Tracheostomy Care and Emergencies

Tube parts and types, bedside equipment, routine care, speaking valves, the fresh trach, and the blocked, displaced or bleeding tube

ICU Basics
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WHAT YOU WILL DO

- Check the bedside equipment and the bedhead sign at the start of every shift, and before any transport.
- Know why and when the trach was placed (surgical or percutaneous), the tube type and size, and whether the mouth still connects to the lungs.
- Inspect and clean the inner cannula, keep the stoma clean and dry, check the ties, measure cuff pressure, humidify and suction.
- Spot the warning signs early and start the emergency steps while help is on the way.

KNOW THE TUBE

PART OR TYPE	WHAT IT DOES
Outer cannula	The tube that stays in the trachea
Inner cannula	Removable liner; pull it to clear a block. Some tubes need it in place to connect a bag or ventilator
Cuff and pilot balloon	Seals the trachea for positive pressure and limits aspiration
Obturator	Smooth-tipped guide used only to insert the tube; take it out at once afterward
Flange	Neck plate with the size printed on it; ties or holder attach here
Cuffed vs uncuffed	Cuffed for ventilation or aspiration risk; uncuffed when weaning toward removal
Fenestrated	Hole in the outer cannula so air reaches the voice box; use the solid inner cannula to suction or ventilate

AT EVERY TRACH BEDSIDE

- Spare tubes: same size and one size smaller, each with its obturator
- Spare inner cannula
- Working suction with the right size catheters
- Oxygen, bag-valve mask, and a face mask that fits the mouth and one for the stoma
- Syringe for the cuff and a cuff manometer
- Scissors or stitch cutter, lubricant, spare ties and dressings
- Bedhead sign: green for a trach (upper airway may be patent), pink/red for a laryngectomy (neck breather)
- Call bell and a way to communicate: the patient may not be able to speak

SAFETY The kit, suction and oxygen go with the patient everywhere: CT, lifts, other units.

ROUTINE CARE

TASK	HOW
Inner cannula	Remove and inspect at least every shift, more often with thick secretions; clean or replace, then lock it back in
Stoma	Clean and dry; pre-cut trach dressing only; look for redness, pus, pressure injury
Ties	Two people, one holding the flange the whole time; one finger fits under the ties
Cuff	20–30 cm H_2O by manometer each shift; rising air need = leak or displaced tube
Humidity	Always: HME, or heated humidifier for thick secretions or high flow
Suction	Preoxygenate; catheter under half the tube lumen; shallow to the tube tip first; deep only if shallow fails; below –200 mm Hg, 15 s or less

SAFETY Speaking valve or cap only with the cuff fully deflated, or an uncuffed tube. With the cuff up the patient cannot breathe out.

THE FRESH TRACH (FIRST WEEK)

For about the first 7 to 10 days the tract is not formed, especially after a percutaneous trach. A displaced tube can be pushed into the neck tissue instead of the trachea. The first tube change is done by the inserting team or a trained physician; you do not reinsert a fresh trach blind. Know what any stay sutures are for.

BLOCKED OR DISPLACED TUBE

1. Call for airway help and check the bedhead sign. Not breathing: code team; no pulse: CPR.
2. High-flow oxygen to the face and the stoma (stoma only for a laryngectomy). Capnography on the tube.
3. Take off the speaking valve or cap, then remove the inner cannula.
4. Pass a suction catheter. It passes: suction and reassess.
5. It will not pass: deflate the cuff, then look, listen and feel again.
6. Still not improving: remove the tube. Do not wait.
7. Oxygenate: bag-mask over mouth and nose with the stoma covered, or a small mask over the stoma.
8. The airway expert intubates from above or through the stoma.

CALL FOR HELP WHEN

- Noisy, whistling or labored breathing, falling SpO_2, loss of the CO_2 trace, rising airway pressures
- Voice or air at the mouth with the cuff up, or the cuff keeps needing more air
- The tube looks pulled out, moves, or a suction catheter will not pass
- Any fresh blood from the stoma or tube, a pulsating tube, or bleeding with each heartbeat
- New anxiety, agitation or confusion: think airway first

SAFETY A small bleed days to weeks after placement can be the warning bleed of a trachea-innominate fistula. Report it at once. In a major bleed, sit the patient up, call the emergency team, and do not deflate an inflated cuff: it may be holding pressure on the artery.

CHECK YOUR UNIT POLICY

Check your unit policy for who may change tubes and inner cannulas, the cleaning solution, suction pressure and pass time, cuff checks, speaking valve trials, the bedhead sign your hospital uses, and how to call the airway team.

Sources (11) are listed with links at icubasics.com/sheets/tracheostomy-care.html. For education and exam preparation only. Not medical advice; follow current guidelines and your institution's protocols. ICU Basics is an independent study aid not affiliated with any certifying body.