### NURSING PROCESS FOCUS  Clients Receiving Diuretic Therapy

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<th>Assessment</th>
<th>Potential Nursing Diagnoses</th>
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| Prior to administration:  
  - Obtain a complete health history (mental and physical), including data on recent surgeries or trauma.  
  - Obtain vital signs; assess in context of client’s baseline values.  
  - Obtain client’s medication history, including nicotine and alcohol consumption and use of herbal supplements or alternative therapies to determine possible drug allergies and/or interactions.  
  - Obtain blood and urine specimens for laboratory analysis. |  
  - Fluid Volume, Excess  
  - Fluid Volume, Deficient, Risk for  
  - Urinary Elimination, Impaired, related to diuretic use |

### Planning: Client Goals and Expected Outcomes

The client will:  
- Exhibit normal fluid balance and maintain electrolyte levels within normal limits during drug therapy.  
- Demonstrate an understanding of the drug’s actions by accurately describing drug side effects and precautions.  
- Immediately report symptoms of hyperkalemia or hypokalemia and hypersensitivity.

### Implementation

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<th>Interventions and (Rationales)</th>
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| Monitor for fluid overload by measuring intake, output, and daily weights. (Intake, output, and daily body weight are indications of the effectiveness of diuretic therapy.) | Instruct client to:  
  - Immediately report any severe shortness of breath, frothy sputum, profound fatigue, edema in extremities, potential signs of heart failure, or pulmonary edema.  
  - Accurately measure intake, output, and body weight and report weight gain of 2 lb or more within 2 days or decrease in output.  
  - Avoid excessive heat, which contributes to fluid loss through perspiration.  
  - Consume adequate amounts of plain water.  

| Monitor laboratory values, especially potassium and sodium. (Diuretics can cause electrolyte imbalances.) | Instruct client to inform laboratory personnel of diuretic therapy when providing blood or urine samples.  

| Monitor vital signs, especially blood pressure. (Diuretics reduce blood volume, resulting in lowered blood pressure.) | Instruct client to:  
  - Monitor blood pressure as specified by the healthcare provider and ensure proper use of home equipment.  
  - Stop medication if severe hypotension exists, as specified by the healthcare provider (e.g., “hold for levels below 88/50 mm Hg”). |

| Observe for changes in level of consciousness, dizziness, fatigue, and postural hypotension. (Reduction in blood volume due to diuretic therapy may produce changes in level of consciousness or syncope.) | Instruct client to:  
  - Immediately report any change in consciousness, especially feeling faint.  
  - Change positions slowly.  
  - Obtain blood pressure readings in sitting, standing, and lying positions.  

| Monitor potassium intake. (Potassium is vital to maintaining proper electrolyte balance and can become depleted with thiazide or loop diuretics.) | Instruct clients:  
  - Receiving loop or thiazide diuretics to eat foods high in potassium.  
  - Receiving potassium-sparing diuretics to avoid foods high in potassium.  
  - To consult with healthcare provider before using vitamin/mineral supplements or electrolyte-fortified sports drinks. |

| Observe for signs of hypersensitivity reaction. (Allergic responses may be life threatening.) | Instruct client or caregiver to report:  
  - Difficulty breathing, throat tightness, hives or rash, or bleeding.  
  - Flulike symptoms: shortness of breath, fever, sore throat, malaise, joint pain, profound fatigue.  

| Monitor hearing and vision. (Loop diuretics are ototoxic. Thiazide diuretics increase serum digoxin levels; elevated levels produce visual changes.) | Instruct client to report any changes in hearing or vision such as ringing or buzzing in the ears, becoming “hard of hearing” or experiencing dimness of sight, seeing halos, or having “yellow vision.” |
Chapter 30  Diuretic Therapy and Drugs for Renal Failure  435

NURSING PROCESS FOCUS  Clients Receiving Diuretic Therapy (Continued)

Implementation

Interventions and (Rationales)  
- Monitor reactivity to light exposure. (Some diuretics cause photosensitivity.)

Client Education/Discharge Planning

- Instruct client to:
  - Limit exposure to the sun.
  - Wear dark glasses and light-colored loose-fitting clothes when outdoors.

Evaluation of Outcome Criteria

Evaluate the effectiveness of drug therapy by confirming that patient goals and expected outcomes have been met (see “Planning”).

- The client maintains fluid balance and normal electrolyte levels.
- The client demonstrates an understanding of the drug’s actions by accurately describing drug side effects and precautions.
- The client verbalizes signs and symptoms of hyperkalemia and hypersensitivity and the importance of reporting these.

See Tables 30.1 through 30.4 for lists of drugs to which these nursing actions apply.

Chapter Review

KEY CONCEPTS

The numbered key concepts provide a succinct summary of the important points from the corresponding numbered section within the chapter. If any of these points are not clear, refer to the numbered section within the chapter for review.

30.1 The kidneys regulate fluid volume, electrolytes, and acid–base balance.

30.2 The three major processes of urine formation are filtration, reabsorption, and secretion. As filtrate travels through the nephron, its composition changes dramatically as a result of the processes of reabsorption and secretion.

30.3 The dosage levels for most medications must be adjusted in clients with renal failure. Diuretics may be used to maintain urine output while the cause of the renal impairment is treated.

30.4 Diuretics are drugs that increase urine output, usually by blocking sodium reabsorption. The three primary classes are loop, thiazide, and potassium-sparing diuretics.

30.5 The most efficacious diuretics are the loop or high-ceiling agents, which block the reabsorption of sodium in the loop of Henle.

30.6 The thiazides act by blocking sodium reabsorption in the distal tubule of the nephron, and are the most widely prescribed class of diuretics.

30.7 Though less effective than the loop diuretics, potassium-sparing diuretics are used in combination with other agents, and help prevent hypokalemia.

30.8 Several less commonly prescribed classes such as the osmotic diuretics and the carbonic anhydrase inhibitors have specific indications in reducing intraocular fluid pressure (acetazolamide) or reversing severe renal hypoperfusion (mannitol).

NCLEX-RN® REVIEW QUESTIONS

1. Which of the following actions by the nurse is most important when caring for a client with renal disease?
   1. Identify medications that have the potential for nephrotoxicity.
   2. Check the specific gravity of the urine daily.
   3. Eliminate potassium-rich foods from the diet.
   4. Encourage the client to void every 4 hours.

2. The client admitted for congestive heart failure (CHF) is receiving digoxin (Lanoxin) and furosemide (Lasix). Which of the following laboratory levels should the nurse carefully monitor?
   1. Potassium
   2. Creatinine
   3. Calcium
   4. Sodium