My CoughAssist

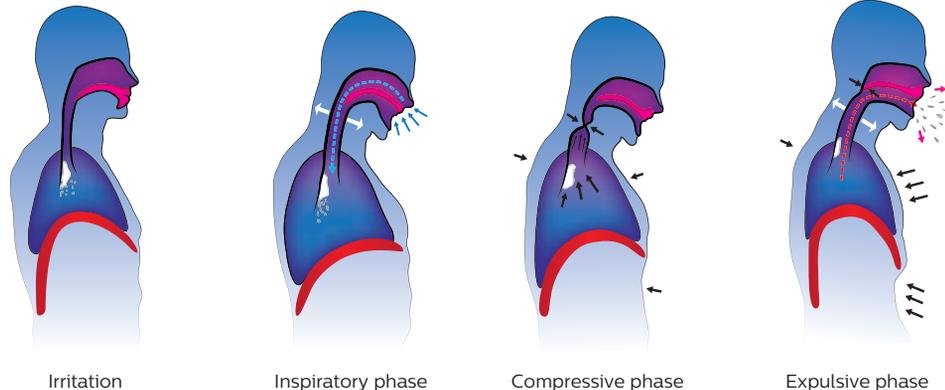A patient guide to CoughAssist E70

A natural part of life

Coughing. We often think of a cough as a symptom of a cold or a means to clear our throat. Truth is, the ability to cough is essential to life. Normally, the lining of the airways produces small amounts of mucus, which trap dirt and bacteria. If allowed to accumulate, these secretions can result in infection. Coughing is the body's way of clearing mucus from the lungs.

A cough begins with a deep breath in. The glottis (the opening at the top of the voice box) closes, allowing the pressure to build up in the lungs. The respiratory muscles contract and the glottis opens, forcing air back out of the lungs.

Muscles located in our rib cage, neck and abdomen play an important role during coughing. With many diseases, a weakened ability to remove secretions increases the chance of a respiratory infection.

If coughing becomes difficult, your physician may prescribe the use of a manual and/or mechanical-assisted coughing technique. A manual cough assist involves applying firm and rapid pressure to the upper abdomen and/or thorax, forcing air out of the lungs.

The different steps of coughing

| Irritation | Inspiratory phase | Compressive phase | Expulsive phase |

CoughAssist E70 is a mechanical insufflation–exsufflation device that simulates a natural cough by gradually delivering a large volume of air to your lungs, similar to a normal deep breath, when you breathe in (positive pressure), and then quickly reversing the flow to pull secretions out (negative pressure). CoughAssist E70 makes your cough more effective to help keep your airways clear, reducing the occurence of respiratory infections.

Product description

1 – Buttons. Allow you to perform certain actions specified on the screen.

2 – Power On / power Off button. Turns the device on or off.

3 – Manual switch. Activates the insufflation and exsufflation phases*.
Pressing switch to the right (+) activates the insufflation phase. Pressing switch to the left (–) activates exsufflation phase. The center position activates the pause phase.

4 – Display screen. Allows you to view settings and system status information.

5 – Breathing circuit connection. Connect your circuit to the outlet of the device.

*Blue: inhale, Yellow: exhale and Green: pause

6 – Air outlets. Air from inside the device is expelled here.

7 – AC power inlet. Connect the AC power cord here.

8 – Remote control connector. Connect the optional remote control accessory (foot pedal) here.

9 – SpO$_2$ connector. If you are using optional oximetry accessory, connect it here.

10 – Airpath inlet where outside air enters the device. Insert the filter supplied with the device here.

11 – Detachable battery slot with optional lithium ion detachable battery inserted here.

12 – Tubing retainer. Route the tubing and mask through this bracket for proper tubing management when the device is not in use.

Typical treatment

A cough cycle is composed of an inhale time, an exhale time, and a pause time. Four to six cycles represent a sequence. Between each sequence, you may rest for 20 to 30 seconds or more. This resting time allows you or your caregiver to remove secretions from the mask, mouthpiece, or trach tube. Four to six sequences represent a typical treatment. The number of treatments you take each day may vary.

During a treatment, you should sit upright as tolerated.

You may want to agree on a signal with your caregiver in the event you wish to alert them that you want to stop treatment.

Treatment delivery can be manual or automatic. This means that cycles can be started either by the manual switch, foot pedal, or automatically, based on your inspiratory effort or a set time. Cough-Trak is available in Auto mode, allowing you to control when you want to start the inspiratory phase. CoughAssist E70's Cough-Trak will detect when you are ready to inhale and will deliver the set pressure. In addition, CoughAssist E70's oscillation feature can be added to your therapy to increase loosening of secretions.

Your device allows up to three prescription settings. Your clinician will advise you on which prescription preset to use.
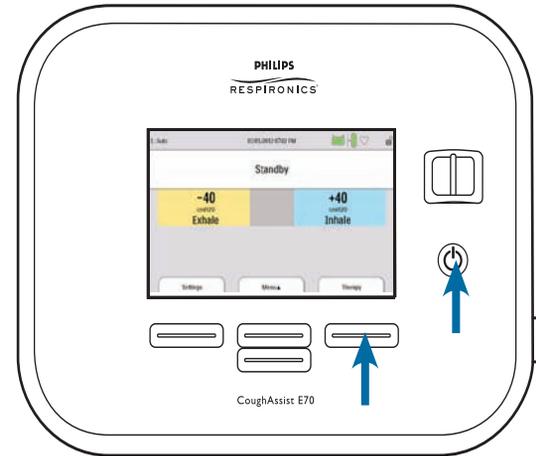
Patient interface

- When using a mouthpiece, nose clips may be required.

- A well-fitting, soft-seal mask is important to eliminate possible leakage.

- Some patients may need to have their head supported from behind to prevent leaks. In order to be effective, firm pressure may be required.

- If the patient has a cuffed tracheostomy tube, inflate the tube cuff during the CoughAssist treatment.
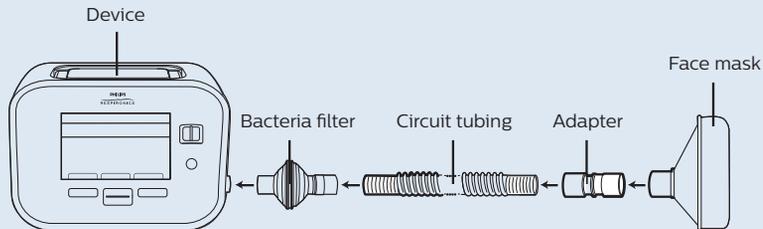
Always follow the treatment plan that your physician has prescribed.

How to set up and use my device

- Plug the device into an AC power source, DC power source, or use the detachable battery

- Connect the filter and tubing to the device and the mask, mouthpiece or trach adaptor to the tube

- Press the power On / power Off button to turn the device on and enter Standby

- Select the appropriate preset and position the interface on the patient

- Press the right (Therapy) button to begin therapy – in the Auto mode, the device will cycle from inhale (positive) to exhale (negative); if in Manual mode, slide the control lever from the right (inhale) to the left (exhale)

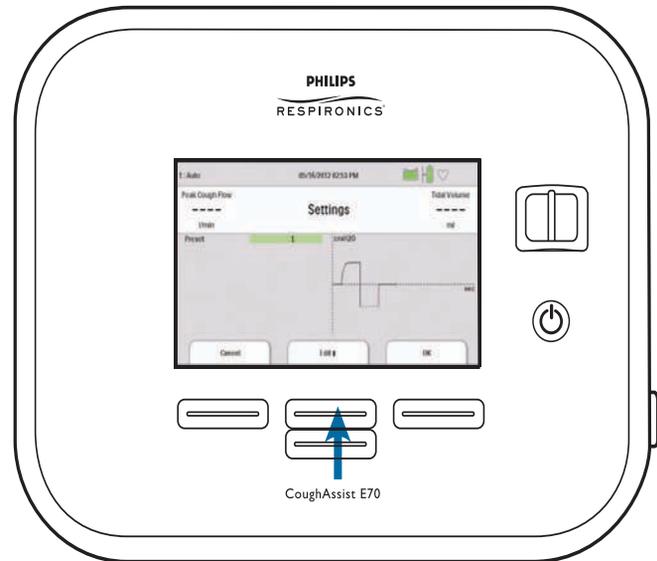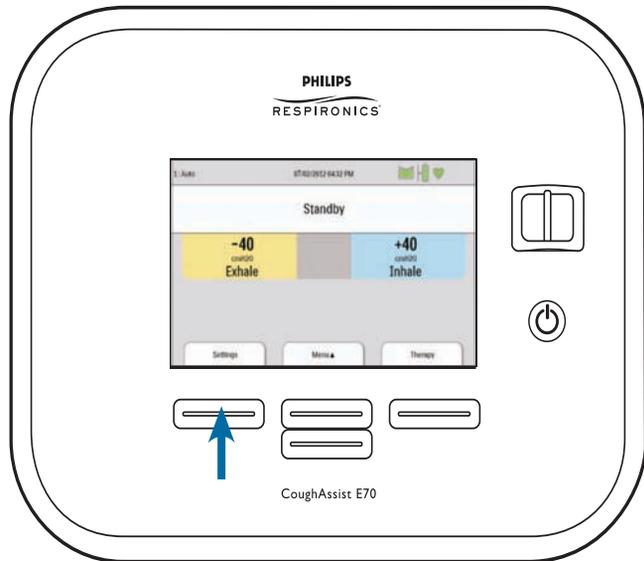- Press right (Standby) button to end therapy

Breathing circuit connection

Device

Bacteria filter   Circuit tubing   Adapter

Face mask

Changing preset

· Once the device is turned on, press the left (Settings) button
· Press the right (Modify) button and then the top center (Edit) button to select corresponding preset
· Press right (OK) button to validate the choice or left (Cancel) to come back to previous screen
· Press left (Finish) button to go back to main screen

CoughAssist E70

CoughAssist E70

Note: Any change of preset made during therapy will automatically take effect.

Information log

If the information log picture ⓘ is displayed on the screen, it means information is available in the information log screen but it does not necessarily affect therapy.

To access these messages:
• From the Standby screen, press up (Menu) key, press down (Navigate) key to "Information Log."
• Press right (Select) key. One of the following messages will appear:

Informational message	User action
Battery not charging – Temp	The detachable battery is too hot and cannot be charged. Allow device and/or battery to cool to resume charging. Remove battery and charge with battery charger accessory. If battery still cannot be charged, contact your homecare provider.
Check external battery	Power is being drawn from the detachable battery even though the external battery is usable. Replace external battery cable or external battery. If problem persists, contact your homecare provider.
Detachable battery not charging	The detachable battery cannot be charged. Replace battery. If problem persists with a different battery, contact your homecare provider.
Replace detachable battery	Detachable battery has failed or has reached end of life. Replace battery. If problem persists with a different battery, contact your homecare provider.
Internal fan failure – see User Manual	The internal fan is not working. Device should not be used with oxygen added to the patient circuit. Before using oxygen with this device, contact your homecare provider.
Card error	The device cannot write to or read from the SD card. Remove the SD card and use another card, if available. If problem persists, contact your homecare provider.

Cleaning and maintenance

The device
Unplug the device and clean the external surface using one of the following cleaning agents:

· A clean cloth dampened with water and a mild detergent

· 70% Isopropyl alcohol

· DisCide towelettes

· 10% chlorine bleach solution

Allow the device to dry completely before plugging in the power cord. The device does not require routine servicing.
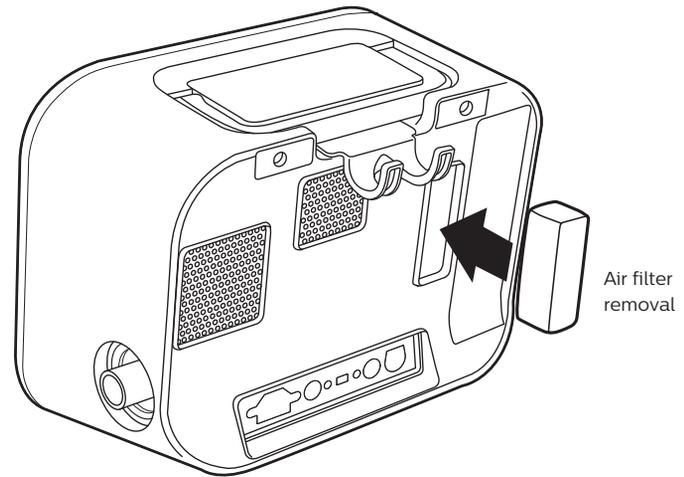
The breathing circuit, interface and bacteria filter
· After each use, the breathing hose and patient interface should be washed thoroughly with mild liquid detergent and water. The parts need to be dried completely before each use.

· The bacteria filter cannot be washed. It has to be replaced when blocked with mucus or trapped moisture.

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

The air filter

Under normal usage, you should clean the air filter at least once every two weeks and replace it with a new one every six months.

· If the device is operating, stop the airflow. Disconnect the device from the power source.

· Remove the filter from the enclosure.

· Examine the filter for cleanliness and integrity.

· Wash the filter in warm water with a mild detergent. Rinse thoroughly to remove all residue.

· Allow the filter to air dry completely. Replace the filter if it is torn or damaged. Only Philips Respironics filters should be used as replacement filters.

· Reinstall the filter.

Air filter removal

SD card

The CoughAssist E70 comes with an SD card inserted in the SD card slot on the side of the device. Your clinician may use this card to record information and might ask you to remove the card and forward for evaluation.

To remove the SD card:

• Select "Safely Remove SD Card" option from the Main menu.

• After the "Safely remove SD Card" message appears, remove the card.

My doctor:

My homecare provider:

My mask and tubing size:

My prescription:

Preset 1:_____

Mode:	☐ Manual	☐ Auto
Cough-Trak (inspiratory trigger):	☐ On	☐ Off
Inhale pressure:	____ cmH$_2$O	
Inhale flow: ☐ Low	☐ Medium	☐ High
Inhale time:	____ sec.	☐ N.A
Exhale pressure:	____ cmH$_2$O	
Exhale time:	____ sec.	☐ N.A
Pause time:	____ sec.	☐ N.A
Oscillation: ☐ Inhale ☐ Exhale	☐ Both	☐ Off
Frequency:	____ Hz	☐ N.A
Amplitude:	____ cmH$_2$O	☐ N.A

Preset 2:_____

Mode:	☐ Manual	☐ Auto
Cough-Trak (inspiratory trigger):	☐ On	☐ Off
Inhale pressure:	____ cmH$_2$O	
Inhale flow: ☐ Low	☐ Medium	☐ High
Inhale time:	____ sec.	☐ N.A
Exhale pressure:	____ cmH$_2$O	
Exhale time:	____ sec.	☐ N.A
Pause time:	____ sec.	☐ N.A
Oscillation: ☐ Inhale ☐ Exhale	☐ Both	☐ Off
Frequency:	____ Hz	☐ N.A
Amplitude:	____ cmH$_2$O	☐ N.A

Preset 3:_____

Mode:	☐ Manual	☐ Auto
Cough-Trak (inspiratory trigger):	☐ On	☐ Off
Inhale pressure:	____ cmH$_2$O	
Inhale flow: ☐ Low	☐ Medium	☐ High
Inhale time:	____ sec.	☐ N.A
Exhale pressure:	____ cmH$_2$O	
Exhale time:	____ sec.	☐ N.A
Pause time:	____ sec.	☐ N.A
Oscillation: ☐ Inhale ☐ Exhale	☐ Both	☐ Off
Frequency:	____ Hz	☐ N.A
Amplitude:	____ cmH$_2$O	☐ N.A

Recommendations:

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Notes:

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