

functions to decrease ICP.

Suctioning and percussion are poorly tolerated; therefore, these procedures are contraindicated unless concurrent respiratory problems exist. Hypoxia and the Valsalva maneuver associated with cough acutely elevate ICP. Vibration, which does not increase ICP, accomplishes excellent results and should be tried first if treatment is needed. If suctioning is necessary, it should be used judiciously and preceded by hyperventilation with 100% oxygen, which can be monitored during suctioning with a pulse oxygen sensor reading to determine oxygen saturation.

Nutrition and Hydration

In the unconscious child, fluids and calories are supplied initially by the IV route (see [Chapter 20](#)). An IV infusion is started early, and the type of fluid administered is determined by the patient's general condition. Fluid therapy requires careful monitoring and adjustment based on neurologic signs and electrolyte determinations. The goal of fluid therapy is euvolemia. Often, unconscious children cannot tolerate the same amounts of fluid as when they are healthy. Over-hydration must be avoided to prevent fatal cerebral edema. When cerebral edema is a threat, fluids may be restricted to reduce the chance of fluid overload. Examine skin and mucous membranes for signs of dehydration. Adjustments to fluid administration are based on urinary output, serum electrolytes and osmolarity, blood pressure, and arterial filling pressure. Observation for signs of altered fluid balance related to abnormal pituitary secretions is a part of nursing care.

Provide long-term nutrition with a balanced formula given by nasogastric or gastrostomy tube. Most children have continuous feedings, but if bolus feedings are used, the tube is rinsed with water after each feeding. Avoid overfeeding to prevent vomiting and the risk of aspiration. Stomach contents are aspirated with a syringe and measured before feeding to ascertain the amount remaining in the stomach. If the residual volume is excessive (depending on the child's size), consult the dietitian and the physician.

Altered Pituitary Secretion

An altered ability to handle fluid loads is attributed in part to the