

## Chapter 13, Nonopioid Analgesics: Salicylates and Nonsalicylates

1. A 6-year-old client is presenting with signs and symptoms of fever, cough, stuffy nose, general malaise, and muscle aches. The nurse prepares to administer which medication to this client?
  - A) Aspirin
  - B) Magnesium salicylate
  - C) Acetaminophen
  - D) Diflunisal

Answer: C

Rationale: The known actions of acetaminophen include treating mild to moderate pain and reducing fever. Children and teenagers with influenza or chickenpox should not take salicylates, particularly aspirin, because of the association of developing Reye syndrome. Magnesium salicylate and diflunisal are also salicylates.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Contraindications

2. A client receiving warfarin for atrial fibrillation is requesting pain medication for a headache and for home use. Which medication does the nurse anticipate the health care provider will suggest?
  - A) Bufferin
  - B) Tylenol
  - C) Ecotrin
  - D) Empirin

Answer: B

Rationale: Clients taking warfarin should avoid the use of salicylates (Bufferin, Ecotrin, and Empirin) and should be encouraged to use the nonsalicylate Tylenol (acetaminophen).

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 166, Contraindications

3. A client is asking the nurse about changing from aspirin to using willow bark. Which advantage of willow bark would the nurse integrate into the answer?
- A) Willow bark is ideal for clients with peptic ulcers.
  - B) Willow bark works relatively quickly as compared to aspirin.
  - C) Small amounts of willow bark produce a noticeable effect.
  - D) Willow bark has fewer adverse reactions than other salicylates.

Answer: D

Rationale: Willow bark causes fewer adverse reactions than other salicylates. The nurse should inform the client and family members that willow bark treatment should be given cautiously to clients with peptic ulcers. Willow bark takes more time to take effect, and it has to be given in large amounts to produce a significant effect.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 165, Herbal Considerations

4. A nurse is assessing a client after administering aspirin for pain. Which finding should the nurse prioritize?
- A) Constipation
  - B) Bradycardia
  - C) Sleeplessness
  - D) Flushing

Answer: D

Rationale: Flushing is one of the symptoms of salicylism that the nurse should monitor for. Tachycardia, not bradycardia, is a symptom of salicylism. Sleeplessness and constipation are not symptoms of salicylism.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Chronic Care Considerations

5. A 15-year-old client is brought to the emergency department after the parents discovered the client has taken 15 gm of acetaminophen over the past 24 hours for back pain. Which assessment finding should the nurse prioritize?
- A) Hypotension
  - B) High fever
  - C) Sweating
  - D) Rapid, deep breathing

Answer: A

Rationale: Hypotension is one of the signs of acute acetaminophen toxicity that the nurse should monitor for in the client. High fever, sweating, and rapid, deep breathing are not symptoms generally associated with acute acetaminophen toxicity.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Nonsalicylates

6. A client with diabetes is taking acetaminophen for pain. When assessing the client which factor should the nurse closely monitor?
- A) Arterial blood pH
  - B) Blood pressure
  - C) Blood glucose levels
  - D) Blood creatinine levels

Answer: C

Rationale: When administering acetaminophen to clients with diabetes, care needs to be taken when blood glucose testing is done because acetaminophen may alter blood glucose test results, causing falsely lower blood glucose values. Acetaminophen does not significantly alter pH level, blood pressure, or blood creatinine levels in a client with diabetes.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 167, Contraindications and Precautions

7. The nurse is developing a plan of care for a client ordered to take acetaminophen for pain relief. The nurse will monitor the client for liver failure if there is a history of which disorder?
- A) Diabetes
  - B) Alcoholism
  - C) Hypertension
  - D) Urinary tract infection

Answer: B

Rationale: The risk of liver failure during acetaminophen therapy increases in clients who drink alcohol habitually. Clients with diabetes, high blood pressure, or urinary tract infections are not at a significantly greater risk for liver failure.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 167, Contraindications and Precautions

8. Which points should a nurse include in the teaching plan for a client who has been prescribed a nonopioid analgesic?
- A) Discontinue the dosage of the drug immediately if symptoms disappear.
  - B) Take any over-the-counter (OTC) drug if pain increases.
  - C) Contact the health care provider if temperature remains high even after 3 days.
  - D) Discard the medication if a vinegar odor is detected.

Answer: D

Rationale: The nurse should instruct the client to dispose of the medication if there is a vinegar smell. This is a sign that the salicylate has deteriorated and is not safe to be taken. No OTC drugs should be taken without first consulting the primary health care provider. If the drug is used to reduce fever, contact the primary health care provider if the temperature continues to remain elevated for more than 1 day, not 3 days.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 170, Educating the Client and Family

9. The nurse is preparing discharge teaching for a client with unstable angina. Which medication will the nurse include in this teaching?
- A) Aspirin
  - B) Diflunisal
  - C) Magnesium salicylate
  - D) Acetaminophen

Answer: A

Rationale: Aspirin is used to decrease the risk of myocardial infarction in clients with unstable angina or previous myocardial infarction. Diflunisal, magnesium salicylate, and acetaminophen do not significantly decrease the risk of myocardial infarction.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 165, Herbal Considerations

10. A nurse is caring for several pediatric clients. The nurse would question an order for aspirin for a client with which disorder?
- A) Liver dysfunction
  - B) High blood pressure
  - C) Diabetes
  - D) Chickenpox

Answer: D

Rationale: Children or teenagers with influenza or chickenpox should not take salicylates, particularly aspirin, because their use appears to be associated with Reye syndrome.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 165, Herbal Considerations

11. A client receiving magnesium salicylate is reporting gastric upset to the nurse. Which intervention should the nurse prioritize for this client?
- A) Administer the drug with orange juice.
  - B) Include fiber-rich food in the client's diet.
  - C) Administer antacids to minimize GI distress.
  - D) Ensure drug is given at least 3 hours before meals.

Answer: C

Rationale: The nurse may administer antacids to minimize GI distress. Instead of orange juice, the nurse may administer the drug with milk to alleviate gastric upset. The nurse can also administer the drug with food to relieve gastric upset instead of giving the drug 3 hours before a meal. Including fiber-rich food in the client's diet will not significantly relieve gastric upset.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 169, Pain

12. While assessing the medication history of an older adult client, the nurse notes the client takes acetaminophen daily. The nurse will further question the client to determine how much and how often to ensure the client is not exceeding what daily amount?
- A) 1 gram
  - B) 3 grams
  - C) 5 grams
  - D) 7 grams

Answer: B

Rationale: The maximum daily dose of acetaminophen for those older than 65 years should not exceed 3 grams.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Nonsalicylates

13. A client with edema is receiving a loop diuretic and acetaminophen for mild pain. The nurse would monitor the client for which adverse effect?
- A) Increasing edema
  - B) Bone pain
  - C) Gastric upset
  - D) Diarrhea

Answer: A

Rationale: When loop diuretics are given in conjunction with acetaminophen, the effectiveness of the loop diuretic is decreased. Therefore, the nurse would need to assess the client for evidence of increasing edema. Bone pain, gastric upset, and diarrhea are not associated with this combination.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 167, Contraindications and Precautions

14. A client is scheduled for outpatient surgery. When performing the preoperative teaching with the client, the nurse would instruct the client to avoid taking any salicylates for at least how many days before the surgery?
- A) 3
  - B) 5
  - C) 7

D) 9

Answer: C

Rationale: The client should be instructed to avoid salicylates for at least 1 week before any type of major or minor surgery, including dental surgery, because of the possibility of postoperative bleeding.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Teaching/Learning

Reference: p. 164, Salicylates

15. A group of nursing students are discussing the actions of aspirin. The students are able to correctly explain which action as being responsible for reducing fever?
- A) Inhibition of prostaglandins
  - B) Dilation of peripheral blood vessels
  - C) Inhibition of platelet aggregation
  - D) Reduction in endorphins

Answer: B

Rationale: Salicylates lower body temperature by dilating peripheral blood vessels. The blood flows out to the extremities, resulting in the dissipation of the heat of fever, which in turn cools the body. Prostaglandin inhibition occurs with pain relief and is responsible for the drug's anti-inflammatory effects. Inhibition of platelet aggregation results in prolonged bleeding times and increases the risk of bleeding.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 164, Salicylates

16. A nurse is assessing the medication history for a client who is to receive salicylate therapy. Which disorder if noted by the nurse would lead the nurse to closely monitor the client for salicylism?
- A) Antacids
  - B) Anticoagulants
  - C) Carbonic anhydrase inhibitors
  - D) Activated charcoal

Answer: C

Rationale: The use of carbonic anhydrase inhibitors, used to lower intraocular pressure, along with salicylates places the client at increased risk for salicylism. Combined use of anticoagulants and salicylates increases the client's risk for bleeding. Combined use of antacids with salicylates decreases the absorption of the salicylates. Combined use of activated charcoal with salicylates causes a decrease in the effects of salicylates.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Precautions

17. A client has had minor surgery and asks the nurse what can be used for pain. Which would be most appropriate for the nurse to suggest?
- A) Aspirin
  - B) Diflunisal
  - C) Magnesium salicylate
  - D) Acetaminophen

Answer: D

Rationale: After minor or major surgery, the client should avoid salicylates to reduce the risk for bleeding and use acetaminophen for pain control.

Question Format: Multiple Choice

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 169, Promoting an Optimal Response to Therapy

18. A nurse is preparing to teach a client about aspirin. Which actions will the nurse explain to the client? Select all that apply.
- A) Analgesic
  - B) Antipyretic
  - C) Anti-inflammatory
  - D) Anti-infective
  - E) Antiviral

Answer: A, B, C

Rationale: Aspirin is a salicylate. Salicylates are useful in pain management because of their analgesic, antipyretic, and anti-inflammatory effects. Aspirin does not have anti-infective or antiviral effects.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2



Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 164, Salicylates

19. A nursing instructor is analyzing basic nursing education materials prepared by nursing students and notes the students have correctly chosen which drugs as a salicylate? Select all that apply.
- A) Ecotrin
  - B) Bufferin
  - C) Tylenol
  - D) Asprimox
  - E) Motrin

Answer: A, B, D

Rationale: Ecotrin and Asprimox (acetylsalicylic acid) and Bufferin (magnesium salicylate) are classified as salicylates. Tylenol is a nonsalicylate. Motrin is an NSAID.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Remember

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 172, Summary Drug Table

20. A nursing instructor is preparing a class that will teach about aspirin. Which action would the instructor include about aspirin's effects on platelets? Select all that apply.
- A) Increases platelet aggregation
  - B) Inhibits platelet aggregation
  - C) Shortens bleeding time
  - D) Effect is irreversible
  - E) Effect is reversible

Answer: B, D

Rationale: Aspirin prolongs bleeding time by inhibiting the aggregation of platelets. The effect of aspirin on platelets is irreversible and lasts for the life of the platelet (7 to 10 days).

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 164, The Pain Experience

21. The nurse is assessing a client receiving diflunisal. Which findings should the nurse prioritize? Select all that apply.
- A) Diarrhea
  - B) Tarry stools
  - C) Weight loss
  - D) Heartburn
  - E) Constipation

Answer: B, C, D

Rationale: A nurse monitoring a client taking a salicylate-like diflunisal should monitor the client for adverse effects including gastric upset, heartburn, nausea, vomiting, anorexia, and GI bleeding (dark, tarry stools).

Question Format: Multiple Select

Chapter: 13

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 165, Herbal Considerations

22. The nurse is reviewing laboratory values of a client receiving salicylate. The results show salicylate 200 mcg/mL, prolonged aPTT, and elevated leukocytes. When further assessing this client, which signs and symptoms should the nurse prioritize? Select all that apply.
- A) Tinnitus
  - B) Bradycardia
  - C) Sweating
  - D) Impaired vision
  - E) Mental confusion

Answer: A, C, E

Rationale: Signs and symptoms of salicylism include dizziness; tinnitus; impaired hearing; nausea; vomiting; flushing; sweating; rapid, deep breathing; tachycardia; diarrhea; mental confusion; lassitude; drowsiness; respiratory depression; and coma (from large doses of salicylate). Salicylates will also increase the bleeding time which will result in a prolonged aPTT. A salicylate value of 150 to 249 mcg/mL is considered mild salicylism.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Precautions

23. The nurse is teaching a client about the salicylate that has been prescribed. The nurse determines the teaching is successful when the client successfully chooses which foods to avoid while taking the salicylate? Select all that apply.
- A) Turkey
  - B) Pepper
  - C) Paprika
  - D) Tea
  - E) Prunes

Answer: C, D, E

Rationale: Curry powder, paprika, licorice, prunes, raisins, and tea are foods that contain salicylates, therefore potentially increasing the risk for adverse reactions in clients receiving salicylate medications.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Teaching/Learning

Reference: p. 166, Precautions

24. A nurse is conducting a presentation for a local community about salicylates and nonsalicylates. When explaining the basics about aspirin and acetaminophen, which properties would the nurse describe as these two drugs sharing? Select all that apply.
- A) Anti-inflammatory
  - B) Analgesic
  - C) Antipyretic
  - D) Inhibition of prostaglandins
  - E) Inhibition of platelet aggregation

Answer: B, C

Rationale: Acetaminophen has an unknown mechanism of action, has no anti-inflammatory properties, and does not inhibit prostaglandins or platelet aggregation; therefore, analgesic and antipyretic properties are the only properties that acetaminophen and aspirin share.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 171, Key Points

25. A family member brings a client to the urgent care center for assessment of the flu, stating various over-the-counter (OTC) drugs are not working. After an assessment, the nurse suspects acute acetaminophen toxicity based on which findings? Select all that apply.
- A) Nausea
  - B) Jaundice
  - C) Hypertension
  - D) Cardiac arrhythmias
  - E) Confusion

Answer: A, B, E

Rationale: Signs of acute acetaminophen toxicity include nausea, vomiting, confusion, liver tenderness, hypotension, cardiac arrhythmias, jaundice, and acute hepatic and renal failure. Most individuals do not read the labels and are unaware that many OTC contain acetaminophen which can lead to overdosing and resulting adverse effects.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 166, Precautions

26. A nurse is administering a nonopioid analgesic to a client. Which activities should the nurse perform during the ongoing assessment? Select all that apply.
- A) Reassess client's pain rating 30 to 60 minutes after drug administration.
  - B) Assess joints for greater mobility.
  - C) Check vital signs every 4 hours.
  - D) Document pain severity, location, and intensity if pain persists.
  - E) Assess the joints for decreased inflammation.

Answer: A, B, C, D, E

Rationale: During ongoing assessment the nurse monitors the client for pain relief; reassesses the client's pain rating every 30 to 60 minutes after drug administration; documents pain severity, location, and intensity if pain persists; checks vital signs every 4 hours; and assesses the joints for decreased inflammation and greater mobility.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 168, Ongoing Assessment

27. The nurse is preparing discharge teaching for a client receiving a salicylate. What information should the nurse point out to the client? Select all that apply.
- A) Inform all health care providers of salicylate use.
  - B) Discard salicylates if they smell like vinegar.
  - C) Take salicylates with food.
  - D) Store salicylates in the bathroom.
  - E) Keep salicylate container closed tightly.

Answer: A, B, C, E

Rationale: The nurse should include the following in the discharge teaching for clients receiving salicylates: take the drug as prescribed, take the drug with food or milk and a full glass of water, inform all health care providers (including dentists) of salicylate use, discard salicylates that smell like vinegar, and store in a tightly closed container away from air, moisture, and heat. Salicylates should not be stored in the bathroom because the humidity can cause the drug to deteriorate.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 170, Educating the Client and Family

28. A nurse is monitoring a client taking diflunisal. Which assessment findings should the nurse prioritize for immediate treatment? Select all that apply.
- A) Overactive bowel sounds
  - B) Copious amounts of vomit
  - C) Vomit that looks like coffee grounds
  - D) Dark, tarry stools
  - E) Bright red blood in stool

Answer: C, D, E

Rationale: Signs of gastrointestinal bleeding include abdominal pain or distention (especially any sudden increases); vomit that appears bright red, blood streaked, dark red, brown, black, or similar to the consistency of coffee grounds; or stools that appear black, loose, tarry, bright red, red streaked, or dark mahogany colored.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 2

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 169, Pain

29. A nurse is developing a plan of care for a client with advanced rheumatoid arthritis who is experiencing moderate pain in the knees and hips and difficulty walking and moving. Which nursing diagnosis would be most appropriate for this client? Select all that apply.
- A) Acute Pain
  - B) Impaired Physical Mobility
  - C) Ineffective Health Management
  - D) Deficient Knowledge
  - E) Imbalanced Nutrition: Less Than Body Requirements

Answer: A, B

Rationale: Based on the situation, appropriate nursing diagnoses would include Acute Pain and Impaired Physical Mobility. There is no indication that the client is having difficulty managing the medication therapy, has a lack of knowledge about the medication, or is experiencing problems with nutrition.

Question Format: Multiple Select

Chapter: 13

Learning Objective: 4

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Physiological Adaptation

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 170, Impaired Physical Mobility