

TRACHEOSTOMY

What is it?

A tracheostomy is a surgical opening made in the front of the neck into the trachea, or windpipe. A short tube called a trach is placed into the opening called a stoma. The trach provides a stable airway and allows for secretions to be removed from the lungs. A child then breathes through the trach instead of through the nose and mouth.

What are the types/?

Tracheostomies vary in size and purpose. Parts of a tracheostomy include an obturator used for insertion, an outer cannula, and an inner cannula for adult size trachs only. Note that neonate and pediatric size trachs do not have an inner cannula because of their small size. Trachs can be metal or plastic, disposable or reusable. It is important to know specific type and parts of a student's tracheostomy.

Type, brand, size	Shiley (Adult, pediatric, neonate size) Bivona (Adult, pediatric, neonate size) Cuffed or Cuffless (note amount of water or air used)
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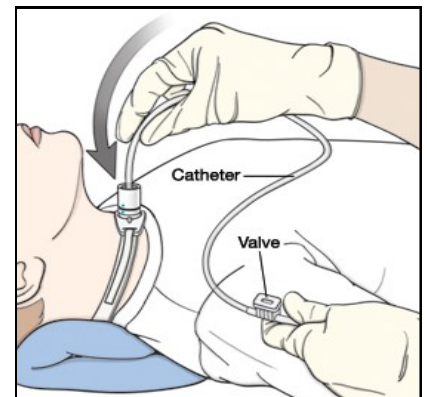
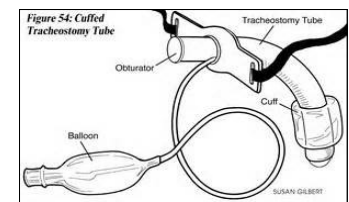
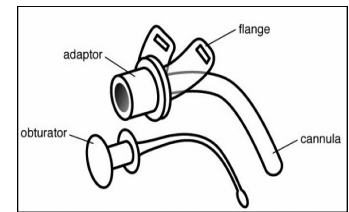
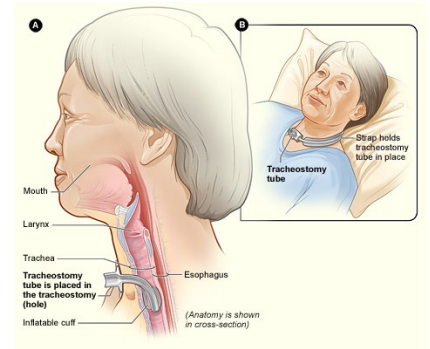
When do you suction?

Secretions, or mucous in the trach, can build up and thicken making it difficult to breath. Suctioning is a procedure used to help remove mucous from the airway. The student should be encouraged to cough and produce secretions to clear their airway when able. If tracheal suctioning is indicated, the suction depth (distance catheter to be inserted) is equal to the length of the tracheostomy itself. Do **NOT** suction by continuing to insert the catheter until the child coughs. This can cause airway trauma. The student should be suctioned per orders; at least once a shift or PRN based on symptoms.

Indications for suctioning	Difficulty breathing, fast breathing, high heart rate, decreased oxygen saturation
	Audible gurgling or visible bubbles in trach not cleared by cough
	Student complaints of chest or back rattling
	Skin is pale or blue; grayish color around eyes, nails, mouth
Respiratory distress	Working harder than normal to take a breath
	Decreased oxygen saturation
	Fast heart rate, rapid belly breathing
	Pale or bluish colored skin or fingernail beds
	Crying, irritability, restlessness

Helpful information

See SHNIC's Competency Checklist section for detailed procedure on "Tracheal Suctioning" and "Tracheostomy Replacement."



Kennedy Krieger Institute

The Specialized Health Needs Interagency Collaboration (SHNIC) program is a collaborative partnership between the Kennedy Krieger Institute and the Maryland State Department of Education.

What are other tracheostomy accessories I could see in school?

- HME (Heat moisture exchanger)** A filter that attaches to the end of the trach. It works as an artificial nose to warm and humidify the air entering the trach.
- Trach collar** A soft plastic mask that fits over the trach. Ordered for heated trach mist, or blow by oxygen to deliver humidified air or oxygen directly to the trach.
- PMV (Passy Muir Valve)** A one-way speech valve which allows air in, but not out. As the valve closes, air then moves around the trach and up through the vocal cords. The valve will twist on, and twist off. Speaking valves should be removed if there is difficulty breathing or if the child is asleep or eating. Speech therapy will normally establish a PMV protocol.

Emergency supplies	Spare trach and downsize trach
"To-Go" Bag	Water soluble lubricant or saline, gloves
	Scissors, tracheotomy ties
	Suction supplies including suction machine and suction catheters
	Ambu bag with proper connections (trach adaptor and face mask)

It is very important to establish a relationship with the student's private duty nurse (PDN). It may be beneficial for the PDN to stop in the health room each morning for the school nurse to complete a quick assessment of the student. A checklist can even be used to document that emergency supplies are accessible and ready to go.

Specific health issues for Individualized Healthcare Plan

- Medical diagnosis including reason for tracheostomy
- Baseline assessment including respiratory rate and pulse ox parameters
- Orders for trach type, size, and cuff size if applicable (i.e. milliliter amount of water or milliliter amount of air)
- Orders for suction catheter size and suction depth, when to suction
- Vent settings and/or oxygen orders when applicable
- Student's ability to assist with trach care (i.e., suctioning, trach change, mucous plugs)
- History of respiratory distress including signs and symptoms of distress specific to the student
- Activity limitations
- Skin assessment of the stoma and neck, including stoma skin care or dressings as ordered
- Communicate with school staff, parents, and provider any changes or concerns about the student's disease, procedure, or device
- Medical device information (*see SHNICs "Medical Device Information Guide"*)
- Consideration of team discussion for a possible 504/IEP and Emergency Evacuation Plan
- Emergency Care Plan (ECP) related to medical needs in the school setting and staff education/training as appropriate for each

Resources & Manuals

Children's Minnesota: Care at Home– Tracheostomy

<https://www.childremsmn.org/references/pfs/homecare/tracheostomy-a-guide-for-care-at-home.pdf>

American Association of Respiratory Care: A guide to aerosol delivery devices for respiratory therapists

<https://www.aarc.org/wp-content/uploads/2018/03/aersol-guides-for-rt.pdf>