TRACHEOSTOMY EMERGENCIES

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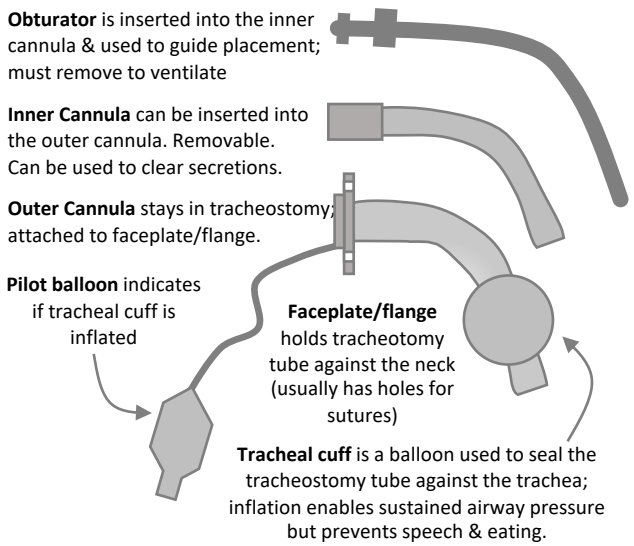
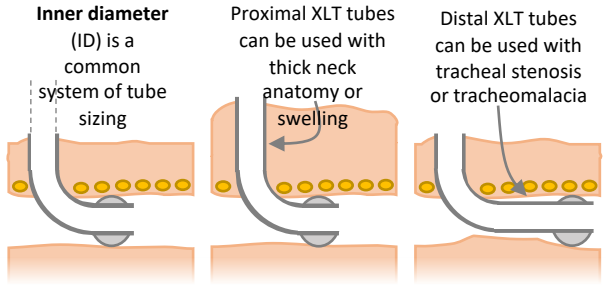
COMPONENTS OF A TRACHEOSTOMY TUBE:

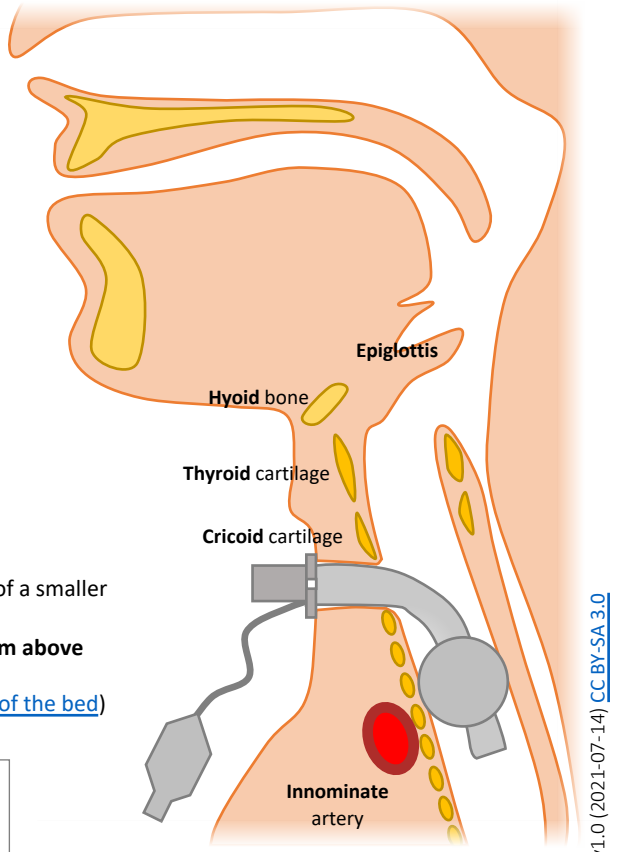


TRACHEOSTOMY SIZING:

Proper sizing is essential and depends on length, inner diameter, outer diameter, and curvature. *Usually* the size number refers to the inner diameter (ID) of the outer cannula, measured in mm (e.g. Portex 6.0 has an ID of 6mm). This is not consistent for all manufacturers. The ID and OD sizes are always written on the flange.

Some tubes have an adjustable flange. Other specially made longer tracheostomy tubes may be called XLT (extra long tubes).





APPROACH TO TRACHEOSTOMY EMERGENCIES:

There are three categories of emergencies involving a tracheostomy: ***ACCIDENTAL DECANNULATION***, ***OBSTRUCTION***, and ***BLEEDING***. The **timing** of the emergency is also important as the approach is different in the 7-14 days after initial tracheostomy placement compared with later. (The tracheotomy tract takes time to mature)

Preparing for Tracheostomy Contingencies

Have a **back-up airway plan** prepared ***in advance.***

- Have a back-up tracheostomy of the same size & one of a smaller size immediately available (e.g. in the room)
- Know if the patient **can be intubated or ventilated from above**
- Know the **placement date** of the tracheostomy

(ideally this information should be on a sign at the head of the bed)

DECANNULATION

EARLY (<14 days)

Early (<7-14 days)

- Do **NOT** attempt re-insertion due to risk of creating a false tract (stoma is not mature)
- Call for help (e.g. airway code)
- Oxygenate and ventilate from above while preparing to intubate
- Intubate

LATE (>14 days)

Late (>7-14 days)

- Prepare back-up airway
- Oxygenate and ventilate from above
- Attempt to replace tracheostomy (can insert obturator) and may need to downsize
- Confirm proper placement, ideally with bronchoscopy
- If unable to re-insert, intubate.

OBSTRUCTION

Early (<7-14d)

- Prepare back-up airway plan
- Deflate cuff and oxygenate from above
- Remove inner cannula
- Attempt to pass suction catheter and clear
- Consider bronchoscopy if immediately available
- In unable to clear, intubate from above

Late (>7-14d)

- Prepare back-up airway plan
- Deflate cuff and oxygenate from above
- Remove inner cannula
- Attempt to pass suction catheter and clear
- Consider bronchoscopy if immediately available
- If still obstructed, attempt to replace and may need to downsize tracheostomy tube

BLEEDING

Early (<7-14d)

Early bleeding may be at the surgical site, from suction trauma, or due to tracheitis; Consider lower airway bleeding/hemoptysis

- Tx: Inflate cuff, apply direct pressure, apply topical silver nitrate

Late (>7-14d)

Late bleeding may be due to the above or due to development of a **Tracheo-innominate fistula**: erosion of the tracheostomy causing a fistula between innominate artery & trachea. Look for ETT pulsations This can cause life-threatening hemorrhage.

- Tx: overinflate cuff to tamponade, ventilate from above and remove tracheostomy, Intubate from above, Insert finger into stoma and pull anteriorly to occlude innominate artery. Surgical management of hemorrhage will be required (high mortality w/o surgery)

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