

ANSWERS TO PRACTICE QUESTIONS FOR BOTH FLUIDS & ELECTROLYTES, MUSCULOSKELETAL

(Fluids & Electrolytes)

1. A patient is admitted to the hospital with pneumonia. The complete metabolic panel reveals a sodium level of 114 mEq/L. Which of the following is the most important nursing intervention?
- A. Teach patient to consume only low-sodium liquids
 - B. Encourage patient to increase oral intake of water
 - C. Monitor intake and output every four hours
 - D. Perform frequent neurological checks**

Correct answer: D.

Rationale: When the sodium falls below 120 mEq/L the nurse must be particularly alert for central nervous system changes, such as lethargy, confusion, muscle twitching, and seizures, so performing frequent neurological checks is the best answer. Ref: Lewis et al., Ch. 16

2. The nurse is caring for a patient with rheumatoid arthritis (RA) that has developed hypocalcemia. The nurse knows it is important to review the patient's home medications because hypocalcemia may be caused by long term use of which class of drugs?

- A. Corticosteroids**
- B. Bronchodilators
- C. Cephalosporins
- D. Anticholinergics

Correct answer: A.

Rationale: Corticosteroids are used for treatment of airway inflammation and with long term use contribute to bone loss. Bronchodilators may cause tremor and tachycardia, Cephalosporins may cause allergic reaction and bleeding, Anticholinergics may cause cardiac events, but none affect bone loss. Ref: Lehne, Chapter 76, page 923

3. The nurse is caring for a 63-year-old patient admitted with dehydration after running a half-marathon. After infusion of 1000 mL 0.9% NS, the patient begins to cough and asks for the head of the bed to be raised to ease breathing. The nurse's assessment includes jugular vein distention (JVD) and increased respiratory rate. How should the nurse interpret these findings?

- A. Hypervolemia is developing**
- B. The fluid volume deficit is worsening
- C. Hypotonic water intoxication is beginning
- D. Ascites is causing respiratory compromise

Correct answer: A.

Rationale: This client presented with deficient fluid volume because of dehydration. Older adults have less cardiac and renal reserve to compensate for acute fluid imbalances and thus are more susceptible to overcorrection. JVD, tachypnea, cough, and dyspnea indicate the client has received too much IV fluid at too rapid a rate. Ref: Lewis et al., Ch. 16

4. The nurse is caring for a patient recovering from hypertensive crisis. The patient has diffuse, generalized edema throughout the body. What would be the cause of the abnormal fluid shift?

- A. A decrease in hydrostatic pressure
- B. An increase in hydrostatic pressure**
- C. A decrease in capillary permeability
- D. An increase in capillary permeability

Correct answer: B.

Rationale: The immune response as a result of the allergic reaction to the medicine leads to abnormal fluid movement through increased capillary permeability. An increase in hydrostatic pressure can be caused by hypertension, venous obstruction or sodium & water retention. Ref: Lewis et al., Ch. 16; M. Rogers Class notes

5. A patient's serum sodium level is 155 mEq/L. What should the nurse expect the serum osmolality to be?
- A. 0 mOsm/kg
 - B. 280-300 mOsm/kg
 - C. Less than 280 mOsm/kg
 - D. Greater than 300 mOsm/kg**

Correct answer: D.

Rationale: Normal serum osmolality is less than 300 so if the sodium level is high at 155 mEq/L, then the osmolality would be greater than 300. Ref: Lewis et al., Ch. 16; MRogers class notes

6. The nurse is monitoring a patient with hypercalcemia who is taking digoxin. Which of the following focused assessments is the highest priority?
- A. Frequent pulse checks**
 - B. Auscultation of bowel sounds
 - C. Checking for Trousseau's sign
 - D. Inspection of skin for signs of bleeding

Correct answer: A.

Rationale: The patient with hypercalcemia is more sensitive to the toxic effects of digoxin. Frequent apical and radial pulse checks by the nurse will aid in detecting potential complications. Assessing for Trousseau's and bleeding are assessment priorities in hypocalcemia. Auscultation of bowel sounds is appropriate, but not a high priority. Ref: Lewis et al., Ch. 16; MRogers class notes

(Musculoskeletal)

7. A patient with a comminuted fracture of the femur is scheduled for an open reduction with internal fixation (ORIF) of the fracture. The patient's family asks why the surgery is necessary. What is the nurse's best response?

- A. "A cast would be too weak to provide normal mobility."
- B. "The patient is unable to tolerate long-term immobilization."
- C. "Adequate alignment cannot be obtained by other methods."**
- D. "The patient cannot tolerate the discomfort of a closed reduction."

Correct answer: C.

Rationale: An ORIF is the method to obtain adequate alignment if other methods do not accomplish the goal. A person with a comminuted fracture does not have normal mobility. Long-term immobilization is not an explanation of an ORIF. A closed reduction would not correct the comminuted fracture; it has nothing to do with discomfort. Ref: Lewis et al., Ch. 62

8. A postmenopausal patient with a family history of breast cancer develops osteoporosis. The patient asks the nurse about the medications to treat this condition. The nurse knows which is the best medication for this patient?

- A. Raloxifene**
- B. Estrogen estradiol
- C. Teriparatide
- D. Pamidronate

Correct answer: A.

Rationale: Raloxifene exerts estrogenic effects in bone, however it protects against cancer of the breast and endometrium. Estrogen estradiol does not, and will increase the risk of breast cancer formation. Pamidronate is indicated for IV therapy of Paget's disease, not osteoporosis. Teriparatide carries a black box warning for increased risk of bone cancer so is not suitable for this patient. Ref: Lehne, Chapter 75, page 907-908; Lewis et al., Ch. 63

9. The nurse is performing a physical assessment of a patient with a hip fracture. Which of the following issues would indicate a problem with infection?

- A. Exaggeration of extremity movement
- B. Petechiae on the head and upper thorax
- C. Purulent drainage at the site of open fracture**
- D. Decreased sensation distal to the fracture site

Correct answer: C.

Rationale: Purulent drainage at the site of open fracture is a sign of infection. Exaggeration of movement of extremities might be a neurovascular issue; petechiae of the head and upper thorax might be an immune or blood disorder issue; decreased sensation distal to the fracture site would be a neurovascular issue. Ref: Lewis et al., Ch. 62; MRogers class notes

10. A patient with fractures of the tibia and fibula is treated with open reduction and application of an external fixator device. The patient complains of severe pain in the affected leg, which is unrelieved by pain medication. The patient's capillary refill to toenail bed is brisk, pins insertion site is slightly red, patient complains of numbness to his heel and toes. What is the nurse's highest priority action?

- A. Notify the patient's physician**
- B. Check the patient's blood pressure
- C. Assess the external fixator pins for redness or drainage
- D. Elevate the extremity and apply ice over the wound site

Correct answer: A.

Rationale: The patient's manifestations point to compartment syndrome, and delay in diagnosis/treatment may lead to severe functional impairment. There is no reason to suspect that the patient's symptoms are caused by hypotension or hypertension, or by infection at the pin sites. Elevation of or ice application to the leg will decrease arterial flow and further reduce perfusion.

Ref: Lewis et al., Ch. 62