• Closely monitor the response to intravenous calcium gluconate, particularly in clients taking digitalis. Calcium increases the risk of digitalis toxicity.

Risk for Imbalanced Fluid Volume
Renal failure is a major cause of hyperkalemia. Clients with renal failure also are at risk for fluid retention and other electrolyte imbalances.

• Monitor clients receiving sodium bicarbonate for fluid volume excess.

• Closely monitor serum potassium, BUN, and serum creatinine. Notify the physician if serum potassium level is greater than 5 mEq/L, or if serum creatinine and BUN levels are increasing. Serum creatinine and BUN are the primary indicators of renal function. Levels of these substances rise rapidly in acute renal failure, more slowly in chronic renal failure (see Chapter 00).

• Maintain accurate intake and output records. Report an imbalance of 24-hour totals and/or urine output less than 30 mL/hour. Oliguria (scant urine) or anuria (no urine output) may indicate renal failure and an increased risk for hyperkalemia and fluid volume excess.

• Monitor clients receiving sodium bicarbonate for fluid volume excess. Increased sodium from injection of a hypertonic sodium bicarbonate solution can cause a shift of water into the extracellular space.

• Monitor clients receiving cation exchange resins and sorbitol for fluid volume excess. The resin exchanges potassium for sodium or calcium in the bowel. Excessive sodium and water retention may occur.

Using NANDA, NIC, and NOC
Chart 5–4 shows links between NANDA nursing diagnoses, NIC, and NOC when caring for a client with a potassium imbalance.

Home Care
Preventing future episodes of hyperkalemia is the focus when preparing the client for home care. Include the family, a significant other, or a caregiver when teaching the following topics.

• Recommended diet and any restrictions including salt substitutes and foods high in potassium

• Medications to be avoided, including over-the-counter and fitness supplements

• Follow-up appointments for lab work and evaluation

A Client with Hyperkalemia

Montigue Longacre, a 51-year-old African American male, has end-stage renal failure. He arrives at the emergency clinic complaining of shortness of breath on exertion and extreme weakness.

Assessment
Mr. Longacre tells the nurse, Janet Allen, RN, that he normally receives dialysis three times a week. He missed his last treatment, however, to attend his father’s funeral. During the last several days, he has eaten a number of fresh oranges he received as a gift.

Physical assessment findings include T 99.2, P 100, R 28, BP 168/96, 2+ pretibial edema, and a 6 lb (3.6 kg) weight gain since his last hemodialysis treatment 4 days ago. Laboratory and diagnostic tests show the following abnormal results.

- K+ 6.5 mEq/L (normal 3.5 to 5 mEq/L)
- BUN 118 mg/dL (normal 7 to 18 mg/dL)
- Creatinine 14 mg/dL (normal 0.7 to 1.3 mg/dL)
- HCO3- 17 mEq/L (normal 22 to 26 mEq/L)
- Peaked T wave noted on ECG

Mr. Longacre is placed on continuous ECG monitoring, and the physician prescribes hemodialysis. As an interim measure to lower the serum potassium, the physician prescribes D50W (25 g of dextrose), one ampule, to be administered intravenously with 10 units of regular insulin over 30 minutes.

Diagnosis
- Activity intolerance related to skeletal muscle weakness
- Risk for decreased cardiac output related to hyperkalemia
- Risk for ineffective health maintenance related to inadequate knowledge of recommended diet
- Excess fluid volume related to renal failure

Expected Outcomes
- Gradually resume usual physical activities.
- Maintain serum potassium level within normal range.