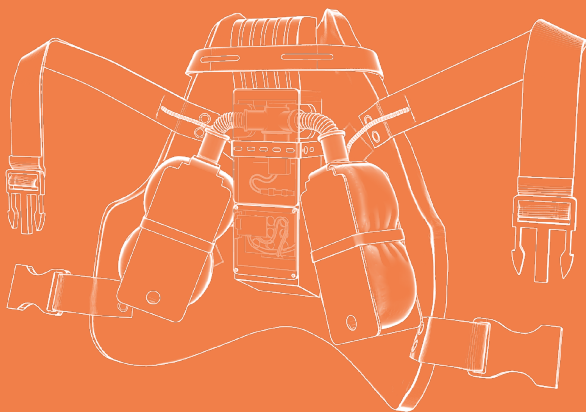


# Avtrach

*with Ventilator Attachment  
Wearable Tracheostomy Simulator*

## USER MANUAL

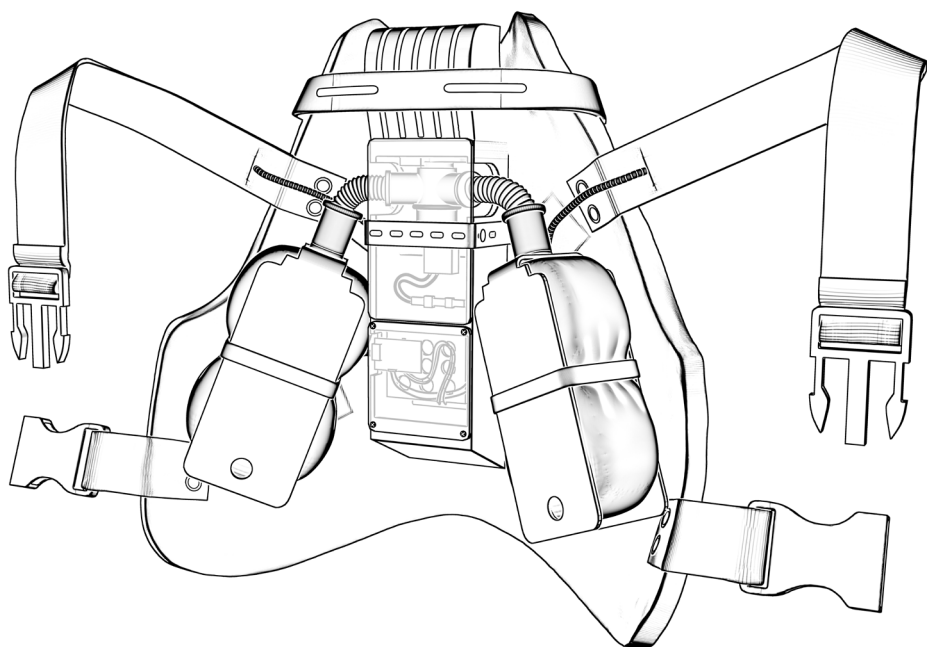
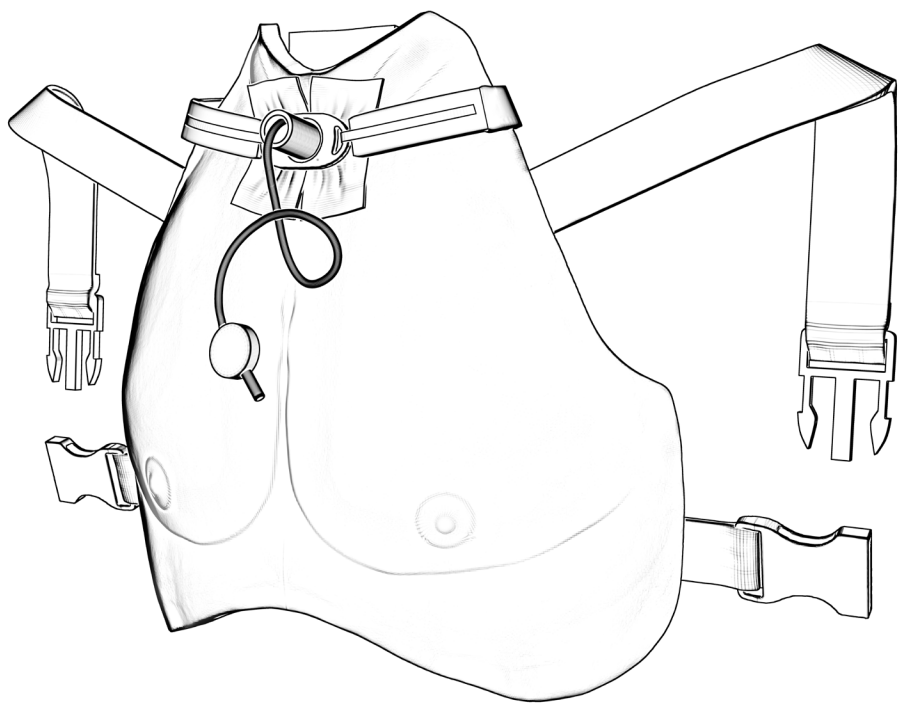


**Customer Assistance**

**302-562-2110**

**Technical Support**

**302-562-2040**





## LUNG SOUNDS\*

# WELCOME TO YOUR AVTRACH!

four lung sound locations on the chestplate can be controlled through the Avkin App

## SIMULATED MUCUS


mucus can be inserted directly into the trachea for simulations requiring tracheal suctioning

## SENSORY FEEDBACK

simulated participants are cued through a light vibration on the shoulder to provide a patient response when (1) deep suctioning (2) faceplate pressure/manipulation. Learners receive real time feedback about their care

## VENTILATOR CAPABLE

hook up any ventilator to the Avtrach and see real ventilator readings

\*\* Lung sounds provided by our partners,  **Thinklabs**  
Digital Stethoscopes  
and **R.A.L.E. Lung Sounds**

# WHAT'S INCLUDED

- ✓ Avtrach: wearable technology for use with standardized patients
- ✓ Size 6 “cuffed” Tracheostomy tube (modified for use) with disposable inner cannula
- ✓ Foam trach tie
- ✓ Drain Sponge
- ✓ Simulated Lungs (2)
- ✓ Ventilator Anti-Disconnect device
- ✓ Simulated Mucus- 2 green, 2 yellow, 2 clear syringes (colors may be darker than expected due to high concentration of mucus)
- ✓ Flexible catheter with luer lok end to be attached to luer lok syringe used for insertion of mucus
- ✓ Replacement finger cots for mucus chamber
- ✓ Micro USB charger

## App Reminders:

- Enable location services on your smartphone or tablet before connecting your Avband to the Avkin App
- The tablet is preset so that it will not go to sleep while using the Avkin app. Do not press the tablet's lock button, as this will also suspend notifications.
- Set your font size on your smartphone or tablet to default or normal for proper viewing of the app. Larger font sizes can dysregulate functionality.

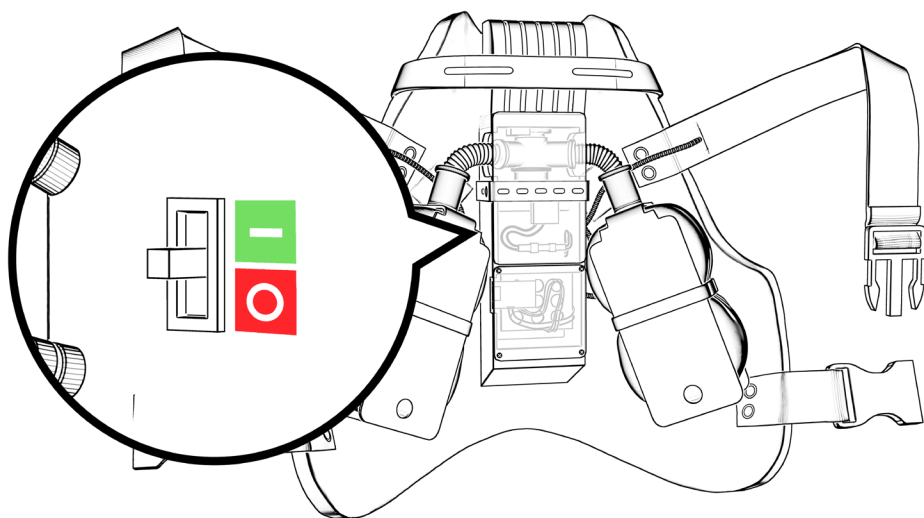
# GETTING STARTED

Watch the instructional video on the customer portal and USB.

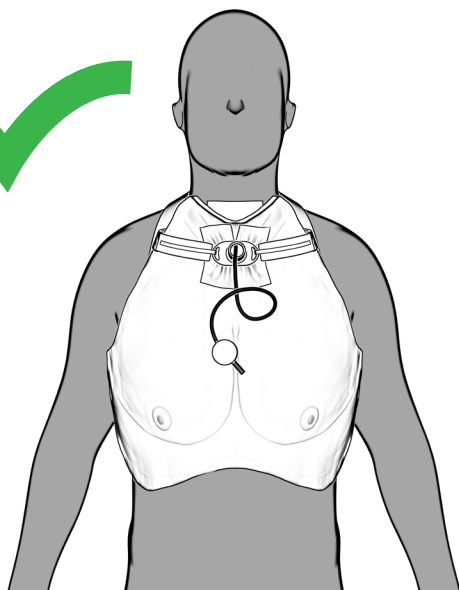
- 1 Download the “Avkin” App on your Apple or Android device.



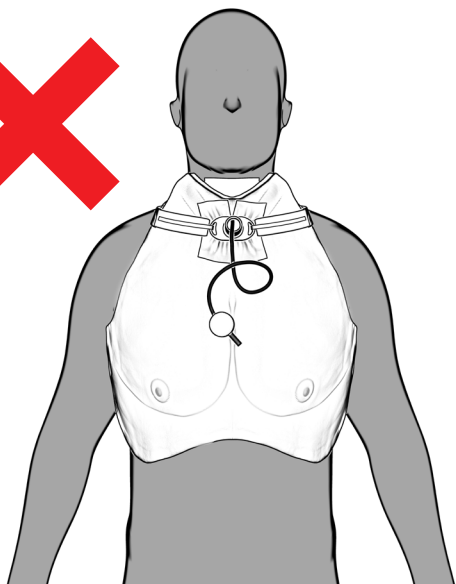
- 2 Turn on the device.



### 3 Put Avtrach on simulated participant



**GOOD EXAMPLE** - Not too high on chest, when sitting falls back on breastbone

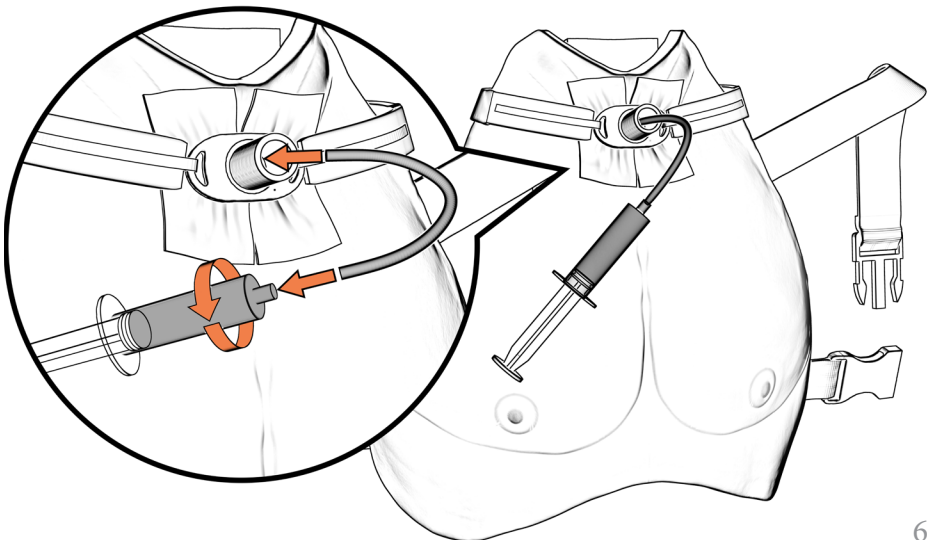


**BAD EXAMPLE** - Too high on chest, when sitting falls on throat

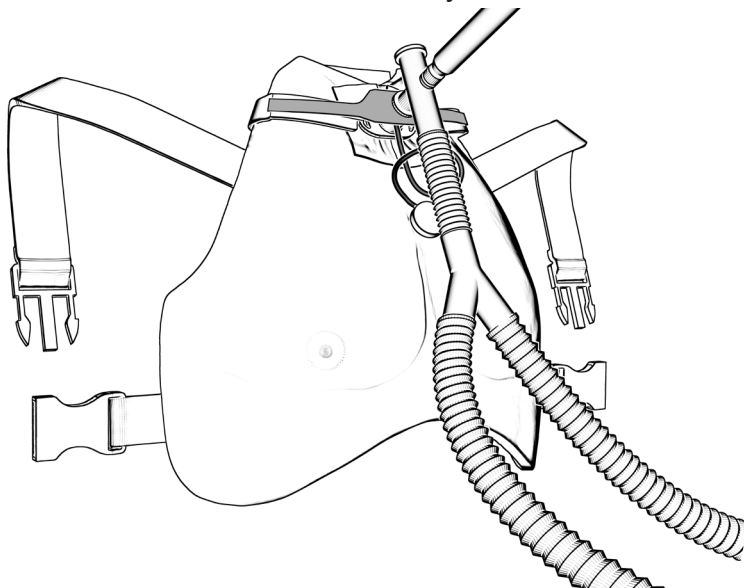
**4** Turn on Bluetooth on your apple or android device

**5** Open the Avkin App, select your Avtrach serial number (located on the chestplate) to connect to your device

**6** Load the mucus into the device by attaching the mucus tubing to the syringe of mucus. Insert into the tracheostomy until you hit the carina sensor and feel the buzz. Insert 5ml of mucus the first time you fill the mucus chamber for the day, and 2ml of mucus after each simulation.



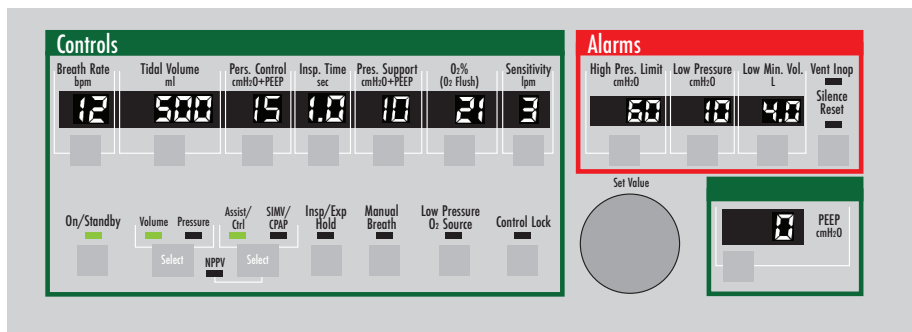
- 7** If using the ventilator, attach the flexible connection tubing to the tracheostomy and attach the ventilator. If not, remove the flexible connection tubing and the anti-disconnect device, then use your Avtrach as normal.



- 8** Run your simulation!

*Be sure to test the ventilator for a few minutes before placing on SP or starting simulation to ensure connections are correct and simulated lungs have had time to “warm up”.*

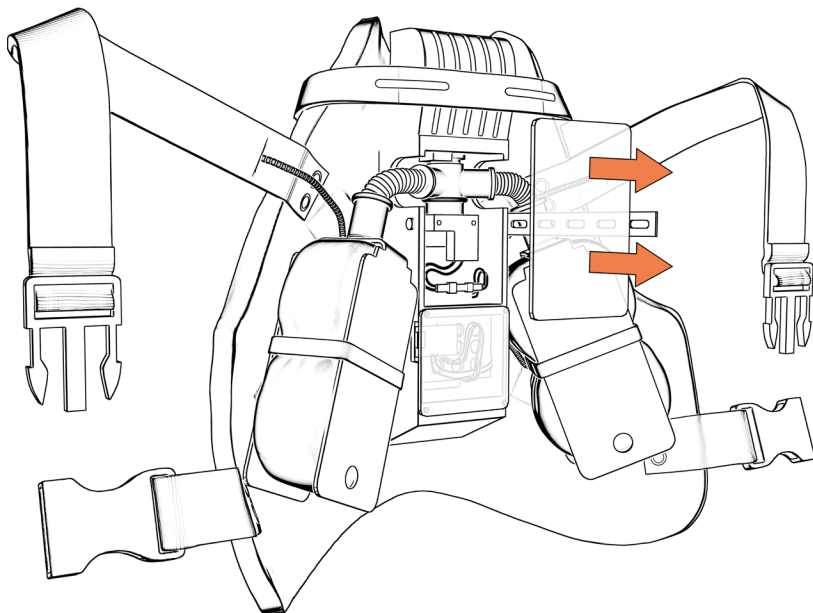
\*Avtrach has been tested at the following ventilator settings:



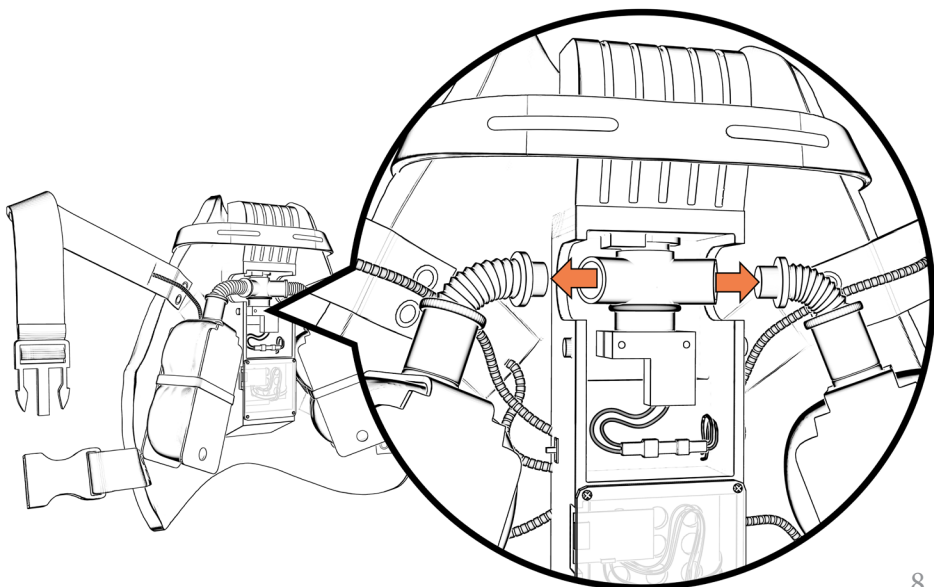
# CARE AND MAINTENANCE

## TO CLEAN MUCUS CHAMBER

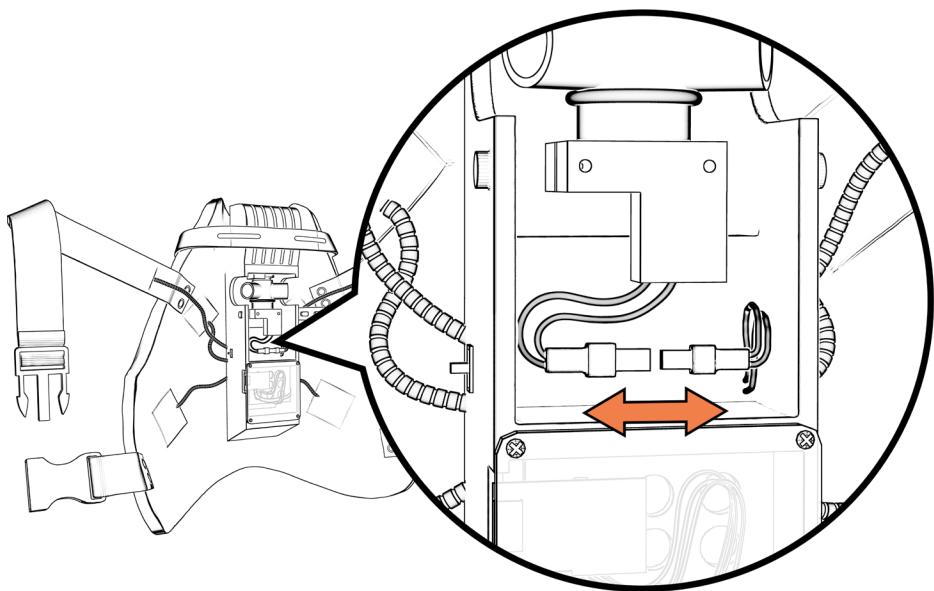
- 1 Turn Avtrach over and remove clear plastic cover from back.



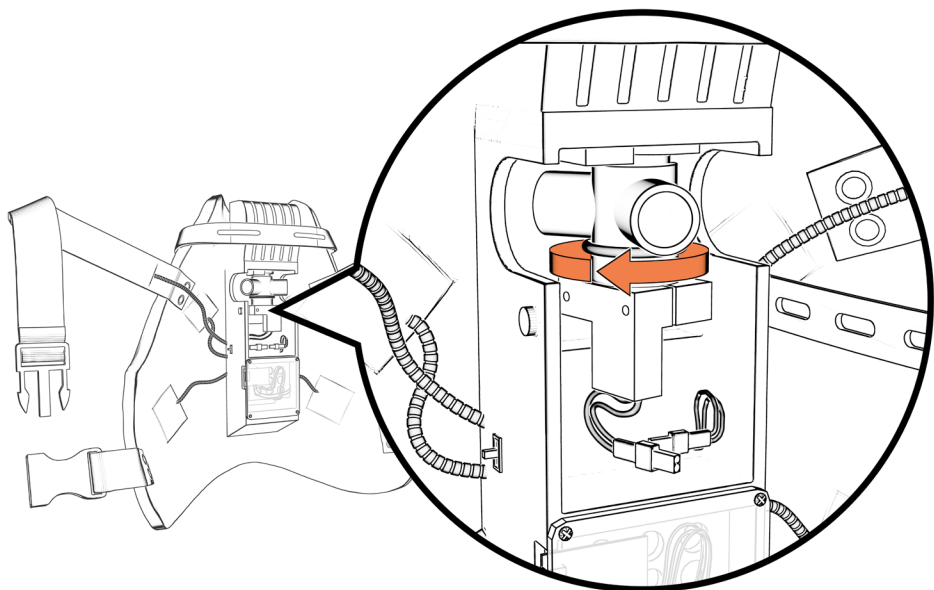
- 2 Disconnect 2 flexible connections from mucus chamber.



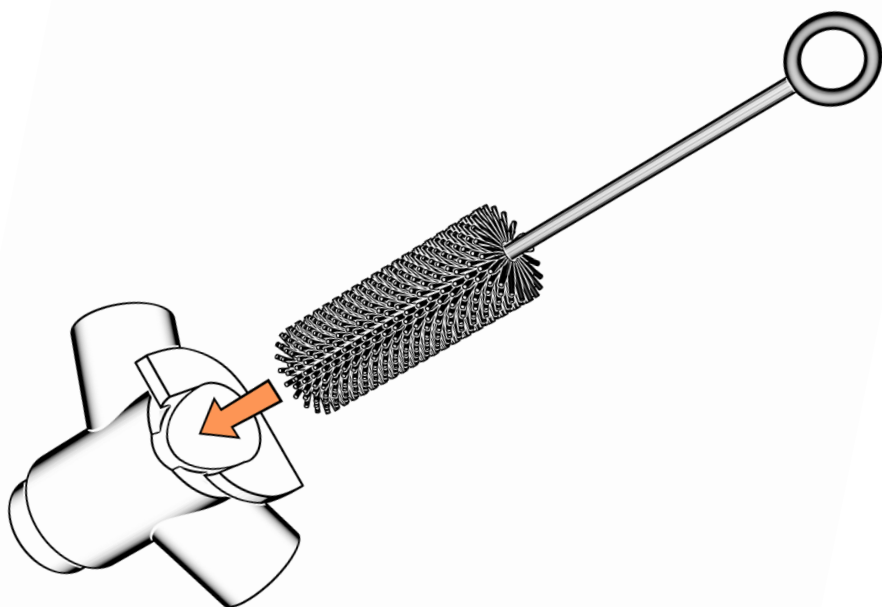
### 3 Disconnect electrical connection of mucus chamber.



### 4 Twist out mucus chamber from Avtrach.

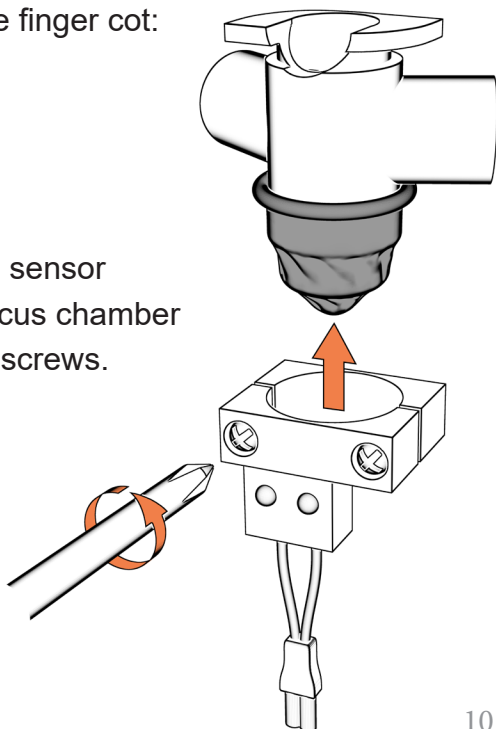


- 5** For daily use, simply rinse with distilled water and scrub out with bristle brush from tracheostomy care kit.

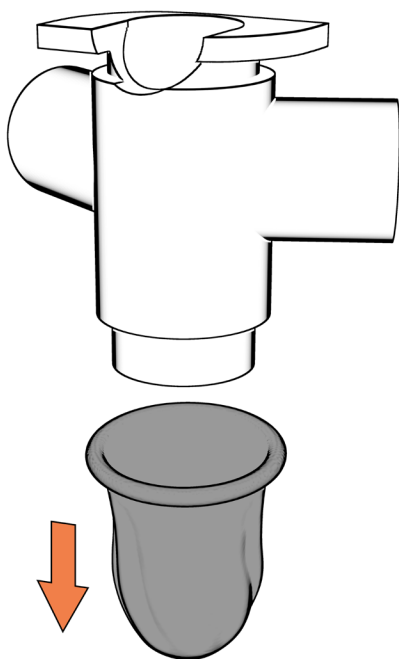


- 6** Once a semester replace finger cot:

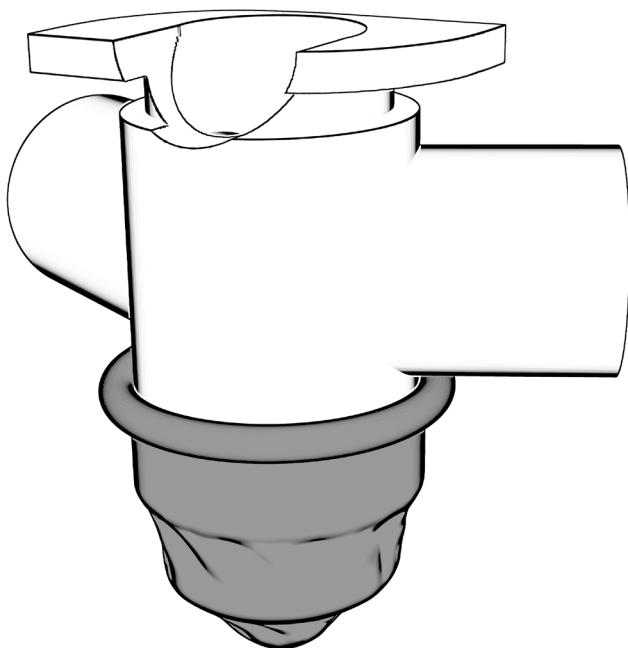
- a** Remove carina sensor clamp from mucus chamber by loosening 2 screws.



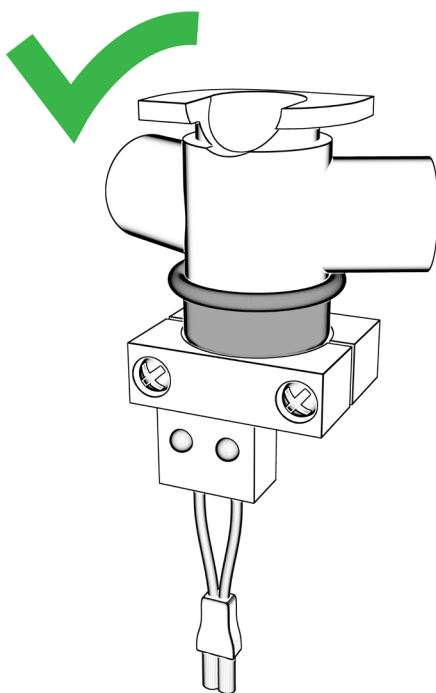
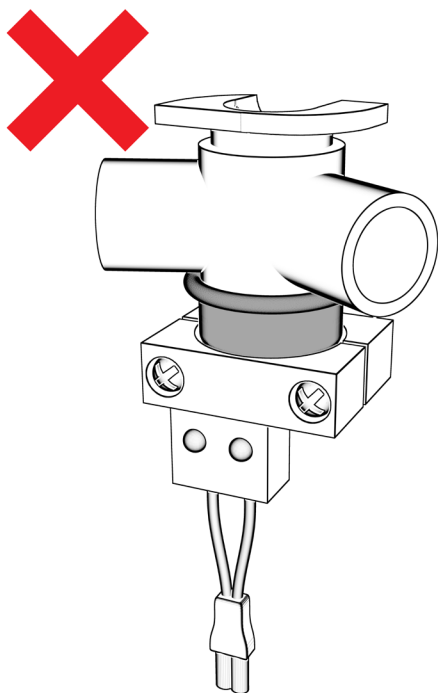
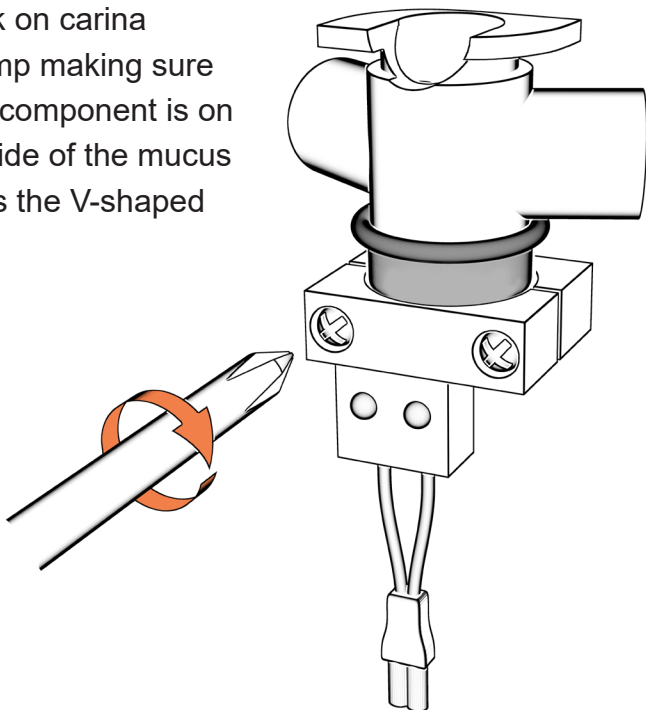
- b** Remove finger cot, use this opportunity to thoroughly rinse the inside of the mucus chamber.



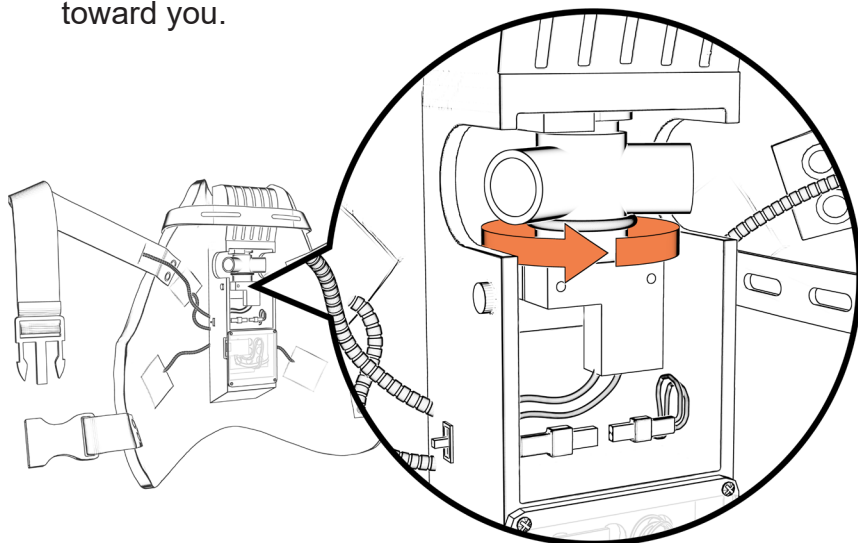
- c** Put on new finger cot.



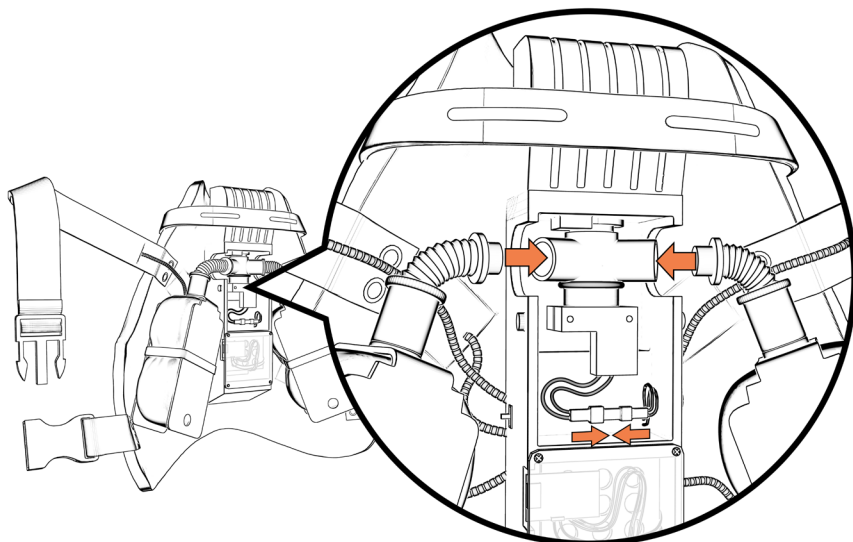
- d** Screw back on carina sensor clamp making sure the sensor component is on the same side of the mucus chamber as the V-shaped extensions.



- 7** Insert mucus chamber back into place on Avtrach. If carina sensor is correctly attached, the v-shaped extensions on the mucus chamber will be pointing down and slightly toward you.



- 8** Connect the lungs back to the mucus chamber and reconnect the electrical connection.

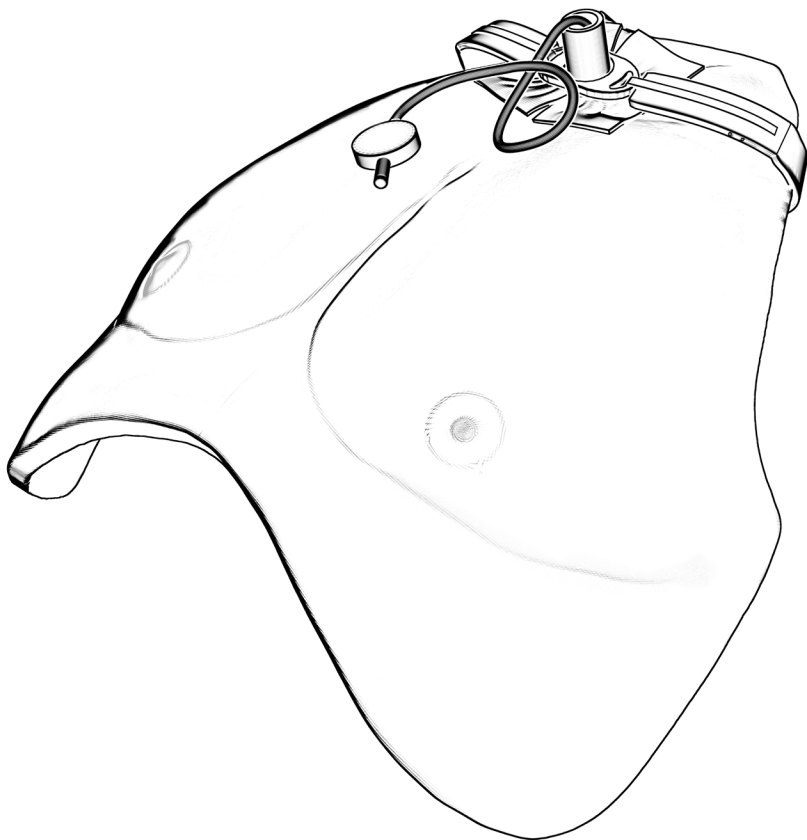


- 9** When putting the tracheostomy back into the Avtrach, insert a suction catheter and make sure you set off the carina sensor to make sure everything is in place correctly.

# TO CLEAN EXTERIOR

- 1** Use a damp lint-free cloth to clean off the silicone chest. Once dry, dust with baby powder or corn starch to remove tackiness. Add cocoa powder to the corn starch if you have a dark skin tone Avtrach.
- 2** Wipe down black plastic backing with slightly moist disinfectant wipes

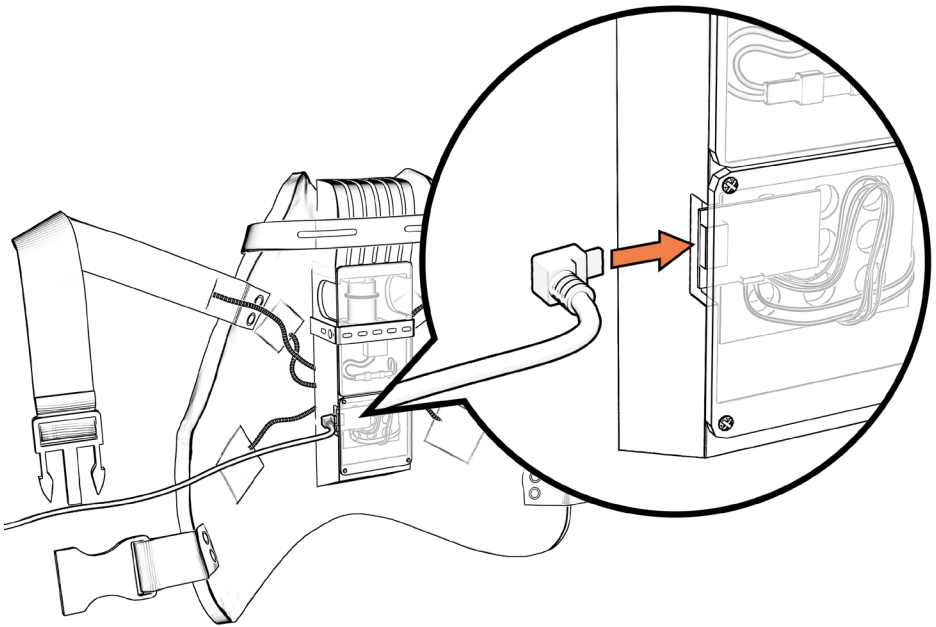
**STORE WITH CHEST FACE UP AT ALL TIMES**



# CHARGING

When the light on the back of Avtrach turns red, the device needs to be charged. The Avtrach battery lasts up to 2 full simulation days (16 hours total). The battery requires up to 8 hours to fully charge.

Plug the charger provided in the back of the Avtrach (pictured below).



The light will turn yellow when charging and green when charge is complete.



## AVTRACH BATTERY SAFETY GUIDELINES



The Avtrach contains a rechargeable 3.7/4.2V Lithium Ion Polymer Battery that could cause injury if mishandled. Follow the proper handling procedures for the Avtrach and the Avtrach charger:

- Charge the Avtrach only with a USB micro cable attached to a USB wall adapter - this is what Avkin provides with the Avtrach
- Do not charge or use unattended
- When charging, keep away any flammable or conductive materials (ex: textiles, paper, metal, etc.)
- Do not disassemble the Avtrach battery or charging circuitry (small blue board above the battery)
- Do not puncture the Avtrach battery
- Do not immerse the Avtrach in water or other liquids
- Do not expose the Avtrach to:
  - Extremely cold temperatures (below freezing, 32 deg F)
  - Extremely hot temperatures (above 130 deg F)
  - Direct sunlight
  - Hot vehicles
- Do not expose the Avtrach to mechanical impact (ex: throwing, dropping, etc.)
- Do not use the Avtrach if the battery is damaged
  - Call Avkin for a replacement battery if needed
- Store the Avtrach in a cool, dry place
- Keep the Avtrach away from children - it is not a toy
- Refer to FAA guidelines for airplane transportation of devices with installed lithium batteries:
  - Turn the Avtrach completely off (power switch on the side of the chestpate housing)
    - It is off when the blue light on the charging circuitry is off
  - Protect it from accidental power-on
  - Pack it to cushion it from damage

Avtrach is provided by:



[www.avkin.com](http://www.avkin.com)