Tracheostomy Care

UPMC

Information for Patients

This booklet was developed by UPMC/Jefferson Regional Home Health, L.P. in collaboration with the respiratory care nurses and therapists across the University of Pittsburgh Medical Center.

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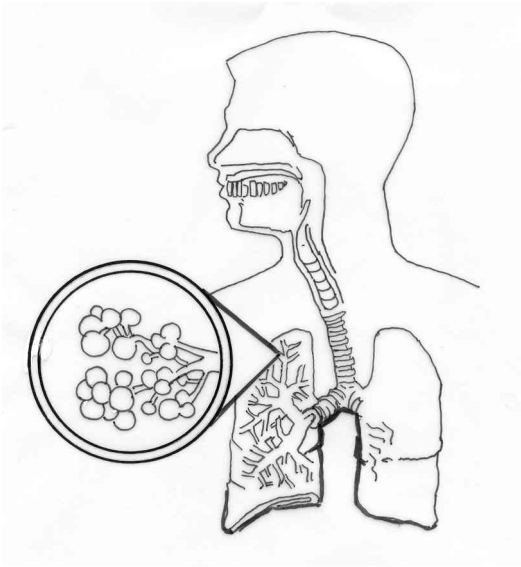
Learning to care for a tracheostomy requires the support and individual attention of your care team — doctor, respiratory therapist, nurse, and possibly speech therapist and dietitian. This booklet was developed to supplement this instruction. Each of these procedures should be performed only with the help of a member of your health care team until you are able to do it on your own.

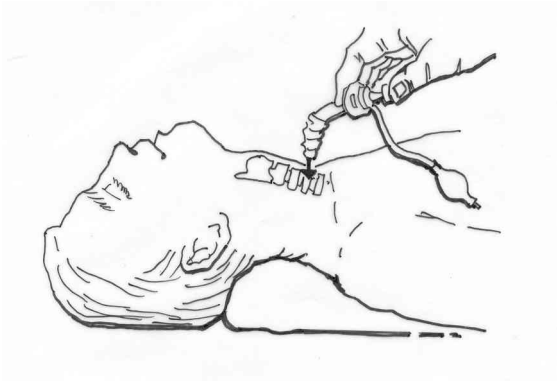
Introduction

What is a tracheostomy?

A tracheostomy is an artificial opening in the neck into the windpipe (trachea). This opening is called a stoma. It allows air to go in and out of the lungs. It also allows any mucus to be removed. A small tube (the tracheostomy tube) is inserted through this opening. Breathing occurs through this tube.



The upper airway warms, filters, and humidifies the air we breathe.



The tracheostomy tube is inserted into the windpipe (trachea). Breathing occurs through this opening.

When you breathe through the nose and mouth, the air is filtered, warmed, and moistened (humidified) before it gets to the lungs. When you breathe through a tracheostomy tube, air enters directly into the windpipe and the usual warming, humidifying, and filtering do not occur. This booklet will teach you ways to safely care for yourself with a tracheostomy tube.

Learning and practicing

It is important to learn how your tracheostomy works and the best way to care for it. Caring for your tracheostomy tube should begin as soon as possible. Your training will begin before you go home. This training may happen in the hospital, rehabilitation hospital, or skilled nursing facility.

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Information for Patients

It is important to have the support of family members or a friend. At least 1 person should learn how to help you. Have this person join you when you get instructions in the hospital.

Ask questions about caring for your tracheostomy tube.

Caring for your tracheostomy at home may be a little different from the care you get in the hospital. What you do at home depends on your home setting, equipment, and condition.

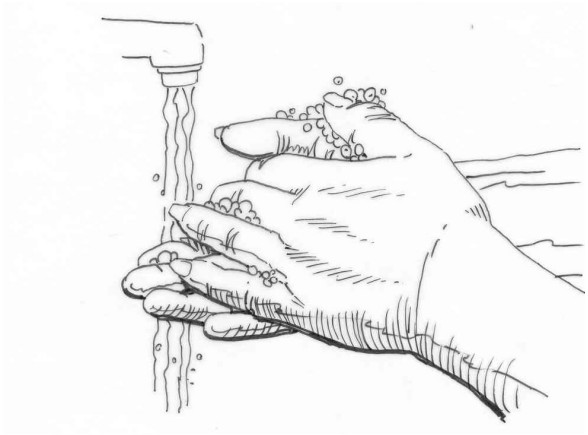
One of the main differences at home compared to the hospital is the use of "clean technique" versus "sterile technique."

Sterile technique

In the hospital, sterile or aseptic (ay-SEP-tik) technique is used. This means that all equipment used is packaged or cleaned in a way that is free of all germs. Sterile gloves are used when handling anything that will go into the tracheostomy or anything used to clean around it. When you are learning in the hospital, you will use sterile technique. At least 1 of your gloved hands will stay sterile.

Clean technique

At home, most people can use a clean technique. The home care nurse, along with your doctor, will help decide if this is possible. Clean technique still requires special precautions and care of equipment. The procedures in this booklet describe clean technique. **Your doctor will tell you whether any changes in these instructions are necessary based on your situation**.



Wash your hands.

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Recommended checklist for going home with a tracheostomy tube

Brand: _____ Size: _____

Disposable inner cannula _____ OR Non-disposable inner cannula _____

Cuffed _____ OR Cuffless _____

Fenestrated _____ OR Non-Fenestrated _____

Home equipment supplier _____

Phone number _____

☐ Extra tracheostomy tube of the same size

☐ Smaller size tracheostomy tube if doctor determines it is needed

☐ Guide (obturator) and any parts that go with the tracheostomy tube currently in place

☐ Suction catheters: Size _____

☐ Suction machine with extension tubing arranged

☐ Normal saline or sterile water

☐ Tracheostomy care kits (including brush and pipe cleaners)

☐ Oxygen, if ordered

☐ Tracheostomy ties — twill tape or Velcro tracheostomy tube holders

☐ Syringe for cuff care

☐ Cotton-tip applicators

☐ Gloves — clean, disposable, and powderless

☐ Hydrogen peroxide

☐ 4 inch x 4 inch gauze dressings (NO cotton fillers), if needed

☐ Disposable inner cannulas (if you have a disposable inner cannula tracheostomy tube)

☐ Manual resuscitation bag, if ordered

☐ Humidifier

☐ Saline bullets for instillation, if ordered

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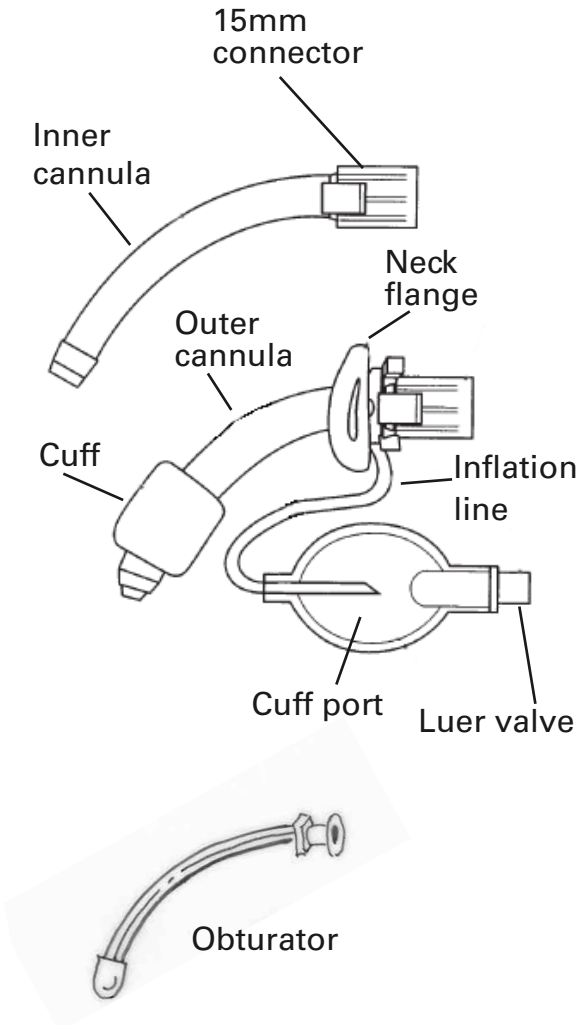
Parts of the tracheostomy set

Your new airway is kept open by using a tracheostomy tube. You may have only 1 tube (an outer cannula) or you may have 2 tubes (an outer cannula and an inner cannula). Tubes are made of metal or synthetic materials.

1. **Cuff** - the "balloon" on the end of the tracheostomy tube. When inflated, it forms a seal against the wall of your windpipe. This stops the air flow through your mouth and nose so that you breathe through the tracheostomy tube. You are unable to speak when the cuff is inflated.
2. **Inflation line** - thin plastic tubing that carries air to and from the cuff
3. **Cuff port** - a small, plastic balloon-like component on the end of the inflation line. The cuff port shows if the cuff is inflated. It is also called a pilot balloon.
4. **Luer valve** - where the syringe is connected to inflate or deflate the cuff.
5. **15mm connector** - part of the tracheostomy tube or inner cannula that sticks out at the neck. Ventilator tubing, a manual resuscitation bag, or a speaking valve may be connected to the 15mm connector.
6. **Neck flange** - usually contains product information and has holes on either side for securing neck ties.
7. **Outer cannula (CAN-you-luh)** - the tube that is inserted into your windpipe. It stays there all the time and may have another part (the inner cannula) that slides inside of it.
8. **Inner cannula** - the tube that fits inside your outer tracheostomy tube. It is removed for cleaning or replacement.
9. **Obturator (OB-ter-ay-ter)** - a guide used to insert the tracheostomy tube.



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Humidification

Your nose and mouth normally warm and moisten the air you breathe. **Because you are now bypassing your nose and mouth by breathing through your tracheostomy, you must replace the moisture**. Without moisture, your mucus may become thick and hard to cough out. This will make breathing difficult.

You can increase the moisture in your airway:

- Drink plenty of fluids (8 to 10 cups a day) unless your doctor tells you to drink less.

- Your doctor might recommend squirting sterile saline into your tracheostomy. If so, you may use "saline bullets." These are made especially for patients who use respiratory equipment. This helps you cough and remove secretions. Squirt the saline slowly into the tracheostomy while you take a deep breath. Cough 1 to 2 times to clear your airway. Talk with your health care provider about using saline and how often you should use it.
- Use a humidifier in your main living area during the day and beside your bed during the night. Clean the humidifier each day according to the manufacturer's instructions to keep germs from growing.
- Your doctor may order a humidity machine that can be attached to a tracheostomy collar. A tracheostomy collar is a soft plastic mask that fits over and around the tracheostomy tube. It allows humidified oxygen or humidified air to be delivered. If you have this equipment, you need to learn how to take care of it from your home equipment supplier.

Humidifier

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Tracheostomy skin care (stoma care)

It is important to routinely clean the skin around the opening of the tracheostomy (stoma). This will help prevent skin irritation and the build-up of secretions. Follow your doctor's instructions. The list below applies to most patients.

Equipment

- gloves (clean, disposable, and powderless)
- clean, cotton, lint-free, white wash cloth or towel
- mild soap and water
- hydrogen peroxide
- 4 x 4 gauze dressing without cotton filler
- cotton tip applicators
- normal saline or sterile water
- container to mix hydrogen peroxide and saline (or sterile water)
- clean tracheostomy ties

Procedure

1. Wash your hands well. Gather the supplies. Put on gloves.
2. Dampen lint-free, white cotton wash cloth.
3. Gently clean around the neck plate and skin under the plate with mild soap and water. Be careful not to get any soap or water into the tracheostomy opening. Rinse well.

Cleaning with cotton applicator.

4. Crusts may be removed by loosening with peroxide (dilute equal parts of peroxide and water) on a cotton-tip applicator. Hold cotton-tip applicator securely to keep it from going in to the stoma. Rinse well.
5. If mucus is a problem, you may use 4 x 4 gauze without cotton filler around the tracheostomy tube.
6. Adjust the tracheostomy ties or apply new ones. Refer to the section on tracheostomy ties (page 13) for directions.
7. Check your skin daily for redness or irritation. Tell your health care provider if you see redness.

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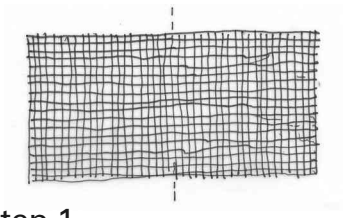
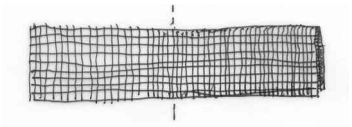
Most people who use trach dressings purchase "pre-cut" tracheostomy gauze dressings, but you can make your own with 4 x 4 gauze. DO NOT cut the gauze. The fraying can make lint or fuzz that could enter your tracheostomy.

To make a folded 4 x 4 gauze dressing to be placed around the tracheostomy tube:

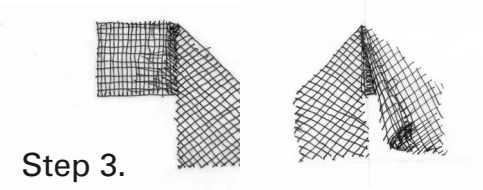
1. Open a sterile 4 x 4 gauze to its fullest length.
2. Fold the gauze in half lengthwise to form a long, thin rectangle.
3. Fold center of gauze. Fold each gauze side to center to create a V-shaped gauze.
4. Put gauze under the neck flange as shown in step 4.



Step 1.



Step 2.



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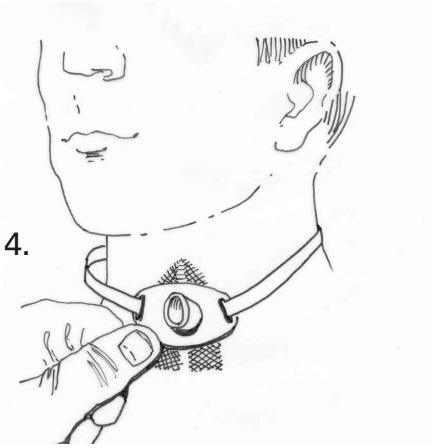

Step 4.

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Information for Patients

Suctioning

Suctioning removes secretions or mucus from the tracheostomy tube and keeps the airway open. Use suction only when it is necessary. You may not need to suction yourself at home. You and your caretakers should know how to suction if you can't cough mucus out.

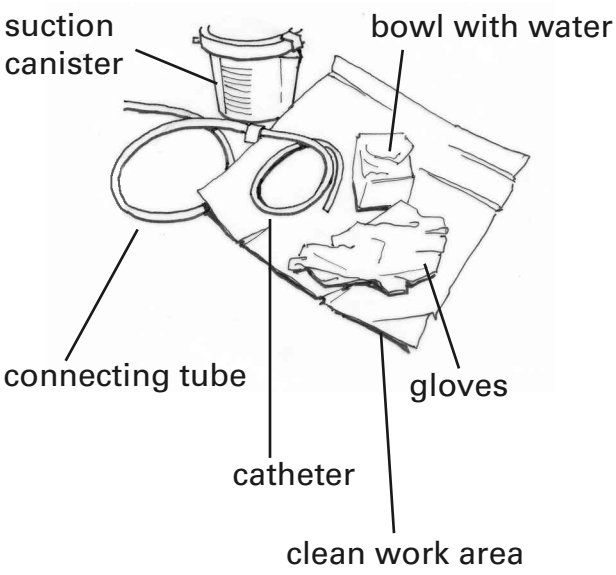
When to suction

- when you feel a build up of secretions that you can't clear by coughing
- if you are having trouble getting your breath. If suctioning doesn't help you catch your breath, refer to page 23, "Emergency Tips."

Equipment

- suction machine and tubing set up according to manufacturer's instructions
- suction catheters that are no greater than half the diameter of the tracheostomy tube
- clean, disposable, powderless gloves
- paper towels, facial tissues, or napkins (lint-free)
- a bowl, a glass, plastic cup, or unwaxed paper cup. Fill it with fresh, cool water.
- oxygen or resuscitation bag, if ordered

Suction machine



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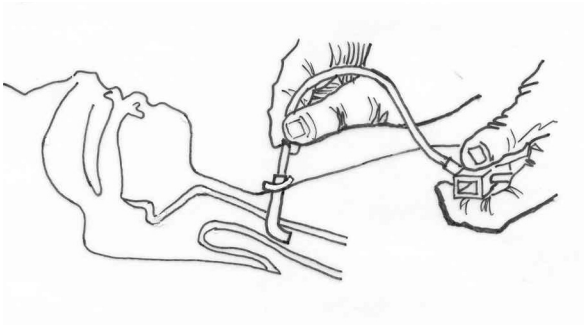
Information for Patients

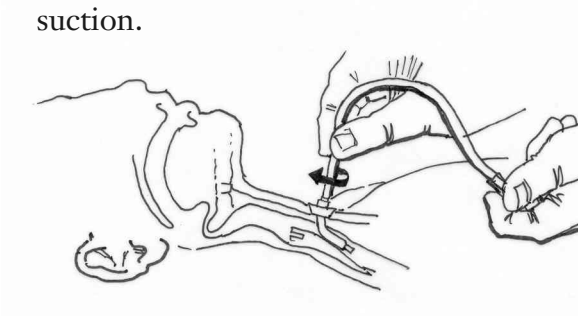
How to suction

1. Wash your hands thoroughly. If you are going to wear gloves, put them on.
2. Attach the suction catheter to the connecting tubing of the suction machine.
3. Turn on the suction machine as instructed.
4. Dip the catheter tip into the suction rinse water and test suction by placing your thumb over the port of the catheter. Release.
5. Make sure your head and shoulders are slightly elevated.
6. Cough and wipe mucus from your tube and mouth using paper towels, facial tissues, or napkins. A damp paper towel is best because it produces the least lint.
7. Take 3 or 4 deep breaths, or increase the oxygen flow rate as your doctor explained.



Hole (vent) is open when inserting

8. Insert the catheter with NO suction applied. The vent, or Y connector, will be open. Gently insert the catheter about 4 to 5 inches, or until resistance is met, or until you cough. Let the natural curve of the catheter follow the curve of the tube. Pull the suction catheter back a little before you apply suction.



Thumb covers hole (vent) on suction catheter.

9. Apply suction by covering the hole (vent) with your thumb. At the same time, slowly take out the catheter by twisting it. **DO NOT leave the suction catheter in for longer than you can hold your breath. This is no more than 10 seconds.**
10. Take deep breaths and use oxygen if your doctor ordered it.
11. Rinse the catheter by suctioning water or normal saline from the bowl through it.
12. Repeat steps 8 to 11 if needed.
13. Return oxygen flow rate to the level it was before suctioning.

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Caring for suctioning equipment

Follow your equipment supplier's directions.

Suction catheters

In some situations, a new catheter will be used each time you suction. When this is the case, the used suction catheter should be rinsed and placed in a plastic sealed bag (sandwich bag) and thrown away.

In many situations, suction catheters can be re-used at home. Your health care provider will help you make this decision. If you are reusing the suction catheter, flush it out with water and moisturizer-free, clear dish detergent after each use. Rinse with plain water. Dry the outside of the catheter with a clean, lint-free cloth. Attach the catheter to the suction machine, turn the machine on, and apply suction to dry the inside of the suction catheter. Wrap the catheters in a clean, lint-free cloth and leave them beside the suction machine. Throw away catheters that are cracked or look unclear.

Suction machine

- Clean the machine, container, bowl, and tubing every day.
- Empty and rinse the suction container with cool water.
- Wash the suction container with water containing clear, moisturizer-free dish detergent.
- Rinse with hot water and dry with a clean cloth.
- Additional cleaning may be necessary. Your equipment will have a filter which may require cleaning. The equipment supplier may suggest you use a vinegar mixture to clean the filter. Follow the manufacturer's instructions.

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Caring for the inner cannula

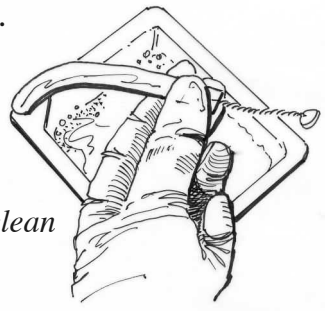
If your tracheostomy tube has an inner cannula, it is important to remove and clean the inner cannula or tube often. The nurse can help you establish a schedule based on your own needs. If your tracheostomy has a disposable inner cannula, change it according to your health care provider's instructions. **DO NOT clean and reuse a disposable inner cannula.**

Equipment for non-disposable cannula

- a small bowl filled with a mix of equal parts of hydrogen peroxide and water
- tracheostomy brush or pipe cleaners
- gloves (clean, disposable, powderless)

How to clean the non-disposable inner cannula

1. Wash your hands.
2. Suction your tracheostomy if needed.
3. Unlock the inner cannula and remove it.
4. Place inner cannula into diluted peroxide mixture.
5. Using a brush, gently cleanse and remove mucus from the inner cannula.



Use brush to clean inner cannula.

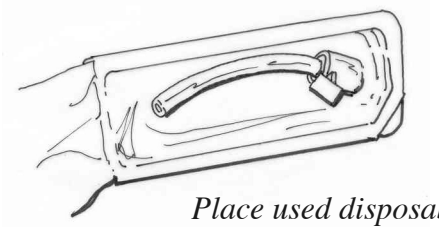
6. Re-soak and clean as many times as needed to get the inner cannula visibly clean.
7. Rinse the tube well with cool, running water. Check the inner cannula to make sure it is clean.
8. Gently reinsert the inner cannula and lock in place.

Equipment for new disposable inner cannula

- new disposable inner cannula

How to change the disposable inner cannula

1. Wash your hands.
2. Suction your tracheostomy if needed.
3. Open the package of a new disposable inner cannula.
4. Unlock and remove the disposable inner cannula according to the manufacturer's directions.
5. Gently insert a new disposable inner cannula and lock in place according to the manufacturer's directions.
6. Place used inner cannula into a garbage bag and throw away in the trash.



Place used disposable cannula in a bag and throw away.

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Tracheostomy ties

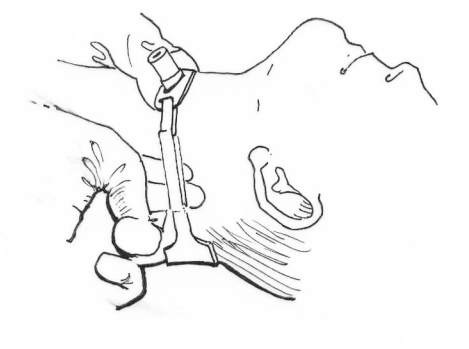
There are 2 different types of tracheostomy ties, twill ties and Velcro ties. The ties hold the tracheostomy tube in place and keep it from coming out. The tube could fall out or be coughed out if the ties weren't there. The ties need to be changed when they are soiled or more often if your health care provider tells you. If possible, have another person help you change the ties.

Twill ties

1. Leave old ties in place. Pull one end of the twill tie through either neck flange hole. Adjust the ends of the tie until one is 3 to 4 inches longer than the other one.
2. Bring both ends of the tie around your neck, and insert the longer end of the tie through the other neck flange hole.
3. Pull the tie snug. Place one finger between the tie and the neck, and tie the two ends together using a square knot. Do not use a bow.
4. Cut the ends of the ties leaving only 1 or 2 inches.
5. Carefully cut and remove soiled ties.

Velcro ties

1. Follow manufacturer's directions for measuring and applying the tie.
2. Use fingers to hold both sides of the neck plate of the tracheostomy tube in place. Release 1 side of the Velcro fastener.
3. Insert and secure the Velcro strip into the same neck plate hole.
4. With fingers still holding both sides of the neck plate, remove the old Velcro tie from the other side.
5. Insert and secure the clean Velcro strip into the neck plate, and remove the old Velcro tie from the other side.
6. Adjust the clean ties to fit your neck. You should be able to fit 1 to 2 fingers between the tie and the neck.



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Tracheostomy cuff care

A cuffed tracheostomy tube has an inflatable cuff attached to it. When the cuff is inflated with air or water, it forms a seal between the windpipe (trachea) and the tracheostomy tube. There are different types of cuffs. Each requires a different type of care and maintenance.

Cuffs can be air-filled, water-filled, or pre-filled (Fome cuff).

The type of cuff I have is:

❒ Air-filled

❒ Water-filled

❒ Fome cuff

Reasons for using a cuffed tube

- provides a seal if using a breathing machine (ventilator)
- may prevent choking (aspiration) from nose or mouth drainage
- may prevent choking (aspiration) of food from the stomach

Supplies you will need

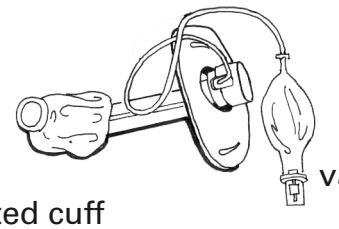
- syringe (size depends on your type of cuff, but usually 5 to 10 cc)
- cuff pressure measuring device, if available

Air-filled cuff care

To deflate:

Suction the mouth to remove mucus that may have built up on top of the cuff.

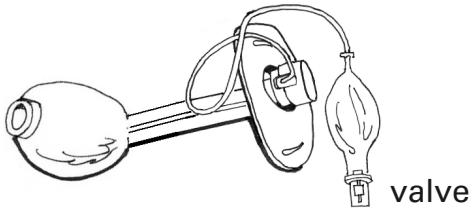
1. Attach a syringe to the valve and remove the air.



Deflated cuff

To inflate:

1. Attach an air-filled syringe to the valve.
2. Slowly inject air into the cuff until you cannot feel or hear air moving from the nose or mouth.
3. A cuff pressure-measuring device can be used if available. Follow the manufacturer's instructions.



Inflated cuff

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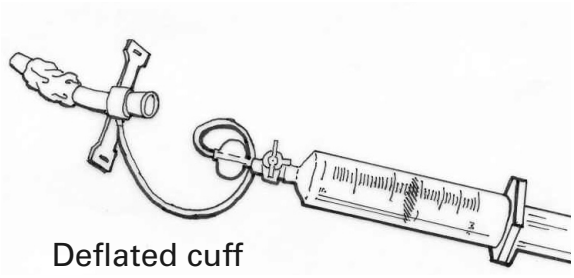
Water-filled cuff care

Some newer tracheostomy tubes have water-filled cuffs. Follow the directions provided by the manufacturer. The directions are basically the same as those for the air-filled cuff, except you will use sterile water to fill the cuff instead of air.

Fome cuff

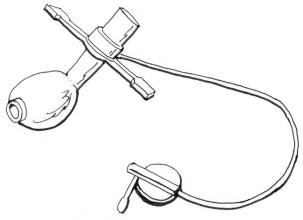
A Fome cuff is normally inflated. The cuff must be deflated before removing an old tube or inserting a new tube. To deflate:

1. Suction the mouth to remove mucus that may have built up on top of the cuff.
2. Attach a syringe to the cuff port and remove air. ***Immediately*** **cap the port. If the port is left open, the cuff will reinflate.**



Deflated cuff

Fome cuff automatically inflates



red cap is open

To inflate after insertion:

1. After the tube is inserted, uncap the port and keep it open. The cuff automatically inflates as air lets the foam expand.

Important points to remember about cuffed tracheostomy tubes

You will get specific instructions about the care of your cuffed tracheostomy tube from your health care provider. General points to remember about caring for your cuffed tracheostomy tube are:

- When the cuff is inflated, the only way to breathe is through the tracheostomy tube opening. The tube must be kept open and clean.
- The person with an inflated cuff cannot speak because no air passes over the vocal cords.
- If the tracheostomy tube cuff is over-inflated, it can cause serious damage to the windpipe (trachea). For air- and water-filled cuffs, inject air and water into the cuff only until you cannot feel or hear air moving from the nose and mouth.
- Before the cuff is deflated, you may need to cough or to be suctioned because mucus may build up on the top of the cuff while it is inflated.
- Your health care provider may tell you to deflate your cuff from time to time.

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Changing the outer cannula (tracheostomy tube)

DO NOT remove the outer cannula unless your doctor tells you to do so. If you will be changing the outer cannula, your health care provider will help you with the following procedure. A tracheostomy tube should never be changed if the stoma is less than 1 week old.

Equipment

- clean set of tracheostomy tubes and obturator (some patients will also get a smaller size tracheostomy tube set)
- tracheostomy ties
- water-soluble lubricant
- gloves
- syringe (if using a cuffed tube)

Procedure to change outer cannula

1. Wash your hands thoroughly.
2. Remove the inner cannula from the clean set.
3. If tube is cuffed, check the cuff for a leak according to the manufacturer's directions.
4. Apply tracheostomy ties to the clean outer cannula.
5. Suction the tracheostomy if needed.
6. Insert an obturator guide into the clean outer cannula.
7. Lubricate the clean outer cannula with water-soluble lubricant.
8. Hold the clean outer cannula with the guide (obturator) inside.
9. If your old tracheostomy tube is cuffed and inflated, deflate it before removal.
10. Take a deep breath and remove the tracheostomy tube. Be sure to remove the tube following the curve of the throat.
11. Immediately insert the clean cannula and guide (obturator), again following the curve of the throat. Never force re-entry.
12. Hold the tube in place with 1 hand and quickly remove the guide (obturator) with the other hand.
13. Attach the tracheostomy ties as indicated. Check for tension by slipping 1 to 2 fingers between the ties and neck.

Be sure to plan ahead. When you are learning about changing the tracheostomy tube, ask your health care provider what you should do if you can't get the tube back in. At this time, the smaller size tracheostomy tube may be temporarily inserted to keep the airway open. **Be sure to tell your doctor if you do this.** Some more suggestions are included in the "Emergency tips" section on page 23.

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Fenestrated tracheostomy tubes

A fenestrated (FEN-ess-tray-ted) tracheostomy tube has 1 hole or several smaller holes along the outer cannula. When a person has a tracheostomy that is fenestrated and has the outer opening of the tracheostomy tube capped, breathing in and out happens through the nose and mouth. Mucus is coughed up through the mouth. A person can talk because exhaled air passes through the holes in the outer cannula up to the vocal cords.

Note: Airflow occurs through mouth and nose. (Diagram courtesy of Mallinckrodt/Shiley)

Types of fenestrated tracheostomy tubes

- cuffed or cuffless
- Disposable inner cannula or reusable inner cannula

The type of fenestrated tracheostomy tube I have is:

❑ Cuffed OR ❑ Cuffless

❑ Disposable inner cannula OR

❑ Reusable inner cannula

Why have a fenestrated tracheostomy tube?

Short-term use while weaning from the tracheostomy tube

Weaning with a fenestrated tracheostomy tube lets your doctor see how well you could breathe without the tracheostomy tube.

Long-term use

Some people choose to have a fenestrated tracheostomy tube on a long-term basis. Your doctor and health care team can help you decide if this is right for you. In the daytime, the fenestrated tracheostomy tube may be capped for normal mouth and nose breathing and speaking. For sleeping and suctioning, the inner cannula can be inserted. Then breathing and suctioning can occur through the tracheostomy tube.

Fenestrated tracheostomy tubes also may help swallowing.

continued

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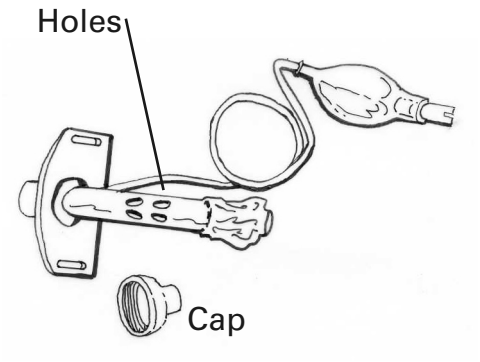
Information for Patients

Parts of the fenestrated tracheostomy tube

The fenestrated tracheostomy tube has several differences:

- holes (fenestration) on re-usable inner cannula and outer cannula (used with re-usable fenestrated tracheostomy tubes)
- cap (may fit directly on the outer cannula or on to the fenestrated inner cannula-depending upon the type of tracheostomy tube)



Fenestrated tube

Important points about fenestrated tracheostomy tubes

- Before the fenestrated tracheostomy tube is capped, the cuff MUST be deflated. **A person CANNOT breathe with the cuff inflated and the tube capped.**
- If you have 2 inner cannulas (fenestrated and non-fenestrated), make sure the fenestrated inner cannula is in when capped.
- If you have trouble breathing when the tube is capped, **REMOVE the cap immediately**.
- It is important to relax when you first start using a fenestrated tracheostomy tube. You need to get used to breathing in and out of the nose and mouth again. It is important to have a health care provider there when learning how to breathe through a fenestrated tracheostomy tube.
- Clean the inner cannula and cap as instructed in inner cannula care.

Do not cap a fenestrated tracheostomy tube until you've received instructions and have practiced.

continued

Using the fenestrated tracheostomy tube

1. **Deflate the cuff.**
2. Remove the non-fenestrated inner cannula.
3. Place the fenestrated inner cannula into the outer cannula and lock it. This step depends on the type of tracheostomy tube you have.
4. Secure the cap onto the end of the inner cannula.
5. Breathe, speak, and cough through the nose and mouth.

Using the fenestrated tracheostomy tube as a non-fenestrated tracheostomy

1. Put the non-fenestrated inner cannula into the tracheostomy tube and lock it.
2. Inflate the cuff as instructed.

Store the cleaned cap and spare inner cannula in a sealed, clean, dry container. **NEVER place the cap on the tracheostomy tube when the cuff is inflated.**

continued

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Information for Patients

Using a speaking valve

Speaking valves contain a one-way valve. They can be placed on the end of a tracheostomy tube. The valve stays open while you breathe in and closes while you breathe out. This allows air to move up and through the vocal cords. You can speak without covering the end of the tracheostomy tube with your finger. Your speech may sound more natural.

Your doctor will determine if you can use a speaking valve.

Taking care of a speaking valve

1. Wash the valve in soapy water every day using moisturizer-free, clear detergent.
2. Rinse thoroughly in cool (tepid) water, not hot.
3. Air dry.

While wearing the valve, you may notice these things:

- air exhaling through the nose and mouth
- speech is improved and you can speak in full sentences
- strong coughing may blow the valve off
- mouth and nose mucus will lessen
- you will be able to remove mucus from your throat or lungs by coughing
- you will be able to blow your nose and sneeze

To use the speaking valve

- **The tracheostomy cuff must be deflated**.
- Increase the amount of time you wear the speaking valve as you are able.
- If you have a dry mouth, you may need to increase your mouth care.
- **Do not wear the speaking valve while you are sleeping**. The disc could become clogged with mucus.
- **Do not throw the speaking valve away**. It is not disposable.
- Follow your doctor or speech language pathologist's instructions.
- Remove the speaking valve if breathing becomes difficult.
- **Do not** use a speaking valve with a Fome cuff tracheostomy tube.

continued

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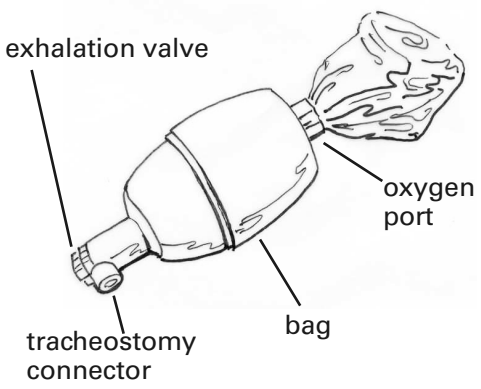
Information for Patients

The resuscitation bag

The resuscitation (re-suss-i-TAY-shun) bag is a football-shaped bag that can help give breaths of air and oxygen to a person who needs help breathing or is unable to take breaths on his or her own. When the bag is squeezed between the hands, the air leaves the bag and enters into the person's lungs. The exhaled air flows out of the lungs, through the windpipe (trachea), and through a special exhalation valve in the resuscitation bag.

Parts of the resuscitation bag

- Bag: The bag holds the air and oxygen. When squeezed, a breath goes into a person's lungs.
- Tracheostomy connector: The tracheostomy connector connects the resuscitation bag to the person's tracheostomy tube.
- Exhalation valve: When the bag is released, exhaled air moves from the lungs, out through this valve.
- Oxygen port: This port allows extra oxygen to be added to each breath.



Reasons to use a resuscitation bag

- to give larger breaths that will help loosen mucus plugs in the lungs
- to provide more oxygen before and after suctioning
- to help with breathing if shortness of breath is getting worse
- to give breaths and oxygen

Patients who use a breathing machine (ventilator) can use a resuscitation bag if they need to disconnect from the breathing machine, or if there is a power failure or problem with the breathing machine.

If a person's breathing stops, call 911 immediately and begin to use the resuscitation bag.

continued

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Information for Patients

How to use the resuscitation bag

Assisted breathing

1. Attach the tracheostomy connector to the tracheostomy tube.
2. Squeeze the bag until about 1/3 to 1/2 the air is forced out, then release the bag.

- Look at the chest when squeezing the bag. The chest should rise and fall with each bag breath.
- Give a breath large and deep enough so the person feels comfortable. You may need to squeeze the bag with 2 hands.
- If the person is breathing on his or her own, try to match the delivered breaths with the person's own efforts. As soon as the person starts to inhale, squeeze the bag.
- Give a breath every 4 to 5 seconds, allowing the bag to refill after each breath. If the person is short of breath, then deliver breaths at a faster rate, still allowing for the bag to refill, about 12 to 16 breaths per minute.

Providing oxygen

You may need to give oxygen in addition to assisted breaths if:

- the doctor has prescribed it
- there is increased shortness of breath

If breathing stops, call 911 immediately.

To give oxygen:

1. Attach the oxygen tubing from the oxygen supply to the oxygen port located on the resuscitation bag.
2. If you are giving extra oxygen, turn the oxygen supply on, setting the flow rate to a maximum of 15 liters.
3. If you are giving the prescribed amount of oxygen, set the oxygen flow to_____.
4. Deliver breaths as described above.

When you are finished using the resuscitation bag with oxygen, be sure to reconnect the oxygen source as directed or turn off the oxygen.

continued

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Information for Patients

Emergency tips

If your tracheostomy tube comes out or becomes blocked, you need to have a plan to deal with the emergency situation quickly. **If you are unable to solve the problem quickly, call 911.**

If the tracheostomy tube comes out and another tube is available

1. Insert a clean, lubricated tracheostomy tube in the stoma using the guide (obturator).
2. Hold the tube in place with your fingers.
3. Pull out the obturator.
4. Replace the ties.

If the tracheostomy tube comes out and another tube is not available

The stoma (neck opening) may stay open for a short period of time.

1. If possible, reinsert the old tracheostomy tube.
2. If you can not insert the old one, insert and hold a hollow tube such as a straw, suction catheter, or inner cannula into the stoma. Sometimes the smaller inner cannula can be inserted until emergency help arrives.
3. If using a straw, suction catheter, or inner cannula, replace with a new tracheostomy tube or the old tracheostomy tube as soon as possible.

If the tracheostomy tube becomes blocked

1. Remove the inner cannula.
2. Try to remove the plug by suctioning. Saline may be helpful, as described on Page 6.
3. If a resuscitation bag is available, use it.
4. Deflate the cuff and try to suction again.
5. If this doesn't work, cut the ties, remove the tube, and replace it with a new one.

Emergency kit

It is good to make an emergency kit. It should include all of the supplies needed for a tracheostomy tube change. These supplies are:

- a clean tracheostomy tube set with obturator
- water soluble lubricant, such as Surgilube
- suction catheter
- syringe, if you have a cuffed tracheostomy tube
- sterile saline bullets
- gloves
- tracheostomy ties
- a smaller size tracheostomy tube set with obturator

Remember to make an emergency plan.

continued

When to call the doctor

You should call the doctor if:

- the amount of mucus increases
- the mucus changes color
- the mucus becomes much thicker
- you have a fever of 101F or higher
- you have difficulty breathing
- secretions become bloody

Other health care professionals may be helpful

If you need help with your nutritional needs, you may want to talk to a dietitian. If you need help with swallowing or speaking, talk to a speech language pathologist.

Follow-up

- Continue to see your doctor at regular intervals. He or she can answer your questions and coordinate your care.
- Talk with your doctor about how often the tracheostomy tube should be changed. Some patients, depending upon the situation, may need to have this scheduled as a procedure in the hospital's ambulatory or outpatient area.

My next doctor appointment is:

_____

My doctor's phone number is:

_____

continued

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Information for Patients

Tips for everyday living

You can do most things with a tracheostomy. One thing you will not be able to do is swim. You also will not be able to do anything where there is a lot of dust.

Follow these precautions for everyday activities:

- Carry some form of identification in case of any emergency. We recommend that you have a Medical Alert Bracelet that states "Neck Breather."
- Use a humidifier to moisten the air you breathe. Keep the humidifier clean by following the manufacturer's instructions.
- Stay healthy by eating a balanced diet and drinking enough fluids. You should drink 8 cups per day unless your doctor tells you otherwise. Get plenty of rest and stay away from people who have a cold or the flu.
- Protect your stoma from very hot or freezing temperatures, and from heavy pollution. Use a dressing, crocheted bib, clothing, or other shield to cover your stoma. Make sure you can breathe through the stoma covering. You can buy stoma coverings at medical supply companies.
- In the shower, aim the showerhead low or wear a special shower shield to keep water from entering your lungs. It may be easier to take a bath in the tub. You can buy protective shower guards at medical supply companies.
- Be careful that nothing enters your new airway. This includes cotton swabs, tissues, shaving cream, hairs, powders, and aerosols. When you are outside, make sure insects, leaves, and other things don't enter the tracheostomy tube.
- Give special attention to your nose and mouth. These areas are no longer moist, and it is harder for you to detect mouth odor. Good mouth care stimulates taste buds.
- Pay attention to the type and amount of mucus through your stoma. Report any changes to your doctor.
- Tell your doctor before you take any medicines. Some drugs may dry out secretions.
- Men need to be careful when shaving. It is easy to cut yourself because nerve endings cut during surgery can decrease sensation.
- Tracheostomy tapes, usually called twill tape, can be bought on a roll in a sewing store or anywhere thread and buttons are sold. Velcro ties also are available from your medical supplier. Some people use shoelaces as another option.
- To loosen secretions and help remove mucus plugs, your doctor may recommend using drops of saline, sometimes called saline bullets.
- Do not go into areas where there is a lot of dust, fumes, and smoke.

continued

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Information for Patients

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For help in finding a doctor or health service that suits your needs, call the UPMC Referral Service at 412-647-UPMC (8762) or 1-800-533-UPMC (8762). Select option 1.