

# TRACHEOSTOMY

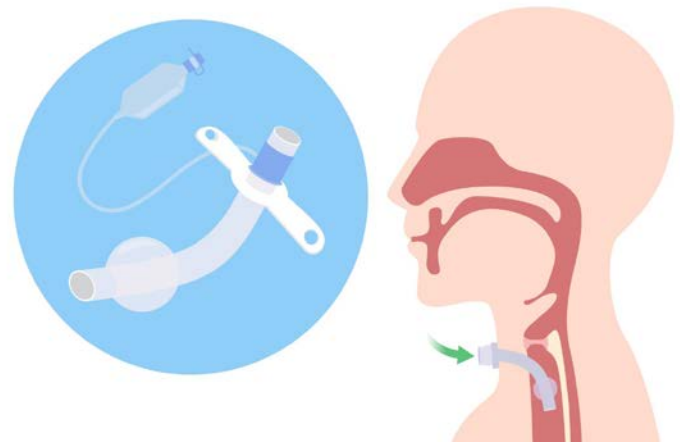
## Background

A tracheostomy is a surgical procedure to provide a stable artificial airway for breathing. An opening is made in the front of the neck into the trachea, or windpipe. A short tube called a tracheostomy tube is placed into the stoma. A child may have a tracheostomy related to an underlying condition or disease such as obstruction, muscle weakness, spinal cord injury, or brain injury. The trach tube can be suctioned to clear secretions from the airway and connected to supplemental oxygen and/or a mechanical ventilation for respiratory management necessary. The need for the tracheostomy may be temporary or permanent based on the diagnosis and child's progress.

Tracheostomy tubes will differ by brand, type, and size based on the child's size age, size and need. Most trach tubes will be made of plastic, silicone, or metal. Trach tubes have an outer cannula tube that acts as a permanent place keeper in the stoma. Larger sized trachs may also have an inner cannula that serves as a liner and can be removed, cleaned, or replaced as necessary. Tracheostomy tubes can also be cuffed or uncuffed. A cuff is a balloon-like part (inflated with water or air depending on the type) that acts as a seal. A cuffed trach is generally used for mechanical ventilation to prevent air leakage and to prevent leakage of fluids into the lungs. Extra humidity may be necessary to filter, warm, and moisten the air as the child breathes. A heat moisture exchanger (HME) or a trach collar can help keep mucous loose and prevent a plug. Both can also be used with supplemental oxygen as necessary.

Mucous in the trach must be removed to maintain patency of the airway. Tracheal suctioning should be performed based on symptoms, not a schedule, which may include difficulty breathing, decreased oxygenation, visible secretions in the airway, or coarse breath sounds. Frequent or excessive suctioning may contribute to increased tracheal secretions and risk of infection. Instillation of normal saline prior to suctioning is generally not considered a routine aspect of care and should only be used to help remove obstructive mucous. The appropriate depth to advance the suction catheter should be predetermined and only the amount of suction necessary to remove secretions effectively should be used.

Tracheostomy Tube



Planning for trach complications and emergencies is important. Complications include obstruction, accidental decannulation, bleeding, and infection. A student should have back-up tracheostomy supplies readily available, often referred to as an emergency tracheostomy “to-go” travel bag. Essential supplies should include *at least* two separate tracheostomy tubes: one the current order size (same size) and another one size smaller (downsize) in event there is difficulty replacing the current size in the stoma.

## Top Takeaways for School Considerations

The two most common tracheostomy emergency scenarios are accidental decannulation and tracheostomy tube obstruction (e.g., mucous plug).

An emergency tracheostomy “to-go” travel bag should always remain with the student. Maintaining a daily checklist of supplies (e.g., same size, downsize tracheostomy) can be helpful.

A suction machine should always remain charged and ready to use.

Supplemental oxygen could require specialized training for safe administration. Storage of oxygen may also need to be considered in the school setting.

It is important to understand the purpose and function of additional devices such as a speaking valve, cap, or ventilator.

## Kennedy Krieger Institute's Specialized Health Needs Interagency Collaboration

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



Kennedy Krieger Institute

## Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnosis of impaired gas exchange, ineffective airway clearance and risk for infection
- Current diagnosed health condition including date of diagnosis, progress of disease process and other chronic health conditions
- Current medication and treatment orders (consider schedule, equipment needs and side effects)
- Respiratory interventions and equipment needs (consider tracheostomy brand/size and downsize, suctioning brand/size, frequency of suctioning, ventilator brand, and settings); note location of suctioning, use of private duty nursing if applicable
- Use of specialized equipment, adaptive equipment, and orthotics
- Activity, positioning, transferring (consider precautions and/or restrictions)
- Equipment troubleshooting (consider equipment/device user manual, battery, charger)
- Consider emergency care plan(s) (ECP) and emergency evacuation plan(s) (EEP) as related to medical needs in the school setting, and staff education/training, as appropriate

## Discussion Starters for Educational Team

1. Has the school staff been trained to implement the student-specific emergency plan?
2. Would the student benefit from any of the following evaluations or assessments: physical therapy, occupational therapy, speech and language, assistive technology, adapted physical education, functional behavioral, psychological, hearing and vision?
3. Does the student need additional adult support to access the academic curriculum in the least restrictive environment?
4. Does the classroom environment support the student's needs and/or equipment (e.g., desk/seating options, maneuverability space, electrical outlets, flash pass for bathroom or nurse)?

## Resources

Children's Minnesota: Care at Home- Tracheostomy  
[childrensmn.org/references/pfs/homecare/tracheostomy-a-guide-for-care-at-home.pdf](http://childrensmn.org/references/pfs/homecare/tracheostomy-a-guide-for-care-at-home.pdf)

Children's Healthcare of Atlanta: Tracheostomy Care  
[choa.org/~media/files/Childrens/medical-professionals/nursing-resources/school-trach-care\\_cne-final.pdf](http://choa.org/~media/files/Childrens/medical-professionals/nursing-resources/school-trach-care_cne-final.pdf)



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