

Tracheostomy Education for Patients and Caregivers

Mount Sinai

Department of Otolaryngology—Head
and Neck Surgery



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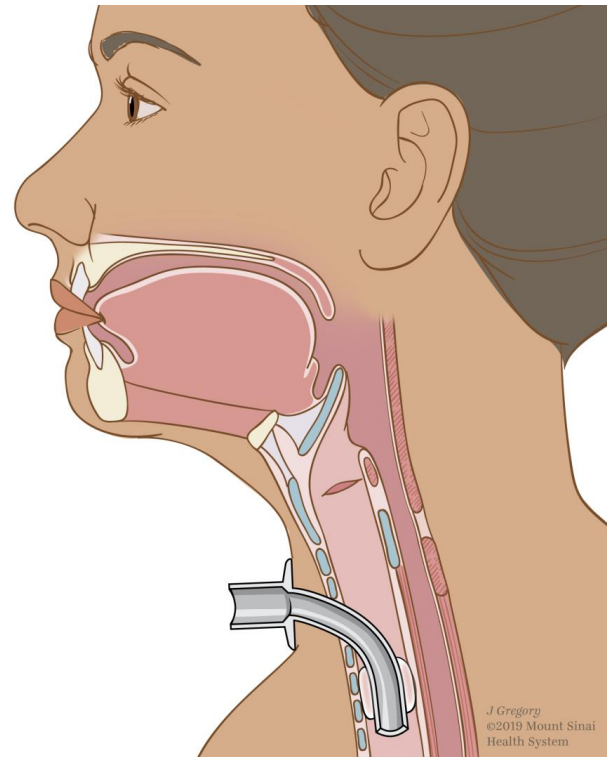
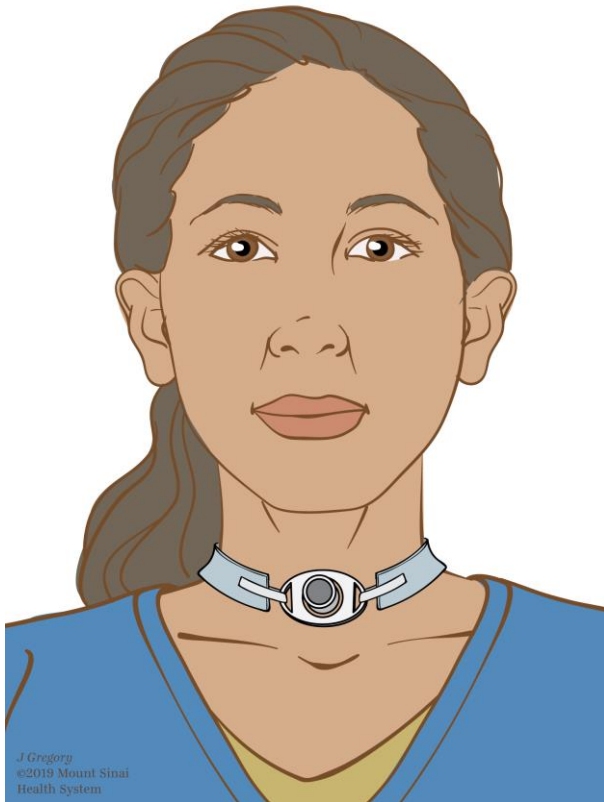
Objectives

1. Learn what a tracheostomy is and why it is performed
2. Learn the different parts of a tracheostomy tube
3. Learn how to clean and take care of a tracheostomy
4. Understand how to manage common complications

Brief Introduction To Tracheostomies

What is a Tracheostomy?

- Opening through the neck into the trachea (windpipe)



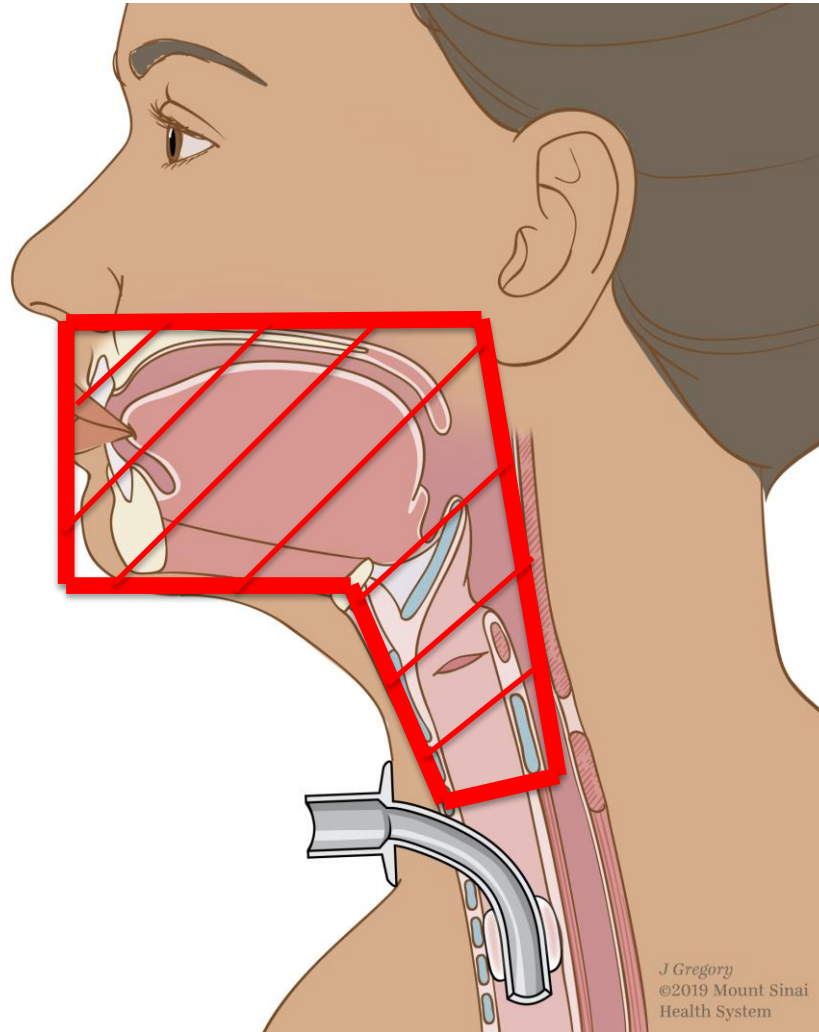
True or **False** A tracheostomy is always permanent

- Tracheostomy is only needed as long as the patient requires it
 - May be temporary or permanent
 - Depends on the reason for initial tracheostomy placement

Why would someone need a tracheotomy?

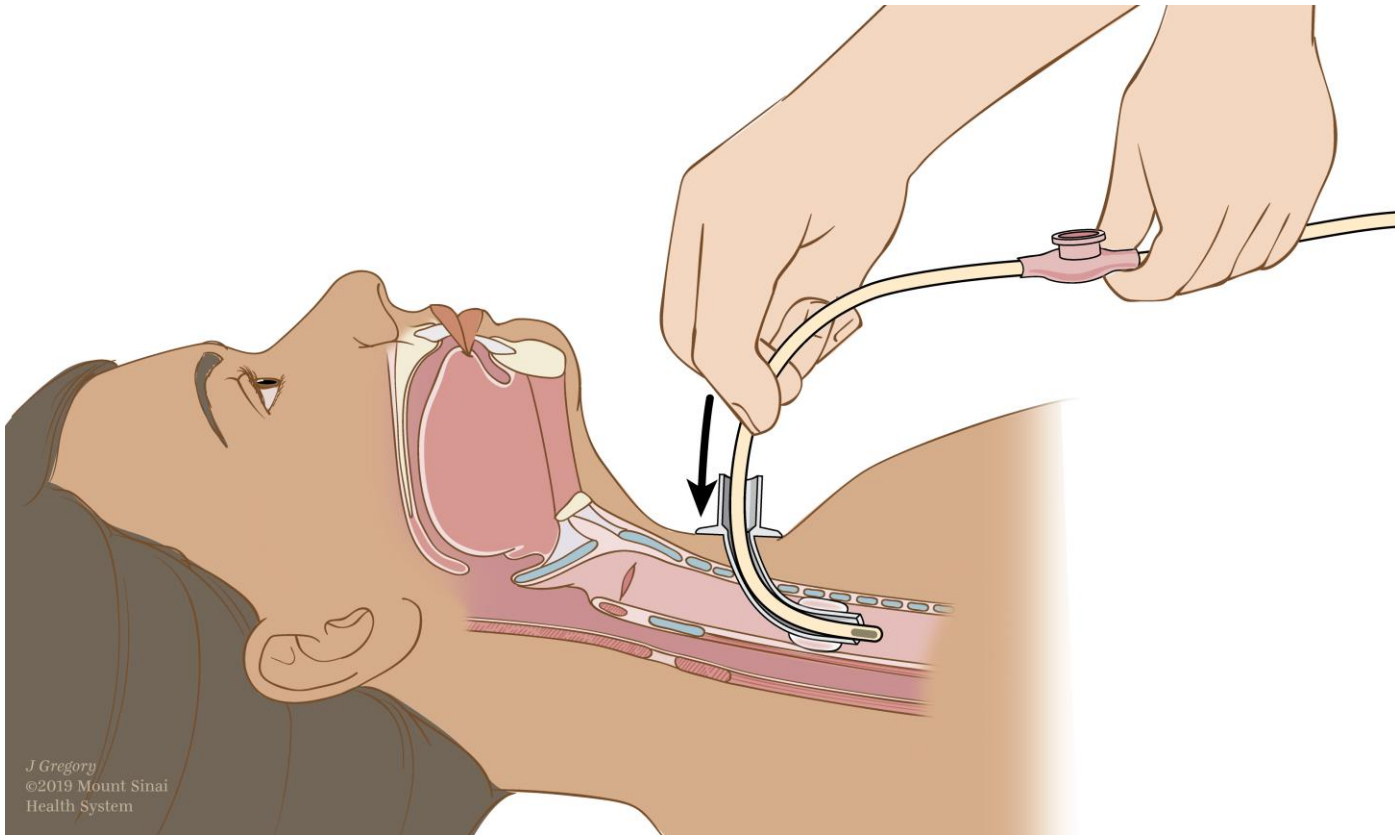
1. Obstruction in the mouth, larynx (voice box), or upper trachea (wind pipe)
2. Prolonged intubation/Inability to be taken off the ventilator
3. Pulmonary Hygiene: improved cleaning of the lungs (i.e. manage secretions)

Bypass Obstruction

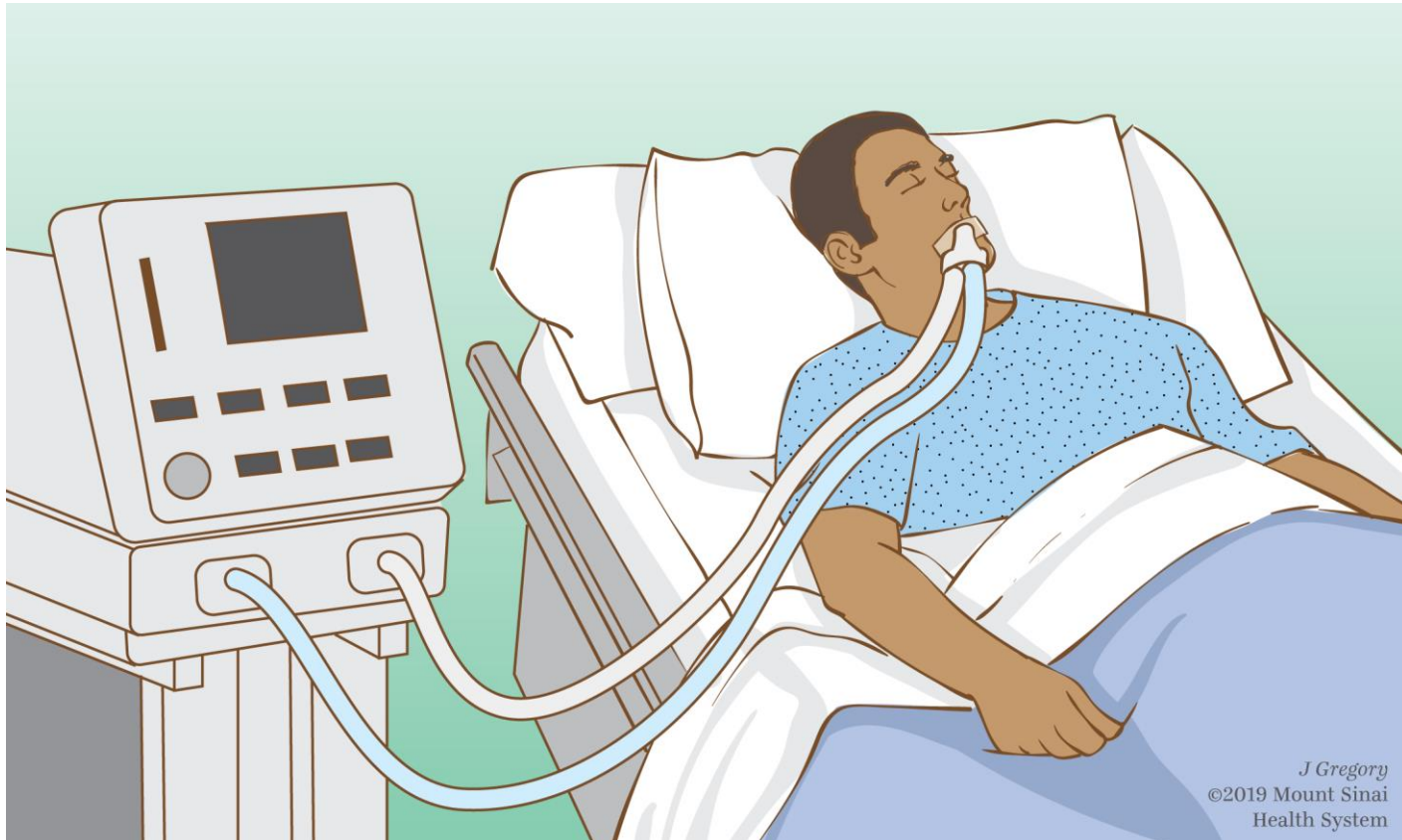


Pulmonary Hygiene

- Removal of secretions and protection of lungs

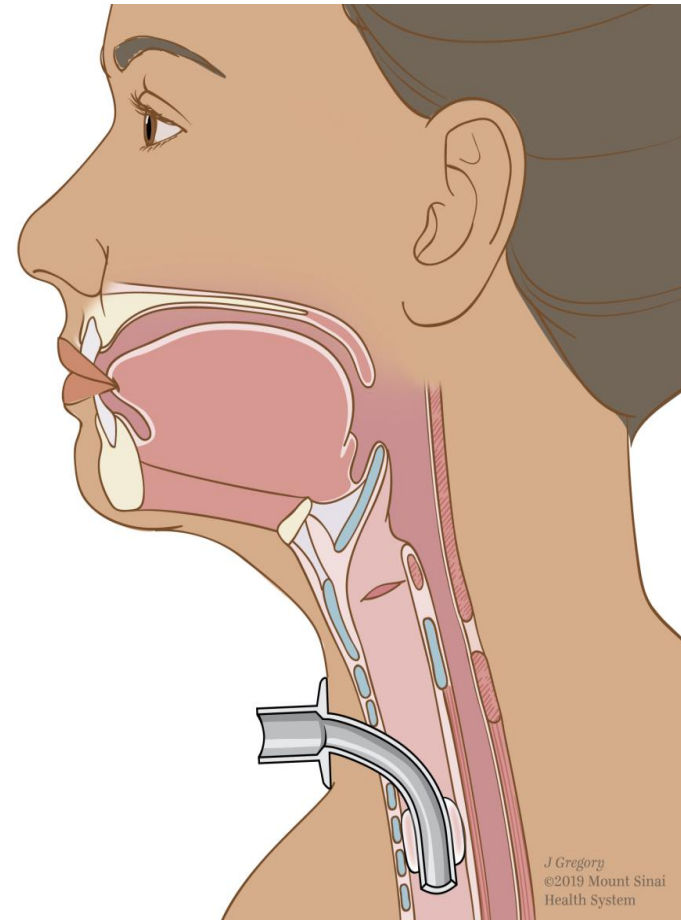
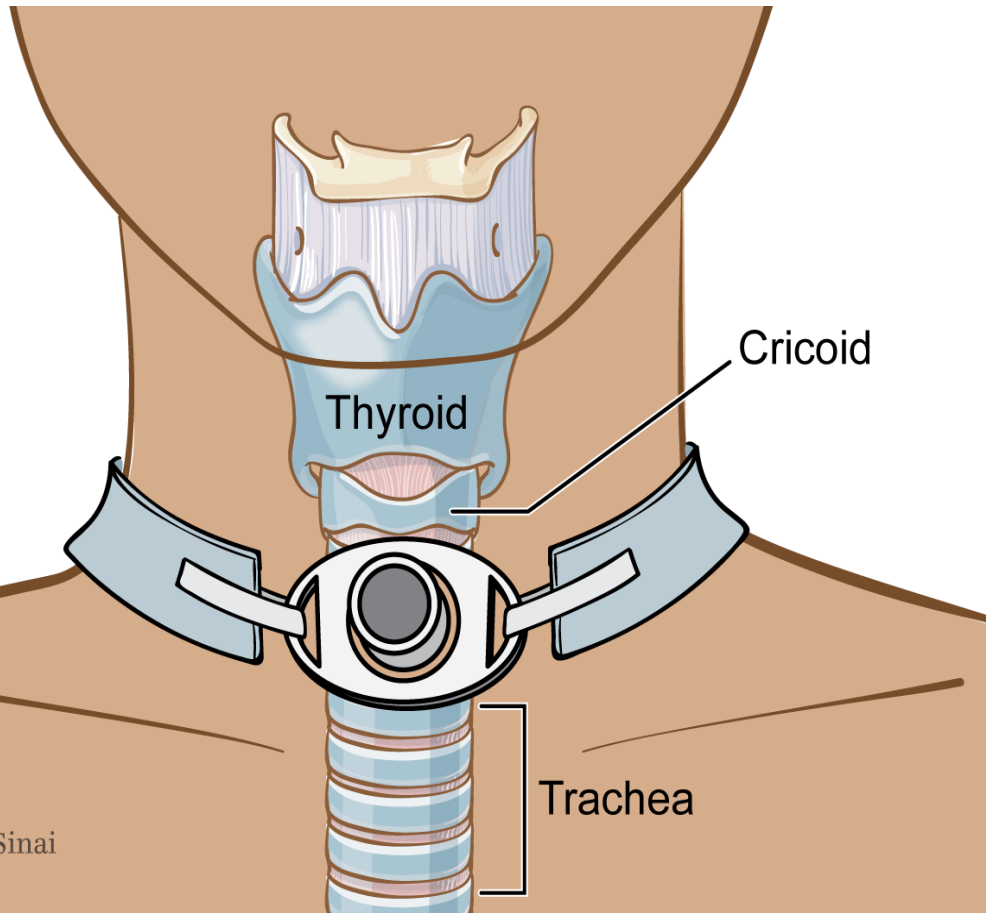


Respiratory Failure/Prolonged Intubation



Surgical Anatomy

Surgical Anatomy

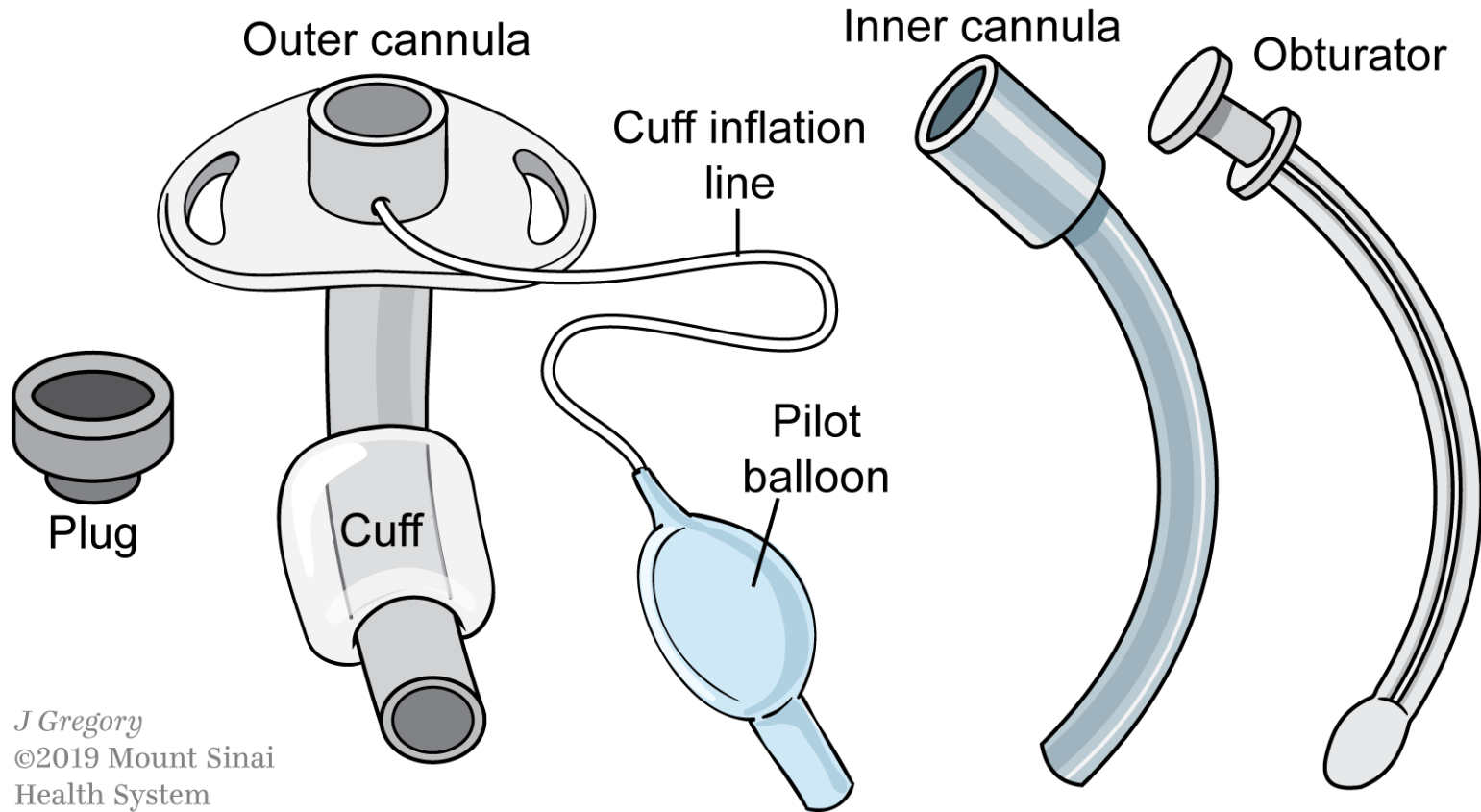


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The Parts of the Tracheostomy Tube

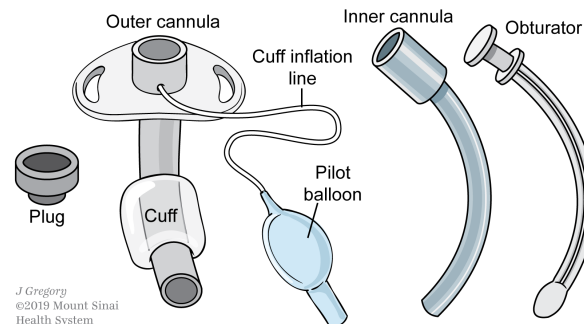
Tracheostomy Components



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Tracheostomy Component Functions

- **Outer cannula:** Main portion of the tracheostomy, serves as connection between trachea and skin
- **Inner cannula:** removable tubing that sits in the outer cannula. Allows easy removal for cleaning and care.
- **Cuff/Balloon:** required in patient requires ventilator. Ensures ventilator air goes to lungs
- **Pilot balloon:** assesses how much air is in the cuff (external)
- **Obturator:** placed in outer cannula when replacing a tracheostomy, allows easy passage into tracheostomy stoma.
- **Plug:** In select patients, can help with speaking and eventual tracheostomy removal



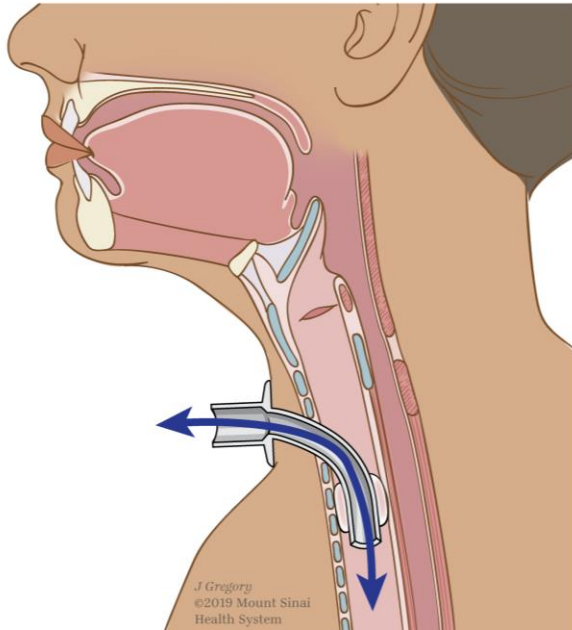
Differences in Tracheostomy Tubes

- **Cuffed Tracheostomy Tubes:**
 - Patients requiring a ventilator
 - Cuff (balloon) blocks air from moving around the tube
- **Cuffless Tracheostomy Tubes**
 - Patients who require a tracheostomy but don't need a ventilator assistance
 - Without cuff, it allows air to pass around the trachea through the voice box so that patients can speak
 - More comfortable

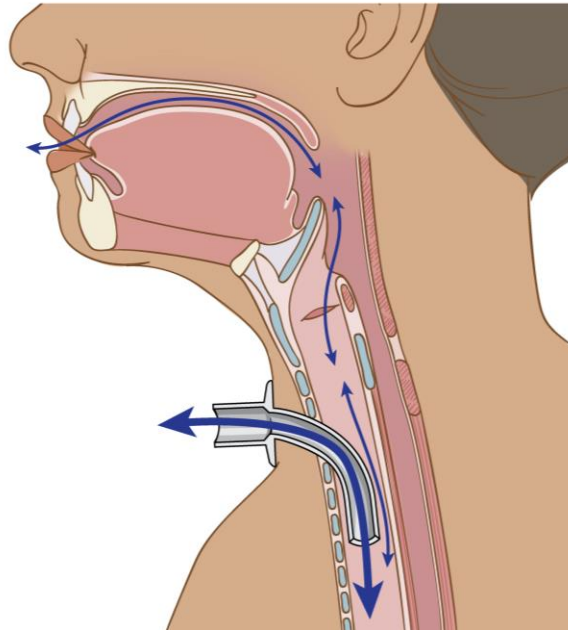


Tracheostomy Types

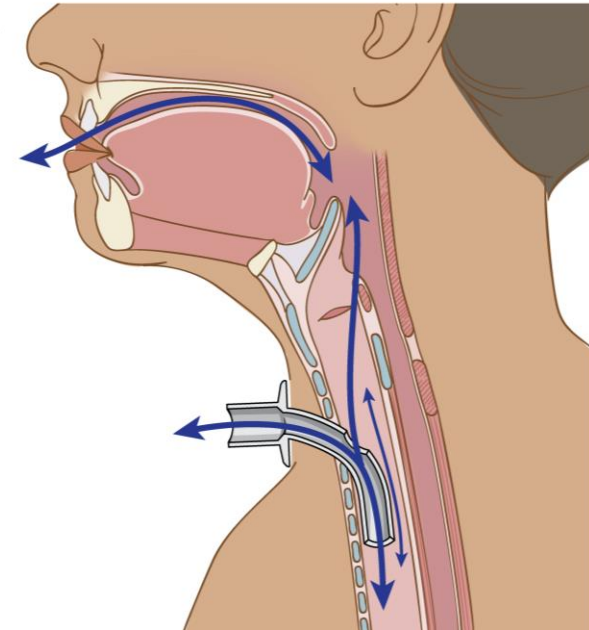
Cuffed



Uncuffed



Fenestrated

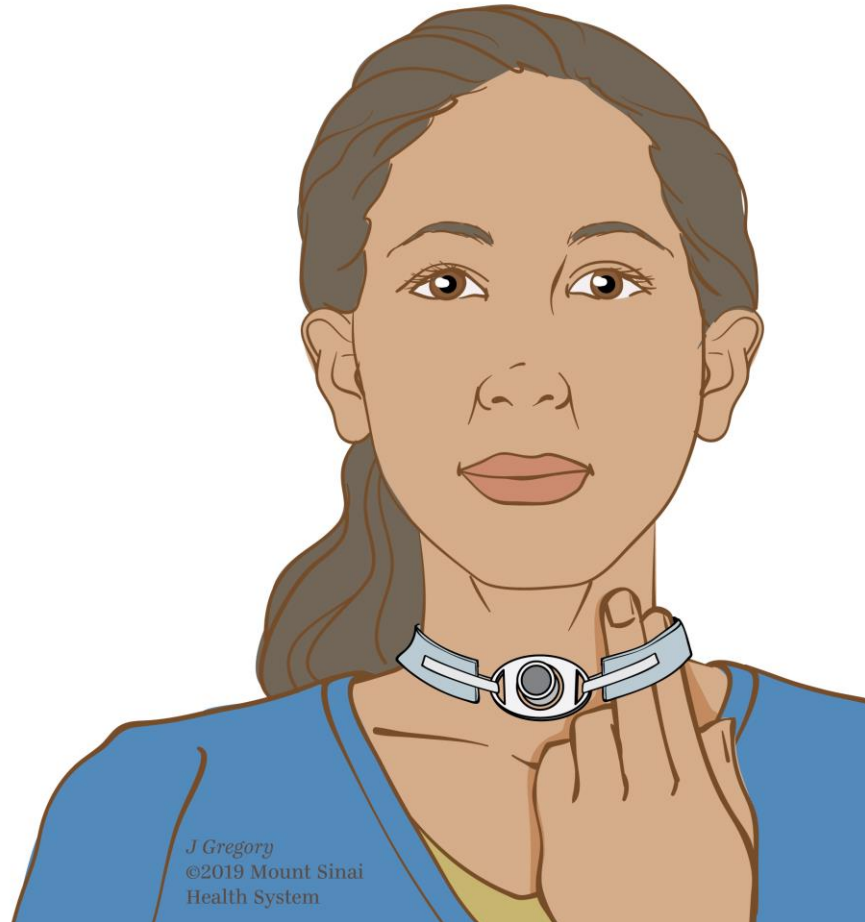
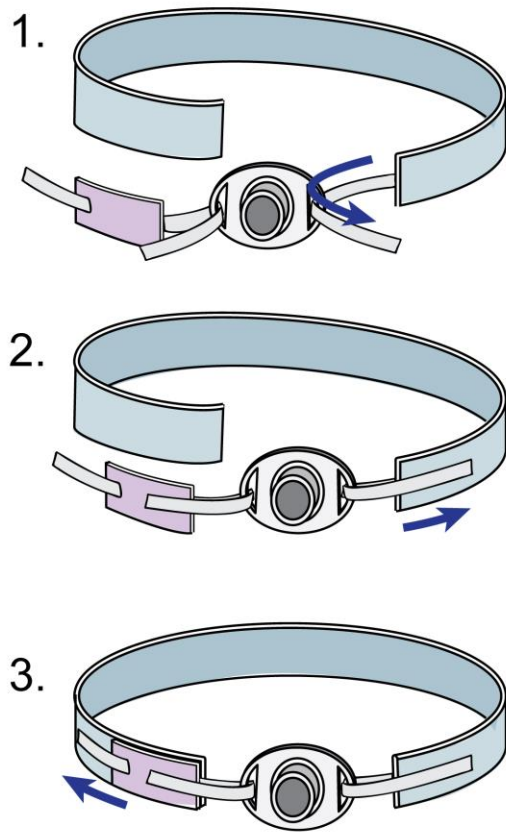


Standard Tracheostomy Care

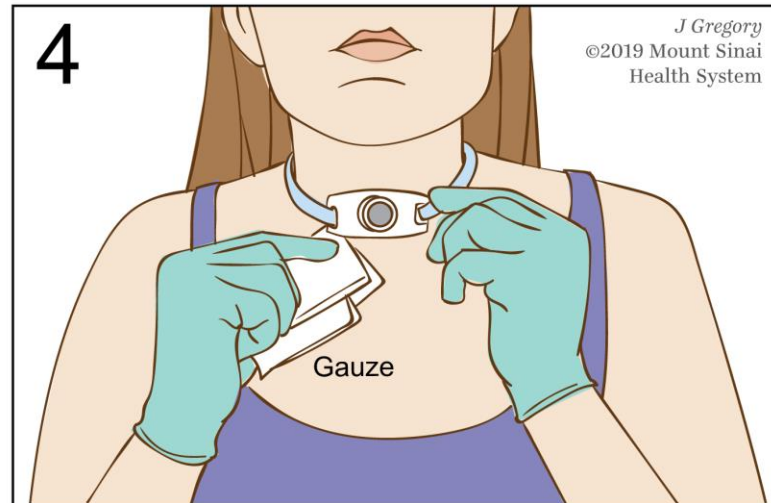
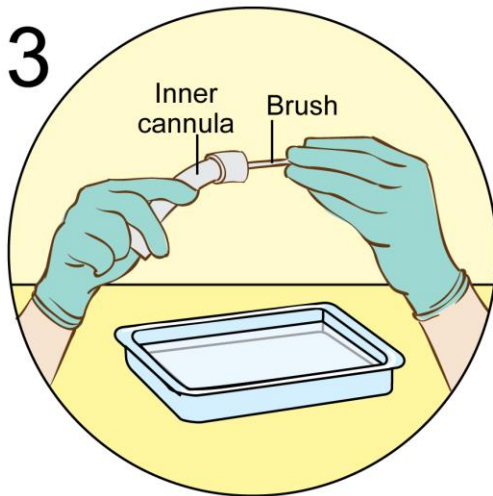
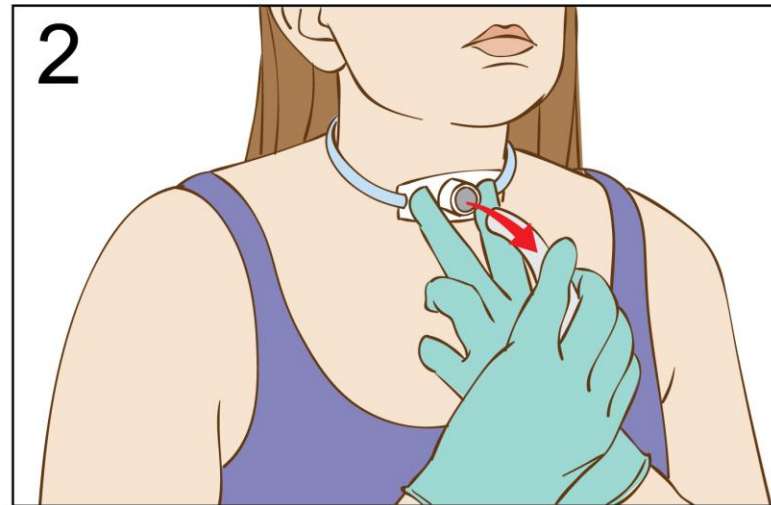
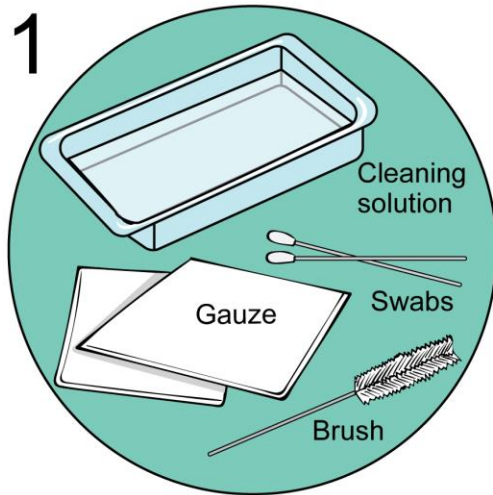
Standard Supplies Required

- **Tracheostomy cleaning kits**
- **Humidification and tracheostomy collar**
- **Suction set up**
- **Replacement tracheostomy tube (same size or one size smaller)**

How to Secure the Tracheostomy



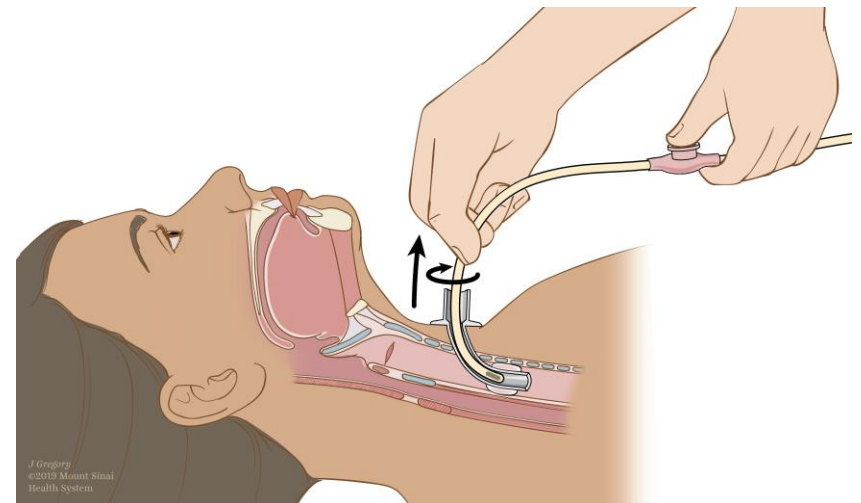
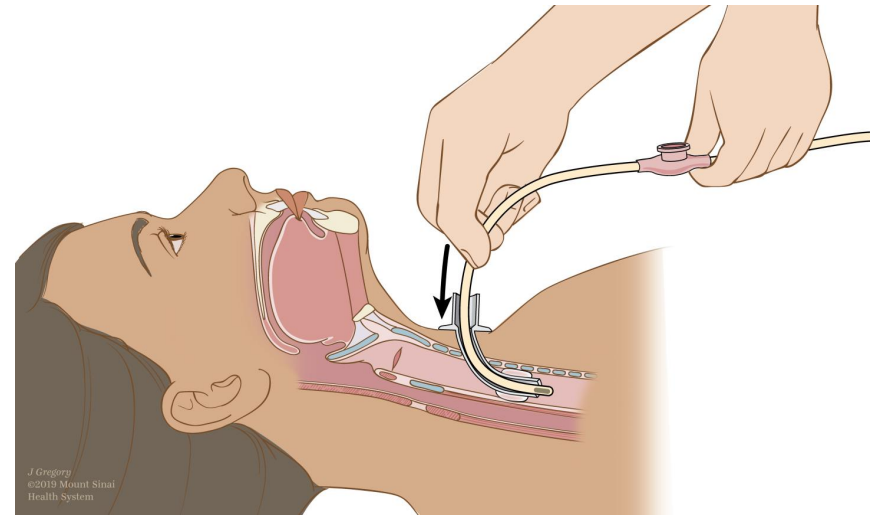
Cleaning The Tracheostomy



Suctioning the Tracheostomy

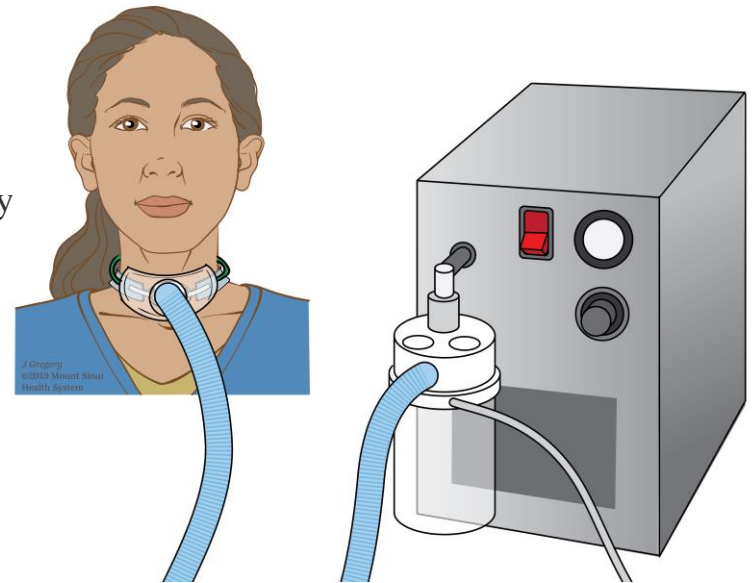
When to Suction:

- As indicated by your physician and as needed
- Unable to cough up secretions on your own
- Change in breathing or becomes harder to breath
- Coughing more than normal



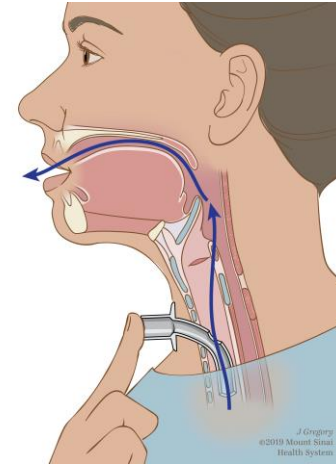
Tracheostomy Humidification

- **Humidification is important:**
 - Prevents thickening of secretions and crusting
 - Most important in first month or so after surgery
 - Body needs to adjust to tracheostomy tube
 - Usually the nose and mouth humidify air, but tracheostomy bypasses these structures and allows dry air to reach lungs
- **Several ways to humidify:**
 - Trach humidification – machine with a mask placed near tracheostomy
 - Room humidifier
 - Fluid intake – important to stay hydrated

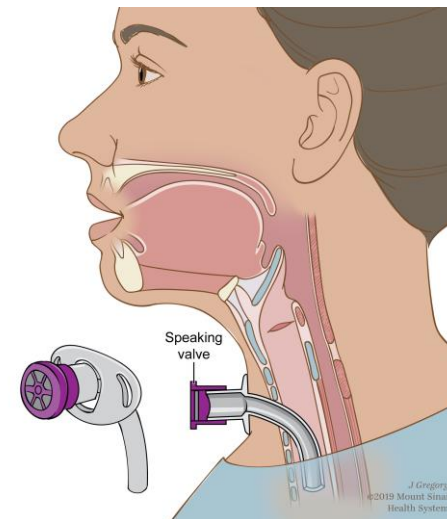


Talking with a Tracheostomy

1. **Finger-Occlusion:** place a finger over the tracheostomy site and speak with finger blocking trach hole.

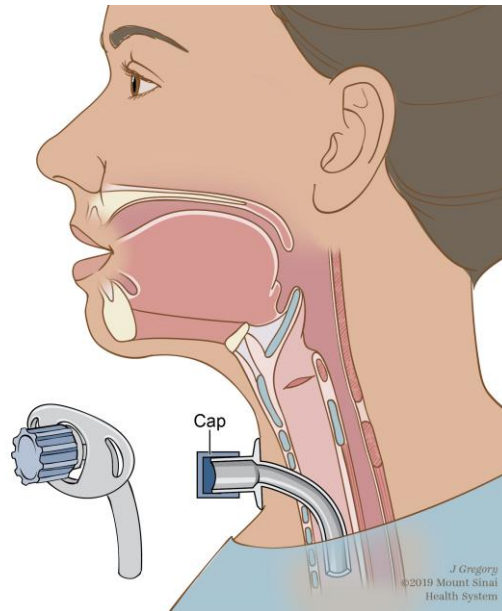


2. **Speaking valve (Passy-Muir Valve):** one way valve, which allows breathing in through the tracheostomy site and breathing out/speaking through the voice box



Removal of Tracheostomy

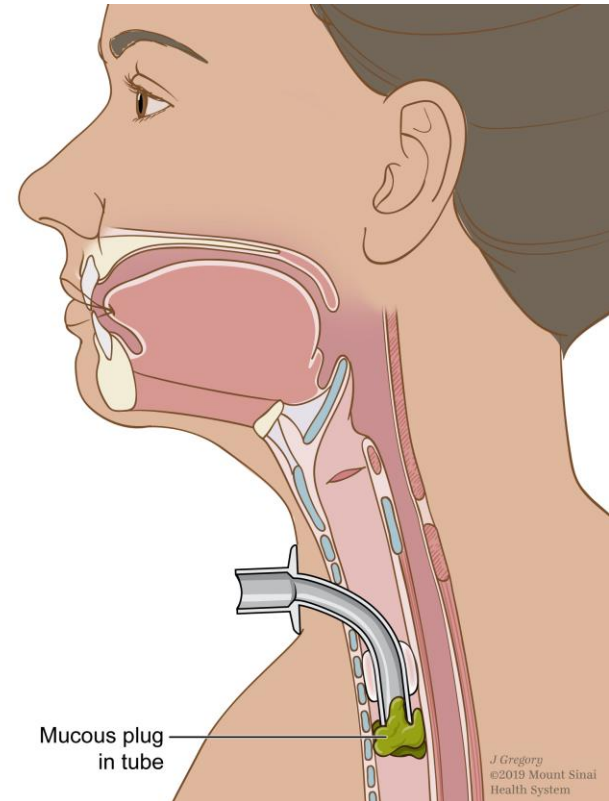
- **Capping trial (DO NOT TRY WITHOUT APPROVAL FROM DOCTOR):**
 - Speak with your doctor if you feel you no longer require your tracheostomy tube
 - During trial, you will test your ability to breath with the tracheostomy capped (blocking the tracheostomy).
 - If able to tolerate capping for 24-48 hours without need for cap removal, then it is possible the tracheostomy can be removed



Management of Common Complications

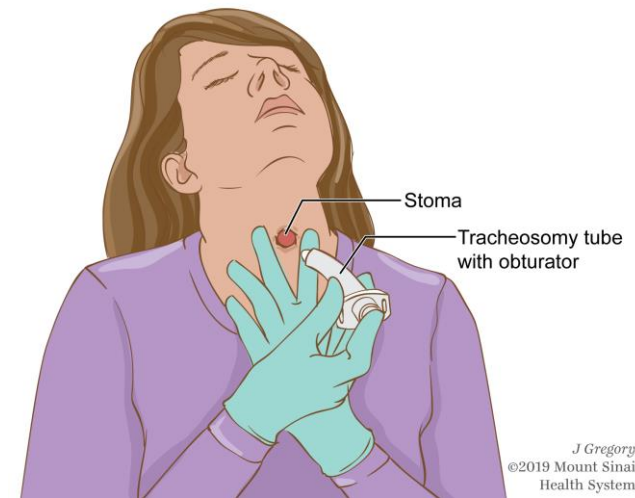
Difficulty Breathing

- A plug or partially plugged trach will make it hard to breath
 - Most often due to thickened secretions or crusting
- If this happens, try to stay calm and follow these steps:
 - Remove the inner cannula
 - Forcefully cough several times
 - Suction the tracheostomy
 - Forcefully cough again
 - Squirt saline into trach
 - Suction and cough again
- **If continue to have difficulty breathing, call 911**



Dislodged Tracheostomy

- By the time you leave the hospital, the tracheostomy stoma will be well formed and will not close immediately
- You can breathe through the stoma itself and try to replace the trach. Try to replace with the following steps:
 - Tilt your head back slightly to make the stoma hole more open
 - Remove the inner cannula and place the obturator inside the tracheostomy tube
 - Apply a small amount of lubricant or saline on the tip
 - Guide the tracheostomy tube back into the stoma
 - Hold the tracheostomy tube in place
 - Pull out the obturator, replace the inner cannula
 - Attach new tracheostomy ties
 - Note: if the tracheostomy will not go back in, try a small tracheostomy tube
- **Call 911 immediately if you cannot get the tube back into place or if you are having difficulty breathing**



When to call your doctor?

- **Bleeding from the tracheostomy**
- **Reddened or swollen skin around the stoma site**
- **More mucous than is usual, or if the mucous becomes yellow, green, or brown**
- **Foul-smelling mucous**
- **Fever of 101F or higher**

Video Demonstrations

- **Orientation to Tracheostomy Tubes:**

<https://www.youtube.com/watch?v=UePM5wr2rH8>

- **Tracheostomy cleaning:**

https://www.youtube.com/watch?v=xV27o__B6Is

- **Tracheostomy suctioning, managing mucous, and changing the inner cannula:**

<https://www.youtube.com/watch?v=nob7E5WkIMI>

- **Tracheostomy Tie Replacement:**

<https://www.youtube.com/watch?v=YRPoCffgwkg>

Tracheostomy Skills Checklist

RN teaching	Return demonstration	Return demonstration	Skill	Teaching complete
			Describe the type and parts of tracheostomy tube	
			Demonstrate ability to set up for trach care	
			Perform stoma site care	
			Describe potential problems, signs/symptoms	
			Clean/change inner cannula	
			Suctioning	
			Instill NS (if appropriate)	
			Change trach ties	
			Use of PMV or trach cap (if appropriate)	
			Humidification delivery, equipment care	
			Knows how to reinsert dislodged trach	
			When to call provider/when to call 911	

Tracheostomy Supplies Checklist

- Below is a list of supplies you may need at time of discharge. Confirm with the team that you have all the correct supplies for discharge.

Trach tube	Type:	Size:
Inner Cannula	Type:	Size:
Suction Catheter		Non-sterile cotton tip applicators
Size:		
Trach Mask		4x4 non-sterile gauze
Trach Ties		4x4 split gauze
Stationary Suction Canister		Lyof foam dressing
Portable Suction Machine		Trach brushes
Portable Suction Canister		Normal Saline (bottles)
Suction tubing (72 inch)		Saline fish
Yankeur		Sterile water (bottles)
Oxygen tubing		
Humidification system		
Heat Moisture Exchange (HME)		

Questions?