

available. Suction catheters, suction source, gloves, sterile saline, sterile gauze for wiping away secretions, scissors, an extra tracheostomy tube of the same size with ties already attached, another tracheostomy tube one size smaller, and the obturator are kept at the bedside. A source of humidification is provided because the normal humidification and filtering functions of the airway have been bypassed. IV fluids ensure adequate hydration until the child is able to swallow sufficient amounts of fluids.

Suctioning

The airway must remain patent and may require frequent suctioning during the first few hours after a tracheostomy to remove mucous plugs and excessive secretions. Proper vacuum pressure and suction catheter size are important to prevent atelectasis and decrease hypoxia from the suctioning procedure. Vacuum pressure should range from 60 to 100 mm Hg for infants and children and from 40 to 60 mm Hg for preterm infants. Unless secretions are thick and tenacious, the lower range of negative pressure is recommended. Tracheal suction catheters are available in a variety of sizes. The catheter selected should have a diameter that is half the diameter of the tracheostomy tube. If the catheter is too large, it can block the airway. The catheter is constructed with a side port so that the catheter is introduced without suction and removed while simultaneous intermittent suction is applied by covering the port with the thumb ([Fig. 20-26](#)). The catheter is inserted just to the end of the tracheostomy tube. The practice of instilling sterile saline in the tracheostomy tube before suctioning is not supported by research and is no longer recommended (see [Translating Evidence into Practice](#) box).

Translating Evidence into Practice

Normal Saline Instillation before Endotracheal or Tracheostomy Suctioning: Helpful or Harmful?

Ask the Question

PICOT Question

In intubated children and those with tracheostomy, is normal