Hyperkalemia — Hyperkalemia is defined as a serum potassium concentration >6 meq/L. This abnormality may result from multiple causes, including decreased potassium clearance (eg, renal failure, certain forms of congenital adrenal hyperplasia), increased potassium release caused by bleeding or tissue destruction (eg, intraventricular hemorrhage, cephalohematoma, hemolysis, bowel infarction), and inadvertent excessive administration of potassium (eg, supplementation for hypokalemia associated with diuretic therapy).

Hyperkalemia occurs frequently in ELBW infants [30-32] . The mechanism may be an exaggerated shift from intracellular to extracellular potassium after birth [30] . As noted above, antenatal **glucocorticoids** may be protective [18] .

Depending upon severity and the rate of onset, hyperkalemia can be asymptomatic or so severe as to constitute a medical emergency. Signs include arrhythmias and cardiovascular instability. ECG findings associated with hyperkalemia consist of peaked T waves, flattened P waves, increased PR interval, and widening of the QRS. Bradycardia, supraventricular or ventricular tachycardia, and ventricular fibrillation may occur.

When the diagnosis is made, administration of any fluid that contains potassium should be discontinued immediately. Treatment is aimed at three factors:

- Reversal of the effect of hyperkalemia on the cell membrane by infusion of 10 percent **calcium gluconate** (100 mg/kg per dose IV).

- Promotion of potassium movement from the ECF into the cells by one of the three following interventions:

- Administration of intravenous glucose and insulin (0.05 units/kg human regular insulin with 2 ml/kg 10 percent dextrose in water), followed by a continuous infusion of insulin (0.1 units/kg per hour with 2 to 4 ml/kg per hour 10 percent dextrose in water).

- Administration of intravenous **sodium bicarbonate** (in a dose of 1 to 2 milliequivalent per kilogram over 30 to 60 minutes).

- Administration of beta agonists, such as **albuterol**, via nebulization.

- Increasing urinary excretion with intravenous administration of **furosemide** (1 mg/kg per dose) in infants with adequate renal function.