Home
Tracheostomy Care

PATIENT education

The material provided in this package is for information only. You should not utilize the information as a substitute for medical advice. Always talk with your doctor about your health care and follow your doctor’s advice.
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What is a Tracheostomy?

A tracheostomy, commonly called a trach, refers to a surgically created hole that extends from the neck skin into the windpipe or trachea. This operation is performed for a number of reasons. Some persons have tracheostomy to bypass obstructions in their airway from injuries, scarring, or tumors. Some patients have a tracheostomy for the treatment of sleep disorders, such as obstructive sleep apnea. Many patients have a tracheostomy for improvement of breathing and for suctioning secretions from the lungs that are unable to clear with coughing. In most patients the tracheostomy enables a person to function more normally and continue to breathe, despite significant medical problems. For this reason this artificial airway needs to be maintained in order to prevent serious or life-threatening problems. These problems are frequently related to blockage of the tracheostomy tube.

Many patients at the University of Kentucky Medical Center are discharged to their homes and maintain tracheostomies without difficulties. They are able to resume most normal activities. This booklet is intended as a guideline to reinforce teaching that was given to you in the Hospital by our nurses and doctors. It is also for a handy reference while you are home and becoming familiar with tracheostomy care. Home health services can frequently assist in providing supplies and guidance for patients with recent tracheostomies.

Definitions

- **Tracheostomy Tube**: A small tube inserted into the windpipe. It maintains the hole in the skin of the neck that connects with the windpipe. A tracheostomy tube can be made of various materials but is most frequently made of plastic or stainless steel. Most trach tubes are made up of both an outer cannula and an inner cannula, but some do not have an inner cannula. All tracheostomy tubes come with an obturator.

- **Trachea**: Windpipe

- **Outer Cannula**: The outer part of the tracheostomy tube. Stays in place as long as you have a tracheostomy.

- **Inner Cannula**: The inner part of a trach tube. It can be removed for cleaning without removing the entire tracheostomy tube

- **Stoma**: The connection from the skin to the trachea. It may be used to refer to the neck hole of a tracheostomy.

- **Obturator**: Enables the tracheostomy tube be precisely guided through the stoma into the windpipe. It is removed after insertion and typically replaced with an inner cannula.

- **Mucus**: The liquid secretions that are made by your lungs. The color of mucus varies from clear to yellow/green. Initially after a tracheostomy, mucus may dry and plug tracheostomy tubes. This requires special attention to humidification, the cleaning of the
tracheostomy tube, and changing the cannulas of the tracheostomy tube. The use of suction and irrigation are very important to keep the tubes clear. Both of these tasks are covered in this booklet.

*If mucus is plugging the tracheostomy tube, first irrigate and suction. If this is not successful, remove the inner cannula and repeat the irrigation and suction. If there is still obstruction, there may be mucus plugging the outer cannula and it should be replaced.

**Handwashing**

Good handwashing is **very** important in preventing infection. With a tracheostomy, you are at a higher risk for developing a lung infection since air is bypassing your body’s normal defenses. You must wash your hands before and after you do any part of your tracheostomy care.

**Cleaning the Inner Cannula**

You need to clean your inner cannula at least three times a day. If your sputum is thick or sticky, you may need to clean it as often as ten times a day.

**Supplies**

- hydrogen peroxide
- clean bowl
- pipe cleaners or cotton-tipped swabs
1. Wash your hands.

2. Remove the inner cannula.
3. Place the inner cannula in bowl and cover with hydrogen peroxide. Let it soak in the peroxide solution for at least one minute.

4. Pick the inner cannula up and clean the inside and outside with pipe cleaners or cotton-tipped swabs.
5. After you scrub off all the sputum, hold the inner cannula under running tap water briefly.

6. Shake the excess water off the inner cannula.
7. Reinsert the inner cannula into tracheostomy and lock in place.

8. Wash hands.

Cleaning the Stoma

Clean the skin around your stoma at least once a day to remove sputum crusts and prevent skin irritation.

Supplies

- clean wash cloth
- mild soap
- cotton-tipped swabs
- hydrogen peroxide
- petroleum jelly
- 4 x 4 gauze or pre-cut dressing

1. Wash hands.

2. Clean around stoma with soapy washcloth, then rinse.
3. If the stoma is covered with dried sputum crusts, remove the crusts with a cotton-tipped swab soaked in hydrogen peroxide. Hold your breath while removing crusts so that you do not inhale them.

4. If dried crusts are a problem, apply petroleum jelly around the stoma.

5. If you do not have a problem with mucus collecting around your stoma, you do not need to place a dressing around the stoma.

6. If you need a dressing, you may buy pre-cut dressings or make them from a 4 x 4 gauze. Do not cut your dressing. Cutting cotton or gauze pads creates loose fragments that may lodge in your stoma.

- To make a tracheostomy dressing from a 4 x 4 gauze, open gauze to an 8” x 4” size, then fold lengthwise.
• Fold gauze corners up.

• Slide folded gauze under tracheostomy strings.
Changing the Outer Cannula

Your doctor and nurses will instruct you on changing the outer cannula. It is best to do this for the first time in the presence of a medical professional familiar with changing a tracheostomy tube. If the outer cannula comes out accidentally, it should be replaced.

The outer cannula should be replaced if you think mucus is plugging the end of the outer cannula.

Materials necessary for changing the outer cannula:

- It is best to have a second complete tracheostomy tube with obturator and inner cannula to replace the current one in your neck.
- Water-soluble lubricants, such as K-Y Jelly® or Surgilube®.
- Clean tracheostomy ties.
- Clean gauze for placement under the tracheostomy tube.

Procedure:

1. Wash your hands.

2. Prepare the clean tracheostomy tube.
   a. Remove the inner cannula.
   b. Attach the tracheostomy ties to the outer cannula.
c. Place the obturator in the outer cannula.
d. Run clean water over the tubes.
e. Apply a thick coat of water-soluble lubricant to the outside of the clean tracheostomy tube.

3. Loosen the ties of the old tracheostomy tube.

4. With a smooth, quick motion, slide the old trach forward and out.

5. Insert the clean tube into your tracheostomy stoma using a gentle, inward motion. If it is difficult to insert the cannula into the stoma, lift your chin up. This may better align the stoma with the hole in the trachea.

6. Stabilize the neck plate of the outer cannula with one hand and immediately remove the obturator with the other hand.

7. Tie the neck ties to one side in a square knot.

8. Replace inner cannula and lock in place.

9. Wash your hands.

Cleaning the Outer Cannula

1. Use the same method described on page 3 for cleaning the inner cannula.

2. After cleansing and drying the outer cannula thoroughly, place clean trach ties on the outer cannula.

3. Store the cannula in a clean container.

Changing the Tracheostomy Ties

The tracheostomy ties only need to be changed when they become dirty. You will need a friend to hold the tracheostomy tube in place so it does not accidentally come out while you are changing the ties.

Supplies

- ½ inch wide twill tape
- scissors
- a friend
1. Cut two strips of twill tape about 8 inches long.

2. Cut a small slit at one end of each strip.
3. Cut and remove the old ties while your friend holds the tracheostomy in place.

4. Pull the slit end of each tie through the opening in the neck plate. Then, thread the unslit end through the slit.
5. Tie the ends together in a double knot to one side of your neck. Make the ties loose enough to slip one finger under them.

Humidification

Normally, your nose and mouth warm, filter, and humidify the air you breathe. Because you are breathing through your trachea, you need to add extra sources of humidity to your home. Dry air may cause your secretions to become thick, blood-tinged, and hard to cough up. You need to be particularly careful to provide adequate humidity in the winter months because heat sources make the air extra dry.

Measures to Provide Humidity

1. Put normal saline solution into your trachea as often as needed to keep secretions loose. (See directions below.)

2. Keep a ten gallon humidifier in your main living area during the day.

3. Keep a small humidifier at your bedside at night.

4. If you have radiators, place pans of water on top of them.

5. Maintain a relative humidity of 50 percent in your home.

6. The most important way to keep your sputum thin is to drink plenty of fluids – at least six glasses of water a day.
Making Saline Solution

1. Boil four cups of water for five minutes.
2. Add 1 ½ teaspoon salt to the four cups of water.
3. Pour into clean jar and cover with a lid.
4. Solution may be kept in the refrigerator. Discard after three days.

Instilling Saline Solution

Supplies

• clean syringe
• saline solution at room temperature
• tissues

1. Fill syringe with 2 cc of saline solution.
2. While breathing in deeply, squirt saline into inner cannula. This will make you cough immediately, so have tissues ready to catch the sputum.
3. Repeat this whenever needed to keep secretions loose.
4. Clean syringe with soap and water and dry thoroughly, then place in a clean container. Replace the syringe with a new one every week.

Cleaning a Cool Mist Humidifier

The humidifier must be cleaned regularly to prevent lung infections. If your humidifier has cleaning instructions, please follow them. Otherwise, you should clean your humidifier according to these instructions. (Avoid using a heated humidifier.)

Daily

1. Empty the tub.
2. Clean it with hot, soapy water.
3. Rinse.
4. Add fresh water.
Weekly

1. Empty the tub.

2. Fill the tub with equal parts of vinegar and water.

3. Turn the humidifier on for one hour with the vinegar solution in it. Use an unoccupied room so you don’t have to smell the vinegar.

4. Empty the humidifier tub and wash with hot, soapy water.

5. Rinse the tub and fill with water.

6. Turn the humidifier on for one more hour.

7. Empty the tub and air dry.

Suctioning

Initially, you may need a suction machine to help clear sputum from your airway. Eventually your secretions will probably decrease, as your airway adjusts to the presence of the tracheostomy tube.

Supplies

- suction machine
- suction catheter
- clean container
- saline solution
- connecting tubing
- syringe
1. Wash your hands.

2. Attach connecting tubing and suction catheter to suction machine.

3. Turn suction machine on.

4. Pour about half a cup of saline solution into the clean container.

5. Draw 2 cc of saline solution into the syringe and squirt the saline solution into your trachea.
6. Wet the end of the suction catheter with normal saline.

7. Take three deep breaths. Then gently insert the suction catheter 4-8 inches through your tracheostomy tube. Do not apply suction while you are inserting the catheter. Once you feel resistance, withdraw the catheter slightly.

8. Cover the suction control vent with your thumb to apply suction. Do not apply suction for more than ten seconds. As you apply suction, gently rotate the catheter while you withdraw it.

9. Do not suction more than three times a session. If you need more suctioning, rest at least five minutes before repeating.
10. Take three deep breaths after you finish.

11. Place the catheter in the water and suction to rinse tubing.

12. Wash your hands.

Cleaning the Suction Catheters

Supplies

- used suction catheters
• white vinegar
• mild liquid soap
• clean towel
• clean covered container

1. Wash catheters in hot soapy water.
2. Rinse thoroughly with tap water.
3. Soak catheters in a solution containing equal parts of white vinegar and tap water for one hour.
4. Rinse the catheters well with water. Connect the catheters to suction to rinse inside of each catheter.
5. Air dry the catheters on a clean, dry towel.
6. Store catheters in a clean, covered container.

**Cleaning the Suction Machine**

1. Dispose of the secretions from the suction bottle into the toilet.
2. Wash the suction bottle every day with hot soapy water.

**Resuming Activities**

Having a tracheostomy should not interfere with normal activities. You should be able to continue indoor and outdoor activities. Patients with lung problems such as asthma, emphysema, and chronic bronchitis may have some shortness of breath and wheezing associated with exposure to extremely cold air. Covering of the tracheostomy with a light cotton garment or bib may be beneficial for maintaining humidity and decreasing the shock of cold air in the lungs. Scarves may also provide some additional protection. These covers are also useful for individuals who are exposed to airborne dust particles in the air. This type of covering is also helpful during haircuts.

Water can easily flow into a tracheostomy tube. A person with a tracheostomy cannot hold their breath under water and, therefore, if an individual with a tracheostomy becomes submerged, they can easily drown. For this reason there is significant risk in boating or being around water that can cover the neck.

One can easily bathe in a bathtub or use a movable showerhead in order to direct water away from the tracheostomy tube. Covering of the tracheostomy with a plastic/cloth child’s bib during showering is also helpful to protect the tracheostomy from water in a standard shower. The cloth side of the bib is placed against the tracheostomy and the plastic side
should face out to guide the water away from the stoma during showering. Some patients wrap a cotton towel loosely around the neck in to protect the stoma from direct exposure to water in the shower.

In your circumstance, your doctor and healthcare professionals would prefer you to resume the majority of your normal activities and interests. Please feel free to discuss any concerns with your doctor and/or nurses.

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