FOR EARLY WARNING SIGNS OF COVID-19
CONTACT YOUR PHYSICIAN OR HEALTH-CARE PROVIDER

1. Enroll through your patient portal.

2. Email your health-care provider through the portal, or call the office and provide some details about your concerns.

3. Request a 3-month supply of prescriptions and supplies by speaking to your insurance company in order to avoid a break in taking your medications.

4. Consider purchasing a thermometer and pulse oximeter at a local drug store or online.

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
Patients should be aware of their bodies in order to identify when things feel strange or different. Early recognition of the signs and symptoms associated with infection can prevent things from getting worse and developing into future complications.

**SYMPTOMS**
1. Fever
2. New loss of taste or smell
3. Sore throat
4. Cough
5. Shortness of breath or difficulty breathing
6. Muscle pain
7. Chills

**EMERGENCY WARNING SIGNS**
1. New confusion
2. Bluish lips or face
3. Inability to wake or stay awake
4. Trouble breathing
5. Persistent pain or pressure in chest

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
These alternative cleaning processes are recommended to be used to extend the use of disposable supplies and to be done ONLY during this pandemic. When this pandemic ends, return to the evidence-based practices for cleaning or replacing your disposable equipment.

Prior to starting any of these cleaning processes, wash your hands with mild soap and rinse thoroughly.

## TRACH-VENT EQUIPMENT

You should have a spare ventilator circuit at all times.

If you are using a ventilator, be sure to have a manual resuscitator with mask or tracheostomy tube adapter in case the electricity goes out and your ventilator does not come back on, or your backup generator is not working.

Extra ventilator battery, circuit/tubing, and Ambu bag may need to be purchased out of pocket; Ambu bag is covered by insurance for tracheostomy patients (discuss with your durable medical equipment provider about options).

<table>
<thead>
<tr>
<th>SUPPLY ITEM</th>
<th>RECOMMENDED CLEANING</th>
<th>CLEANING PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilator, non-wired circuits</td>
<td>Only when soiled if a new circuit is NOT available.</td>
<td>If a new circuit is NOT available, only clean if soiled using the following steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two buckets:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One with water and soap, one with water only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Place the soiled circuit into the bucket with soap and water, and soak for 10-15 minutes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Drain the circuit in the soap and water bucket, and then place the circuit into the water-only bucket, and soak for 10-15 minutes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Pull the circuit from the water bucket, and stretch the circuit over the water bucket, to drain all water from inside the circuit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. When all water is moved out of the circuit, air dry the circuit by clipping it to a plastic hanger on a door frame away from the bathroom.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOTE: if there are dried secretions on or in the circuit adapter, you may use a clean toothbrush or bottle cleaner that has been boiled before use. The brush may be used to remove the secretions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CLEANING METHOD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soap and water</td>
</tr>
</tbody>
</table>

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
### Humidifier Chamber
- **Recommended Cleaning:** Only when soiled if a new circuit is NOT available.
- **Cleaning Process:** If a new circuit is NOT available, only clean if soiled using the following steps:
  - The humidifier chamber is removable and can be cleaned with soap and water following the same steps as for the ventilator circuit.
  - Humidifier chamber can be placed in the top rack of the dishwasher.
- **Cleaning Method:** Soap and water

### Humidifier Bag
- **Cleaning:** This is not cleaned.

### Ventilator Filters
- **Recommended Cleaning:** Use unless soiled. When soiled, replace.
- **Cleaning Process:**
  - How to know if the filter has an issue:
    - You may notice increased resistance causing an alarm for low pressure if the ventilator is in a pressure mode.
    - Alternatively, for patients using a ventilator in a volume mode, you may see the peak pressure increasing. If this is the case, you may need to remove and replace the filter.
- **Cleaning Method:** This is not cleaned.

---

**TRACH-VENT EQUIPMENT**

- **22-mm Trilogy elbow**
  - **Cleaning:** Clean only when soiled
  - **Cleaning Process:** Cleaning process is like that of a ventilator circuit
  - **Cleaning Method:** Clean with soap and water
- **Dual swivel adapters**
- **Whisper Swivel valve**
- **Omni Flex adapters**
- **Multiadapters**
- **Universal cuff adapters**
- **Flexible trach adapters**
  - **Cleaning:** Clean only when soiled
  - **Cleaning Process:** Cleaning process is like that of a ventilator circuit
  - **Cleaning Method:** Clean with soap and water

**NOTE:** Must make sure the flexible tube is "stretched" a bit to make sure water is pulled out of the small adapter.

---

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
<table>
<thead>
<tr>
<th>SUPPLY ITEM</th>
<th>RECOMMENDED CLEANING</th>
<th>CLEANING PROCESS</th>
<th>CLEANING METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suction catheter</td>
<td>Following each use</td>
<td>Single-clean with soap and water immediately after use.</td>
<td>Soap and water-rinse</td>
</tr>
</tbody>
</table>
|                           | If gloves are missing: wash hands before and  | 1. Suction water through the catheter until clear.  
|                           | after cleaning catheter.                      | 2. To clean the outside of the catheter, soak in soapy water.  
|                           |                                               | 3. Next, soak catheter in clean water.  
|                           |                                               | 4. Then, suction soapy water through the catheter.  
|                           |                                               | 5. Suction clean water through the catheter.  
|                           |                                               | 6. Hang to dry.  
|                           |                                               | For storage: place in a zip-lock bag or plastic container. Ensure catheter is dry before closing the bag or lid.                                                                                                   |                       |
| Closed-system catheters   | Following each use                            | Clean the inside of the catheter by suctioning clean water through the catheter.                                                                                                                                       | Soap and water-rinse  |
|                           |                                               | If soiled,  
|                           |                                               | 1. Suction soapy water through the catheter.  
|                           |                                               | 2. Then, suction clean water through the catheter.                                                                                                                                                                 |                       |
| Suction canisters         | When 1/3 full                                 | Empty into toilet when 1/3 full.                                                                                                                                                                                  | Soap and water-rinse  |
| Suction connect tubing    | Use until soiled.                             | If soiled,  
|                           |                                               | 1. Suction soapy water through the catheter.  
|                           |                                               | 2. Then, suction clean water through the catheter.                                                                                                                                                                 | Soap and water-rinse  |

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
# IPV - INTRAPULMONARY PERCUSSIVE VENTILATOR

<table>
<thead>
<tr>
<th>SUPPLY ITEM</th>
<th>RECOMMENDED CLEANING</th>
<th>CLEANING PROCESS</th>
<th>CLEANING METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phasitron</td>
<td>Each IPV use</td>
<td>Once visibly soiled, clean like the ventilator circuit.</td>
<td>Soap and water</td>
</tr>
</tbody>
</table>

# PERSONAL O₂ EQUIPMENT

<table>
<thead>
<tr>
<th>SUPPLY ITEM</th>
<th>RECOMMENDED CLEANING</th>
<th>CLEANING PROCESS</th>
<th>CLEANING METHOD</th>
</tr>
</thead>
</table>
| Oxygen connection tubing | Once visibly soiled or obstruction forms inside of tubing | Do not replace until soiled.  
  1. Use soapy water to run through the tubing by slushing back and forth through the catheter.  
  2. Use clean water to run through the tubing by slushing back and forth through the catheter.  
  3. Drying process has a few options depending on what you have available:  
     - Connect tubing to a suction system, turn up suction and cover open end with your finger to suction water out of the tubing.  
     - Connect tubing to oxygen concentrator, turn flow up to flush out any excess water in the tubing.  
     - Hang dry in a clean area, NOT IN A BATHROOM.  
   **To hang dry, you can use a hanger with clothes pins or create a loose knot to secure tubing to hanger if you do not have clothes pins. BE SURE NOT TO PUNCTURE TUBING. | Soap and water |
CLEANING: NASAL CANNULA
Do not replace until soiled. Put on a new or clean cannula while you wash the “dirty” cannula

1. If the prongs are dirty wipe down with moist cloth.
2. Use soapy water to run through the tubing by slushing back and forth through the tubing.
3. Use clean water to run through the tubing by slushing back and forth through the tubing.
4. Drying process has a few options depending on what you have available:
   · Connect tubing to oxygen concentrator, turn flow up to flush out any excess water in the tubing.
   · Hang dry in a clean area, NOT IN A BATHROOM.

**To hang dry, you can use a hanger with clothes pins or create a loose knot to secure tubing to hanger if you do not have clothes pins. BE SURE NOT TO PUNCTURE TUBING.**

---

CLEANING: OUTSIDE OF OXYGEN CONCENTRATOR

1. Unplug the concentrator (if you are using continuous oxygen, you should plug your oxygen device into your back-up concentrator or cylinder while you clean the outside of the concentrator.)
2. Use a soft washcloth.
3. Use a bowl that has warm water and few drops of dishwashing soap.
4. Dip the washcloth into the bowl to dampen. Squeeze or wring the washcloth so it is not dripping wet - it should only be damp.
5. Wipe down the outside of the concentrator.
6. Clean the washcloth in the bowl of warm water between passes.
7. Allow the concentrator to air dry.

**Do not submerge the concentrator in water. Clean the outside of the concentrator weekly.**

---

CLEANING: PARTICLE FILTER OF OXYGEN CONCENTRATOR

Clean the particle filter of the oxygen concentrator at least once a month.

1. Remove the particle filter per the manufacturer’s instructions (there are many different types of concentrators).
2. Fill the bowl or sink with warm water and a few drops of mild dishwashing soap.
3. Dip the filter into the mild water.
4. Use a wet washcloth to remove excess dirt and dust.
5. Rinse the filter with warm water from the faucet and remove any excess soap.
6. Allow the filter to air dry.
7. When dry – place the particle filter back into the concentrator per the manufacturer’s instructions.

---

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
# Cough-Assist Devices

<table>
<thead>
<tr>
<th>Supply Item</th>
<th>Recommended to Extend Use</th>
<th>Recommended Cleaning</th>
<th>Cleaning Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough-assist masks</td>
<td>Only when soiled</td>
<td>After each treatment, wash the mask using the ventilator circuit steps and air dry the mask.</td>
<td>Soap and water</td>
</tr>
<tr>
<td>Cough-assist filters</td>
<td>These are not cleaned, and they will need to be replaced when soiled.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## PAP Devices

<table>
<thead>
<tr>
<th>Supply Item</th>
<th>Recommended to Extend Use</th>
<th>Recommended Cleaning</th>
<th>Cleaning Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP masks</td>
<td>Each time used and when soiled</td>
<td>After each use and when soiled. For all PAP Device pieces below, follow the cleaning instructions for ventilator circuits.</td>
<td>Soap and water</td>
</tr>
<tr>
<td>PAP filters</td>
<td>When soiled or every 7 days</td>
<td>When soiled or every 7 days</td>
<td>Soap and water</td>
</tr>
<tr>
<td>PAP water chambers (humidifier)</td>
<td>Every 6 months</td>
<td>Every 7 days</td>
<td>Soap and water</td>
</tr>
<tr>
<td>PAP tubing</td>
<td>Every 3-6 months</td>
<td>Every 7 days</td>
<td>Soap and water</td>
</tr>
</tbody>
</table>

---

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure
When purchasing a pulse oximeter at your local pharmacy, speak with your pharmacist about the pulse oximeters they have in stock and have them help you identify which device would best meet your needs.

If you are purchasing a pulse oximeter online, look for devices similar to these devices below.

RESOURCES

AARC has a home oxygen brochure for patients, and it is available in English, Spanish, Chinese, and Russian and provides information about the different home oxygen devices.

https://my.aarc.org/Shop/Product-Details?productid={F1FB8CF0-366E-E811-80CD-02BFC0A80172}

American Lung Association has a video for cleaning a home nebulizer and its parts in warm water with soap.


Ontario Ventilator Equipment Pool 2018 Cough Assist E70 Cleaning Guide.


ResMed video shows how to clean the CPAP mask and machine.

https://youtu.be/svtqBHZl13Y

ResMed video shows how to clean and fill the water chamber/humidifier.

https://youtu.be/6nRKIm8NdeA
Creating Distilled Water from Tap Water

**SUPPLIES:**
- Deep stainless-steel pot
- Clean stainless-steel lid to pot
- Tap water
- Oven safe glass bowl
- Wire rack to fit pot
- Ice

**DIRECTIONS:**
1. Fill the stainless-steel pot halfway with tap water.
2. Place the oven-safe glass bowl inside the pot, floating on top of the water; it should not touch the bottom of the pan. If the bowl does not float, place the wire rack under the bowl.
3. Heat the water to a low and steady boil.
4. Place the stainless-steel lid upside down onto the pot, and fill the lid with ice. The ice will create steam/water vapor that will condense against the bottom of the lid and drip down into the bowl.
5. Allow the distilled water to collect, and fill the bowl inside of the pot. BE SURE NOT TO LET THE POT BOIL DRY.
6. Once the water inside the pot boils down, remove from heat source, and let it cool.
7. Remove the glass bowl from the pot that contains the distilled water, and pour into a glass container for storage.

Read the CHEST Foundation Patient Education Disclosure at chestfoundation.org/patient-education-disclosure