Nursing Alert

Respiratory obstruction and subsequent compromise leads to cardiac arrest. Always maintain an adequate, patent airway.

Children in lighter states of coma may be able to cough and swallow, but those in deeper states of coma are unable to manage secretions, which tend to pool in the throat and pharynx. Dysfunction of CN IX and CN X (glossopharyngeal and vagus nerves) places the child at risk for aspiration and cardiac arrest. Therefore, position the child with the head and body to the side to prevent aspiration of secretions, and empty the stomach to reduce the likelihood of vomiting. In infants, blockage of air passages from secretions can happen in seconds. In addition, upper airway obstruction from laryngospasm is a frequent complication in comatose children.

An oral airway can be used for the child who is suffering a temporary loss of consciousness, such as after a contusion, seizure, or anesthesia. For children who remain unconscious for a longer time, a nasotracheal or orotracheal tube is inserted to maintain the open airway and facilitate removal of secretions. A tracheostomy is performed in cases in which laryngoscopy for introduction of an endotracheal tube would be difficult or dangerous or for a child who needs long-term ventilatory support. Suctioning is used only as needed to clear the airway, exerting care to prevent increasing ICP. Respiratory status is observed and evaluated regularly. Signs of respiratory distress may indicate a need for ventilatory assistance.

When the respiratory center is involved, mechanical ventilation is usually indicated (see Chapter 20). Blood gas analysis is performed regularly, and oxygen is administered when indicated. Moderately severe hypoxia and respiratory acidosis are often present but not always evident from clinical manifestations. Hypoventilation frequently accompanies unconsciousness and may lead to respiratory alkalosis, or it may represent the body's attempt to compensate for metabolic acidosis. Therefore, blood gas and pH determinations are essential guides for electrolyte therapy. Chest physiotherapy is carried out on a regular basis, and the child's position is changed at least every 2 hours to prevent pulmonary