



PATIENT/CAREGIVER INSTRUCTIONS

# Oral and Tracheal Suction



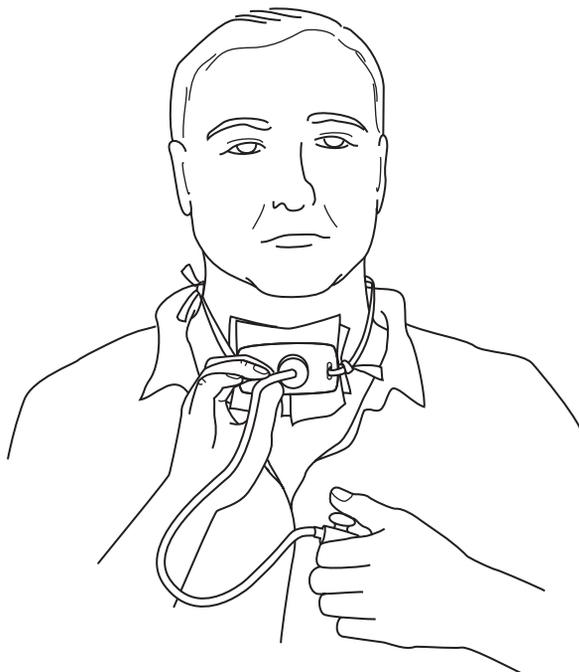
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*Suctioning through the mouth*



*Suctioning through the trach tube*

Suctioning may be performed orally, nasally or through a tracheostomy opening. This manual will provide an overview of oral and tracheal suction procedures.

The need for suctioning is evaluated by listening for noisy respirations, evaluating the patient's coughing and, with more experienced patients, by their own requests for suctioning. An increase in the patient's

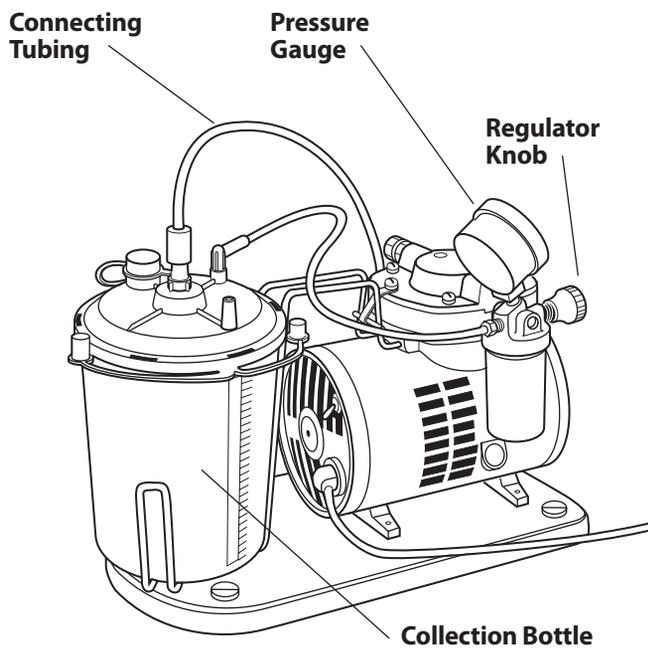
normal mucus production or the presence of blood in the mucus could indicate a significant problem and should be reported to the physician.

The following points regarding suctioning are important:

- It is important to protect yourself from any germs that may be present. Remember to thoroughly wash your hands after suctioning and discard suction catheters.
- If the patient's secretions are thick, 3–5 ccs of normal saline can be instilled into the tracheostomy tube to help thin the secretions. **Note:** Stay clear of the patient's trach after instilling saline, as they may cough and expectorate or forcefully project the saline and secretions.

In order to suction a patient, a suction machine, connecting tube, suction catheter and electrical wall outlet are needed. The operating and cleaning instructions for this equipment are discussed under the procedure entitled, "Cleaning Your Suction Machine" (on page 8).

Although suctioning is a necessary part of airway care, it must be done with care. If the patient begins to produce blood in his or her secretions or experiences severe shortness of breath, the physician should be contacted immediately. Suctioning should only be done when secretions are present. Suctioning when secretions are not present is not only unnecessary but can irritate or harm the airway.

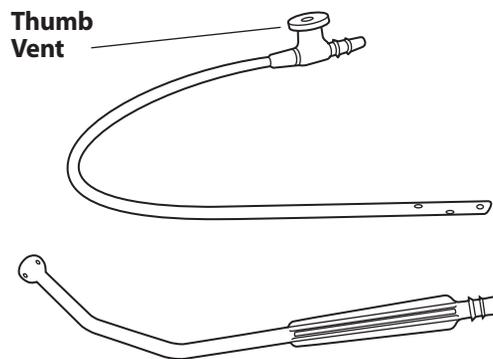


*A typical suction machine*

## Your Suction Equipment

Your suction machine is a device that has a compressor which creates a negative pressure vacuum called suction. When tubing is attached, the machine pulls mucus and other secretions up through the catheter and connecting tubing and into the collection bottle. There may be a gauge on the machine to indicate how much negative pressure is being created.

Suction machines are available in different models. However, most models have the same basic parts: a **regulator knob** that allows you to set the proper amount of suction, **connecting tubing** through which the secretions drain, and a **collection bottle** which holds the secretions. Some models have a **pressure gauge** that indicates the amount of suction. Battery operated suction machines also are available.



*Typical suction catheter and Yankauer tip*

A suction catheter is placed on the end of the connecting tubing. The catheter has a **thumb vent** which acts as a control valve. By placing your finger over the vent when the suction machine is on, you can control the amount of suction pressure. The tip of the suction catheter which is placed in the patient's mouth or throat is smooth and has a number of holes to allow mucus and secretions to be pulled into the tubing.

A Yankauer catheter may be used for oral suction.

## Operating Your Stationary Suction Unit

To perform the suctioning procedure, a suction unit, which produces a negative pressure, is required. Once the negative pressure is applied to the airway, the secretions can be removed.

Each suction unit should have an adjustable vacuum gauge so that the vacuum can be adjusted to a safe level. The recommended ranges are:

- Adults: -80 to -120 mm Hg
- Children: -80 to -100 mm Hg
- Infants: -60 to -80 mm Hg

Additionally the unit should include a reservoir bottle for fluid accumulation; a connecting tube which attaches to the suction catheter; a standard electrical wall plug; a short tube which connects the machine pump, bacteria filter and the reservoir bottle.

## Specific Operating Instructions

**Step 1:** Connect the short, clear plastic tubing between the reservoir bottle and the suction unit. Often, a filter is placed at this juncture, thus protecting the suction unit against fluid back-up.

**Step 2:** Connect the long, clear plastic connecting tube to the connector that goes to the reservoir bottle.

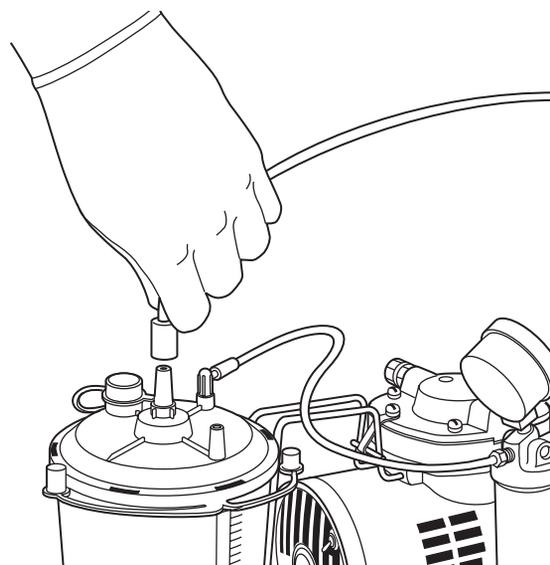
**Step 3:** Plug the unit into a standard wall outlet.

**Step 4:** Turn the unit on and block the end of the long connecting tube. Adjust the regulator setting according to the recommended values.

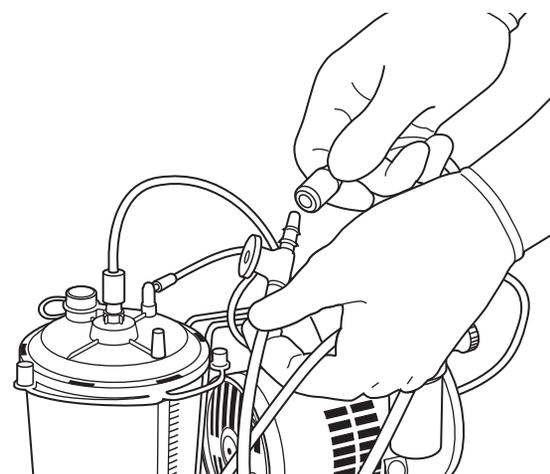
- Clockwise — increases the suction
- Counterclockwise — decreases the suction

**Step 5:** Check for proper negative pressure. To do this, turn the suction machine on, kink the connecting tubing and note the reading on the gauge.

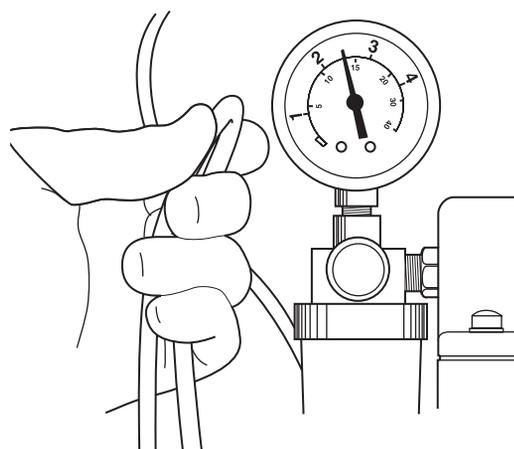
If the needle does not reach the appropriate setting, check all connections for tightness. If after retightening all connections the correct setting has not been achieved, turn the adjustment knob until the needle of the gauge is at the correct reading.



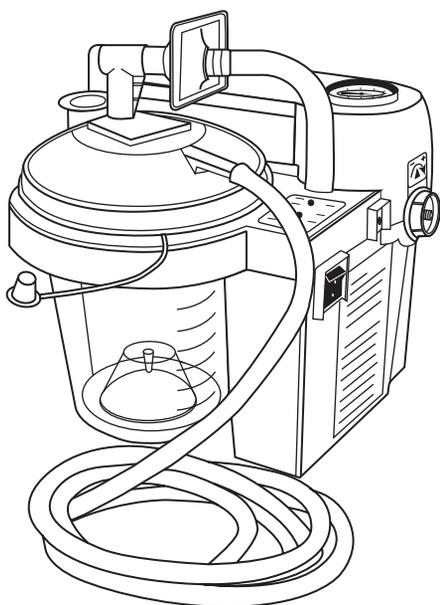
*Step 1: Attach the connecting tubing*



*Step 2: Attach the suction tubing to the suction catheter*



*Step 5: Check for proper negative pressure*



*A typical portable suction unit*

## Operating Your Portable Suction Unit

A portable suction unit is primarily used for patients who are able to leave their homes and are away from electricity. It can also be used as a back-up system for electrical failures.

### Specific Operating Instructions

**Step 1:** Turn the unit on by turning the switch to the ON position. The unit will be running on power from one of three different sources:

- Standard home electrical current, by plugging the unit into a wall outlet
- In a vehicle, by attaching the cigarette lighter adapter
- The unit's internal battery

**Step 2:** The charging light indicator will light if the unit is plugged into a wall outlet.

**Step 3:** The suction pressure may be adjusted by turning the knob on the top or the side of the unit clockwise.

**Step 4:** Empty and clean the reservoir bottle at least once per day. The fluids should be flushed down the toilet.

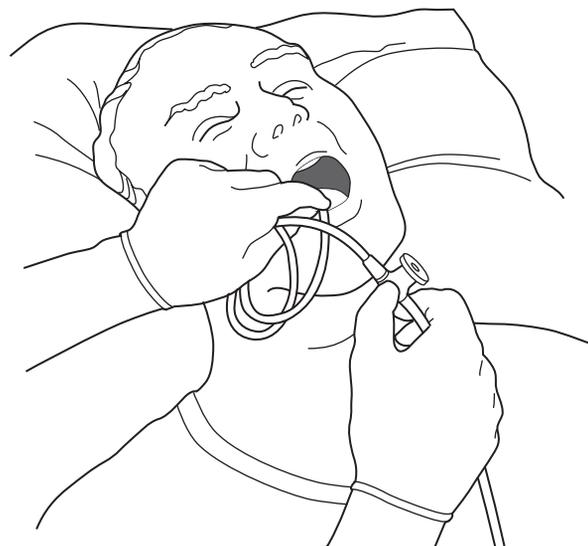
**Step 5:** The reservoir bottle should be washed with a mild non-detergent soap and water and rinsed with warm water.

**Step 6:** Dry equipment completely before it is reassembled.

## Suction Procedure for Oral Suction

**Step 1:** With the thumb off the suction vent, gently insert the catheter or Yankauer into the mouth. Advance the catheter slowly into the back of the mouth as directed by your physician.

- Passage of the catheter may cause the patient to cough or gag.
- If coughing occurs, put on a face mask and goggles to protect yourself from exposure to bodily fluids.
- Wait until the patient recovers before continuing.



*Gently insert the catheter or Yankauer into the patient's mouth*

**Step 2:** Cover the suction vent with your thumb. While slowly removing the catheter, apply intermittent suction by taking your thumb on and off the vent.

- **Never suction for longer than 15 seconds.**
- Suctioning may cause slight airway irritation and/or coughing. Stop and wait until the patient recovers before continuing.

**Step 3:** Empty and clean the reservoir bottle at least once a day, or whenever the fluid reaches the full line. The fluid should be flushed down the toilet.

**Step 4:** Before the reservoir bottle is replaced, it should be washed with a mild, non-detergent soap and water and rinsed well with hot water.

**NOTE: The reservoir bottle should always be cleaned after emptying the contents. This is extremely important to prevent bacteria from contaminating the suction machine. “Dirty” or contaminated equipment is a common source of infection in the lungs.**

**Step 5:** The connecting tubes should be cleared by suctioning water up through the tubing.

**Step 6:** The longer connecting tube should be thrown away at least monthly or whenever it can no longer be cleared adequately.

## Clean Suction Procedure for Tracheal Suction

When you use a “clean” suctioning technique, extreme care must be taken to avoid introducing bacteria into the tracheostomy and lungs. It is also important to use clean gloves each time the patient requires suctioning.

### Equipment Required

- Suction machine and suction tubing
- Clean gloves
- Suction catheter (some catheters may have a plastic sleeve on the outside)
- Disposable paper cup full of distilled water
- Sterile normal saline — if needed for thick secretions
- Manual resuscitator
- Oxygen source, if ordered

### Instructions

**Step 1:** Wash your hands thoroughly before starting the procedure.

**Step 2:** Plug in the suction machine, connect the tubing to the suction jar, and turn the machine on to make sure it is working properly.

**Step 3:** Set the vacuum gauge to the proper suction pressure.

- Adult: -80 to -120 mm Hg (high)
- Children -80 to -100 mm Hg (medium)
- Infants: -60 to -80 mm Hg (low)

**Step 4:** Connect the patient to the manual resuscitator and manually ventilate for

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several breaths before suctioning. If oxygen is prescribed, it should be supplied to the patient through the manual resuscitator.

**Step 5:** If secretions are thick, instill 3 to 5 ccs of normal saline into the trach as the patient inhales. This will cause the patient to cough. It is important to be ready to suction the patient immediately to clear the airway and stop the coughing.

**Step 6:** Reconnect the patient to the manual resuscitator and manually ventilate for 15–30 seconds.

**Step 7:** Put on your clean gloves.

**Step 8:** Attach a clean suction catheter to the suction machine tubing.

**Step 9:** Disconnect the patient from the manual resuscitator.

**Step 10:** Gently insert the catheter into the trach tube (usually 3–4 inches or until resistance is met). Do not apply suction as you are inserting the catheter.

**Step 11:** Apply suction as you withdraw the catheter from the airway. **NEVER suction longer than 10–15 seconds.** This would remove too much oxygen from the patient's lungs.

**Step 12:** Reconnect the patient to the manual resuscitator and manually ventilate for 30 seconds.

**Step 13:** Repeat the suctioning and manual ventilation procedure until the airway is clear.

**Step 14:** At the end of the tracheal

suctioning procedure, give several deep breaths with the manual resuscitator.

**Step 15:** If the patient has difficulty swallowing, you may use the same catheter and glove to suction the mouth and/or around the trach tube. It is important to remember that once you have suctioned the mouth and/or around the trach tube, you cannot re-suction the trach until you have replaced the catheter with a new one.

**Step 16:** Rinse the catheter and the suction connecting tube with distilled water until it is clear of mucus.

**Step 17:** Discard your glove and paper cups.

**Step 18:** Wash your hands.

## Instilling Normal Saline

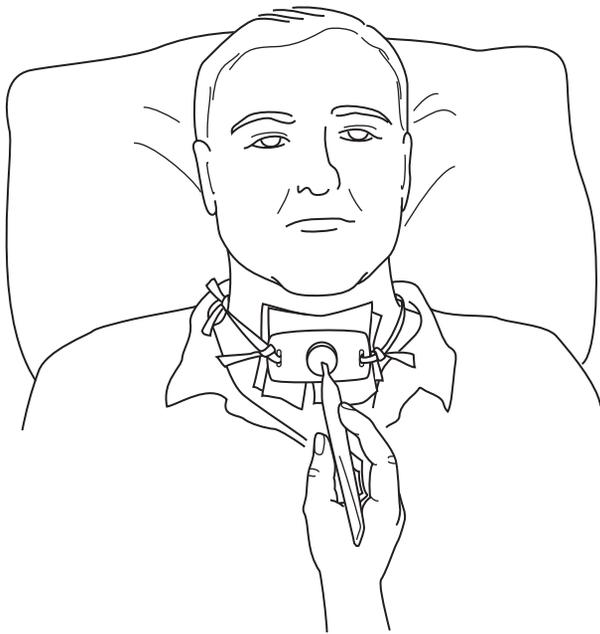
If a patient has thick secretions, approximately 3–5 ccs of normal saline can be instilled into the tracheostomy tube in an attempt to make the secretions thinner. Instilling normal saline into the trach can also stimulate the patient to cough. Instilling normal saline into the trach is done in conjunction with the suctioning procedure.

## Equipment Required

- 5 cc syringe (no needle)
- Sterile normal saline, or
- Unit dose normal saline vials

## Instructions

**Step 1:** Wash your hands thoroughly before beginning the procedure.



*Instilling normal saline*

**Step 2:** Explain the procedure to the patient.

**Step 3:** Draw up 3 to 5 ccs of normal saline in the syringe. **Note:** Some patients may use the normal saline unit dose ampules available through a pharmacy instead of using a syringe to draw up the normal saline.

**Note:** You should be prepared to suction the patient immediately after instilling the saline.

**Step 4:** Instill the saline into the trach as the patient inhales.

**Step 5:** Suction the patient as instructed in the “Suctioning” section.

**Step 6:** When you are finished using the syringe (or saline vial), throw it away.

## Cleaning Your Suction Machine

Proper cleaning and disinfecting of respiratory therapy equipment in the home

is very important. Do all cleaning and disinfecting in a clean environment. Avoid doing it after vacuuming, under an open window, or in dusty, dirty, smoky areas.

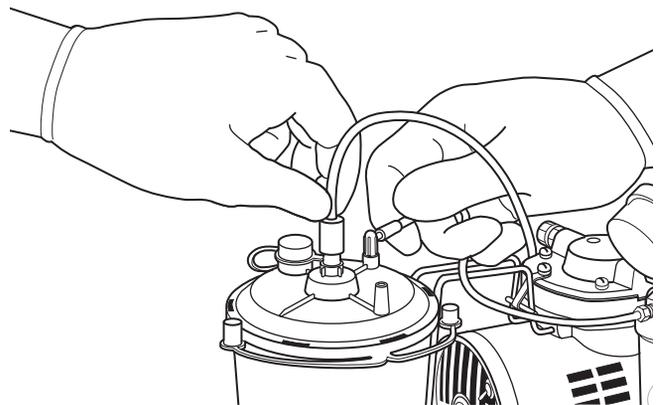
It is important to keep your suction machine clean and free from harmful bacteria which could cause an infection.

## Daily Cleaning Procedure

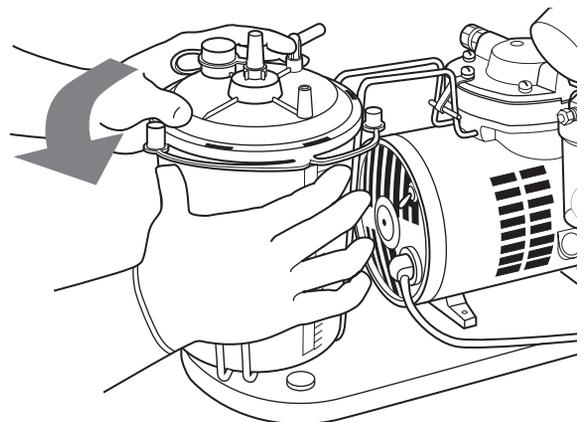
**Step 1:** Wash your hands as instructed on page 10 and put on disposable gloves.

**Step 2:** Remove the tubing from the outlets on the lid of the collection bottle.

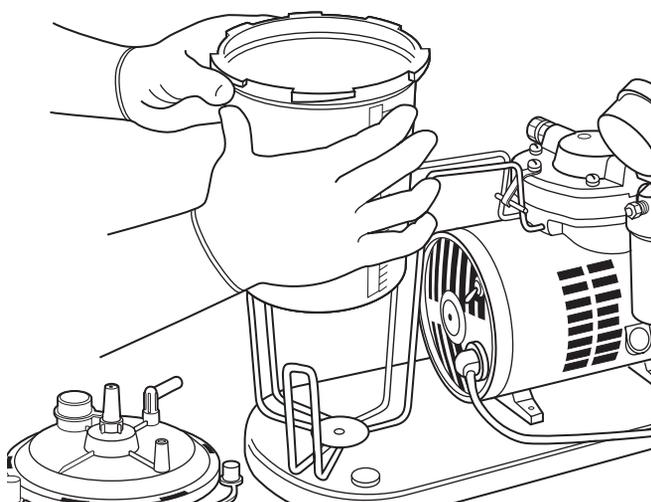
**Step 3:** Remove the lid from the collection bottle.



*Daily Cleaning Procedure —  
Step 2: Remove the tubing from the lid outlets*



*Step 3: Remove the lid from the collection bottle*



*Daily Cleaning Procedure —  
Step 4: Remove the collection bottle*

**Step 4:** Remove the collection bottle from the holder on the suction machine.

**Step 5:** Empty the contents of the collection bottle into the toilet. Do not pour contents in the sink.

**Step 6:** Wash the collection bottle and bottle lid thoroughly in a solution of liquid detergent and warm water.

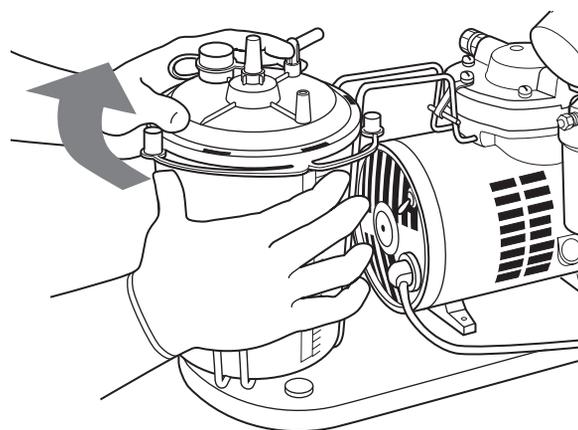
**Step 7:** Rinse thoroughly under warm running water. Shake off excess water.

**Step 8:** Dry the outside of the collection bottle with a clean towel.

**Step 9:** Place the collection bottle back in the carrier on the suction machine. Replace the lid tightly on the jar.

## **Cleaning and Disinfecting Suction Catheters and Yankauers**

Your physician may recommend using reusable suction catheters and/or supplies.



*Step 9: Place the bottle in the carrier*

Your Apria Healthcare representative will advise you on disinfecting procedures. If you do reuse these suction supplies you must thoroughly clean them once a day. The following procedure should be followed:

**Step 1:** Wash your hands as instructed on page 10 and put on disposable gloves.

**Step 2:** Wash the soiled suction catheters and supplies thoroughly in a solution of liquid detergent and warm water. Soak them in soap solution for 15 minutes.

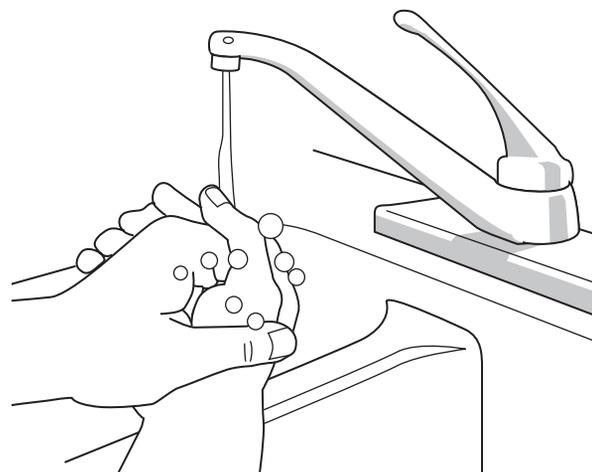
**Step 3:** Allow tap water to run for three minutes. Rinse each suction catheter and other supplies under warm running water. Run water through the inside of the suction catheters and supplies. Shake off excess water.

**Step 4:** Mix disinfectant solution. You may use one part water with one part white vinegar, or other solution as instructed.

**Step 5:** Place the suction catheters and supplies in the disinfectant solution making sure the solution completely covers all the suction catheters and supplies. Soak for 30 minutes or as instructed.

**Step 6:** After the suction catheters and supplies have been soaked, remove them from the disinfectant solution. Shake off excess solution. Place on clean towel to air dry. Do not dry with a towel. Allow tap water to run for three minutes. Rinse in warm tap water.

**Step 7:** After the suction catheters and supplies are dry, place them in clean bags and store until next use.



*Wash hands for 20 seconds*

## Physical Problems

If you experience any of the following problems, call your physician:

- Fever or chills
- Increased wheezing
- Increased mucus production
- Mucus becomes thicker
- Change in mucus color
- Headaches
- Loss of appetite
- Increased shortness of breath
- Chest pain
- Increased cough
- Swelling in the ankles or around the eyes
- Weight gain overnight
- Feeling dizzy or sleepy
- Any change in physical sensation after taking a new medication
- Persistent oral bleeding.

If you experience **severe physical problems**, call 911 or your local emergency services.

If you experience any **physical change**, call your physician.

If you are having trouble with your **equipment**, call Apria Healthcare.

## Handwashing Technique

Thorough handwashing must be done prior to all procedures. Contaminated, dirty hands are one of the most common sources of infection.

**Step 1:** Wet your hands thoroughly with warm water.

**Step 2:** Use soap.

**Step 3:** Scrub hands for 20 seconds using a rotary motion and friction. Wash:

- Back and palm of each hand
- Between all fingers
- Fingernails

Need a timer? Hum the “Happy Birthday” song from beginning to end twice:

**Step 4:** Rinse your hands under running water.

**Step 5:** Dry on clean towel or with paper towel.

For additional good health habits, visit our patient education section at [apria.com](http://apria.com).

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## Using Your Suction Equipment Safely

Your suction machine is a durable, dependable piece of equipment and should operate efficiently with just a few simple safety precautions. These precautions are listed below:

- Never plug in the machine if it is wet or damp.
- Never immerse the machine in water.
- Always place the machine on a hard flat surface, such as a table or desk.
- Do not place the machine on the floor where someone could trip over it.
- Never allow the collection bottle to fill above the maximum fill line. If fluid collects above the fill line, secretions will be pulled into the small overflow jar. This may cause the machine to automatically shut off to prevent fluid from entering the compressor motor.
- If fluid enters the overflow trap, remove the jar and empty it. Wash the jar and cork in liquid detergent and warm water. Rinse, dry and replace. At the same time, be sure to empty the collection bottle.
- To produce the proper amount of suction, all connections must be tight. You should check and adjust the amount of suction on a regular basis. If suction pressure seems low, check all connections for tightness.
- If at any time your suction machine does not appear to be working properly, contact Apria Healthcare. We maintain service for equipment problems. If you

ever develop a serious medical problem, you should notify your physician and local rescue unit immediately.

- Occasionally, you may need to reorder suction catheters, Yankauers or connecting tubing. Simply call our office for replacement supplies. Please call at least two days in advance.

## Feedback on Our Services

Apria Healthcare is among America's most experienced and respected home respiratory care providers, and our patient satisfaction scores are consistently high. It is possible, however, that you may have a concern and we welcome feedback. To voice a concern, you should take these steps:

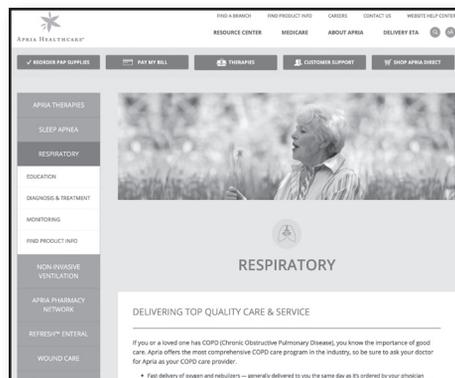
1. Call the Apria Customer Service for Patient Concerns at **1 (800) 260-8808**  
OR
2. Contact us by e-mail at:  
**Patient\_Satisfaction@apria.com**  
OR
3. Visit our web site at **apria.com**

## Satisfaction Survey Process

Our goal is to ensure your satisfaction. You will likely receive an Apria patient satisfaction questionnaire and we hope that you will take a few minutes to fill it out and return it to us. The postage is prepaid by Apria Healthcare.



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