b. Phosphate binding agents (calcium acetate, sevelamer hydrochloride, aluminum hydroxide—taken with meals)

7. Hypocalcemia
   a. Calcium carbonate or calcium gluconate if symptomatic
8. Hypermagnesemia
   a. Discontinue $Mg^{2+}$ containing antacids
9. Hyperuricemia
   a. Acute treatment is usually not required except in the setting of tumor lysis syndrome (see above)
10. Nutrition
    a. Sufficient protein and calorie intake (20–30 kcal/kg per day) to avoid negative nitrogen balance. Nutrition should be provided via the enteral route if possible.
11. Drug dosing
    a. Careful attention to dosages and frequency of administration of drugs, adjustment for degree of renal failure
    b. Note that serum creatinine concentration may overestimate renal function in the non–steady state characteristic of patients with AKI.

*Abbreviations:* ACE, angiotensin-converting enzyme; AKI, acute kidney infection; ARBs, angiotensin receptor blockers; NSAIDs, nonsteroidal anti-inflammatory drugs; THAM, tris (hydroxymethyl) aminomethane.

**Prerenal Azotemia** Prevention and treatment of prerenal azotemia require optimization of renal perfusion. The composition of replacement fluids should be targeted to the type of fluid lost. Severe acute blood loss should be treated with packed red blood cells. In AKI, oliguria alone is not an indication for fluid administration. Intravascular hypovolemia should be the only indication. Optimal fluid composition is not well defined. Crystalloid solutions are less expensive than albumin-containing solutions, and albumin does not provide a survival benefit compared to crystalloid. Albumin may decrease fluid requirements but does not reduce the need for renal replacement therapy. Buffered crystalloid solutions (e.g., Ringer's Lactate, Hartmann's solution, Plasma-Lyte) are recommended for patients with AKI who are not hypochloremic; 0.9% saline is recommended for hypovolemic hypochloremic patients if the serum chloride concentration is closely monitored. Excessive chloride administration from 0.9% saline may lead to hyperchloremic