

Tracheostomy

What is a tracheostomy?

A tracheostomy is a surgical opening into your windpipe (trachea). A hollow tube, called a tracheostomy tube, is placed through the opening (stoma). When you breathe, the air will enter and leave your lungs through this tube, instead of through your nose and mouth.

How does a tracheostomy affect breathing and speaking?

You will breathe through the opening in your neck, not through your mouth and nose. Your neck must not be covered when you are taking a deep breath. You'll need to avoid getting water into the opening.

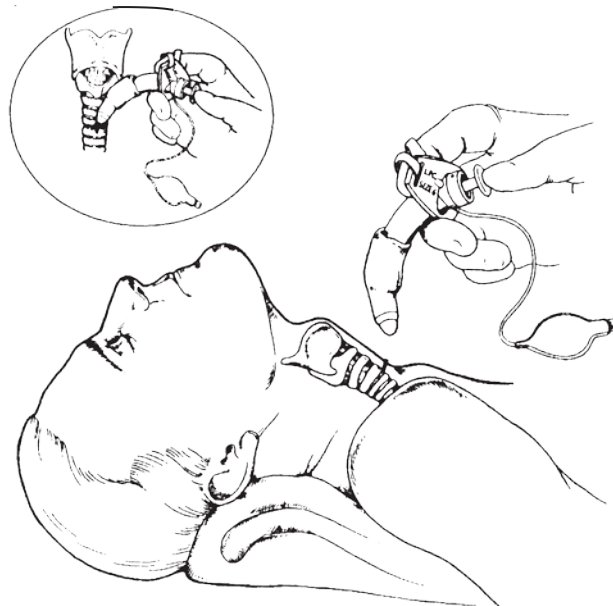
You will not be able to talk while you are breathing through the tracheostomy. This is because the air from your lungs comes out of your tracheostomy and does not go up through your vocal cords and out of your mouth.

The tracheostomy tube:

- Is curved to fit into the trachea.
- May be made of plastic or metal, and will have a smooth, slippery surface.
- May have a “cuff” or balloon. The cuff prevents air or liquids from getting past the tracheostomy. This prevents you from breathing in liquids such as saliva.
- May have inner and outer cannulas (tubes). The inner cannula is removed for cleaning. The outer cannula stays in place.
- Will come with an obturator, which fits inside the tracheostomy tube. It has a rounded end and allows the tube to be placed easier.

These pages will cover:

- General tips on living with your tracheostomy
- Routine care of your tracheostomy
- What to do if you have problems or symptoms
- What to do in an emergency



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Living with a Tracheostomy

Living with a tracheostomy means breathing in a different way. When you breathe in through your nose, the outside air is warmed, cleared of large particles, and humidified. When you breathe in through the tracheostomy, air passes directly into the trachea. It is not warmed, filtered or humidified.

Humidity (moisture in the air) helps keep the mucous in your body moist and thin. If the mucous becomes dry, it gets thick and sticky. Increasing the humidity in the air you breathe helps keep mucous thin and liquid.

Decrease irritation and drying

- Drink extra fluids each day. Aim for 8 to 12 cups of liquids each day. Weigh yourself daily, and if you gain more than 3 pounds in one day, call your doctor or nurse.
- Use a home humidifier, attached to furnace or separate unit. Clean it regularly according to manufacturer's instructions to prevent molds from growing.
- Use saline drops in tracheostomy as directed by your doctor or nurse.
- Cover your neck loosely with a scarf when going out in cold weather.
- Avoid cigarette smoke. Do not allow smoking in the same room.
- Avoid dust, powders, lint and sprays.

Safety

Prevent water from entering the tracheostomy.

- Take baths instead of showering, or shower with a hand-held nozzle, avoiding water spray on neck.
- Make lifestyle changes excluding swimming, water sports, boating, fishing and spas to prevent water from entering the tracheostomy if you slip or fall into the water.

Preventing infection

Bacteria can enter easily through tracheostomy tube, secretions and skin breakdowns.

- Always wash hands before and after any care of the tracheostomy tube or secretions.
- Clean the skin around the tracheostomy each day and keep it dry. Use clean dressing daily and change if it gets wet or soiled.
- Germs can live on dirty equipment. By following cleaning instructions, you can decrease the risk of infection.

- Call your doctor if you have signs of infection:
 - Hard, red, tender area around the stoma
 - Drainage from stoma site
 - Foul-smelling secretions
 - Change in color of secretions
 - Increased amount of secretions
 - Temperature greater than 101° F

Travel

Travel is possible with a tracheostomy, but requires planning ahead.

- Suction your tracheostomy before you leave on short trips, such as to the grocery store. Take tissues and saline drops, if you use them to help dislodge mucous.
- Prepare a travel kit with spare ties, scissors, a new tracheostomy tube, tissues, saline and other supplies based upon your needs.

Electricity

- Plan where you will be plugging in your suction machine. You will want it close to your bed and near the area where you will spend most of your time.
- Make sure you have easy access to outlets in those areas. Contact an electrical contractor to have additional outlets installed if necessary.
- Make sure you can use the equipment without "blowing fuses." Contact the electric company if you are not sure if your home can handle the electrical equipment.
- Label the circuits to rooms where important outlets are located. If your home uses fuses, buy extra fuses.
- Check your outlets for three-prong wiring, or buy three-prong adapters.
- Notify your electric company of your medical electric needs.

Continued

Emergency care

Notify your local emergency medical system (fire department and police) of your medical needs. In many counties, this information is put into the 911 computer system and relayed to emergency care personnel when needed.

Home medical equipment

Before you go home, we will work with you and your family, as well as home care agencies, to make sure you have everything you need. Your home medical equipment is provided from:

Tracheostomy Suctioning

Suctioning helps to keep your tracheostomy tube clear. Suction only when needed. Too much suctioning can increase the amount of mucous your body produces. You should suction when:

- You hear noisy breathing and can't clear the secretions by coughing
- You have signs of trouble breathing:
 - ☐ Fast breathing
 - ☐ Restlessness
 - ☐ Nasal flaring
 - ☐ Yawning
 - ☐ Unusual drowsiness
 - ☐ Sweating
 - ☐ Struggling to breathe
 - ☐ Shortness of
 - ☐ Bluish, grayish or pale color to skin
 - ☐ Anxiety

Other tips on suctioning

- Turning the head to the left while suctioning helps clear the left bronchus (large airway). Turning right helps clear the right bronchus.
- If you have oxygen at home, giving extra oxygen before and after suctioning will help prevent low oxygen levels during suctioning. To do this, you will use a ventilation bag and give several extra breaths before suctioning.
- If not on oxygen, take several deep breaths before suctioning.

Getting ready

1. Gather your suction equipment:
 - Suction machine with connection tubing
 - Suction kit
 - Ventilation bag
2. Sit, stand or raise the head of the bed to a comfortable sitting position.
3. Wash your hands with soap and water. Put clean, disposable, powder-free gloves on both hands.
4. Open the 3cc saline packet and the suction catheter package.
5. Pour water in the basin.
6. Connect the suction catheter to the connecting tubing and place it on a clean surface.
7. Turn on the suction machine.
8. Connect the ventilation bag to oxygen tubing (if you have oxygen at home).

Suctioning procedure

1. Attach the ventilation bag to the tracheostomy tube and give several extra breaths or have the person take several deep breaths. Remove the bag.
2. Dip the catheter tip in water and test suction.
3. Insert the catheter into the tracheostomy until you feel resistance (do not apply suction while inserting).
4. Cover the suction control and apply suction for no more than 10 seconds. Pull the catheter out while rolling it between your fingers as you suction.
5. Suction water to clear tubing.
6. Repeat steps 1 through 5 if necessary.
7. Suction around the tracheostomy or in mouth if needed. Do not go back into tracheostomy after suctioning the mouth or around tracheostomy as this could bring bacteria into the tracheostomy.
8. Attach the ventilation bag and give several extra breaths, or take several deep breaths. Replace oxygen source, if any.
9. Suction water to clear tubing. Discard the suction kit.
10. Remove glove(s) and wash your hands.

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Care of equipment

Suction catheters: Discard the used suction catheter. Use a new suction kit each time.

Connecting tubing can be used as long as it can be cleaned and is not cracking. If it becomes hard or cracked, throw it away.

Basins used for cleaning should be washed with warm, soapy water, rinsed and air dried each time.

Humidifier and tracheostomy mask: Rinse out water reservoir with each fill. Rinse tubing and reservoir with soapy water, then rinse with clear water.

Suction canister should be emptied once a day. Wash with warm, soapy water. Rinse with warm water. Reconnect to suction machine. Throw canister away if it is cracked.

Cannulas and parts of a plastic tracheostomy tube should never be boiled, or **soaked** in harsh cleaning chemicals such as alcohol or hydrogen peroxide. Some metal cannulas are reusable and can be boiled after cleaning.

Plan ahead: Make sure you keep enough supplies on hand and ready to use. Always keep an extra tracheostomy tube of the same size available in a well-known location to all caregivers.

Daily Care with Reusable Inner Cannula

Tracheostomy care is done at least once a day in addition to suctioning. Tracheostomy care can be done before bedtime so that it will be clean overnight. You may need to do tracheostomy care more often if you have more drainage or secretions.

1. Gather your equipment:
 - Suction machine
 - Suction kit, catheter and all other suctioning equipment
 - Hydrogen peroxide to use mixed with equal amount of water
 - Trach care kit
2. Wash your hands with soap and water. Apply clean, disposable, powder-free gloves to both hands.
3. Stand in front of a sink with a mirror.
4. Suction the tracheostomy following your usual method.
5. Remove the inner cannula.
6. Pour a solution of half water and half hydrogen peroxide into the tray, and place the cannula into the solution.
 - Brush the cannula to remove any secretions.
 - Rinse with water very thoroughly.
 - Dry the inner cannula well by shaking it and tapping it to make sure all water is removed.
 - Replace inner cannula. Make sure the cannula is locked into place.
7. Remove the old tracheostomy dressing from under the tube. Check it for drainage.
8. Clean the skin around your tracheostomy tube and the outside of the tracheostomy with a small piece of gauze or cotton tip applicators from the cleaning kit and warm water. When your tracheostomy is healing, you may use half strength hydrogen peroxide solution to help loosen dried secretions. Swab only once with each gauze or applicator. Use a circular pattern, starting next to the stoma and working outward. Dry the area gently. Report any sign of skin infection to your nurse or doctor as soon as possible.
9. Apply ointment to the stoma, **if directed by your doctor**. Put a clean dressing under the tracheostomy. You can use a pre-cut tracheostomy dressing or folded 4-inch by 4-inch gauze.
10. Remove your gloves and wash your hands.
11. Clean equipment as directed.

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Daily Care with Disposable Inner Cannula

Tracheostomy care is done at least once a day in addition to suctioning. Tracheostomy care can be done before bedtime so that it will be clean overnight. You may need to do tracheostomy care more often if you have more drainage or secretions.

1. Gather your equipment:
 - New sterile inner cannula, open package, but keep clean
 - Suction machine
 - Suction kit and catheter, and all other suctioning equipment
 - Trach care kit
 - Hydrogen peroxide
2. Wash your hands with soap and water. Apply clean, disposable, powder-free gloves to both hands.
3. Stand in front of a mirror.
4. Suction the tracheostomy following your usual procedure.
5. Remove the inner cannula and throw it away.
6. Insert a new inner cannula. Make sure it is locked into place.
7. Remove the old tracheostomy dressing; check it for drainage.
8. Clean the skin around your tracheostomy and the outside of the tracheostomy with a small piece of gauze or cotton tip applicator and warm water. When your tracheostomy is healing, you may use half-strength hydrogen peroxide solution to help loosen dried secretions. Swab only once with each gauze or applicator. Use a circular pattern, starting next to the stoma and working outward. Dry the area gently. Report any sign of skin infection to your nurse or doctor as soon as possible.
9. **Apply ointment to your stoma only if directed by your doctor.** Put a clean dressing under your tracheostomy.
10. Remove gloves and wash your hands.

Do not clean and reuse a disposable cannula. Disposable cannulas are designed for one time use only. If you prefer a reusable inner cannula, discuss this option with your doctor.

Changing the Ties or Holder

If you use a Velcro trach tube holder, follow the package directions. Change the ties or holder whenever they are soiled, wet or stiff. It may be convenient to plan this with regular daily tracheostomy care.

Tape ties

1. Assemble your usual supplies for suctioning and daily care if you plan to change the ties, along with your daily care or suctioning. You also will need:
 - New twill tape, ties
 - Blunt bandage scissors
2. Complete the suctioning and daily care as usual.
3. If you use ties, fasten the new ties:
 - Bring the end through one hole of the face plate and pull enough length through to reach around neck and back to the starting side.
 - Bring the tape around the back of your neck and through the opposite hole of the face plate.
 - Place a finger between the neck and the tie, and tie a square knot. Knot should be snug, but comfortable. Do not place knot right over the carotid artery in the neck.
 - Cut off excess ties so that 1 to 2 inches are left.
4. When the new ties are in place, carefully cut and remove the old ties.
5. Wash your hands when you are done.

Keep old ties in place until the new ones are tied securely.

Continued

Changing or Reinserting Cuffless Tubes

If you are planning on changing the tube yourself, have another trained person with you in case you have difficulty inserting the new tube. Always keep an extra tube of the same size available in case you have difficulty inserting a new tube.

In case of accidental tube removal or emergency situations, see “Changing Tracheostomy Tube” and your emergency plan.

Getting ready

1. Gather your supplies. You need:
 - New or disinfected tracheostomy tube with an obturator (see page 1, “Tracheostomy Tube Types”)
 - Clean tracheostomy ties
 - Clean dressing
 - Water-soluble lubricant
 - Clean scissors for cutting ties
2. Stand, sit or raise the head of the bed to a comfortable sitting position.
3. Wash your hands with soap and water. Apply clean, disposable, powder-free gloves to both hands.
4. Attach new ties to tracheostomy tube.
5. Remove the inner cannula, and insert the obturator into the new tube.
6. Apply the water-soluble lubricant (Surgilube or K-Y Jelly) to the end of the tracheostomy tube and obturator.

Changing tracheostomy tube

1. Remove the old dressing.
2. Remove old ties from the old tracheostomy tube.
3. Remove the tracheostomy tube by pulling it in a straight downward motion. Coughing may occur. Use a gauze to wipe away any secretions produced during removal.
4. Take a deep breath. Extend your chin upward to straighten the trachea. Insert the new tracheostomy tube using gentle pressure following the curve of the neck.
5. Remove the obturator immediately to allow air to flow into the tube. Hold the tube in place, as coughing may occur.
6. Secure the tube in place.
7. Insert the inner cannula and lock it into place.
8. Apply a new dressing
9. Discard the disposable tracheostomy tube.
10. Remove your gloves and wash your hands.

If you are unable to insert the new tube:

1. Reinsert the old tube.
2. Follow the emergency plan.

Changing or Reinserting Cuffed Tubes

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Getting ready

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 - Clean tracheostomy ties
 - Clean dressing
 - Water-soluble lubricant
 - Clean scissors for cutting ties
 - Trach care kit with sterile water and basin
2. Stand, sit or raise the head of the bed to a comfortable sitting position.
3. Wash your hands with soap and water. Apply clean, disposable, powder-free gloves to both hands.
4. Insert syringe in pilot balloon and inflate the cuff with the designated amount of air.
5. If the cuff cannot hold the air, do not use the tube. Contact your home health care provider or doctor for a different tracheostomy tube.
6. Deflate the cuff (remove all the air you put in with the syringe). **Make sure the cuff is completely deflated.**
7. Leave the syringe with the desired amount of air attached.
8. Remove the inner cannula and insert the obturator into the new tube.
9. Apply a thin layer of water-soluble lubricant (Surgilube or K-Y Jelly) or water to the end of the tracheostomy tube and obturator.

Changing tracheostomy tube

1. Follow your home health care provider’s instructions about suctioning before deflating the old cuff and removing the old tube.
2. Remove old ties from the tracheostomy tube. Do not cut the inflation line.
3. Deflate the old tube by withdrawing all the air from the cuff using a syringe.
4. Grasp the neck plate and remove the old tube in a curved downward motion. Coughing may occur. Use gauze to wipe away any secretions produced during removal. Remove the old dressing.
5. Take a deep breath. Extend your chin upward to straighten the trachea. Insert the new tracheostomy tube using gentle pressure following the curve of the neck.
6. Remove the obturator immediately to allow air to flow into the tube. Hold the tube in place, as coughing may occur.
7. Inflate the cuff with the designated amount of air.
8. Secure the new ties or holder.
9. Insert a new inner cannula and reconnect ventilator or other equipment if needed.
10. Apply a new dressing.
11. Throw away disposable tube.

If you are unable to insert the new tube:

1. Reinsert the old tube.
2. Follow the emergency plan.

Changing or Reinserting Cuffed Tubes (cont.)

Call your doctor right away if you develop any of these symptoms:

- Hard, red or tender area around the stoma
- Foul-smelling secretions
- Change in color or amount of secretions
- Temperature higher than 101° F
- Unexplained trouble breathing
- Severe coughing or coughing up blood
- Bleeding around the tracheostomy site
- Any new or severe symptoms

Symptom	Possible cause	What to do about it
Tube becomes dislodged	Trach ties too loose or tied incorrectly	Reposition tube and tie tracheostomy ties tighter (see page on changing the tube and emergency procedures).
Part of the tube doesn't work or is damaged	Tracheostomy needs to be changed more frequently	Contact your doctor about changing your tube more often.
	Using strong cleaning agents	Do not use anything except water and diluted hydrogen peroxide to clean tracheostomy tube.
Unable or difficult to pass suction catheter through inner cannula	Secretions partially blocking air passage	Remove and clean twist-lock inner cannula or discard and replace disposable inner cannula.
	Catheter too large for tube size	Call your home health care provider for smaller suction catheter.
	Tube is out of place	Follow emergency plan. Contact your home health care provider.
	Fenestrated inner cannula in place	Remove and replace with non-fenestrated inner cannula.
Difficult removal and insertion of inner cannula on fenestrated tube.	Multiple causes	Report to your doctor or home health care provider.

