

Tracheostomy

Home Care Instructions

Dear Parents:

As the parent of a child with a Tracheostomy, you may have questions and concerns as you get ready to take your child home from the hospital. This booklet will help to answer your questions and care for your child at home.

Please let the CHOC teams know how we are doing and how we can help you get ready to take your child home. Together we will make sure you feel ready and able to take your child home safely.

This book is only a guide. If your doctor's instructions are different from the content of this booklet, please follow your doctor's instructions.

Thank you,

CHOC Children's Hospital

1201 W La Veta Avenue

Orange, California 92868

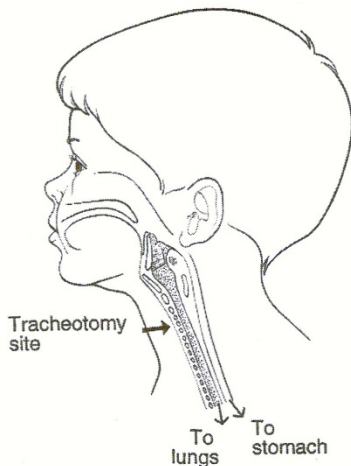
714-997-3000

Table of Contents

What is a Tracheostomy?	Page 3
Tracheostomy Tie Change	Page 4
Changing the Tracheostomy Tube	Page 6
Cleaning the Tracheostomy Tube of Inner Canula	Page 7
Cleaning Suction Catheters and Connecting Tubing	Page 8
Recipe for Sterile Water and Normal Saline	Page 9
Tracheostomy Suctioning	Page 10
Tracheostomy Care	Page 11
Tracheostomy Emergency Plan	Page 12
Tracheostomy Care Discharge Instructions	Page 13
Tracheostomy Home Supplies	Page 14

What is a Tracheostomy?

A Tracheostomy is a surgical procedure that creates an opening into windpipe (trachea). A tube is placed in the opening to keep it open. It is an alternative way of breathing.



There are different types of Trach tubes. Your child's doctor will decide which kind of tube your child will need. Trach tubes also come in a single or double cannula (inner cannula). Infants or smaller children always have a single cannula. Older children or adults may have the double cannula.

Parts of the Trach tube:

- Obturator: Used to guide the tube into the opening when changing the Trach tube.
- Flange/Neck Plate: "Wings" on the Trach tube that the ties are secured to. The flange will have the brand and size of Trach tube printed on it.
- Cannula: Part of the Trach tube that is inside the windpipe.
- Inner Cannula: Part that is inside the cannula of a double cannula Trach. The inner cannula may be removed for cleaning.

When is it used?

A Tracheostomy may be done when your child has a problem with breathing or with the airway. If the upper airway is blocked, a Tracheostomy can go around the blockage to provide air to the lungs. It can also provide oxygen to the lungs and is used to clear secretions from the airway.

Tracheostomy Tie Change

You should have a second person helping you if your child is not able to hold still and until you feel comfortable changing the Tracheostomy ties. Ties should be changed daily, preferable at bath time, when dirty, and with Tracheostomy tube changes.

1. Wash your hands very well with soap and water or hand gel.
2. Get all the equipment you will need:
 - Velcro ties or twill tape or metal chain tie
 - Scissors
 - Tweezers
 - Suction set up
 - Extra tracheostomy tube the same size as the one in place and one that is a size smaller.
 - Resuscitation bag and mask
 - Blanket roll such as a rolled-up baby blanket
 - Blanket to use as a mummy restraint, if necessary
3. Prepare tracheostomy ties by cutting one end off each tie at an angle and cutting a 1 cm long slit (or creating a puncture hole through the tape with the end of a tweezers) at each end pointed end. (Figure 1)
4. Hold down child using mummy wrap if needed.
5. Place the rolled blanket under the shoulders to expose the Tracheostomy area.
6. Remove old trach ties:
 - Option 1 (best method): Uses 2 people. One person assists by holding trach tube securely to prevent decannulation (trach comes out). The second person cuts and removes old trach ties without pulling on trach tube. (Figure 2)
 - Option 2: Uses 1 person. Slide old ties from the center of the hole to the top of the hole on both sides of the trach tube. Put new ties into the hole on both sides of the trach tube. Do not cut the old ties until new ties are in place and tied.
7. Clean skin under the tie. Wash, rinse, and dry.

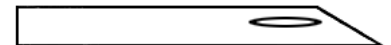


Figure 1

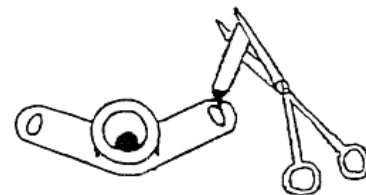
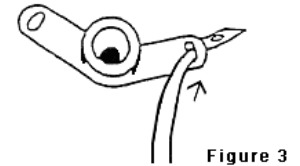


Figure 2

8. Attach trach ties: Ties should fit snugly enough so one finger can be easily placed between tie and child's neck. If possible, check the tightness with the child lying down and sitting up with neck bent toward chest.

Twill ties:

- a. Insert pointed end of each tie through the hole on each side. Insert from front and direct tape in toward back of neck. (Figure 3)
- b. Pull along end of tie through the 1 cm slit. (Figure 4) Do again on the other side.



- c. Pull long end so loop is tight. Do again for other side. (Figure 5)
- d. Trach tie knot should be on the side of neck, switching to other side daily to prevent pressure area.
- e. Tie the ends of the tape in a loop around the neck to secure the trach tube.
- f. Apply gentle pressure until the ties are tight.
- g. Tie the end into a bow tie.
- h. Pull ends of bow tie through making a secure double knot. Tie one more loop, making it a triple knot.
- i. Cut off extra length after knot is tied

Velcro tie:

- a. Thread thin edge through hole on trach tube wing and fold back onto soft cloth of band.
- b. Repeat for the other side.
- c. Attach the two ends of the tie at the back of the neck. You may cut off extra material with scissors. Tie should allow one finger tip to be placed between child's neck and tie.
- d. Velcro ties can be used again. Wash by hand in mild soap and water, rinse and hang to dry. Check ties to see that velcro hold is strong.

Metal chain tie:

- a. Place 1 end of the tie through the hole on one side and secure.
- b. Secure the ends by placing last bead into clasp, making sure clasp is tight.

9. Suctioning may be needed before, during and after the procedure

Changing the Tracheostomy Tube

Your doctor will tell you how often the trach tube should be changed. The trach tube must also be changed if it becomes blocked or comes out. Suction the trach tube first to see if you can remove any mucus. If the trach tube comes out, immediately reinsert a new tube.

1. Wash your hands with soap and water or hand gel.
2. Gather equipment
 - Trach tube (1-same size, 1-smaller size)
 - Scissors
 - Tweezers
 - Trach ties
 - Suction set up
 - Suction catheter
 - Saline
 - Cotton tipped applicators (q-tips)
 - Wash cloth, mild liquid soap and water
 - Small blanket roll
 - Water- soluble lubricant or sterile water
 - Resuscitation bag with face mask
3. Prepare trach ties.
4. Check new trach tube to ensure inner and outer cannula and obturator fit properly.
5. Attach trach ties to trach tube.
6. Insert the obturator into the outer cannula.
7. If needed, lubricate tip of the new trach tube and obturator with normal saline, sterile water or sterile water-soluble lubricant. Keep in clean package until needed. Keep inner cannula (if applicable) nearby until needed.
8. Hold child using blanket if needed.
9. Lay your child flat on his/her back. Place a small blanket roll under the shoulders to expose the trach area.
10. Your child may need to be suctioned prior, during, and after the procedure.
11. Cut the old trach ties or remove Velcro/metal ties while holding the trach tube in place.
12. Remove the old trach tube.
13. Insert tip of trach tube into opening until in place (use arching motion).
14. Remove the obturator while holding onto the outer cannula firmly at the tabs.
15. Listen for air exchange and suction if needed. If child is breathing well, secure ties.
16. Clean old trach tubes. Do not discard or throw away the used trach tube.

Cleaning the Tracheostomy Tube or Inner Cannula

Trach tubes should be cleaned every time they are changed. The inner cannula is a smaller tube that fits into the larger outer cannula. It should be changed daily and as needed for large amounts of secretions that may clog the tube. Some inner cannulas are disposable and only used once. Check with your nurse which inner cannula your child is using. If using a cuffed trach tube, the cuff should be rinsed gently in sterile saline; do not use any cleaning detergents.

1. Wash hands very well with soap and water or hand gel.
2. Gather supplies:
 - Mild liquid soap
 - Sterile or distilled water
 - White pipe cleaners
 - 2 clean bowls
 - Half strength Hydrogen Peroxide mixed with water if “crust” is present
 - Clean airtight container (i.e. jar, zip-lock bags)
3. Pour small amount of mild liquid soap in warm water in one bowl. Pour sterile water into another bowl.
4. To change the inner cannula:
 - a. Unlock the inner cannula: secure the outer cannula with one hand, remove the inner cannula with the other hand.
 - b. Insert a clean inner cannula and secure the lock.
5. Place the dirty trach tube (without cuff), obturator, and inner cannula (if non-disposable) in the bowl with soap and water. Clean the inside of the tube with a pipe cleaner and cotton applicator with half strength hydrogen peroxide as needed to remove crusty secretions inside and out. It may be soaked for 10 minutes if needed.
6. Rinse the tube in sterile or distilled water.
7. Shake off extra water. Allow tube to air dry well on a clean paper towel.
8. Store clean, dry tube in clean airtight container. Replace cleaned cannula at your child's bedside or wheelchair.

Cleaning Suction Catheters & Connecting Tubing

Suction catheters and connecting tubing can be safely reused when cleaned well. Suction catheters should be cleaned after each use. Connecting tubing should be cleaned when very dirty or at least twice a week.

1. Wash hands very well with soap and water or hand gel.
2. Gather supplies:
 - Paper towel
 - 2 jars (washed in hot soapy water)
 - Water
 - Mild liquid soap (e.g. Ivory dishwashing detergent)
 - Vinegar (white)
 - 20cc syringe
 - Sterile water
 - Gloves
 - Clean airtight container (i.e. jar, zip-lock bag)
 - Soiled connecting tubing and catheters
3. Wash the catheter/connecting tubing in warm water and mild liquid soap. Clean the inside with soapy water using a syringe.
4. Rinse the catheter/connecting tubing in hot water. Rinse the inside with hot water using a syringe.
5. Use a 20cc syringe to draw up sterile water and rinse the inside of the catheter/connecting tubing. Discard flushing solution outside of the clean container. Then dip and rinse the catheter/connecting tubing in the remaining sterile water.
6. Allow the catheters/connecting tubing to air dry on a clean paper towel.
7. You are now ready to store the catheters/connecting tubing.
8. Store in a clean airtight container until ready to use. When ready to use, remove a catheter/connecting tubing from container.

*****You should always have 2 containers for your catheters/ connecting tubing. One for “dirty” and one for “clean”. Wash and store a new set of catheters each day.**

Recipe for Sterile Water and Normal Saline

Supplies:

- (2) 1 quart glass jars with a well fitting lids
- Large cooking pan with cover
- (2) 1 quart distilled water
- 1 tablespoon non-iodized salt

Instructions for preparing jars:

1. Thoroughly wash and rinse the jars and lids.
2. Completely cover jars and lids in a pan of tap water, cover and boil gently for 15 minutes.
3. Pour the water out of the pan and allow the jars and lids to cool in the pan.
4. Place the cooled jars and lids upright on a clean towel. Do not touch the inside of any of the items.

Instructions for making Sterile Water and Normal Saline:

1. For sterile water, boil one quart of distilled water fifteen (15) minutes.
2. For normal saline, add 1-tablespoon table salt to one quart of distilled water; boil for fifteen (15) minutes. You may use the same pan.
3. Store the cooled solution in the sterile jar, tightly covered and in the fridge until ready to use.
4. Write the date on the label and put on the jar.

REMEMBER:

Use the solution only by pouring it out of the jar. Do not pour any extra back into the jar. After three (3) days, throw away any leftover solution, re-sterilize the jar and lid, and make a new solution.

Tracheostomy Suctioning

Suctioning clears mucus secretions from the trachea (windpipe) when a child cannot cough it up. Watch for signs that your child may need suctioning:

- Increased gurgling, bubbling or coughing
- Upset or uneasy, crying
- Flaring nostrils
- Mouth, lips and fingernails may be pale, blue or dusky color
- Trouble eating
- Hollow in the neck area
- Skin under breast bone and between ribs pulls in
- Can't cough out secretions

Suctioning equipment can be reused if washed correctly. At home, gloves are not needed. However, if your child has an infection or you have cuts/sores on your hands, wear gloves.

1. Gather equipment: suction catheter, machine, sterile water, normal saline.
2. Wash hands very well with soap and water or hand gel before and after suctioning.
3. Turn suction machine on and set the pressure. Suggested pressures:
 - Infant 50-95 mm Hg
 - Child 95-115 mm Hg
 - Teen 95-140 mm Hg
4. Attach catheter to connecting tubing.
5. Make sure suction machine and catheter are working by rinsing catheter with water.
6. If secretions are thick, put a few drops of saline into the trach tube. This may make your child cough—this is normal and helps to loosen the mucus in the trach tube.
7. Without applying suction, insert catheter into the trach tube to the length of the tube.
8. Place thumb over the control of the catheter to create suction. Pull out the catheter while slowly turning the catheter between your fingers taking no more than 10 secs.
9. If your child uses ventilator or oxygen, reconnect him/her at this time. Allow 30-60 seconds between suctioning to restore oxygen and allow the lungs to re-expand.
10. Use water to clear secretions from suction tubing at the end and between suctioning.
11. Repeat suctioning as needed until no more secretions can be heard. Be aware that too much suctioning may cause increased secretions or irritate the airway.
12. You may suction your child's mouth or nose after suctioning his/her trach. Once you put the catheter into your child's mouth or nose, you cannot put it back into the trach.
13. If you only suction the trach, you may rinse the catheter with water; put it in the package and use again. Clean used catheters at the end of each day.

Tracheostomy Care

Warning Signs of a Blocked Tracheostomy

- Anxiety, scared looks
- Restlessness
- Trouble or refusing to eat
- Breathing fast
- Whistling sound when breathing
- Nostrils flare with each breath
- The mouth, lips, or fingernails are pale blue or dusky
- Skin between ribs, in the neck area, and under breastbone pull inwards with breaths

Most commonly this is caused by a mucus plug. If you see any of these signs, immediately suction the trach tube. If the signs continue, change the trach tube and suction again. If the signs still persist after changing the tube call 911.

Warning Signs of Infection—Call your specialist if:

- Secretions are yellow/green or if they have a strange or bad smell.
- Secretions have bright red blood (not following a trach tube change).
- Your child has a fever or vomiting.

Warning Signs of Dehydration

- Your child has stopped wetting his/her diapers or is wetting a lot less.
- Your child goes to the bathroom less than 3 times a day.
- Pee is a darker color and smells.

Your child should be well-hydrated so secretions are thin. Your child will need to drink more fluids when he or she is sick.

Precautions for Parents

- Water: No swimming or showering. Be careful at bath time. Use shallow water and don't splash water into trach. A trach mask, mist collar, or HME can be worn for extra protection. Never leave a child alone in the bathtub.
- Do not use powder, bleach, aerosol sprays or perfumes near a child with a trach.
- Prevent objects from entering the trach—sand, dust, insects, small toy pieces, etc.
- Do not let your child use sandboxes or play in the sand while the trach is in place.
- Watch play with other children so that toys, fingers, and food are not put into trach and that other children do not pull on the trach.
- Do not use clothing that blocks the trach tube such as crew necks, turtlenecks, and shirts that button in the back.
- Do not allow anybody to smoke near the child.
- Keep your child away from people with colds or other contagious illnesses.
- Be sure your child has all their immunizations.
- Your child should get a yearly flu shot if recommended by your doctor.

Tracheostomy Emergency Plan

Post CPR instructions near the child's bed.

Have emergency telephone numbers posted near each telephone.

Tell electric, gas, and phone companies that you have a child with a trach so that your home is a priority in resuming services in the event of a power outage.

Tell local police and ambulances services know that you have a child with trach.

Let the Fire Department know that you have oxygen in your home.

Pack emergency bag to take with you every time you are away from home (even for short walks or time outside).

Emergency/Travel Bag List:

- Shoulder strap bag or small suitcase
- Suction machine (battery-operated portable machine)
- Suction catheters
- Saline in a screw top bottle
- Sterile water in a screw top bottle
- Tissue
- K-Y Jelly
- Trach ties
- Extra trach tube, same size and one size smaller
- Hand sanitizer or disinfectant wipes
- Blunt scissors
- Gloves
- Manual suction (feeding tube with 30cc syringe)
- Connecting tubing for suction machine
- Resuscitation bag (Ambu-bag)
- For an infant or toddler also include diapers, wet wipes, food/water/bottle, change of clothes, toys, seat or blanket

Tracheostomy Care Discharge Instructions

1. Emergency Telephone Numbers:

Emergency Medical Services: 911

Pediatrician: _____ Phone: _____

ENT: _____ Phone: _____

Pulmonologist: _____ Phone: _____

CHOC: (714) 997-3000 or (800) 229-CHOC (2462)

Vendor: _____ Phone: _____

2. Tracheostomy Tube Size: _____ Brand: _____

3. Suction Catheters Size: _____

4. Suction the trach tube prior to feeding and as needed, using clean technique.

5. Skin care should be done 3 times a day the first 14 days and 2 times a day thereafter.

6. Trach ties should be changed daily, when they are wet or dirty, and with trach tube changes.

7. Cleaning of the inner cannula (if your child has one) should be done once a day, or more often if your child is having large amounts of secretions.

8. Call your Electric Company to tell them the medical equipment you have in your home so you will be a high priority for restoration of electrical power in the event of a power outage.

9. Call your Telephone Company to tell them your child's medical problems may require emergency care so you will be placed in a high priority list for reconnection.

Tracheostomy Home Supplies

Tracheostomy Tubes	3 at discharge, then 2 every month
Tracheostomy Tube (1 size smaller)	emergency if unable to insert regular size
Suction Catheters	120 per month
Stationary Suction Machine	1 each
Portable Suction Machine	1 each
Humidification	1 each
Sterile Saline	See formula for making
Sterile Water	See formula for making
Mild Liquid Soap	As needed
Hydrogen Peroxide	As needed
Trach ties or twill tape	30 per month or 1 roll per year
Scissors	1 each
Tweezers	1 each
Ambu bag or CPR Trach adaptor	1 each
Pipe cleaners or brush	
Bell for older patient to call for assistance	
Bowls with covers for cleaning and storing tracheostomy tubes	
Apnea monitor when applicable	
HMEs (Heat moisture exchangers)	30 per month
Oxygen if needed	
Pulse oximeter or apnea monitor	