nurse should not stop the dosage. Sulfasalazine is administered with meals or immediately afterward, not on an empty stomach. Administering cranberry juice is helpful for clients with urinary tract infections, but not for clients with ulcerative colitis.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 3
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 72, Ongoing Assessment

4. An elderly client receiving treatment for a urinary tract infection is now reporting diarrhea. On assessment, the nurse notes the client has been receiving the appropriate medication as well as drinking cranberry juice. Which factor is most likely the cause of the client's condition?
   A) Extremely large dosage of cranberry juice
   B) Lack of activity or exercise
   C) Occurrence of crystalluria
   D) Minimized food and fluid intake

   Answer: A

   Rationale: Clients may develop gastrointestinal distress such as diarrhea if they have consumed extremely large doses of cranberry juice. The recommended dose is 6 oz of juice twice daily. Cranberry juice on an empty stomach or immediately after dosage will not lead to diarrhea if taken in the recommended amount. Minimized food and fluid intake or lack of exercise does not increase the chances of diarrhea. Crystalluria does not cause diarrhea.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 2
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 72, Herbal Considerations

5. A nurse is about to administer mafenide to a client. The nurse would be alert for which possible reaction?
   A) Rash, itching, or other allergic reactions
   B) Crystals in the urine sample
   C) Inflammation of the mouth
   D) Loss of appetite

   Answer: A

   Rationale: The nurse should assess for allergic reactions such as rash, itching, edema, and urticaria when administering mafenide. Topical sulfonamides like mafenide do not cause crystalluria, inflammation of the mouth, or loss of appetite.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 7
   Cognitive Level: Apply
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 71, Other Reactions

6. After administering sulfonamides to a client, the nurse observes the client has developed a fever, cough, and muscular aches, as well as lesions in the form of red wheals on the neck and the mouth. The nurse interprets these findings as indicating which possible adverse reaction?
   A) Stevens–Johnson syndrome (SJS)
   B) Anaphylactic shock
   C) Thrombocytopenia
   D) Leukopenia

   Answer: A

   Rationale: Clients with SJS may report fever, cough, muscular aches and pains, and headache. Additional signs include lesions on the neck and mouth. Lesions are not symptoms of leukopenia or anaphylactic shock. A client with thrombocytopenia develops bruises on the skin but not lesions in the form of red wheals.
   Question Format: Multiple Choice
   Chapter: 6
   Learning Objective: 7
   Cognitive Level: Analyze
   Client Needs: Physiological Integrity: Pharmacological Therapies
   Integrated Process: Clinical Problem-solving Process (Nursing Process)
   Reference: p. 71, Nursing Alert

7. The health care professional has recommended sulfonamide therapy for a client who is currently taking oral anticoagulants. What are the possible effects of combining sulfonamide therapy with oral anticoagulants?
   A) Increased action of the anticoagulant

B) Increased risk of anaphylactic shock
C) Rendering of sulfonamide therapy ineffective
D) Development of leukopenia

Answer: A

Rationale: Taking sulfonamide drugs when the client is already taking oral anticoagulants may result in increased action of the anticoagulants. Anaphylactic shock and leukopenia are some of the adverse reactions of sulfonamides but are not associated with mixing sulfonamides and anticoagulants. Oral anticoagulants do not decrease the effectiveness of sulfonamides.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 71, Interactions

8. A client who is on sulfonamide therapy is about to be discharged. Which precaution should the nurse instruct the client to follow to reduce the effects of photosensitivity?
A) Wear protective clothing and sunscreen when outside.
B) Increase fluid intake.
C) Avoid lights while indoors.
D) Wear protective footwear.

Answer: A

Rationale: The nurse should encourage a client to wear protective clothing while going out in the sun to reduce the effect of photosensitivity. While increasing the fluid intake is recommended, it does not help combat the effects of photosensitivity. There is no need to avoid lights while indoors; the skin becomes sensitive only to harsh sunlight during sulfonamide therapy. Wearing protective footwear may protect the feet from injury, but it will not protect all the skin from the harmful effects of photosensitivity.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 5
Cognitive Level: Apply
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Teaching/Learning
Reference: p. 74, Altered Skin Integrity: Photosensitivity

9. A 60-year-old client with altered urinary elimination is prescribed sulfonamide and instructed to increase daily fluid intake. Which nursing intervention would be most appropriate to address the fear of incontinence?
A) Inform the client that there is no need to increase fluid intake.
B) Inform the client that increasing fluid intake will not result in incontinence.

C) Teach the client the times to take fluids to maintain continence.
D) Increase fluid intake by 1000 mL instead of 2000 mL to avoid incontinence.

Answer: C
Rationale: The nurse's responsibility is to help the client overcome the fear of incontinence and to teach the client when to take fluids to maintain continence. Instead of telling the client that increasing fluid intake has no effect on continence, the nurse should focus on helping the client with the problems of incontinence. The nurse should instruct the client to increase the fluid intake by at least 2000 mL, instead of only 1000 mL; however, this will not help control incontinence.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 6
Cognitive Level: Apply
Client Needs: Physiological Integrity: Reduction of Risk Potential
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 73, Lifespan Considerations

10. A nurse is caring for a client who is being administered sulfasalazine. Which instruction should the nurse include to ensure that the client gets the full benefits of the treatment?
A) Take dosage while eating or immediately after eating.
B) Increase food intake for the duration of sulfonamide therapy.
C) Take the drug with a full glass of milk instead of water.
D) Drink at least two to three 8-ounce glasses of fluid every day.

Answer: A

Rationale: The nurse should administer sulfasalazine with food or immediately afterward. Increasing the food intake during sulfonamide therapy is not necessary, as long as a proper diet is maintained and the health care provider's recommendations are followed. Two to three 8-ounce glasses of fluid is not enough; the client should drink at least eight to ten 8-ounce glasses of fluid every day. All drugs should be taken with water and not milk, juice, or any other liquid, unless specifically instructed by the health care provider.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 5
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 73, Promoting an Optimal Response to Therapy

11. A client who is being discharged has been instructed to continue with sulfonamide therapy for a week. Which point should the nurse include in the teaching plan to educate the client about the therapy?
A) Discontinue dosage if symptoms of infection disappear.
B) Take the drug a few minutes before a meal.

C) Take any off-the-shelf medication if fever occurs.
D) Ensure that all follow-up appointments are met.

Answer: D
Rationale: The nurse's plan should include educating the client about the importance of keeping the follow-up appointments. The nurse should instruct the client to adhere to the dosage schedule and not discontinue it even if the symptoms of the infection have gone. The client should inform the primary health care provider if fever, skin rash, or nausea occurs during the therapy. The client should be instructed to take the drug on an empty stomach (at least 2 hours before or after a meal) and not just before a meal.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 5
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 74, Educating the Client and Family

12. A nurse caring for a client with burns carefully applies the topical silver sulfadiazine. The nurse would be alert for which potential adverse reaction?
A) Facial edema
B) Skin necrosis
C) Headache
D) Rash

Answer: B

Rationale: Skin necrosis is an adverse effect of silver sulfadiazine that the nurse should be alert for. Facial edema and rash are adverse effects of mafenide, used for second- and third-degree burns. Headache is an adverse effect of sulfadiazine, used for urinary tract infection.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 75, Summary Drug Table Sulfonamides

13. After teaching a group of nursing students about the action of sulfonamides, the instructor determines that the teaching was successful when the students articulate that this class of drugs has primarily what action?
A) Bacteriostatic
B) Bactericidal
C) Promotor of folic acid activity
D) Bacterial cell metabolizer

Answer: A

Rationale: The sulfonamides are primarily bacteriostatic because of their ability to inhibit the activity of folic acid in bacterial cell metabolism. They are not bactericidal.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 1
Cognitive Level: Understand
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 70, Actions

14. When developing the plan of care for a client receiving sulfonamides for treatment of a urinary tract infection, the nurse determines actions for encouraging fluid intake and monitoring intake and output based on which nursing diagnosis?
A) Risk for Fluid Imbalance
B) Altered Urinary Elimination
C) Risk for Ineffective Renal Perfusion
D) Stress Incontinence

Answer: B

Rationale: A client with a urinary tract infection already is experiencing an alteration in urinary elimination. Because one adverse effect of the sulfonamide drugs is altered elimination patterns, it is important to help the client maintain adequate fluid intake and output. The nurse would encourage clients to increase fluid intake to 2000 mL or more per day to prevent crystalluria and stones (calculi) forming in the genitourinary tract, as well as to aid in removing microorganisms from the urinary tract. It is important to measure and record the client's intake and output every 8 hours and notify the primary health care provider if the urinary output decreases or the client fails to increase their oral intake. If the client is unable to maintain adequate intake, then they would be at risk for fluid imbalance. If renal injury would occur, then the client would be at risk for ineffective renal perfusion. Bladder training would be an appropriate intervention to address stress incontinence.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 4
Cognitive Level: Analyze
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 72, Nursing Diagnoses

15. After teaching the client about taking the prescribed sulfonamide therapy, the nurse determines that the client needs additional teaching after they make which comment?
A) "I should take the drug with a large glass of water each time."
B) "I can take the drug at different times of the day each day."
C) "I have to finish the full prescription for the medication."

D) "I should call my doctor if my symptoms seem to get worse."

Answer: B

Rationale: It is important that the client takes the drug at the scheduled intervals consistently throughout the course of the therapy because a certain amount of the drug must be in the body at all times for the infection to be controlled. The client is correct in taking the drug with a large glass of water each time, finishing the full prescription, and calling the doctor if symptoms get worse.

Question Format: Multiple Choice
Chapter: 6
Learning Objective: 5
Cognitive Level: Analyze
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 74, Taking Anti-Infectives

16. A client develops a cough and fever and laboratory test results reveal leukopenia after receiving sulfonamide therapy. When developing the client's plan of care, the nurse would determine which nursing diagnosis is most appropriate?
A) *Altered Urinary Elimination*
B) *Altered Skin Integrity*
C) *Infection (Secondary) Risk*
D) *Deficient Knowledge*

Answer: C

Rationale: Fever and leukopenia suggest an infection, which can occur secondarily with sulfonamide therapy. Therefore, *Infection (Secondary) Risk* would be the most appropriate nursing diagnosis. *Altered Urinary Elimination* would be appropriate if the client was experiencing changes in urinary output. *Altered Skin Integrity* would be appropriate if the client developed a rash or hypersensitivity reaction. *Deficient Knowledge* would be appropriate if the client lacked understanding of the drug therapy, which is not evident in this situation.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 4
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 72, Nursing Diagnoses

17. A client asks the nurse why fluid intake should be increased while taking sulfonamides. Which response by the nurse would be most appropriate?
A) "The fluids will help to decrease your risk for kidney stones."
B) "You need fluids so that you won't develop a reaction in the sunlight."
C) "Fluids prevent you from getting dehydrated."
D) "You need fluids to keep your blood count from dropping too low."

Answer: A

Rationale: With sulfonamides, the client is at risk for crystalluria and kidney stones. Increasing fluid intake helps to reduce the risk for their development. Fluids will have no effect on the development of photosensitivity or maintaining blood counts. Although fluids help to minimize the risk for dehydration, this is not the reason for increasing fluid intake with sulfonamide therapy.
Question Format: Multiple Choice
Chapter: 6
Learning Objective: 6
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 73, Altered Urinary Elimination

18. After teaching a group of nursing students about sulfonamides, the instructor determines that the teaching was successful when the students choose which medication as an example of a sulfonamide antibiotic? Select all that apply.
A) Amoxicillin
B) Ciprofloxacin
C) Sulfamethoxazole/trimethoprim
D) Clarithromycin
E) Silver sulfadiazine

Answer: C, E

Rationale: Silver sulfadiazine and sulfamethoxazole/trimethoprim are sulfonamide antibiotics. Amoxicillin is an aminopenicillin. Ciprofloxacin is classified as a fluoroquinolone. Clarithromycin is a macrolide.
Question Format: Multiple Select
Chapter: 6
Learning Objective: 2
Cognitive Level: Remember
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 75, Summary Drug Table Sulfonamides

19. A nursing instructor has finished teaching about sulfonamides. The instructor determines the students have grasped the basics by articulating which factors concerning this drug class? Select all that apply.
A) Are well absorbed when given orally
B) Are poorly absorbed when given orally
C) Treat only gram-positive infections
D) Treat only gram-negative infections
E) Are excreted by the kidneys

Answer: A, E

Rationale: Sulfonamides are well absorbed by the GI tract and are excreted by the kidneys. Sulfonamides treat both gram-positive and gram-negative infections.
Question Format: Multiple Select
Chapter: 6
Learning Objective: 2
Cognitive Level: Understand
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Teaching/Learning
Reference: p. 70, Actions

20. When assessing the medical records of several clients who are prescribed sulfonamide therapy, the nurse would expect laboratory findings related to which bacteria? Select all that apply.
    A) *Pseudomonas aeruginosa*
    B) *Escherichia coli*
    C) *Klebsiella pneumoniae*
    D) *Streptococcus pyogenes*
    E) *Staphylococcus aureus*

    Answer: B, C, E

    Rationale: Sulfonamides are often used to control infections caused by both gram-negative and gram-positive bacteria, such as *Escherichia coli*, *Klebsiella pneumoniae*, and *Staphylococcus aureus*. Typically, fluoroquinolones are used to treat infections caused by *Pseudomonas aeruginosa* and pencillins or cephalosporins are used to treat infections caused by *Streptococcus pyogenes*.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 2
    Cognitive Level: Understand
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Reference: p. 70, Actions

21. A nurse is preparing to administer a sulfonamide to a client. The nurse is aware sulfonamides are commonly used to treat which types of infections? Select all that apply.
    A) Ulcerative colitis
    B) Urinary tract infection
    C) Acute otitis media
    D) Upper respiratory tract infection
    E) Osteomyelitis

    Answer: A, B, C

Rationale: Sulfonamides are often used to treat ulcerative colitis, urinary tract infection, and acute otitis media. Cephalosporins are commonly used to treat upper respiratory tract infections and osteomyelitis; however, this depends on the causative organism.
Question Format: Multiple Select
Chapter: 6
Learning Objective: 2
Cognitive Level: Understand
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 70, Uses

22. A client is taking trimethoprim and sulfamethoxazole one tablet twice daily for 14 days. Which possible adverse reaction would the nurse include when teaching the client about this drug? Select all that apply.
    A) Muscle pain
    B) Blurred vision
    C) GI disturbances
    D) Allergic skin reactions
    E) Glossitis

    Answer: C, D, E

    Rationale: Teaching should address potential adverse reactions that can occur while taking trimethoprim and sulfamethoxazole. These adverse reactions include headache, GI disturbances, allergic skin reactions, hematologic changes, Stevens-Johnson syndrome, anorexia, and glossitis. Muscle pain and blurred vision are not recognized as adverse reactions to this medication.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 2
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Teaching/Learning
    Reference: p. 75Summary Drug Table Sulfonamides

23. The nurse suspects that a client who is taking a sulfonamide has leukopenia. Which assessment findings would support this suspicion? Select all that apply.
    A) Sore throat
    B) Cough
    C) Nausea
    D) Photosensitivity
    E) Bruising

    Answer: A, B

Rationale: Antibiotics including sulfonamides can lead to leukopenia, which would be manifested by fever, sore throat, or cough. Thrombocytopenia is also possible and would be manifested by easy bruising or unusual bleeding from minor to moderate trauma. Nausea and photosensitivity are adverse reactions to sulfonamides.
Question Format: Multiple Select
Chapter: 6
Learning Objective: 5
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 74, Infection (secondary) Risk

24. A nurse is assessing the laboratory test results of a client receiving sulfasalazine therapy for ulcerative colitis. Which findings would be a priority? Select all that apply.
A) Pancytopenia
B) Leukopenia
C) Thrombocytopenia
D) Aplastic anemia
E) Iron deficiency anemia

Answer: B, C, D
Rationale: Leukopenia, thrombocytopenia, and aplastic anemia are hematologic changes that may occur during prolonged sulfonamide therapy, such as during ulcerative colitis treatment with sulfasalazine.
Question Format: Multiple Select
Chapter: 6
Learning Objective: 2
Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 71, Other Reactions

25. The nurse is preparing to administer medications to some clients. For which clients should the nurse question the order of sulfonamide? Select all that apply.
A) Children younger than 6 years
B) Adults older than 65 years
C) Lactating females
D) Clients with group A beta-hemolytic streptococci infections
E) Women in the second trimester of pregnancy

Answer: C, D

Rationale: The sulfonamides are contraindicated in clients with hypersensitivity to the sulfonamides, during lactation, in children younger than 2 years, near the end of pregnancy, and for infections caused by group A beta-hemolytic streptococci.
Question Format: Multiple Select
Chapter: 6

Learning Objective: 2
Cognitive Level: Understand
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 71, Contraindications

26. The nurse is providing care to a client with diabetes who is receiving sulfonamides. The nurse counsels the client about the increased risk of hypoglycemia, especially if the client is taking which medications? Select all that apply.
    A) Tolbutamide
    B) Lisinopril
    C) Simvastatin
    D) Losartan
    E) Chlorpropamide

    Answer: A, E

    Rationale: Sulfonamides may inhibit the hepatic metabolism of oral hypoglycemic drugs including tolbutamide and chlorpropamide. Older adult clients may be especially sensitive to this reaction. Lisinopril, simvastatin, and losartan are used for cardiac conditions.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 2
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Teaching/Learning
    Reference: p. 71, Chronic Care Considerations

27. A nurse in an ambulatory care setting routinely conducts a nursing assessment as part of the care. Which assessments are most important for the nurse to complete in clients presenting with an active infection? Select all that apply.
    A) Client's use of self-remedies
    B) Review of lab results
    C) Vital signs
    D) Client's symptoms
    E) Client's general appearance

    Answer: A, B, C, D, E

    Rationale: When assessing a client who may have an infection, the nurse should gather information about the client's general appearance; vital signs; symptoms, including the length of time the client has been experiencing them; and any self-remedies used. In addition, the nurse should review the results of any laboratory and diagnostic tests.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 3

Cognitive Level: Apply
Client Needs: Physiological Integrity: Pharmacological Therapies
Integrated Process: Clinical Problem-solving Process (Nursing Process)
Reference: p. 72, Preadministration Assessment

28. A client with a fever is ordered to receive sulfonamide therapy for an infection. The nurse needs to evaluate the client for which responses during the course of therapy? Select all that apply.
    A) Response to drug therapy
    B) Elevated blood glucose levels
    C) Mental status changes
    D) Occurrence of adverse reactions
    E) Decrease in temperature

    Answer: A, D, E

    Rationale: During the course of therapy, the nurse evaluates the client at periodic intervals for response to the drug, including relief of symptoms and decrease in temperature, as well as the occurrence of any adverse reactions.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 3
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Cognitive Level: Apply
    Reference: p. 72, Ongoing Assessment

29. The nurse is preparing to administer a prescribed sulfonamide. Which actions would the nurse ensure the client does? Select all that apply.
    A) Have the client sit up to take the drug.
    B) Give the prescribed drug on an empty stomach.
    C) Be sure to administer the drug immediately after a meal.
    D) Have the client decrease fluid intake.
    E) Encourage the client to drink additional fluids.

    Answer: A, B, E

    Rationale: Oral medication should be administered to clients only when they are in an upright or sitting position. Sulfonamides should be administered on an empty stomach if tolerated with 8 ounces of water. Increased fluid intake is encouraged to prevent crystalluria.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 5
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Reference: p. 73, Promoting an Optimal Response to Therapy

30. A nurse is preparing a plan of care for an older client who is receiving sulfonamide therapy. Which would the nurse include in the plan of care to reduce the likelihood of causing renal damage? Select all that apply.
    A) Administer sulfonamides once daily.
    B) Increase fluid intake up to 2000 mL if tolerated.
    C) Use sulfonamides cautiously in clients with renal impairment.
    D) Administer the dose intravenously instead of orally.
    E) Ask the prescriber to change the medication ordered.

    Answer: B, C

    Rationale: Older adults experience a decline in renal function with aging. Therefore, sulfonamides must be used cautiously in older clients. In addition, increasing fluid intake up to 2000 mL daily can decrease the likelihood of causing renal damage in older clients. The drug is administered throughout the day, not as a once-daily dose. Sulfonamides can affect renal function regardless of the route administered. Asking the prescriber to change the medication ordered may be appropriate but is not necessary as long as the drug is administered cautiously and the client is monitored closely.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 6
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Reduction of Risk Potential
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Reference: p. 73, Altered Urinary Elimination

31. A client is being discharged with a prescription for sulfasalazine. Which instructions would the nurse include in the discharge teaching plan? Select all that apply.
    A) Take the drug 1 hour before or 2 hours after meals.
    B) Use protective sunscreen or cover exposed areas when going outside.
    C) Finish the entire course even if you begin feeling better.
    D) Decrease fluid intake to prevent increased excretion of the drug.
    E) Keep all follow-up appointments.

    Answer: B, C, E

    Rationale: The nurse should teach the client to take sulfasalazine with food or immediately after a meal, to use sunscreen or cover exposed areas to prevent severe sunburn, to increase fluid intake to prevent renal calculi, to finish the entire course of drug even if the symptoms go away, and to keep all follow-up appointments.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 5
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Teaching/Learning

Reference: p. 74, Taking Anti-Infectives

32. A client receiving methotrexate for rheumatoid arthritis is prescribed trimethoprim and sulfamethoxazole. The client returns for follow-up feeling worse with new reports of a cough and unusual bruising on the extremities. The nurse expects a complete blood count and metabolic profile will reveal which results? Select all that apply.
    A) Increased hemoglobin
    B) Decreased number of white blood cells
    C) Increased number of red blood cells
    D) Decreased number of platelets
    E) All values should be within normal limits

    Answer: B, D

    Rationale: The concomitant use of methotrexate and sulfonamides, like trimethoprim and sulfamethoxazole, can result in increased bone marrow suppression, leading to decreased amounts of white blood cells, red blood cells, and platelets in the blood.
    Question Format: Multiple Select
    Chapter: 6
    Learning Objective: 3
    Cognitive Level: Apply
    Client Needs: Physiological Integrity: Pharmacological Therapies
    Integrated Process: Clinical Problem-solving Process (Nursing Process)
    Reference: p. 71, Interactions