

# TRACHEOSTOMY

## After the first 10 days

### Indications

- To assist in long-term mechanical ventilation due to pulmonary disease, congenital heart disease or neurological/neuromuscular disease
- To bypass chronic obstruction within the upper airway (tracheomalacia, tracheal stenosis, bilateral vocal cord paralysis, compression by large vessels)

### Materials

- Required at bedside at ALL TIMES
- One tracheostomy tube same size as in current use
- One size smaller tracheostomy tube
- Emergency tracheostomy tray
- Tracheostomy dilator (curved mosquito forceps)
- Hemostats
- Removable obturator (size of current tracheostomy)
- Water-based lubricant (Muko)
- Scissors
- Tracheostomy ties
- Self-inflating bag with extension and face mask (ambubag)
- Sign: do not suction beyond \_\_\_\_cm
- NS
- Sterile water
- Suction catheter (appropriate size)

### Procedure - Dressing and ties change

- When?
  - Q DAY, usually with bath
  - Materials
  - 6 alcohol free chlorhexidine gluconate 2%
  - 4 packs of 4x4 sterile gauze
  - 1 Mepilex foam or type of dressing used by patient
  - 1 clean trach ties
  - How?
  - Always done with **2 people**
  - Tracheostomy must **always be held during the entire procedure**
1. **Suction** the tracheostomy as per protocol before starting

2. **Position** the patient supine, **place a small roll** under his/her shoulders
3. **Wash your hands** with solution and put on non-sterile gloves
4. Open material:
  - 6 alcohol free chlorhexidine gluconate 2% swabsticks
  - 2 packs of sterile 4x4s
  - Have the clean trach ties close by
5. **Remove gauze** or Mepilex from the trach, if there is one
6. Using one swab at a time, **clean the skin** starting from stoma towards the periphery 4 times
7. Dry the skin & under the flange with sterile gauzes
8. Change one side of the ties at a time, ensuring trach remains securely held in place:
  - Remove the dirty tie on one side
  - Clean with alcohol free chlorhexidine gluconate 2% swabsticks one side of the neck
  - Dry the skin with sterile gauze
  - Insert the new trach ties and put the velcro
  - Do the same procedure for the other side
9. **Verify if ties are tight enough and centered:** one little finger should be able to slip beneath the ties

## Procedure – Cannula change

### ○ When?

- Q MONTH, by the RT
- Following resolution of any upper or lower respiratory tract infection to avoid airway reinfection or granulomas
- Every time the tracheostomy tube cannula appears partially obstructed with secretions to avoid tracheostomy tube occlusion

### ○ Materials

- One tracheostomy tube same size as in current use
- Smaller size tracheostomy tube
- Tracheostomy ties ( Velcro or twill tape)
- Water based lubricant
- Scissors
- Hemostats (or blunt tipped tweezers)
- Suction supplies
- Mask & manual resuscitator connected to 100% oxygen
- Gauzes or tissues
- Sterile gloves

### ○ How?

1. Requires **2 trained persons** for routine changes with an **RT present**
2. Keep patient **NPO 3 hours** prior to the tracheostomy tube change to minimize the risk of aspiration
3. **Wash and dry hands**
4. Keep the tracheostomy tube cannula sterile
5. **Prepare ties & tie to flanges** of the new tracheostomy tube
  - For Velcro ties, tie only one side of the tracheostomy tube
  - For twill tape ties, attach ties to both flanges prior to reinserting the tracheostomy tube
6. **Suction** patient as per protocol
7. **Position** the patient supine, **place a small roll** under his/her shoulders
8. 1<sup>st</sup> person **removes the ties** while holding the tracheostomy in place
9. 2<sup>nd</sup> person put on **sterile gloves**
10. 2<sup>nd</sup> person **moistens the tip** of the tracheostomy tube with lubricant holding the obturator in place with thumb

11. **Preoxygenate** the child with 100% oxygen
12. **On exhalation**, 1st person **removes** the tracheostomy tube following the natural curve of the tube
13. 2nd person **inserts immediately** the tracheostomy tube **sideway** in the stoma to visualize adequately the tracheostoma **then turns** the tracheostomy tube gently, once in the stoma, in alignment with the trachea & continues the insertion of the tracheostomy tube in a smooth curving motion, directing the tip of the tracheostomy tube toward the back of the neck. **Never force** the tracheostomy tube into the stoma to avoid tracheal wall injuries
14. **Remove the obturator**, holding the tracheostomy tube securely in the tracheostoma
15. To **confirm that the tracheostomy tube is in place**, place your hand in front of the tracheostomy tube hub and feel for air movement or verify for secretions coming out of the tracheostomy tube
16. Insert a suction catheter & **suction**. The suction catheter should pass easily beyond the tracheostomy tube without resistance
17. **Remove shoulder roll** to relieve the hyperextension of the neck before tying the tracheostomy ties to ensure a correct fit
18. **Tie** the tracheostomy ties, allowing room for only one finger between neck & the ties
19. Perform a respiratory **assessment**
20. **Document** procedure & patient's tolerance in the chart

## Accidental decannulation

**After the first 10 days the stoma tract is more established at this time & should present little resistance to reinsertion but it should still be the professional at the bedside with the most experience related to tracheostomy tube insertion (RT, MD, NNP, ENT or RN) who reinsert the tracheostomy tube**

### ○ What to do?

1. **Reinsert the tracheostomy tube** into the stoma
2. **Call RT stat**
3. In the event of **respiratory distress or cyanosis**, call a **CODE PINK** if additional medical support is required

### ○ If unable to replace the current size tracheostomy tube:

1. **Notify** physician & the ENT physician
2. **Ventilate** the patient using the **bag-and-mask** ventilation technique with 100% oxygen **occluding the tracheostoma** with a gloved finger or a piece of gauze
3. **Reposition** the patient so the head is back & the stoma is more visible using a roll under the patient's shoulders to hyperextend the neck & expose the tracheostoma
4. **Lubricate a smaller size** tracheostomy tube; **try to insert** it into the tracheostoma
5. In the event of **respiratory distress or cyanosis**, call a **CODE PINK** if additional medical support is required
6. The tracheostomy tube **should be changed later for a new one of the appropriate size** when the patient's respiratory status is stable.

### ○ If unable to insert the smaller size tracheostomy tube:

1. Try inserting an **endotracheal tube a ½ size smaller** than the outer diameter of the tracheostomy tube
2. If endotracheal intubation is not feasible, **insert a suction catheter** through the smaller size tracheostomy tube
3. Guide the suction catheter tip into the stoma, then **slide the tracheostomy tube over** the suction catheter & into the stoma
4. Remove the suction catheter
5. Resume **ventilation**
6. Obtain a **chest x-ray** to verify the position of the tracheostomy tube
7. In the event of respiratory distress or cyanosis, call a **CODE PINK** if additional medical support is required
8. The tracheostomy tube **should be changed later for a new one of the appropriate size** when the patient's respiratory status is stable.