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Tracheostomy

What is a tracheostomy?

A tracheostomy (tray-kee-ah-stoh-mee, or “trach,”) is a surgical opening made in the front of the neck into the trachea (tray-kee-ah), or windpipe. A special soft tube called a tracheostomy tube is placed in this opening to help your child breathe. The tube does not reach into the lungs.

Reasons for a Tracheostomy

Airway Problems That May Require a Tracheostomy

- Tumors, such as Cystic Hygroma, & Tracheal Hemangioma
- Infection, such as Epiglottitis
- Subglottic Stenosis / Tracheomalacia
- Bilateral Vocal Cord Paralysis, Laryngeal injury or spasms
- Congenital abnormalities of the airway such as Pierre Robin Syndromes & Treacher Collins
- Large tongue or small jaw that blocks airway (some children with severe Cerebral Palsy)
- Trauma with severe neck or mouth injuries
- Airway burns from inhalation of corrosive material, smoke or steam
- Obstructive sleep apnea
- Severe foreign body obstruction

Lung Problems That May Require a Tracheostomy

- Need for prolonged respiratory support, such as Bronchopulmonary Dysplasia (BPD)
- Chronic pulmonary disease to reduce anatomic dead space
- Chest wall injury
- Diaphragm dysfunction

Other Reasons for a Tracheostomy

- Neuromuscular diseases paralyzing or weakening chest muscles and diaphragm
- Aspiration related to muscle or sensory problems in the throat
- Fracture of cervical vertebrae with spinal cord injury
- Long-term unconsciousness or coma
- Disorders of respiratory control such as Congenital Central Hypoventilation or Central Apnea
- Facial surgery and facial burns
- Anaphylaxis (severe allergic reaction)
Your child’s surgeon will explain the tracheostomy operation in detail, discuss any worries you may have and ask you to sign a consent form. The operation will be carried out under a general anesthetic.

Your child will stay in the hospital for a minimum of two weeks after the operation to ensure that you and your family can learn the necessary skills to care for your child’s tracheostomy at home.

We, at Miller Children’s Hospital Long Beach, will be here to support you throughout your stay.

For a few days after surgery it is normal to have some bleeding around or inside the stoma (stow-ma), the opening in the neck. There will be stitches on each side of the stoma, to keep the stoma open in case the tube comes out or needs changing.

### The First 14 Days:

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**Complete Patient Education**

- 24-hour stay complete care of your child (nursing, respiratory back up)
Family Education Should Have a Maximum of 2 Caregivers

Your child has had a tracheostomy tube placed. Many parents have fears and concerns about caring for their child with a tracheostomy. The staff recognizes that these are normal feelings and the nurses and respiratory therapists will teach you what you need to know to care for your child at home. This handbook, the video and your practice sessions with the nurses and respiratory therapists will help you learn how to care for your child. Please read this booklet. The nurses and respiratory therapists will use it when they are teaching you. Please bring it with you each time you visit. Write down any questions you may have and discuss them with your doctor, nurse or respiratory therapist. For your convenience, there is a section for notes and questions at the back of this booklet.

Your Education will include:

- Cleaning and caring for the trach
- How to use the home care equipment
- Assessing your child’s health
- When to call the doctor
- Emergency procedures/problem solving the tracheostomy and CPR for a child with a trach
- Special considerations for family life

Some tasks must be done several times a day, others several times a week. Being well organized and following a schedule is important. There are many details to learn, but the tasks will get easier as you become used to them. We want you to feel comfortable doing these procedures before you take your child home.
What is a tracheostomy (trach)?

A tracheostomy is an opening (incision) made directly into the neck area where the windpipe (trachea) is located. This allows air movement in and out of the lungs when there is a blockage to the normal air movement. Normal air movement from the nose and mouth into the lungs can be blocked for many reasons, such as paralyzed vocal cords, narrowing of the windpipe or extra tissue growth, as well as some conditions present at birth. Your nurse or doctor can explain more clearly why your child needs a tracheostomy.

What is a trach tube?

A tracheostomy (trach) tube is made of either metal, soft plastic-like material or silicone. It is shaped in the natural curvature of the windpipe (trachea). Trach tubes vary in size and type, depending on your child’s age and size. Some tracheostomy tubes have an outer cannula (which stays in the neck to keep the hole open) and an inner cannula (which is within the outer cannula). The trach tube is placed into an opening made by a small incision into the windpipe (trachea). The tube keeps the windpipe open and allows your child to breathe easier.

How is breathing different with a trach?

Normally, when you breathe, air goes into the nose and passes through tiny hairs. As the air moves to the back of the throat, it picks up heat and moisture from the mucus membranes. When breathing through a trach, air goes directly into the windpipe, bypassing the normal filtering, warming and humidifying process. The esophagus or food pipe is behind the trachea or windpipe and is a separate tube.
Development & Communication

Development of A Child With A Trach

Your child is different from other children only in the way he/she breathes and can make sounds. It is important to treat your child as you would any other child.

Communication

One difference your child will experience when breathing through a trach tube is that the air does not go through the vocal cords. This changes your child's ability to talk or cry. At first, your child will probably not be able to talk or make a crying noise. An older child will learn to block off the trach tube and talk or make noise. Some children learn to move air around the trach tube and make noise. There are also devices (such as a speaking valve) available that may be attached to the trach, which can allow the child to make noises and talk. You can discuss this with your doctor, nurse, respiratory or speech therapist.

There are many benefits to a speaking valve.

- Communication (speech or non-speech)
- Improved swallowing, which may decrease aspiration
- Improved smell & taste
- Improved cough

However, it is very important to treat your child as you would normally and encourage language development. You should do the following:

- Talk to him/her and explain new things
- Read stories to your child
- Show, name and explain pictures and activities to your child

Since it is impossible to remain with your child at all times and you are concerned about hearing your child, especially at night, the following may help:

- Portable intercoms can be bought at electronic and/or toy stores. These allow you to be in a different room from your child and still hear him/her.
- Give a young child picture cards for communication. An older child can use a pad and pencil to communicate.
Helpful Tips for Daily Care

Parents often have concerns about activities such as bathing and feeding now that their child has a tracheostomy. This section will describe daily care. Please ask questions and/or discuss any of your concerns with the nurse or your doctor.

Feeding your infant
Feed your baby just as you would if he/she did not have the trach. Your baby's sense of smell is decreased when breathing through a trach and he/she may not be very eager to eat at first. Burp your infant well and place your child on his/her right side after feeding.

Never prop a bottle for a child with a trach. Do not let your infant sleep with a bottle in his/her mouth. Do not let an infant have a bottle unless you can be there in case choking occurs. Be careful not to let formula drip into the trach. A bib may be used to help cover the trach as long as it does not have a plastic backing and is not interfering with your infants breathing.

If your baby vomits, turn his/her head to the side, away from the trach opening. If you think something has gone into the trach opening, suction the trach immediately.

Feeding Older Children
Your child with a trach should eat a well balanced diet. Give your child plenty of water to drink unless otherwise directed by your doctor. This will help keep secretions moist.

If choking or vomiting occurs, help your child lean over with his/her head down or turn his/her head away from the trach opening. If food or liquid comes through the trach, or you think something has gone into the trach opening, suction the trach immediately.
Bathing

You can bathe your child in a tub. Be sure to keep the water shallow and do not allow water to get into the trach. If you think water has gotten into the trach, suction immediately.

- **Do not** put your child into a shower.
- **Do not** leave your child alone in a bathtub or near any water, such as a swimming pool, lake, etc.
- **Do not** use talcum and baby powders on your child.

Dental Hygiene

Mouth care begins around six months of age or when your child gets his/her first teeth. Clean inside your baby’s mouth with a clean, wet cloth twice a day. When your child is 1 1/2 years old, start using a soft toothbrush after each meal. Your child should see the dentist when he/she reaches three years old. Your dentist can give you further information about dental or mouth care at that time.

Clothing and Bedding

You do not need to buy special clothing for your child. When buying clothes, avoid those with high, tight necklines, which cover the trach opening. Also avoid necklaces, strings, fuzzy clothing, fuzzy blankets and fuzzy stuffed animals. Tiny beads or fibers from these items can get into the trach and make it hard for the child to breathe.

To prevent blocking the trach with clothes or bedding, a trach guard can be used (a trach guard is always blue in color and is placed on the trach).
Housework

When you do housework which requires a machine that makes noise, (for example, vacuuming) have your child within sight or if possible, have someone else in the house. The sound from the machine may mask noise from the child or from an alarm on the monitor, if your child has one.

Safety

- Keep emergency phone numbers by the phone and a copy with you at all times.
- Keep a flashlight handy in case of power failure.
- No one should smoke in your child’s home or when around them (smoke is very irritating to the lungs).
- Keep immunizations up to date.
- Do not burn incense or use scented candles.
- Do not use aerosol sprays, powders, chlorine bleach or ammonia around your child (the fumes can be very irritating to the lungs).
- You and your child can have pets, however, be careful to keep the home clean of any animal hair. These fine hairs can get into the child's trach. In general, the pet should not sleep with your child or on his bed.
- Keep the home as clean and lint/dust free as possible.
Play

- Encourage normal play activities for your child's age.
- Avoid fuzzy toys.
- Remove any small or removable parts from the toys or play area. Your child should be supervised so that his/her playmates do not touch, pull on or put anything into the trach tube.
- Outside play should be encouraged. On cold or windy days, cover the trach tube loosely with a disposable mask or clean 100% cotton scarf.
- Place a horn on the child's bicycle so they can alert people of their presence.
- Your child should avoid contact sports such as football or soccer.
- Your child should not play in sandboxes.
- Talk to your doctor about swimming. Some older children who can plug his/her trach during the day are able to swim; but in general, children with trachs should not be allowed to participate in water activities such as swimming or boating. Younger children should not be allowed to play around swimming pools, lakes, etc.

Babysitters

A child with a trach needs to be watched closely, however, parents need to have time alone. Plan to have another person come to the hospital with you to learn your child's care. Anyone who takes care of your child must be as experienced as you are in his/her trach care. This includes:

- CPR
- Suctioning
- Replacing trach tube
- Apnea monitoring
- Any breathing problems your child may be having
When to Call the Doctor

- When your child has a fever over 101°F.
- You have already changed the tracheostomy tube and:
  - The child is still having difficulty breathing even while sitting quietly.
  - Your child’s breathing pattern changes.
  - The skin below your child’s ribs, around your child’s trach and below your child’s sternum (breastbone) pulls in (retractions).
  - Your child’s lips or nail beds become darker or dusky (blue or gray).

- If there is a change in secretions. These might include:
  - Increased amount of secretions, this would require more suctioning.
  - Change in color.
  - Change in smell.
  - Consistency alters.
- If there are streaks of blood in the mucus.
- Difficulty with a routine trach tube change.
- If there is a rash, drainage or unusual odor around the trach opening.

Problem solving, emergency procedures and cardiopulmonary resuscitation are outlined on following pages.

Note: Color change to your child’s lips and nail beds can mean something is wrong with your child’s breathing.

If lips and nail beds are blue, increase oxygen if immediately available, and call 911.
Care of Your Child with a Tracheostomy

There are two major concerns or events that can occur in a child with a tracheostomy and require immediate attention and action. These are:

- Plugging/blockage of the tracheostomy tube
- The tracheostomy tube accidentally comes out

During your child’s hospitalization, the nurses and respiratory therapists will be instructing you on how to care for your child and what to do if one of the events should occur.

To prevent blockage or plugging of the tracheostomy tube, the following are important to learn about and be able to perform or provide for your child.

- Suctioning of the tracheostomy tube
- Humidification
- Maintaining adequate fluids in child’s diet

Humidification

A mist collar or vaporizer may be ordered by the doctor for your child to use at night. Infants may need this during naps also. If humidification has been ordered for night, it is important to use so as to prevent plugging of the tracheostomy tube. A humidifier may also be needed when the air is very dry such as when the heater or air conditioner is being used or during the "Santa Ana Winds." The nurse, doctor or respiratory therapist will talk with you about an “artificial nose” which can be attached to the tracheostomy tube during the day to help keep the airway moist. You may also be able to use normal saline drops in the tracheostomy during the day to help keep secretions moist.

Photo courtesy of Jodi Audino
Suctioning the Trach Tube

The purpose of suctioning is to remove mucus from your child’s trach tube and windpipe. Some parents feel afraid or uncomfortable when they are learning to suction for their child. Remember, you are not hurting your child. You are clearing the airway, helping him/her to breathe.

Your child should be suctioned whenever any of the following occur:

- There are bubbles of secretions at the trach opening
- His/her breathing sounds "rattled, noisy or congested"
- The child becomes restless and cannot be calmed by cuddling or rocking
- The child may look frightened or anxious
- The color around the mouth may turn pale, blue or dusky
- An infant may have difficulty sucking
- When you touch your child’s chest and back with the flat of your hand, you may feel a "rattling" or vibration

Types of Suctioning

Shallow suctioning describes the insertion of a catheter just into the hub of the tracheostomy tube so that secretions the child has coughed into the opening of the tracheostomy tube can be removed.

Premeasured technique involves the use of a catheter with side holes close to the distal end (0.5 cm or less) of the catheter tube; the catheter is inserted to a premeasured depth, with the most distal side holes just exiting the tip of the tracheostomy tube. Exact depth of insertion in the premeasured technique is critical to avoid epithelial damage (if inserted too deeply) or inadequate suctioning at the tip of the tracheostomy tube (if not inserted deeply enough). A tracheostomy tube, the same size as the one in the child, may be used to measure the exact depth to which the catheter should be inserted. Pre-marked catheters are also helpful in assuring accurate insertion depth.

To suction your child, you will need:

- Suction machine with connecting tubing
- Suction catheter
- Bottled water
- Paper cup
- Sterile saline for suctioning
- Resuscitation bag
- Non-sterile gloves (optional)
How to Suction a Trach

1. Wash your hands.

2. Position infant lying on back with towel roll under the shoulders. For an older child, he/she can lay on their back with "chin up."

3. Turn machine on and check suction. The suction should not exceed 80-100 mm of mercury.

4. Pour sterile water into paper cup.

5. Open suction catheter wrapper.
   - If you use gloves for suctioning, put them on.

6. Connect suction catheter to suction tubing. Be careful not to touch the tip of the catheter.

7. Instill a few drops of sterile saline into the trach. Allow your child to take a few breaths.

8. Insert catheter to pre-determined depth.

9. Place thumb over the port to apply suction.

10. Pull back on catheter while twirling the catheter between your thumb and index finger.

11. Rinse mucus out of the catheter by suctioning some sterile water out of the paper cup.

12. Let your child take a few breaths between suctioning attempts.

13. Repeat the steps as needed.

14. If you will be reusing the catheter, rinse it well after suctioning (step 12) and replace it in the wrapper.

15. Empty the suction container as directed.

16. Some parents find a Bulb (ear syringe), is a fast and easy way of clearing mucus that is coughed up from the trach, or mucus that is just on the side of the trach.
   - Be sure to examine the color, amount, consistency and smell of your child’s secretions. Follow directions for "When to Call the Doctor" if the secretions are changing.
   - If you are using paper cups, use them only one time and then throw them away.
Maintaining Adequate Fluids
Depending on your child’s condition, it is important to maintain adequate intake of fluids in your child’s diet to help keep secretions moist. If your child develops a fever, has a respiratory tract infection, is vomiting or has diarrhea you should look for signs of dehydration. Notify the doctor if you should notice any of these signs.

Changing the Trach Tube
Before your child leaves the hospital, you will be taught how to change the trach tube. You should change the trach tube every day unless directed differently by your doctor. It is very important that you become comfortable with changing the trach tube, so that you will be prepared if an emergency arises with your child’s trach.

To change the trach tube you will need:
- Clean trach tube with obturator (guide)
- Suction set-up and saline
- Trach ties or Velcro collar
- Resuscitation bag
- Gauze, if used
- Rounded tip scissors
- Towel roll
- Warm, wet washcloth
- Clean, dry towel
- Oxygen source (optional)

Change the trach tube ties (using twill tape)
1. Measure and cut a piece of tie long enough to go around your child’s neck twice. Cut the tie at an angle so it is easier to insert the tie into the neck plate.
2. Untie one side of the old ties and remove that side from the neck plate. Do not completely remove the old ties until the new one is in place and is securely fastened.
3. Holding the trach tube in place, lace the tie through one hole of the neck plate and around the back of your child’s neck, through the other hole of neck plate and again around the back of your child’s neck.
4. Pull the tie snugly and tie a square knot on the side of your child’s neck. There should be enough space for no more than two fingers between the tie and your neck.
5. Cut, remove and discard the old tie. If you have a cuffed trach tube, be careful not to cut the cuff balloon when removing the old trach tube tie.
Changing the Tracheostomy Tube

This is a two-person procedure. Unless it is an emergency, try to wait to change the trach tube until well after the child has eaten (1-2 hours), or right before a meal or feeding.

1. Gather supplies and wash your hands thoroughly.
2. Position infant lying on back with towel roll under the shoulders. For an older child, he/she can lay on their back with their "chin up."
3. Prepare clean trach by threading trach ties or Velcro® collar ends through wings on trach tube. Check that the obturator comes out easily.
4. Suction if needed.
5. Cut or unfasten trach ties and have helper hold trach in place.
6. Examine skin under trach ties. Clean neck with warm, wet washcloth and dry thoroughly.
7. When ready, pull out dirty trach tube.*
8. Look at the stoma site for color, drainage, bleeding or tissue build-up.**
9. Gently wipe stoma with warm, wet washcloth.
10. Insert the clean trach tube using your "dominant" hand. Remove obturator immediately. While changing the trach tube, the less dominant hand is used to "stabilize" the trach opening. Gently stretch the skin around the trach opening upward toward the chin and downward toward the belly. This will help keep the trach opening visible.
11. Have your helper hold trach in place while you secure trach ties or collar around neck.
12. ALWAYS tie tape in a knot (no bows) and tie on the side of the neck.
13. Suction or "bag" as needed.***
15. Be sure to re-check trach ties in one hour since they may loosen from stretching.

*If succioning is needed while the trach tube is out, it is okay to succion directly into the trach opening without the trach tube in place.
**If your child requires oxygen, your helper should direct the oxygen source as close to the trach opening as possible during this procedure.
***A small amount of blood-tinged mucus can be normal after a trach tube change. If this persists, notify your doctor.

Be sure to place two fingers under the trach tie to ensure that it is not too loose or tight.
Cleaning the Trach Tube

To clean the trach tube you will need:

- Hydrogen peroxide
- Sterile water
- Clean container or paper cup
- Paper towels
- Clean gloves (optional)
- Cotton tipped applicators (optional)
- Trach tube and obturator
- Sink with running water

How to clean the trach tube:

1. Wash your hands.
2. With a paper towel, clean the outside of the trach tube and get any outside mucus off. Fill a paper cup or other small container one half full with hydrogen peroxide and one half with sterile water.
3. Place trach tube and obturator in container.
4. "Swish" tube in solution. Use the obturator to "brush" the inside of the tube free of mucus. If the mucus is hard to remove, you may want to use the cotton tipped applicators. You may want to use gloves when using hydrogen peroxide; it can dry your skin.
5. Hold the tube up to light and straighten gently to look through it for any residual mucus. Continue to clean as needed.
6. Rinse obturator and tube with sterile water. Dry the tube as much as possible with clean, dry paper towels.
   a. Place the tube in a clean, dry container and allow to air dry completely
   b. The trach tube will now be ready to use whenever needed
   c. Be sure to place the date to discard the trach tube on the container each month
7. If there is a build up of mucus inside the trach tube, when you change it, you may need to use normal saline drops more often. Before suctioning, use mist more often or encourage your child to drink more fluids unless otherwise ordered by your doctor.
Care of Skin Around the Trach and Neck

The skin around the trach stoma and neck should be kept clean and dry. It is almost impossible to clean the neck and stoma and NOT get the trach ties wet. Wet trach ties can irritate the skin around your child’s neck. For that reason, we recommend that skin care be done with a trach tie change. Skin care should be done at least once every day. Most parents find it easiest to do skin care when the trach tube is changed or at bath time.

**Items you need for your child’s skin care**
- Clean wash cloth moistened with warm, plain water
- Clean dry towel
- New trach ties - when changing ties
- Cotton tipped applicators (optional)
- Container of sterile water
- Pink foam curlers (optional)
- Gauze dressing (optional)

**Steps to Care For Your Child’s Skin**

1. Wash your hands.
2. Cut the trach ties while your helper holds the trach tube in place.
3. Check the skin around the neck for redness, irritation, bleeding or drainage. If you notice these signs, place pink foam curlers under the ties around the neck (remove plastic insert from curler, cut one side lengthwise and then wrap around trach ties). You should plan to clean the skin more often during the day until the skin improves.
4. Wash the skin around the neck with the wet wash cloth.
5. Dry the skin around the neck thoroughly with the towel.
6. If needed, clean the skin around the trach tube with cotton tipped applicators dipped in sterile water.
7. Change the trach ties as previously described.
8. If you are using a gauze dressing around/under the trach tube, change it after doing skin care and when it is wet or soiled.

**Do not** put powder around the trach stoma.

**Do not** use soap as this can irritate the skin if not removed completely from the skin or should get into the trach.

**Do not** use ointment around the trach tube unless it is prescribed by your doctor.
Home Care
Several days before your child comes home from the hospital, you should arrange to get supplies and prepare your child’s room. These are supplies you should buy from the market or drug store:

- Hydrogen peroxide
- 3-prong grounded plug adapters
- Flashlight with extra batteries
- Pink foam curlers, medium size
- Sterile water-soluble lubricant (K-Y Jelly®)
- Cotton tipped applicators (Q-tips®)
- Rounded tipped scissors

Travel
This requires organization and planning ahead. Be sure to take enough supplies for the length of time you will be gone. It is helpful to have everything ready in a diaper bag or small travel bag. When you take your child out of the house to run errands or go to the doctor, be sure to take along the following:

- Portable suction
- Emergency suction back-up (feeding tube and syringe or bulb syringe)
- Suction catheters
- Saline flush
- Clean trach with fresh trach ties already in place (the doctor may send you home with a smaller size in case the child’s normal size trach won’t go in).
- Small rounded tipped scissors
- Small tube or package of K-Y Jelly®
- Resuscitation bag
- List of emergency phone numbers

For overnight or longer trips, be sure to plan ahead and take enough supplies for the length of time you will be gone. Airplane travel should be discussed with your child’s doctor. If your child requires oxygen, the airline should be contacted when reservations are ordered (each airline has different policies regarding oxygen).
CPR and Rescue Breathing with Tracheostomy

Cardiopulmonary Resuscitation (CPR), if in doubt change it out (the trach)
Adaptations to techniques used in basic performance of CPR in infants and children will be necessary for you to learn before your child is discharged home. The main cause for cardio-respiratory arrest in children is due to a lack of oxygen from a blocked airway. Because your child has an artificial airway (tracheostomy tube), it is extremely important to keep the airway open.

The following are possible complications that will require immediate attention as they can lead to an airway problem:
- Mucus plug in the tracheostomy tube
- Dislodgment of the tracheostomy tube
- Foreign object in the tracheostomy tube
- Certain position changes that can block the airway or tracheostomy tube

If the Trach tube will not go back in:
1. **Use water-soluble jelly** to lubricate the new/clean trach.
2. Using two fingers to pull sides of stoma apart to better visualize stoma
3. **Using a suction catheter as guide** (in place of obturator)
   - Place suction catheter into new/clean trach
   - Suction catheter should extend out the end of trach by a couple of inches
   - Tip of catheter is placed into stoma about one inch
   - Holding other end of catheter, slide trach over catheter and push into stoma using catheter as a guide (it will probably require more pressure than normal)
   - Once trach is in stoma, immediately remove catheter
4. **Use smaller size trach if available**
5. If no distress, contact your doctor immediately
6. If the child is in distress call 911, and continue to give extra oxygen if ordered by doctor.

Figure 56: Tracheostomy Tube Placement

- a. Insertion of suction catheter through tracheostomy tube
- b. Insertion of suction catheter through stoma into airway
- c. Placement of tracheostomy tube in airway
- d. Tracheostomy tube in airway

Photo courtesy of Susan Gilbert
CPR with a Tracheostomy

Anyone responsible for the care of a child with a tracheostomy (including parents, school nurses and home health care providers) should be able to assess and maintain airway patency (open or unobstructed airway) and provide rescue breathing and bag mask ventilation through the artificial airway.

- If your child has difficulty breathing (very fast or hard breathing, very pale or blue skin, sweating, squeaky, or whistling noise from tracheostomy tube):
  - Suction the tracheostomy tube at once
  - Replace the tracheostomy tube if:
    - A tube comes out
    - The tube is blocked with mucus
    - Your child’s breathing does not improve with suctioning
    - If the trach has an inner cannula, remove the inner cannula and suction slightly past the length of the trach tube

Figure 57: Ventilation through Tracheostomy Tube
Assisted ventilation through tracheostomy tube using bag-valve-mask

Photo courtesy of Susan Gilbert
CPR and Rescue Breathing for Children with Tracheostomy

1. Check for consciousness.
   a. Gently tap the shoulder and shout.

**If No Response:**
2. Call 911

3. Check for breathing
   a. If the child is lying on his stomach, turn him over onto his back.
   b. Put your ear close to the child's trach. Watch the chest for movement.
   c. Look, listen and feel for breathing for 10 seconds.

4. **If No Breathing:**
   a. Suction the trach tube. If the trach has an inner cannula, remove it and suction the length of the trach tube.

   b. Change the trach if it is plugged or dislodged. Once you have changed the trach you know you have a good airway.

   c. Give *2 breaths* to the trach, using a resuscitation bag.

5. **If Breaths Go In:**
   **Check for Breathing and a Pulse**
   a. Check for a pulse by sliding your 2 fingers into the groove on the side of the child's neck as you look for signs of life and breathing for *10 seconds*.

6. **If Pulse, But No Breathing:**
   **Begin Rescue Breathing**
   a. Place the resuscitation bag on the trach and give *one breath every 3 seconds* (count 1-1000, 2-1000, breathe, etc.).

   b. Re-check for signs of life every *2 minutes*. 
7. If No Pulse, No Breathing:

Begin CPR

a. Position the heel of one hand on the center of the child's chest, (if needed use two hands to compress the chest if the child is large).

b. Compress the chest 1 1/2 inches in depth 30 times. Give two breaths using the resuscitation bag (continue with 30 compressions/2 breaths, 30 compressions/2 breaths).

c. Continue CPR until another rescuer takes over, you see signs of life or help arrives. (Please note you no longer check the pulse once you start CPR).

If you are alone, provide two minutes of care before calling 911, and then resume care until help arrives.
CPR and Rescue Breathing for Infants with Tracheostomy

1. **Check for consciousness.**
   a. Gently tap the shoulder or flick the bottom of the heel.

2. **If No Response:**
   1. Call 911.
   2. Check for breathing:
      a. If the infant is lying on his stomach, turn him over onto his back.
      b. Put your ear close to the baby's trach. Watch the chest for movement.
      c. Look, listen and feel for breathing for 10 seconds.

3. **If No Breathing:**
   a. Suction the trach tube. If the trach has an inner cannula, remove it and suction the length of the trach tube.
   b. Change the trach if it is plugged or dislodged.
   c. Give 2 **breaths** to the trach, using a resuscitation bag.

4. **If Breaths Go In:**
   **Check for Breathing and a Pulse**
   a. With 2 fingers feel for a pulse on the inside of the baby's upper arm. At the same time look for signs of life and for breathing for 10 **seconds**.

5. **If Pulse, But No Breathing:**
   **Begin Rescue Breathing**
   a. Place the resuscitation bag on the trach and give **one breath every 3 seconds**. Count to yourself (1 - 1000, 2 - 1000, breathe, etc.).
   b. Re-check for signs of life every 2 **minutes**.

---

Figure 57: Ventilation through Tracheostomy Tube
Assisted ventilation through tracheostomy tube using bag-valve-mask

Photo courtesy of Susan Gilbert
6. If No Pulse, No Breathing:

Begin CPR

a. Position 2 or 3 fingers on the center of the breastbone, just below the nipple line.

b. Compress the chest 1/2 an inch in depth **30 times**. Give **2 breaths** using the resuscitation bag (continue with 30 compressions/2 breaths, 30 compressions/2 breaths, etc.). Continue CPR until another rescuer takes over, you see signs of life or help arrives.

(Please note: You no longer check the pulse once you start CPR).

If you are alone, provide two minutes of care before **calling 911**, then resume care until help arrives.
### Tracheostomy Home Supplies:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>N/A</th>
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</thead>
<tbody>
<tr>
<td><strong>Tracheostomy tubes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water soluble lubricant (for trach change)</td>
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<tr>
<td>[ ] and one size smaller</td>
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<td></td>
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<tr>
<td><strong>Tracheostomy Ties</strong></td>
<td></td>
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<tr>
<td>Velcro*</td>
<td></td>
<td></td>
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<tr>
<td>Twill tape</td>
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<td></td>
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<tr>
<td>Rounded tipped scissors (to cut ties in an emergency)</td>
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<tr>
<td><strong>Resuscitation Bag</strong></td>
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<td></td>
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<tr>
<td>Mask (appropriate for age and patient size)</td>
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<td></td>
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<tr>
<td><strong>Cleaning Supplies</strong></td>
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<tr>
<td>Cotton tip applicators or gauze</td>
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<tr>
<td>Bottle water</td>
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<tr>
<td>Hydrogen Peroxide</td>
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<tr>
<td>Container to hold clean trach and obturator</td>
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<td></td>
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<tr>
<td>Clean gloves</td>
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<td></td>
</tr>
<tr>
<td><strong>Suctioning Supplies</strong></td>
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<td></td>
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<tr>
<td>Normal saline for tube irrigation</td>
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<td></td>
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<tr>
<td>Suction catheter kits size: [ ]</td>
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<td></td>
</tr>
<tr>
<td>Suction machine (portable with internal battery)</td>
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<td></td>
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<tr>
<td>Suction canisters</td>
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<tr>
<td>Connecting tubing for suction</td>
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(continued…)

Miller Children’s Hospital Long Beach: Patient/Family Education Committee
Revised: 05/2012 (MCHLB/mb)
<table>
<thead>
<tr>
<th>Humidification Supplies</th>
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<tbody>
<tr>
<td>Heat moisture exchange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidified tracheostomy collar setup</td>
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</table>

<table>
<thead>
<tr>
<th>Oxygen Supplies</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Portable tank for emergency or traveling outside the home</td>
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<td></td>
</tr>
<tr>
<td>Pulse oximeter</td>
<td></td>
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<tr>
<td>Pulse oximeter probes</td>
<td></td>
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<tr>
<td>Apnea monitor with wires</td>
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</tbody>
</table>
“Go Bag” Supplies

Make sure to bring a complete care bag with all essential items when traveling outside of your home. This check list will ensure you have all necessary trach care items.

The following items need to be with your child:

- Portable Suction Machine
- Water Soluble Lubricant (K-Y Jelly®)
- Suction Catheter (Disposable)
- Saline Bullets
- Trach Tube And Obturator (Same Size & Size Smaller)
- Bottle Of Water
- Twill Ties Or Velcro® Tracheostomy Tube Holder
- Gauze Sponges
- Scissors (rounded tip)
- 5 ml to 10 ml Syringe
- Emergency Phone Numbers
Questions For Your Care Team

1. 

2. 

3. 

4. 

5. 
Miller Children’s Hospital
Long Beach
MEMORIALCare Health System
2801 Atlantic Avenue
Long Beach, CA 90806
(562) 933-KIDS (5437)
Millerchildrenshospitallb.org
For physician referral contact 800-MEMORIAL