

Cough Assist Machine

The cough assist machine copies a natural cough. It slowly sends a large volume of air to your lungs, like a normal deep breath when you breathe in (positive pressure). Then it quickly reverses the flow of air and mucus (negative pressure). The cough assist machine makes your cough more effective. It helps your airways stay clear, to decrease the chance of respiratory infections.

Getting Started

We will help you to set up the machine and teach you to make needed changes. You may start with lower pressures to get comfortable with the therapy. You should know that the lower pressures may not be effective.

A cough machine breath is made up of an inhale time, exhale time, and a pause time. A normal treatment is 4 sets of 5 breaths. You may do more or less cough sets. It depends on how well you are clearing mucus. Between each sequence you may rest for 20-30 seconds or more. This resting time gives your caretaker time to remove mucus in your mouth and nose.

How do I adjust the phases of breathing?

Each phase of breathing is set so that you can get the air in and out of your lungs with comfort and have a pause time to keep coughing, if needed.

1. Set the inhale time knob at 1 second.
2. Set the exhale time knob at 1 second.
3. Set the pause time knob at 1-2 seconds.
4. Set the inhale flow knob at the 3 squiggly arrows (full flow).

How do I use the cough assist machine?

- Before you start the treatment, wash your hands with soap and warm water or use anti-bacterial hand gel. This decreases the risk of infection.
- Check to make sure the inspiratory (positive) and expiratory (negative) pressures are set. Start at +20/-20 and slowly increase to +40/-40, or as instructed by your provider.
- Test the machine by taking off the face mask or mouthpiece from the tubing. Hold the tubing firmly against a flat surface.
- Turn on the machine.
- Set the manual/auto switch to **auto**. The unit will then cycle from the positive to negative pressure and back to zero for the pause on its own.
- Put the mask or mouthpiece tightly on your face or in your mouth so that no air leaks out. If you use a mouthpiece you may need to use a nose clip to prevent air leakage.
- As you breathe in, the machine will help by giving a big breath of air. This breath will end at the time set on your machine.
- As you breathe out, the machine will help by sucking the air and mucus out. This helps your cough be much stronger and remove mucus.
- Keep taking a set of 4-6 breaths from the cough machine. Rest for 20-30 seconds. Cough out mucus that may have loosened up.
- A well-fitting, soft seal mask is best for less leakage. You may need to support your head from behind during breaths to help keep your

airway open. Firm pressure may be needed.

- If you have a cuffed tracheostomy tube, inflate the cuff during the treatment.

How do I change the pressures?

You may change the pressures with help from your provider. If you need to lower the pressures, tell your provider.

- Remove the face mask or mouthpiece. Hold the tubing firmly against a tight surface.
- Turn on the machine.
- Turn the pressure knob to reach the inhale and exhale pressures you want. Turn the inhale pressure knob to fine tune the inhale pressure set.

How do I adjust the flow?

If you feel there is too much air flow coming from the machine when you take a breath in, you can turn down the inhale flow.

- Set the inhale flow knob at the one squiggly arrow (decreased flow).

How do I clean my equipment?

- Wash your hands.
- Take off the mouthpiece and wash in dish soap (Ivory[®], Joy[®], etc.) and hot water. Do not wash with your dishes.
- Rinse with hot tap water.
- Air dry on a clean towel until your next treatment.
- The bacteria filter on the machine cannot be washed. Replace it when it is blocked with mucus or trapped moisture.
- Unplug the device and wipe the outside surface with a clean cloth dampened with water and one of these cleaners:
 - Mild detergent
 - 70% isopropyl alcohol

- Replace the mask if it becomes torn or if you can no longer keep a good seal.

The mouthpiece must be **cleaned after every treatment**. If you use a mask, clean at least two times a week or more often if visibly soiled.

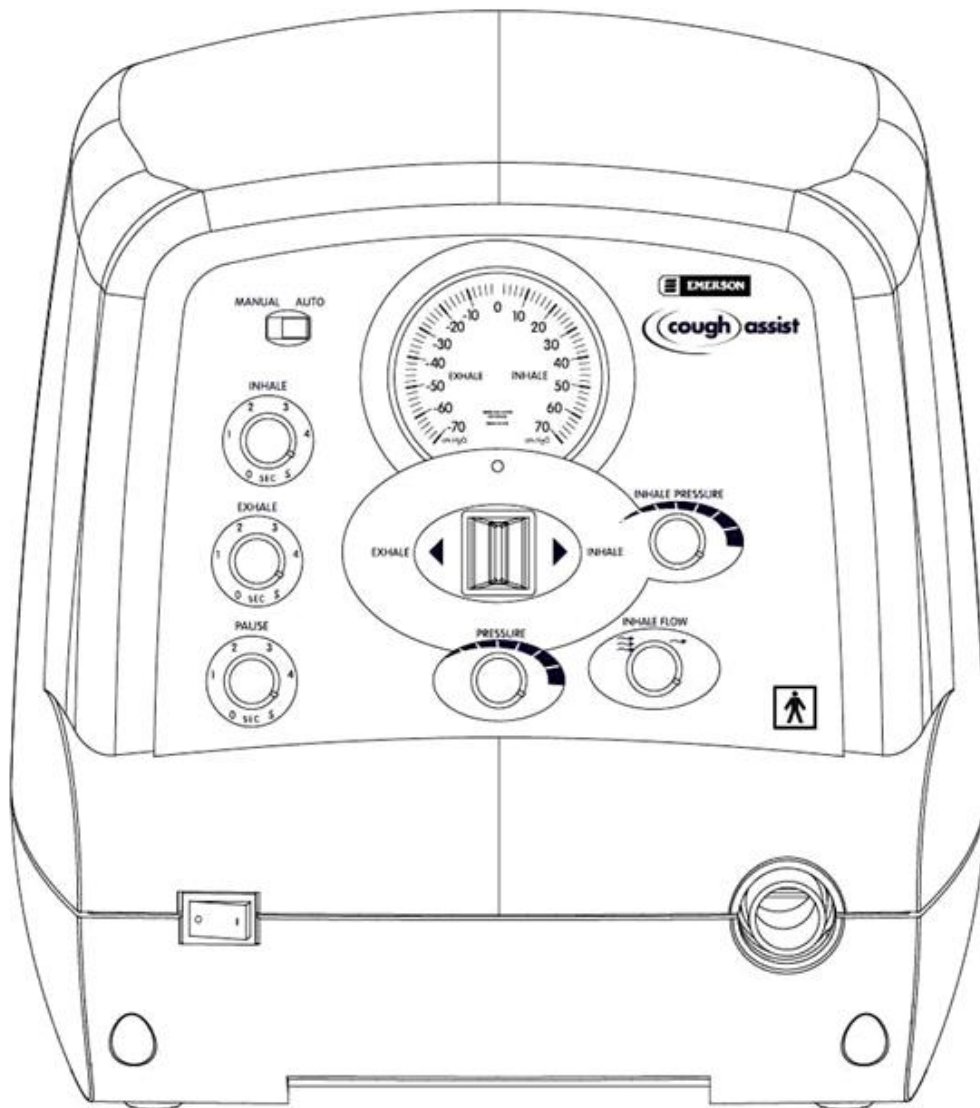
Controls on the Cough Assist Machine

- **Power switch:** ‘I’ symbol means on. ‘O’ symbol means off.
- **Inhale:** sets how long the positive pressure is blowing air into the lungs.
- **Exhale:** sets how long the negative pressure is sucking air out of the lungs.
- **Pause:** sets the time between the last negative pressure and next positive pressure.
- **Inhale flow:** sets the amount of flow needed during breathing in. There are two settings: “full” or “reduced”. If “reduced” flow is used, there is less pressure.
- **Inhale pressure/pressure:** turn to set inhale pressures.
- **Manual/Auto:** controls whether you want the machine to switch between pressures on its own, or you want to do it by hand.
- **Manual control:** allows you to toggle between inhale and exhale when you are using the manual setting.

Who to Call

If you have questions about your treatment, please call your provider.

If you have questions about the machine, contact your equipment provider.



The Spanish version of this *Health Facts for You* is #6366

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 11/2019. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#5306