



# Health Facts

*for you*

## UW HEALTH - ONLINE HEALTH FACT

### Cough Assist Machine

The Cough Assist Machine helps to clear secretions from the lungs by helping you with your breathing. When you breathe in (inspiration), the machine gives you air (positive pressure) to help expand your lungs. When you blow out (expiration), the machine creates a sucking force (negative pressure) that pulls the air out of your lungs. This rapid change in pressure during the different phases of breathing (inspiration and expiration) helps make your cough stronger and more effective.

#### The starting set-up

Your Respiratory Therapist will help you during the start of set-up by making sure that you understand the machine and are comfortable with making any changes on it. You will start out with low pressures and gradually reach the maximum amount of pressure that you can tolerate during each phase of your breathing. In the beginning, the time for each phase of breathing will be set to your comfort level by the therapist.

#### How do I adjust the phases of breathing?

Each phase of breathing should be set so that you can get the air in and out of your lungs comfortably and then pause to continue coughing if needed.

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

#### How do I use the Cough Assist Machine?

1. Check to make sure that the inspiratory (positive) and the expiratory (negative) pressures are set. Start at +20/-20 and gradually increase to +40/-40.
  - Remove the face mask/mouthpiece and hold the tubing firmly against a tight surface.
  - Turn on the machine.
  - Set the manual/auto switch to **manual**.
  - Toggle the manual control switch between inhale and exhale a few times to ensure that the pressures are correct and that the manometer returns to zero.

2. Set the manual/auto switch to **auto**. The unit will then automatically cycle from the positive to negative pressure and back to zero for the pause.
3. Reattach the mask/mouthpiece to the tubing and place it tightly on your face/mouth so that no air leaks out. You may need to use a nose clip to prevent air leakage.
4. Turn the machine on.
5. 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.
6. As you breathe out, the machine will help by sucking the air out. This will help your cough be much stronger and it will help to remove any secretions.
7. Take a series of 4-6 breaths continuously from the cough machine and then rest for 20-30 seconds and cough out any secretions that may have loosened up.
8. Repeat the series of breaths with a rest 4-6 times or until you no longer have any secretions to cough out.

As you get used to the pressures during inspiration and expiration, you will want to increase the pressure to the maximum amount that you can tolerate.

### **How do I adjust the pressures?**

To get the highest amount of pressure you can tolerate, you must change the pressures on the cough machine.

1. Remove the face mask/mouthpiece and hold the tubing firmly against a tight surface.
2. Turn on the machine.
3. Set the manual/auto switch to **manual**.
4. To adjust both inspiratory pressure and expiratory pressure, turn the Pressure knob clockwise to increase the pressures and counterclockwise to decrease the pressures.
5. To adjust the INSPIRATORY PRESSURE to be less than the expiratory pressure:
  - Toggle and hold the manual control lever to inhale.
  - Decrease INSPIRATORY PRESSURE by turning the Inhale Pressure knob counterclockwise to the positive pressure on the manometer that you can tolerate.

Once you get to the highest amount of pressure that you can tolerate on inspiration and expiration you will no longer have to adjust the pressures. If you need to lower the pressures at any time, you should notify your doctor.

### **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 decrease the inhale flow.

1. Set the inhale flow knob at one squiggly arrow (reduced flow)

## How do I clean my equipment?

### To Clean the Mouthpiece

The mouthpiece must be **cleaned after every treatment**.

1. Wash your hands.
2. Run hot tap water for 2 minutes (washes impurities through the tap)
3. Take off the mouthpiece and wash in dish soap (Ivory<sup>®</sup>, Joy<sup>®</sup>, etc.) and water in a separate container. Do not wash with your dishes.
4. Rinse with hot tap water
5. Air dry on a clean towel until your next treatment.

## Things to know about the Cough Assist Machine Cough Machine

The machine is very easy to learn once you understand what each knob controls.

- **Power Switch:** 'I' symbol means ON. 'O' symbol means OFF
- **Inhale:** determines how long the positive pressure will be blowing air into the lungs.
- **Exhale:** determines how long the negative pressure will be sucking or forcing the air out of the lungs.
- **Pause:** determines the time between the last negative pressure and next positive pressure.
- **Inhale Flow:** where you set the amount of flow needed during inspiration (taking a breath in). There are two settings: FULL or REDUCED. If REDUCED flow is used, there is a small reduction in inhale pressure.
- **Inhale Pressure:** where you can adjust the inhale pressure to be less than the exhale pressure.
- **Manual/Auto:** controls whether you want the machine to be automatically switching between pressures or if you want to do it by hand (manually).
- **Manual Control:** allows you to toggle between inhale and exhale when you are using the manual setting.
- This device is designed for intermittent use only. It should not be cycled continuously for more than 5 minutes.

If you have questions about your treatment, please call Regional Services at 1-888-663-7043.

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

