the acutely ill infant and thereafter when clinically indicated.

Mucus may collect in the respiratory tract as a result of the infant's pulmonary condition. Secretions interfere with gas flow and predispose the infant to obstruction of the passages, including the ET tube. Suctioning should be performed only when necessary and should be based on individual infant assessment, which includes auscultation of the chest, evidence of decreased oxygenation, excess moisture in the ET tube, or increased infant irritability. During suctioning, a variety of techniques can be used to minimize complications, including the use of a closed suctioning system (Gardner, Enzman-Hines, and Dickey, 2011).

Nursing Alert

Endotracheal (ET) suctioning is not an innocuous procedure (it may cause bronchospasm, bradycardia resulting from vagal nerve stimulation, hypoxia, or increased intracranial pressure [ICP], predisposing the infant to intraventricular hemorrhage) and should never be carried out on a routine basis. Improper suctioning technique can also cause infection, airway damage, or even pneumothoraces.

When nasopharyngeal passages, the trachea, or the ET tube is being suctioned, the catheter should be inserted gently but quickly; intermittent suction is applied as the catheter is withdrawn. Negative airway pressure should be applied for no more than 10 to 15 seconds because continuous suction removes air from the lungs along with the mucus. It is recommended that the “two-person” suctioning procedure be used on infants who are acutely ill and who do not tolerate any procedure without profound decreases in oxygen saturation, BP, and heart rate. The object of suctioning an artificial airway is to maintain patency of that airway, not the bronchi. Suction applied beyond the ET tube can cause traumatic lesions of the trachea. The use of in-line suction catheters may decrease airway contamination and hypoxia. Evidence-based guidelines for ET suctioning of neonates have been published (Gardner and Shirland, 2009).

The most advantageous positions for facilitating an infant's open airway are on the side with the head supported in alignment by a