

TRACHEOSTOMY PLACEMENT AND CARE

Your physician is asking you to consider a tracheostomy for your child.

What is a tracheostomy (trach) tube?

A tracheostomy tube is a plastic tube placed into the trachea to provide an alternate route for breathing. Typically when we breathe, we pull air into our nose. The nose serves to warm, humidify (add moisture to) and filter the air. This route needs to be bypassed for different reasons. Tracheostomy tubes come in a variety of sizes and shapes. Your doctor will determine which size and type is best for your child.

Tracheostomies are placed by Otolaryngologists (ENT surgeons). It requires being admitted to the hospital, administration of general anesthesia and then surgical placement of the tube through an incision into the trachea. The ENT doctor needs to evaluate your child in their office prior to the surgery and may perform a bronchoscopy (examination of the airway) prior to consideration of the surgery.

Why does my child need a tracheostomy tube?

There are many different reasons why children and adults need trachs. Some of the more common reasons include: the need for mechanical ventilation, severe airway obstruction and difficulty managing secretions. Your doctor should have gone over the reasons they recommended the procedure and if there are any alternative treatment options.

Is the tube permanent?

There are times when the tube is placed on a temporary basis, but this is not very common in children. Please make sure you understand how long the tube will need to remain in before proceeding with the surgery.

What happens to breathing?

Because air is no longer able to go through the usual route (nose and throat), it is not being warmed, humidified or filtered. We will need to do these things with special equipment.

Humidification can be delivered with a mask that sits over the trach and delivers humidified air. Most children will require humidification at night with sleep.

The tracheostomy is a direct opening into the lungs. It is important to make sure water, food, drinks or other foreign materials do not enter the trach tube.

Caretakers

Your child needs someone with him or her at all times who is thoroughly knowledgeable about trach care including changing or replacing the tube if it becomes obstructed or falls out. The hospital policy requires that there is a primary caretaker

trained on trach care as well as a back-up person who will accept responsibility for this care. It should be someone who lives close to the child. Schools and other facilities have their own policies about who can and should provide care for children with trachs. You should explore all of this before making a decision about tracheostomy placement,

Learning how to care for the tracheostomy tube is an extensive process. It will start during the hospital stay by video and hands on instruction by the nursing and respiratory therapy staff.

After the trach is placed, the site needs to heal for 5-7 days before the tube can be changed. During this time, some children require sedation to keep still others do not. Immediately after the tracheostomy is placed all children initially go to the Pediatric Intensive Care Unit (PICU). When your child is stable they will be transferred to the Intermediate Care Unit (IMU).

The very first trach change needs to be done by the ENT surgeon but afterwards you will be asked to perform the task as part of the teaching. You will also learn how to clean and care for the trach site (skin around the trach and under the ties that keep the trach in place). Both primary and back-up caregivers need to demonstrate ability to change and care for the trach. This requires both persons to spend time at the bedside training and demonstrating knowledge. In addition, before being cleared for discharge, you will be asked to perform a "8 hour pass" where you will be independently responsible for all of your child's care while he/she is still in the hospital. Staff will be available should problems arise, but all cares need to be performed by you.

Who will help at home?

Typically once a child has a trach, they become eligible for some amount of in home nursing support. This varies with insurance but is typically 8-16 hours per day. Families usually request nighttime support so they can sleep. However it can usually be adjusted to suit your family's needs. Even if you are eligible for nursing support, there may be times when nurses are not available (due to staffing issues or sudden illness). You should expect this to happen periodically and need to be able to care for your child during these times.

Can my child still eat and drink?

If your child was eating and drinking by mouth prior to the trach, they should be able to resume this after the trach is placed. Sometimes there are changes in swallowing dynamics that require adjusting to but it is rare that this cannot be overcome in a short time.

Can my child still talk/vocalize?

When we talk or make sounds, it requires air to go through the voice box. When the trach is placed, most of the air bypasses the voice box however there is usually still some amount of air that goes around the trach tube and can pass through the voice box. A lot of this depends on the size/age of the child and the size of the trach tube. All trach tubes should fit easily into the airway with some space around the tube. With young children and infants there is frequently less space than with older kids and adults. Also, if you need mechanical ventilation, it may require a more "fitted" trach than if you do not need mechanical ventilation. Our goal is to have your child with the smallest trach they need. There are also speaking valves that can be placed over the trach to make speech and vocalization easier.

Suctioning?

All children and adults with trachs will need some amount of suctioning. This will be taught to you in the hospital after the tube is placed. The frequency of suctioning varies greatly from patient to patient and will increase with colds and infections. Normally we cough when we have to clear secretions from our lungs and there are also cilia ("hair like" structures) that help clear pollution and mucus out of our lungs. The tracheostomy tube can get in the way of some of our normal secretion clearance mechanisms and so suctioning is needed. You will get to know what the usual "baseline" suctioning requirements are for your child. It is important to know this because changes in baseline can be a sign of infection. Increased frequency of suctioning requirements and changes in color of secretions are common signs of tracheitis (infection of the trachea). Usually these infections stay confined to the area exposed to the tracheostomy tube and do not extend into the lung. There may or may not be fevers with these infections. These infections are usually treated with oral antibiotics although inhaled or intravenous antibiotics are also used at times.

From time to time your physician may order a trach culture. This is so we know what types of bacteria may be causing the infection. It is normal to have some bacteria at all times when you have a tracheostomy tube but when your child is well they are colonized (bacteria is there but in low levels and not causing problems). If your child becomes sick with a cold or picks up a virus (common in the fall and winter months) this can be a time when the bacteria will multiply and actually cause an infection that needs to be treated. Again the symptoms of this are typically color changes in secretions and increased frequency of suctioning needs. Secretions can also change depending on environmental exposures, humidity and weather changes and infections. These are different for every child and this is something you will get to know over time as you care for your child.

Common problems

Plugs can occur because of increased mucus or if the mucus becomes thicker (usually from lack of humidity). Sometimes this can be treated with suctioning. If suctioning alone does not work the trach should be replaced and humidity may need to be increased.

What if it falls out?

It is not uncommon for trachs to fall out or get pulled out. It should be replaced as soon as it happens. Sometimes the opening starts to close up rapidly and the trach cannot be replaced. If you have a smaller trach available you should try to use the smaller tube. If you cannot replace the trach you should call 911 or bring your child to the emergency room immediately. The tube can usually be replaced by inserting a smaller tube and gradually stretching the opening back up to be able to put the original size tube back in. It is very rare to require a surgery to replace the tube.

If you would like to read more about tracheostomy care, please see the official statement published by the American Thoracic Society, Care of the Child with a Chronic Tracheostomy at this link: <http://ajrccm.atsjournals.org/cgi/reprint/161/1/297>