Fluids and Electrolytes

KEYWORDS

The following words include English vocabulary, nursing/medical terminology, concepts, principles, or information relevant to content specifically addressed in the chapter or associated with topics presented in it. English dictionaries, nursing textbooks, and medical dictionaries, such as Taber’s Cyclopedic Medical Dictionary, are resources that can be used to expand your knowledge and understanding of these words and related information.

Acid
Active transport
Aldosterone
Anion
Antidiuretic hormone
Anuria
Atmospheric pressure
Base
Catheter
Cation
Colloid osmotic pressure
Deficient fluid volume
Dehydration
Diaphoresis
Diffusion
Diluent
Diuretic
Edema
Dependent
Peripheral
Pitting
Sacral
Electrolytes
Calcium
Magnesium
Phosphorus
Potassium
Sodium
Filtration
Fluid compartments
Extracellular
Interstitial
Intracellular
Intravascular
Third-compartment spacing
Fluid restriction
Fluid volume deficit
Fluid volume excess
Hydrostatic pressure
Hypercalcemia
Hyperkalemia
Hypermagnesemia
Hyperosmolar
Hypertension
Hypertonic
Hypervolemic
Hypocalcemia
Hypokalemia
Hypomagnesemia
Hypo-osmolar
Hypotension
Hypotonic
Hypovolemic
Icteric
Infiltrate
Infusion port
Insensible fluid loss
Ion
Irrigant
Isotonic
Macrodr dip
Microdr dip
Milliequivalent
Oncotic pressure
Osmolality
Osmolarity
Osmosis
Osmotic pressure
Primary infusion line
Residual
Secondary infusion line
Sensible fluid loss
Skin turgor
Solute
Specific gravity
Tenting
Thirst
Tonicity
Vaporization
Chapter 5  Fluids and Electrolytes

QUESTIONS

1. The physician orders a 2-gram sodium diet for a patient with hypertension. Which food should the nurse teach a patient to avoid?
   1. American cheese
   2. Shredded wheat
   3. Potatoes
   4. Cashews

2. A patient receiving a tube feeding develops diarrhea. The nurse understands that the primary reason tube feedings cause diarrhea is because they are:
   1. Icteric
   2. Isotonic
   3. Hypotonic
   4. Hypertonic

3. When the nurse assesses a patient, which adaptation indicates a potassium deficiency?
   1. Increased blood pressure
   2. Muscle weakness
   3. Chest pain
   4. Dry hair

4. The nurse suspects that an older patient may have a problem with excess fluid volume when the patient's skin appears:
   1. Dry and scaly
   2. Taut and shiny
   3. Red and irritated
   4. Thin and inelastic

5. The nurse determines that inflammation of a vein may have occurred at an intravenous insertion site if when touching the area it:
   1. Feels soft
   2. Seems cool
   3. Produces pallor
   4. Causes discomfort

6. When a patient is under extreme stress there is an increased production of antidiuretic hormone (ADH) and aldosterone. Considering the effect of these hormones in the body, the nurse should expect a decrease in the patient's:
   1. Blood pressure
   2. Urinary output
   3. Body temperature
   4. Insensible fluid loss

7. The nurse checks a meal tray for a patient on a clear liquid diet. The item that is acceptable is:
   1. Ginger ale
   2. Lemon sherbet
   3. Vanilla ice cream
   4. Cream of chicken soup

8. The nurse is caring for a patient who has a reduced fluid intake. The nurse understands that this reduced intake will contribute to:
   1. A decreased urine output
   2. Incontinence of urine
   3. A retention of urine
   4. Frequent urination
9. The nurse is providing dietary teaching for a patient with the diagnosis of osteoporosis. The nurse should teach the patient that the best source of calcium is:
   1. Cheese
   2. Lettuce
   3. Peppers
   4. Oranges

10. The nurse is monitoring a patient who is receiving intravenous fluid. The nurse identifies that the patient is experiencing a fluid overload when assessment reveals:
   1. Chills, fever, and generalized discomfort
   2. Blood in the tubing close to the insertion site
   3. Dyspnea, headache, and increased blood pressure
   4. Pallor, swelling, and discomfort at the insertion site

11. When caring for a patient with hypertension, the nurse should anticipate that the physician will first limit the patient's intake of:
   1. Potassium
   2. Sodium
   3. Protein
   4. Fluids

12. The nurse should notify the physician when a critically ill patient's hourly urine output first falls below:
   1. 20 mL
   2. 30 mL
   3. 60 mL
   4. 120 mL

13. The nurse understands that excess fluid in the interstitial compartment results from increased:
   1. Oncotic pressure
   2. Diffusion pressure
   3. Hydrostatic pressure
   4. Intraventricular pressure

14. When the nurse evaluates a patient's fluid intake and output, the fluid intake should be:
   1. Slightly more than the fluid output
   2. Lower than the urine output
   3. Higher than the fluid output
   4. Equal to the urine output

15. The physician orders hydrochlorothiazide, a diuretic for a patient who is retaining fluid. The nurse should encourage the patient to ingest nutrients rich in:
   1. Magnesium
   2. Potassium
   3. Calcium
   4. Sodium

16. To encourage a confused patient to drink more fluid, the nurse should:
   1. Serve fluid at a tepid temperature
   2. Explain the reason for the desired intake
   3. Offer the patient something to drink every hour
   4. Leave a pitcher of water at the patient's bedside

17. When the nurse cares for an older adult, which assessment best reflects fluid and electrolyte balance?
   1. Intake and output results
   2. Serum laboratory values
   3. Condition of the skin
   4. Presence of tenting
18. A patient has a continuous bladder irrigation. What should the nurse do with the irrigant on the I&O sheet when calculating the fluid balance for this patient?
1. Add it to the oral intake column
2. Deduct it from the total urine output
3. Subtract it from the intravenous flow sheet as output
4. Document the intake hourly in the urine output column

19. When the nurse identifies patient adaptations that include either oliguria or polyuria, the nurse should be most concerned about a risk for:
1. Diarrhea
2. Cachexia
3. Fluid volume deficit
4. Impaired skin integrity

20. The patient is receiving a diuretic that contributes to the loss of potassium. The nurse should teach the patient that the best source of potassium is:
1. Baked potato
2. Bran flakes
3. Lean meat
4. Table salt

21. The physician orders a patient’s IV fluids to be discontinued. When discontinuing a patient’s intravenous infusion, it is essential that the nurse:
1. Withdraw the catheter along the same angle of its insertion
2. Use an alcohol swab to scrub the insertion site
3. Flush the line with normal saline
4. Don sterile gloves

22. A patient is admitted to the hospital for a fever of unknown origin. The nursing assessment reveals profuse diaphoresis, dry, sticky mucous membranes, weakness, disorientation, and a decreasing level of consciousness. The nurse infers that the patient has:
1. Hyperkalemia
2. Hypercalcemia
3. Hypernatremia
4. Hypermagnesemia

23. The physician progresses a patient’s diet from clear liquid to full liquid. Which can the nurse include on the full-liquid diet that is not included on the clear-liquid diet?
1. Cranberry juice
2. Ginger ale
3. Jell-O
4. Milk

24. When a patient exhibits an increasing blood pressure and 2-pound weight gain over two days, the nurse should further assess the patient for:
1. A decrease in heart rate
2. An increase in skin turgor
3. An increase in pulse volume
4. A decrease in pulse pressure

25. Which is most important when the nurse assesses adult patients for the effects of vomiting?
1. Electrolyte values
2. Mouth condition
3. Bowel function
4. Body weight

26. When assessing a patient, the nurse understands that an adaptation common to both excess fluid volume and deficient fluid volume is:
1. Hypotension
2. Weakness
3. Agitation
4. Dyspnea
27. The physician orders an intravenous infusion containing potassium. Before administering this solution to the patient, it is essential that the nurse:
   1. Assess the skin turgor
   2. Obtain the blood pressure
   3. Measure the depth of edema
   4. Determine the presence of urinary output

28. When teaching a patient about a 2-gram sodium diet, which is the best choice for an appetizer?
   1. Pigs in a blanket
   2. Stuffed mushrooms
   3. Cheese and crackers
   4. Fresh vegetable sticks

29. The nurse is monitoring a patient who is receiving fluids intravenously. The nurse identifies that the IV has infiltrated when the insertion site is:
   1. Red
   2. Firm
   3. Inflamed
   4. Edematous

30. The nurse is documenting a patient’s intake and output. What should be recorded at approximately ½ its volume?
   1. Ice chips given by mouth
   2. A continuous bladder irrigation
   3. A tube feeding of ½ formula and ½ water
   4. Solution used to maintain patency of a tube

31. When patients are taking supplemental calcium, it is important that the nurse teach them to maintain their fluid intake at a minimum of 2500 mL a day to prevent the:
   1. Formation of kidney stones
   2. Occurrence of muscle cramps
   3. Irritation of the bladder mucosa
   4. Mobilization of calcium from bone

32. A patient receiving a diuretic is encouraged to increase the intake of potassium. The nurse evaluates that the patient understands the teaching when for dinner the patient selects:
   1. Baked salmon fillet
   2. Cooked chicken liver
   3. Cream of chicken soup
   4. Lettuce and tomato salad

33. The nurse is assessing a patient’s fluid status. What assessment indicates that the patient has a deficient fluid volume?
   1. Negative balance of intake and output
   2. Decreased body temperature
   3. Increased blood pressure
   4. Shortness of breath

34. When the nurse evaluates the effectiveness of patient teaching, which food selections by a patient indicate understanding regarding an abundant source of calcium? Check all that apply.
   1. Bread
   2. Yogurt
   3. Spinach
   4. Green beans
   5. Peanut butter
35. A patient in the hospital emergency department tells the nurse, “I feel lousy and I’ve had bad diarrhea for several days. It must have been something I ate. I have nausea and I don’t feel like eating or drinking.” The physical assessment reveals a weight loss of 4 pounds in 3 days and tenting of the skin. The nurse obtains the vital signs and the practitioner orders laboratory studies. Based on these assessments the nurse identifies that the patient may be experiencing:
1. Hypokalemia
2. Hypervolemia
3. Metabolic acidosis
4. Respiratory alkalosis

**CHART/ EXHIBIT**

**Vital Signs:** Oral temperature: 101.2°F  
Pulse: 92 bpm, regular, thready  
Respirations: 26, deep  
Blood pressure: 100/60 mm Hg

**Laboratory Values:** Urine specific gravity: 1.036  
Serum potassium: 5.3 mEq/L  
Arterial blood gases:  
\[pH: 7.30\]  
\[PaCO_2: 24 \text{ mEq/L}\]  
\[HCO_3^-: 18 \text{ mEq/L}\]