remain above 240 mg/dl, or if urinary ketones remain high, the health care practitioner should be notified. Simple carbohydrates may be substituted for carbohydrate-containing exchanges in the meal plan. Although insulin and diet are important tools in sick-day care, fluids are the most important intervention. Fluids must be encouraged to prevent dehydration and to flush out ketones.

Therapeutic Management of Diabetic Ketoacidosis

DKA, the most complete state of insulin deficiency, is a life-threatening situation. Management consists of rapid assessment, adequate insulin to reduce the elevated blood glucose level, fluids to overcome dehydration, and electrolyte replacement (especially potassium).

DKA constitutes an emergency situation, thus a child should be admitted to an intensive care facility for management. The priority is to obtain a venous access for administration of fluids, electrolytes, and insulin. The child should be weighed, measured, and placed on a cardiac monitor. Blood glucose and ketone levels are determined at the bedside, and samples are obtained for laboratory measurement of glucose, electrolytes, BUN, arterial pH, PO_2, PCO_2, hemoglobin, hematocrit, white blood cell count and differential, calcium, and phosphorus.

Oxygen may be administered to patients who are cyanotic and in whom arterial oxygen is less than 80%. Gastric suction is applied to unconscious children to avoid the possibility of pulmonary aspiration. Antibiotics may be administered to febrile children after appropriate specimens are obtained for culture. A Foley catheter may or may not be inserted for urine samples and measurement. Unless the child is unconscious, a collection bag is usually sufficient for accurate assessments.

Fluid and Electrolyte Therapy

All patients with DKA experience dehydration (10% of total body weight in severe ketoacidosis) because of the osmotic diuresis, accompanied by depletion of electrolytes, sodium, potassium, chloride, phosphate, and magnesium. Serum pH and bicarbonate reflect the degree of acidosis. Prompt and adequate fluid therapy restores tissue perfusion and suppresses the elevated levels of stress