

► Tracheostomy Tube Replacement

Establishing a patent airway in a patient with a tracheostomy may be accomplished by suctioning or by replacement of an old tracheostomy tube when suctioning is not successful. Tracheostomy tube replacement may only be performed when patient has a new replacement tracheostomy tube available. If tracheostomy tube is not available, or placement of a new tube is unsuccessful, use of an endotracheal tube (stomal intubation) or BVM ventilation is appropriate.

» **Indications:**

- Dislodged tracheostomy tube (decannulation)
- Tracheostomy tube obstruction not resolved by suction

» **Contraindications:**

- Recent tracheostomy surgery (less than 1 month)
- Inadequately sized tract or stoma for insertion of new tube (use endotracheal tube instead)

» **Procedure:**

1. Remove old tracheostomy tube if obstructed
 - a. Hyperextend head to extent possible to expose tracheostomy site
 - b. Apply oxygen over mouth and nose and occlude stoma or tracheostomy tube
 - c. If existing tube has a cuff, deflate with 5-10 ml syringe (do not cut balloon)
 - d. Cut or untie cloth ties holding tube in place
 - e. Withdraw tube using a slow and steady outward and downward motion
 - f. Assess airway for patency and adequate ventilation
 - g. Provide oxygen through stoma as needed
2. Replace tracheostomy tube
 - a. If tube has obturator, place in tube. If tube has outer and inner cannula, use the outer cannula and obturator for placement.
 - b. Moisten or lubricate tip of tube and obturator with water, saline, or a water-soluble lubricant
 - c. Hold device by flange (wings) or actual tube like a pencil
 - d. Gently insert tube with arching motion (follow curvature of tube) posteriorly and then downward. Slight traction on skin above and below stoma may help.
 - e. Once tube is in place, remove obturator, attach BVM and attempt to ventilate. If tube uses inner cannula, insert to allow ventilation with BVM.
 - f. Check for proper placement by observing bilateral chest rise, listening for equal breath sounds, and general patient assessment. Signs of improper placement include lack of chest rise, unusual resistance to assisted ventilation, air in surrounding tissues, or lack of patient improvement.
 - g. If tube cannot be inserted, withdraw, administer oxygen, and ventilate as needed.
 - h. If insertion not successful, consider use of smaller tracheostomy tube (if available) or endotracheal tube placement.
 - i. An additional aid in placement may be use of a suction catheter as a guide (without applying suction) for tube placement. Remove obturator and slide tube along suction catheter into stoma. Remove suction catheter after placement and assess.

- j. If still unsuccessful and patient requires ventilation, consider endotracheal intubation or BVM ventilation through newborn mask or via nose and mouth with stoma occluded.
3. After proper placement, place tracheostomy ties through openings on flanges and tie around neck, allowing room for a little finger to pass between ties and neck.

» Possible Complications

- Creation of false lumen
- Subcutaneous air
- Pneumothorax or pneumomediastinum
- Bleeding at insertion site or through tube

► Stomal Intubation

For patients with existing tracheostomy without tube (mature stoma):

1. Assure an adequate BLS airway.
2. Oxygenate with 100% oxygen using a bag-valve-mask.
3. Select the largest endotracheal tube that will fit through the stoma without force (it should not be necessary to lubricate the tube).
4. Check cuff, if applicable.
5. Do not use a stylet.
6. Pass endotracheal tube until the cuff is just past the stoma. Right mainstem bronchus intubation may occur if the tube is placed further since the distance from tracheostomy to carina is less than 10 cm. The tube will protrude from the neck by several inches.
7. Inflate the cuff
8. Immediately assess tube placement with colorimetric end-tidal CO₂ indicator (see confirmation of tube/post-intubation procedure).
9. Auscultate the chest for air entry on the right and left sides equally. Look for symmetric chest wall rise. Check neck for subcutaneous emphysema, which indicates false passage of tube. If the chest DOES NOT RISE, extubate and repeat steps 2-7.
10. Secure the tube with tape and ventilate.

Note: Do not attempt to reinsert a dislodged pre-existing tracheostomy tube.