



# Living Well With **COPD**

Chronic Obstructive Pulmonary Disease

PATIENT EDUCATION GUIDE

 **CHEST**<sup>®</sup>  
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The CHEST Foundation, founded in 1996, is the philanthropic arm of the American College of Chest Physicians. The mission of the CHEST Foundation is to champion lung health by supporting clinical research grants, community service grants, and patient-focused public education. Partnering with CHEST members, their patients, and the public, the foundation supports research, prevention, and education programs and provides resources in pulmonary, critical care, and sleep medicine.



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## Living Well With COPD: Chronic Obstructive Pulmonary Disease

Now that you've been diagnosed with COPD, how do you live with it? How do you manage it?

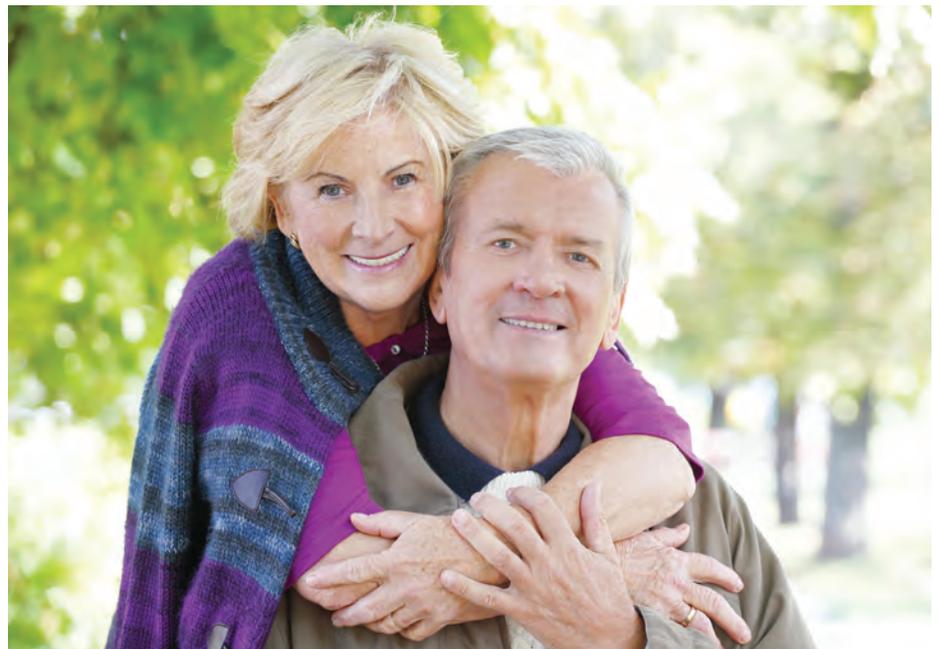
COPD is serious. It can affect your daily life. And it usually gets worse over time. Although it is not curable, COPD is treatable. There are many interventions that your health-care provider and you can do to:

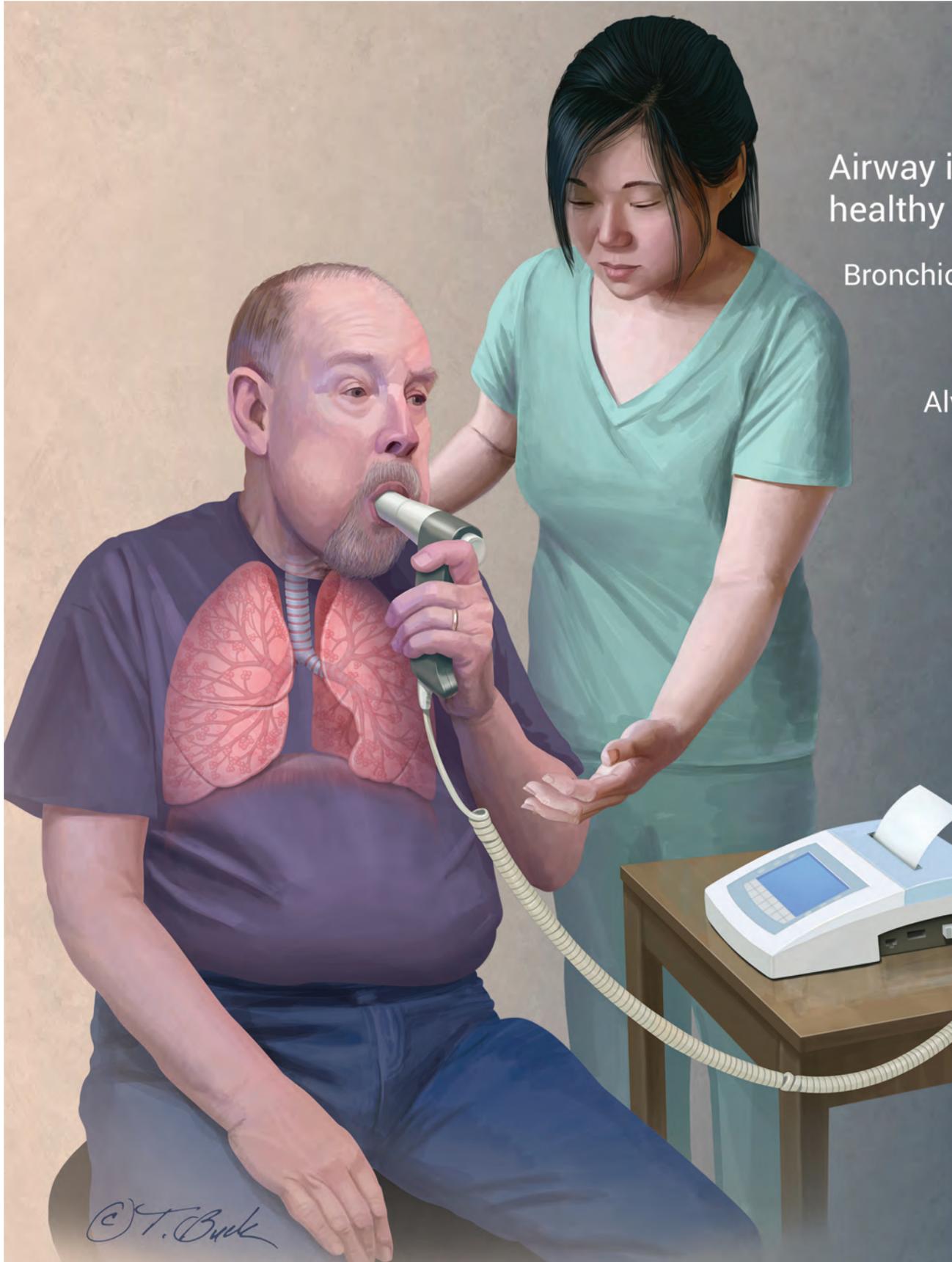
- Improve your breathing
- Decrease hospitalizations
- Slow disease progression
- Continue to live well

Your health-care provider is committed to helping you. He or she has given you this practical guide, **Living Well With COPD**. By working with your care team, you can manage your symptoms and improve your quality of life.

Living well with COPD means taking control of your health and probably making some lifestyle changes. In this guide, we'll outline important steps you can take:

- Review COPD medications and how to use them correctly.
- Present techniques to enhance your breathing.
- Review what to do when you have a flare-up (an exacerbation).

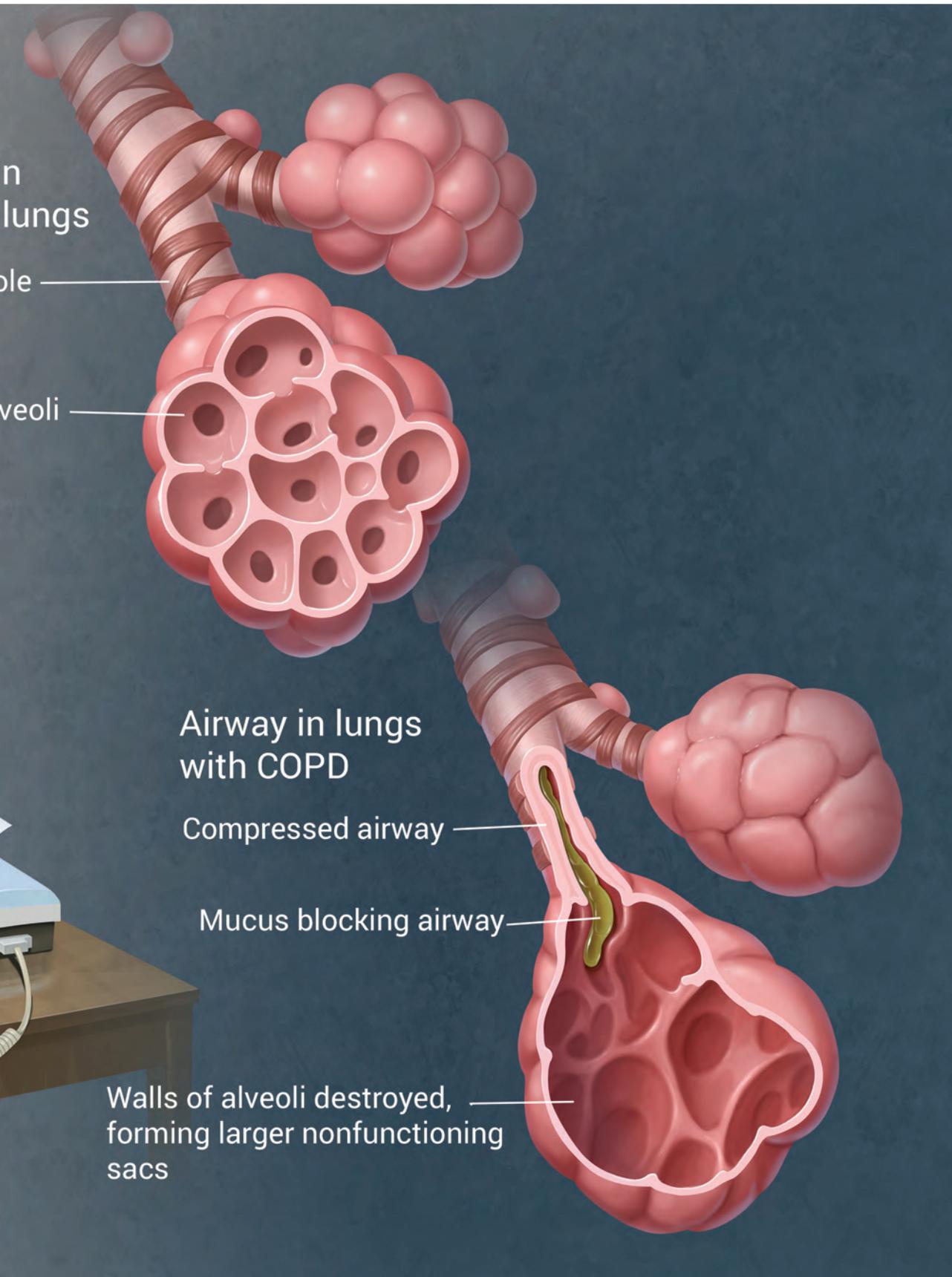




Airway is  
healthy

Bronchio

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## Taking Control of Your COPD



Controlling your COPD is entirely up to you. By taking the right actions, you can minimize symptoms and continue to lead a productive life.

First, you need to work with your health-care provider. You can stay healthy longer by talking openly with your health-care provider about:

- Any new symptoms
- Changes in symptoms
- Health concerns
- Medication and treatment options, and their side effects

It also means:

- Creating a treatment plan with your health-care provider
- Committing to regular checkups

A healthier lifestyle and one that allows for limitations from COPD include:

- Taking your medications as prescribed every day
- Getting exercise
- Eating well
- Reducing stress
- Conserving your energy
- Controlling your breathing

It also means getting support from family, friends, and others dealing with COPD. Support from people you know and care for, and professional support, will help you continue to achieve your goals and find joy in life.

Continue reading for constructive ways to take control of your COPD.

**Here are some constructive ways you can take control of your COPD.**

## Quit Smoking

The single most important thing you can do to improve your life and health is quit smoking. This includes all forms of tobacco:

- Cigarettes
- E-cigarettes
- Cigars
- Pipes
- Hookahs

There are more options today than ever before for the support you need to overcome a nicotine addiction.

Your health-care provider can help you. Start by working with him or her to choose the option that works best for you, such as:

- Group or individual counseling
- Using a product that lessens the urge to smoke (nicotine replacement)

Nicotine replacement options include:

- Over-the-counter and prescription nicotine patches
- Nicotine gums
- Nicotine lozenges
- Nicotine inhalers
- Nicotine nasal sprays

There are now oral medications that can help you control the urge to smoke:

- Bupropion (Zyban)
- Varenicline (Chantix)

Oral medications may have side effects. It's important to discuss these options with your health-care provider.

When you want to quit smoking, your best chance for success is with the help of others. To find smoking cessation counseling programs and/or support groups, check your local:

- Hospitals
- Health clinics
- Libraries
- Civic groups
- Community centers

Take advantage of these programs to gain the support and encouragement you need to quit smoking for good.



## Avoid Getting the Flu or Pneumonia

Having COPD increases your chances of getting the flu and other respiratory infections, including pneumonia.

- Avoid germs. Try to stay away from people who are sick with a cold or flu. A cough and sneeze contain droplets of an infectious organism. Covering your nose and mouth reduces droplet transmission. Ask for people around you to do the same.

- Germs are most commonly shared on handrails, doorknobs, shopping carts – anything that people touch. Wash your hands often to prevent the spread of germs. Carry an alcohol-based hand sanitizer to use when soap and water aren't available.
- Ask your health-care provider about getting a flu shot every year at the end of September or early October. Flu types change every year and so do the vaccines. A flu shot one year does not protect you from getting the flu in subsequent years. Flu shots have been shown to be safe in patients with COPD. They will not cause a flare-up. If you are allergic to eggs, a flu shot may not be suitable for you.
- Ask your health-care provider about pneumonia vaccines. These vaccines protect against most common strains of bacteria that cause common pneumonia types.
- If you think you may have the flu, see your health-care provider and get treatment as early as possible. Flu medications are most effective if given in the first 48 hours after symptoms appear. They are less effective if given later. Early treatment may shorten your recovery time.



## Minimize Your Exposure to Other Irritants

Irritants can also impact your lungs, such as:

- Air pollution
- Strong odors
- Secondhand smoke

Different people react to different substances. It's important to identify and avoid irritants to which you are sensitive.

### Here are some steps you can take:

- Avoid fumes, smoke, and strong odors.
- Minimize your exposure to paints, sprays, cleaning fluids, garden chemicals, scented candles, air fresheners, perfumes, lotions, and hair sprays.
- Stay inside and decrease strenuous activity when air pollution and ozone levels are high.

If you have allergies in addition to COPD, try to stay away from pollen or other things that you are allergic to. Ask your health-care provider about how airborne allergens may affect your COPD.



## COPD Medications



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**Always take your medicine regularly, exactly as prescribed, even when you aren't having symptoms.**

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Medications play a vital role in controlling COPD. It's important to understand how these medications are used and how they may impact your health. In general, COPD medications relax muscles around the airways or decrease swelling in the airways. Antibiotics may be needed to clear up infections.

COPD medications fall into two categories:

- Maintenance medications are taken regularly, often daily, whether or not you have symptoms. They work to control symptoms over time. These are used regularly to keep airways open:
  - Long-acting beta-agonists (LABAs – Arcapta, Brovana, Formoterol, Perforomist, Serevent, Striverdi)
  - Long-acting muscarinic antagonists (Incruse, Lonhala Magnair, Seebri, Spiriva, Tudorza)
  - LABA/LAMA combination inhalers (Anoro, Bevespi, Stiolto)
  - LABA/inhaled corticosteroids combination inhalers (Advair, Breo Ellipta, Symbicort)

- **Quick-relief rescue medications** are used when you have increased COPD symptoms or flare-ups. These offer quick relief when having shortness of breath (maintenance medications can be continued during flare-ups):

- Short-acting beta-agonists (ProAir, Proventil, Ventolin, Xopenex HFA)
- Muscarinic antagonists (Atrovent)
- Combination (Combivent)

COPD may change over time. So your medication requirements might change, too. Work closely with your health-care provider to evaluate which medications work best. Tell your doctor about all medications you take. This includes over-the-counter medicines and any complementary or herbal supplements. Alert your health-care provider to your allergies – both medication and otherwise. And don't be shy; if you have even a minor problem, tell your doctor about it. Write down any concerns or questions before your doctor appointment. That way you won't forget to ask them.

### Other medication management ideas:

- Carry a current list of your medications at all times. Your list should include all over-the-counter vitamins and supplements. Also identify any food or medication allergies.
- Take your inhaler with you to your appointment with your clinician. They can help you make sure you are using your device correctly.
- If possible, get all your medications from one pharmacy. That way your pharmacist will know your full medication and allergy history. He or she will be able to advise both you and your doctor about any possible medication or food interactions.
- All medications have potential side effects. However, the benefits of a particular medicine may outweigh them. Plus, people react differently to medications. One person may have no side effects. Another may have many adverse effects. Ask about possible side effects from each medication. Report them to your doctor.
- Always ask your doctor about new medicines for your lung disease.



## Inhaled Medications



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**You can find explanations of how each of these medication delivery systems work on the following pages.**

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Most COPD medications are delivered by an inhaler. When you breathe in the medication through the inhaler, it goes right into the airways of the lungs. Inhaled medications work to open airways by:

- Relaxing tight muscles around them
- Decreasing swelling in the airways
- Reducing mucus

A complete list of all brand name and generic inhaled COPD medications is included in the pocket at the back of this guide.

**There are four types of inhaler delivery devices:**

- **Metered-dose inhalers (MDIs)**, pressurized devices that release medication in a fine spray
- **Dry powder inhalers (DPIs)**, breath-actuated devices that release a fine, powdered medication (single dose and multi dose)
- **Soft mist inhalers (SMIs)** (Respimat®), propellant-free devices that release a metered dose of medication in a fine mist
- **Nebulizers**, which break liquid medication into a fine mist that can be inhaled slowly

How each delivery system works is explained on the following pages.

## Using a Metered-Dose Inhaler (MDI)

MDIs look the same on the outside. But each brand operates and needs to be maintained differently. Check the patient instruction sheet that came with your inhaler for details on:

- Priming the device (getting it ready to use)
- Using the device
- Cleaning the device
- Maintaining the device

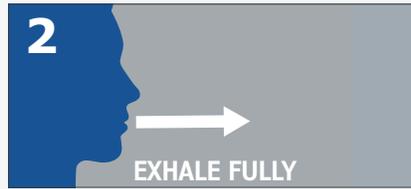
### Priming

When the MDI is new or hasn't been used in 2 weeks, the ingredients may separate. Priming releases one or more sprays into the air. This helps ensure the dose you inhale has the right amount of medication. Read your patient instruction sheet for priming instructions, especially if you don't use your medication every day.

## Instructions for Using an MDI Without a Holding Chamber



**STEP 1:** Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if instructed in your patient information.



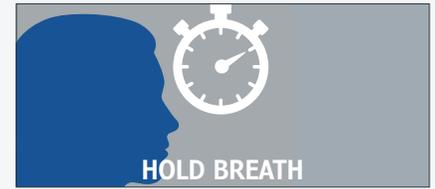
**STEP 2:** Sit up straight, or stand up. Exhale fully, emptying your lungs as much as possible.



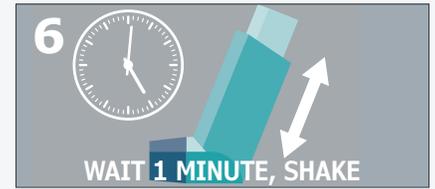
**STEP 3:** Hold the inhaler upright with the mouthpiece at the bottom and the top pointing up. Position it in or in front of your mouth as instructed by your doctor or the medication's patient instruction sheet. Some recommend holding the inhaler 1 to 2 inches away from your open mouth. Others recommend putting the MDI mouthpiece between your teeth and closing your lips tightly around it. Keep your tongue out of the way of the spray.



**STEP 4:** Begin to inhale slowly, then activate the inhaler a split-second later. If you wait too long, you won't have enough breath left. Inhale the medicine deep into your small airways. Continue inhaling SLOWLY for 3-5 seconds or until your lungs are full.



**STEP 5:** Hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath for as long as you can.



**STEP 6:** If you need to take another puff of medicine, wait 1 minute. After 1 minute, shake the MDI again if patient instructions recommend it. Repeat steps 2 through 5.



**STEP 7:** Recap the MDI. If your medicine contains an inhaled corticosteroid, rinse your mouth with water after your last puff of medicine. Spit out the water. DO NOT SWALLOW IT, to minimize the risk of yeast infection in your mouth.



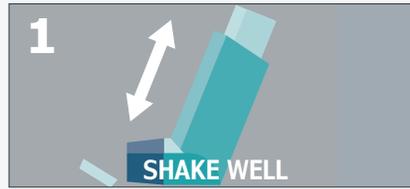
**Counting Doses:** Even the most perfectly timed inhalation won't do you any good if there's no medicine left in the inhaler. It's important to:

- Count each dose
  - Prime the spray
  - Replace the inhaler with a new one after using the labeled number of sprays
- Many MDIs now have dose counters built in. If yours does not, use a diary or other system to track doses used. Don't rely on how the inhaler "feels." The MDI may still spray or feel full when shaken long after the active medication has been used up.

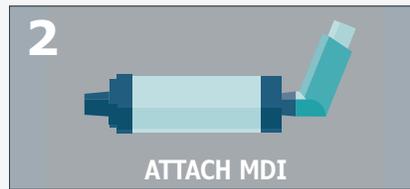
## Instructions for Using an MDI With a Holding Chamber

If you have difficulty using the MDI, your doctor may prescribe a holding chamber with a mouthpiece or a mask. It includes a tube that attaches to your MDI. This may help you more easily use the MDI. Before using your MDI with a holding chamber:

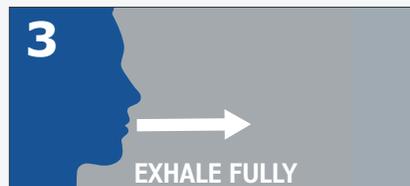
- Read the specific instructions that came with it.
- Follow the priming directions carefully.
- Follow the cleaning directions carefully.
- Wash the holding chamber or spacer according to the instructions.



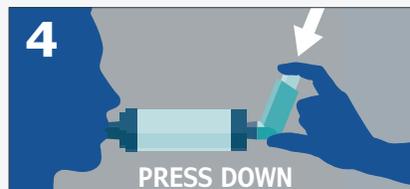
**STEP 1:** Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if patient instructions recommend it.



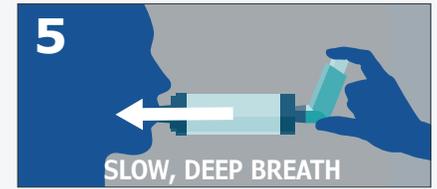
**STEP 2:** Attach the MDI to the holding chamber.



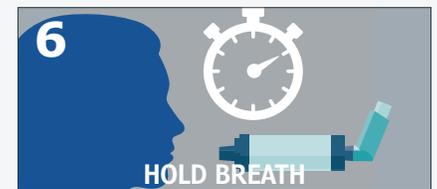
**STEP 3:** Sit up straight, or stand. Exhale fully, emptying your lungs as much as possible.



**STEP 4:** Put the mouthpiece of the holding chamber in your mouth. Close your lips around the mouthpiece and make a tight seal. Press down on the MDI to put one dose of medicine in the chamber. NEVER load more than one dose into the chamber.



**STEP 5:** Take a SLOW, DEEP breath through your mouth. Breathe in as much air as you can. Try to completely fill up your lungs. If you inhale too fast, some holding chambers will give a whistling sound. It means you are not doing the procedure correctly.



**STEP 6:** Remove the mouthpiece from your mouth. Hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath as long as you can.



**STEP 7:** If you need another dose of medicine, wait 1 minute. After 1 minute, shake the inhaler again if patient instructions recommend it. Repeat steps 3 through 6.



**STEP 8:** Remove the MDI from the chamber. Recap both devices. If your medicine is an inhaled corticosteroid, rinse your mouth with water after your last puff of medicine. Spit out the water – **DO NOT SWALLOW IT.**

### Instructions for Using an MDI With a Holding Chamber and Mask

If you have difficulty using the MDI, your doctor may prescribe a holding chamber with a mouthpiece or a mask. It includes a tube that attaches to your MDI. This may help you more easily use the MDI. Before using your MDI with a holding chamber:

- Read the specific instructions that came with it.
- Follow the priming directions carefully.
- Follow the cleaning directions carefully.
- Wash the holding chamber or spacer according to the instructions.



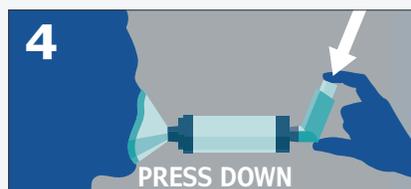
**STEP 1:** Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if patient instructions specify.



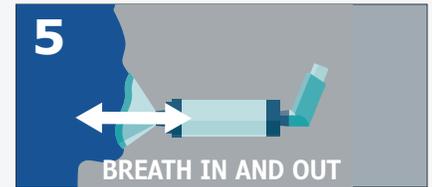
**STEP 2:** Attach the mask to the holding chamber, if it's not a single unit. Insert the MDI into the chamber.



**STEP 3:** Sit up straight, or stand. Place the mask over the patient's nose and mouth. The mask should fit firmly enough so none of the medicine can escape.



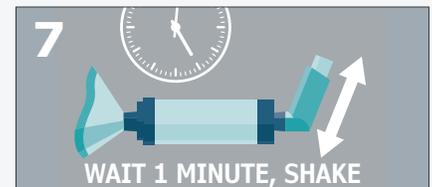
**STEP 4:** Press down on the MDI to put one dose of medicine in the chamber.



**STEP 5:** Breathe in and out normally for six breaths, to inhale the full dose of medicine. The chamber's one-way valve will prevent breath from going back into the chamber. Monitor the user's breathing by watching the valve open and close. Do not remove the mask until the sixth breath is completed.



**STEP 6:** Remove the mask from the user's face.



**STEP 7:** If the patient needs to take another puff of medicine, wait 1 minute. After 1 minute, shake the MDI again if patient instructions specify. Repeat steps 3 through 6.



**STEP 8:** Remove the MDI from the chamber. Recap both devices. If the medicine is a corticosteroid, user's should rinse their mouth with water after the last puff of medicine. Spit the water out – **DO NOT SWALLOW IT.**

## Using a Multi Dose Dry Powder Inhaler (DPI)

With powdered medication particles in DPIs, the dose is released to your airways when you take a deep, fast breath from the inhaler. Inhaling the dry powder may cause some people to cough. Talk with your doctor to make sure a DPI is right for you. Most dry powder medication contains lactose. It gives a sugary sensation in your mouth. This indicates that you have taken the medication. It will not affect you if you're lactose intolerant.

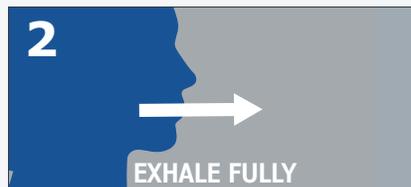
There are several different kinds of DPIs. Each has its own loading and releasing procedures. Ask your health-care professional or pharmacist to show you exactly how to use your device. Then follow the manufacturer's instructions to maintain it. Unlike MDIs, DPIs SHOULD NOT be shaken or primed. They should NEVER be washed in water.

### List of Multi Dose Dry Powder Inhaler devices:

Diskus, Ellipta, Flexhaler, Genuair



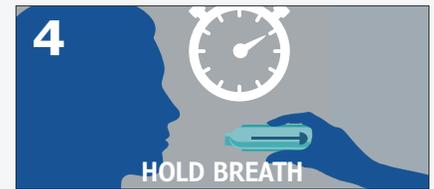
**STEP 1:** Follow your patient instructions to prepare the device and load the dose of medicine.



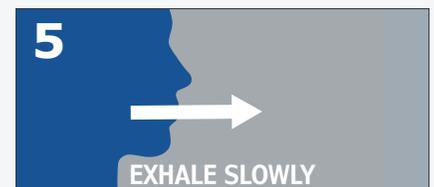
**STEP 2:** Holding the device in your hand, exhale fully, pushing as much air out of your lungs as possible.



**STEP 3:** Put your mouth on the mouthpiece. Inhale deeply and forcefully.



**STEP 4:** Remove the inhaler from your mouth. Hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath for as long as you can.



**STEP 5:** Exhale slowly.



**STEP 6:** If your medicine contains an inhaled corticosteroid, rinse your mouth with water. Spit out the water - **DO NOT SWALLOW IT.**

## Using a Single Dose Dry Powder Inhaler (DPI)

With powdered medication particles in DPIs, the dose is released to your airways when you take a deep, fast breath from the inhaler. Inhaling the dry powder may cause some people to cough. Talk with your doctor to make sure a DPI is right for you. Most dry powder medication contains lactose. It gives a sugary sensation in your mouth. This indicates that you have taken the medication. It will not affect you if you're lactose intolerant.

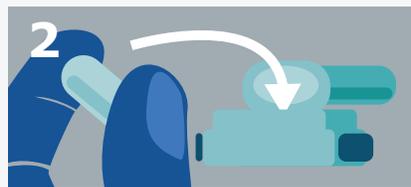
There are several different kinds of DPIs. Each has its own loading and releasing procedures. Ask your health-care professional or pharmacist to show you exactly how to use your device. Then follow the manufacturer's instructions to maintain it. Unlike MDIs, DPIs SHOULD NOT be shaken or primed. They should NEVER be washed in water.

### List of Single Dose Dry Powder Inhaler devices:

Handihaler, Neohaler



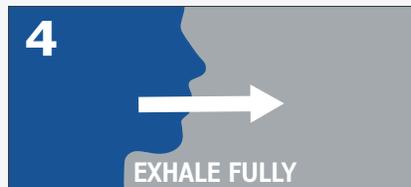
**STEP 1:** Prepare the device as instructed in your patient instructions to load the dose of medicine.



**STEP 2:** Load the capsule in the well inside the inhaler (for Neohaler and Handihaler devices).



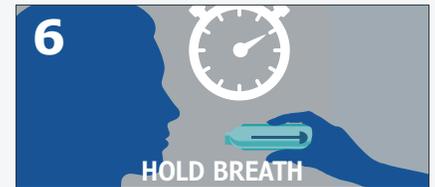
**STEP 3:** Puncture the capsule by pushing the buttons on each side of the inhaler.



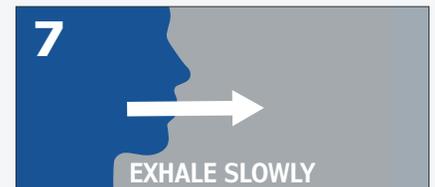
**STEP 4:** Holding the device in your hand, exhale fully, pushing as much air out of your lungs as possible.



**STEP 5:** Purse your lips on the mouthpiece and inhale deeply and forcefully.



**STEP 6:** Remove the inhaler from your mouth. Hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath for as long as you can.



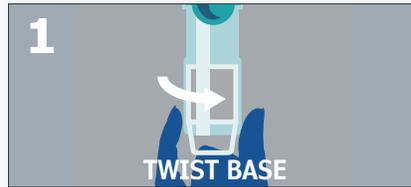
**STEP 7:** Exhale Slowly.



**STEP 8:** If your medicine is a corticosteroid, rinse your mouth with water. Make sure you spit the water out – **DO NOT SWALLOW IT.**

## Using a Soft Mist Inhaler (SMI) (Respimat®)

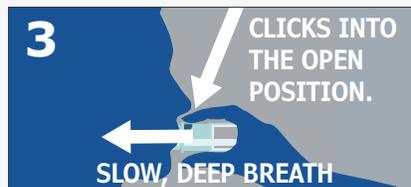
Before using your SMI, read the specific manufacturer's instructions. Follow accordingly to prepare the device and use it properly.



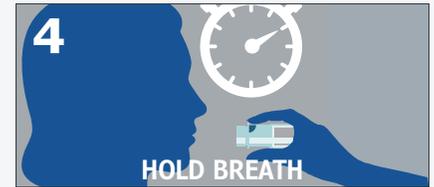
**STEP 1:** Hold the inhaler upright with the cap closed. Twist the base of the inhaler in the direction the arrows point on the label until you hear a click.



**STEP 2:** Open the cap. Listen to make sure it fully clicks into the open position.



**STEP 3:** Close your lips around the mouthpiece. Press the dose release button while taking in a slow, deep breath.



**STEP 4:** Remove the inhaler from your mouth. Hold your breath for 10 seconds, if possible. Exhale slowly.



**STEP 5:** Close the cap.

**STEP 6:** If specified for your product, repeat steps 1 through 5 for a total of 2 puffs.

## Using a Nebulizer

Nebulizers change liquid medicines into a mist. You can inhale that mist into your lungs. There are three basic parts

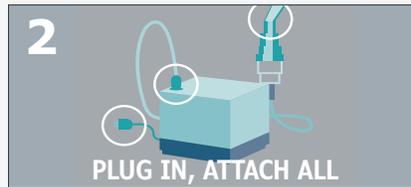
- The nebulizer cup that holds the medicine
- A compressor machine that converts the medicine to a mist
- A mask or mouthpiece for breathing in the mist

Small, quiet, handheld nebulizers are also available now. Nebulizer treatments usually take from 8 to 10 minutes to deliver a full dose of medicine. Some of the new nebulizers may deliver the medication in less time.

To use a nebulizer:



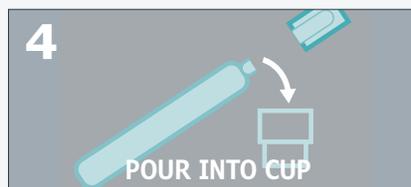
**STEP 1:** Always wash your hands before handling the medication and equipment. This keeps your nebulizer – and your lungs – free of germs.



**STEP 2:** Check the machine to make sure the air filter is clean. Plug it in. Attach the tubing, mouthpiece, or mask.



**STEP 3:** Check your medication. Is the vial crushed or damaged? Is the medication discolored? Has it expired? If you answer “yes” to any of these, contact your pharmacist for a new supply.



**STEP 4:** Snap open the vial. Pour the premixed medicine into the nebulizer.



**STEP 5:** Place the mouthpiece in your mouth, or put the mask firmly over mouth and nose.



**STEP 6:** Turn on the machine. Breathe in and out slowly through your mouth until all the medicine is gone or there is no more mist coming out. Keep the machine upright at all times.



**STEP 7:** Turn off the machine. Remove the cup.

**STEP 8:** It is VERY IMPORTANT to follow the manufacturer’s instructions to KEEP your nebulizer cup, mouthpiece, and tubing clean. When everything is clean and dry, store the equipment where it will stay clean and dust-free.

Nebulizer cup/mouthpiece units and tubing don’t last forever. The plastic will break down over time. Replace them as recommended, along with the air filter.

## Set up MAGNAIR™ Nebulizer System and use LONHALA™ (glycopyrrolate) Inhalation Solution

If your doctor prescribed the MAGNAIR Nebulizer System for use with LONHALA (glycopyrrolate) Inhalation Solution, then follow these instructions to set it up.

It's important to remember a couple of things:

- Make sure you have all the pieces that belong to MAGNAIR.
- Make sure you only use LONHALA Inhalation Solution.
- Make sure you clean MAGNAIR with clear liquid dishwashing soap before first use and after each time you use it. Allow parts to air dry.
- Do not put any parts of MAGNAIR into the microwave or dishwasher.
- Make sure your hands are clean.

## Getting Started

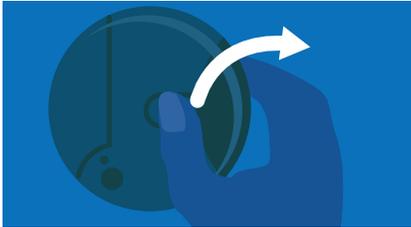
Make sure you have all the pieces shown in the picture below.



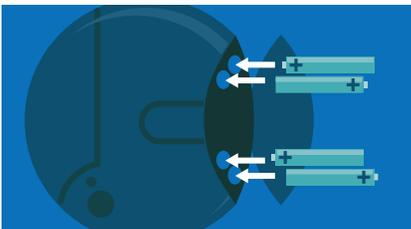
Then follow the instructions using the pictures as your guide.

You can use 4 AA batteries or the AC adapter. If you use the AC adapter, you can skip "Steps to put in the Batteries" section outlined below.

### Steps to put in the Batteries in the Controller



**STEP 1:** To open the battery door, put your thumb on the black tab and push hard.



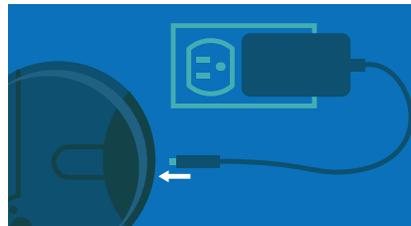
**STEP 2:** Put 4 AA batteries in the opening. Match the battery + sign with the + sign in the opening and the battery - sign with the - sign.



**STEP 3:** Close the battery door until you hear it "click". **NOTE:** If you only use batteries, they will last about 2 weeks. Make sure you have extra batteries handy. If you are not going to use the nebulizer for more than 30 days, take out the batteries.

### Steps to use the AC adapter in the Controller

**STEP 1:** Put MAGNAIR on a flat surface and plug the round end of AC adapter into the hole on the side of MAGNAIR.



**STEP 2:** Plug the AC adapter into the wall. It's okay if there are batteries in the Magnair, the AC adapter won't charge or hurt them.

### Steps to put together the Handset Body.

**STEP 1:** If this is a new Handset Body, wash your hands.



**STEP 2:** Open the top of the Handset Body.



**STEP 3:** Place the Aerosol Head into the Handset Body. DO NOT touch the center of the Aerosol head.

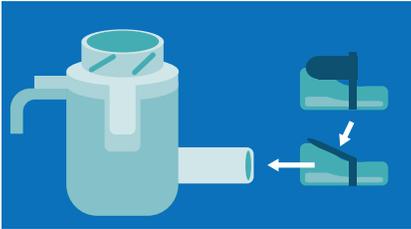
**STEP 4:** When you put the Aerosol Head in, make sure the small tab on the side lines up with the matching notch in the Handset. If inserted incorrectly, the inhalation solution will leak.



**STEP 5:** Close the Handset Body. You may hear a click.

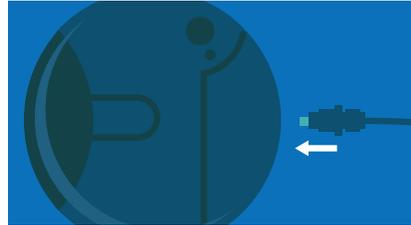
### Steps to attach the Mouthpiece to the Handset Body

**STEP 1:** Make sure the blue valve is pressed down into the slot on the Mouthpiece.



**STEP 2:** Attach the Mouthpiece to the Handset Body

### Steps to attach the Connection Cord to the Controller and the Handset Body



**STEP 1:** Plug the blue round end of the Connection Cord into the hole in the blue side of the Controller as far as it will go. You may hear a click.

**STEP 2:** Plug the flat blue and gray end of the Connection Cord (with the gray mark facing up) into the Handset body as far as it will go.



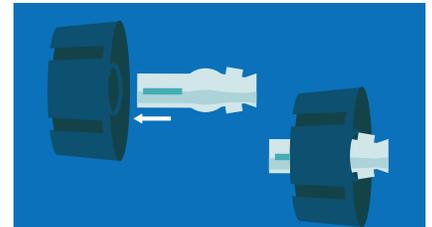
**STEP 3:** Make sure the gray mark on the Connection Cord lines up with the blue mark on the Handset Body.

### Steps to put the LONHALA™ Inhalation Solution into the Medication Cap

**STEP 1:** Open the foil pouch and remove the two LONHALA vials.



**STEP 2:** Separate the vials and put one back into the foil pouch to use for the next treatment. You can store it in Carrying Bag.

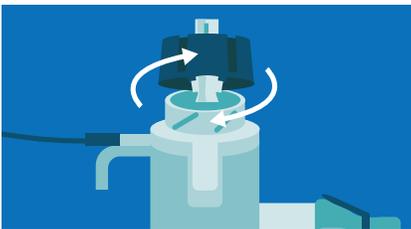


**STEP 3:** Put the LONHALA vial into the bottom of Medication Cap until you hear it "click."

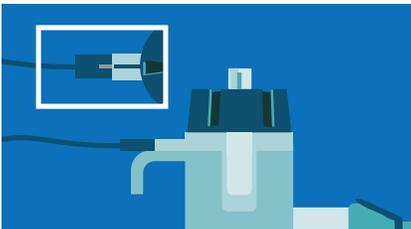
### Steps to attach the Medication Cap to the Handset Body



**STEP 1:** Do not touch the part of the Handset Body that will poke a hole in the vial.



**STEP 2:** Put the Medication Cap with vial on top of the Handset Body.



**STEP 3:** Turn the Medication Cap clockwise until you hear it "click."

### Steps to use the Mouthpiece

**STEP 1:** To make inhaling easier, sit up straight and relax.

**STEP 2:** Hold the Handset Body with one hand and put the Mouthpiece into your mouth and press your lips around it.

**STEP 3:** Do not tilt the handset.

**STEP 4:** Do not cover the blue valve with your lips.

**STEP 5:** Do not loosen or remove the Medication Cap until your treatment is done.

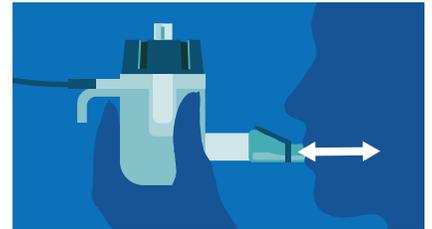


**STEP 6:** Press the On/Off button on the Controller to start your treatment.



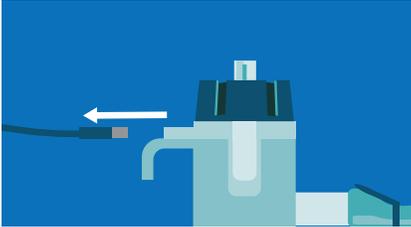
**STEP 7:** A green light beside the On/Off button will light up.

**STEP 8:** You will hear one beep. This means the machine is working.

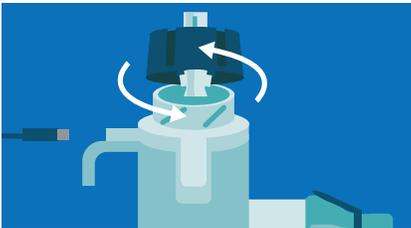


**STEP 9:** Breathe in and out normally through the Mouthpiece until the Controller beeps and turns off (2-3 minutes). If you do not clean your Handset parts after every use, your treatment time might take more than 3 minutes.

## Steps to clean the Handset



**STEP 1:** Take Connection Cord out of the Handset.



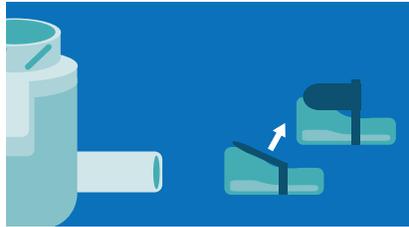
**STEP 2:** To remove the Medication Cap from the Handset Body, turn it counter-clockwise.



**STEP 3:** To remove vial, put the Medication Cap into the palm of your hand and push up. Throw the vial away.



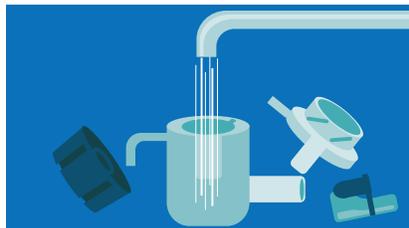
**STEP 4:** To remove the Mouthpiece from the Handset Body, gently pull and twist.



**STEP 5:** To loosen the blue valve on the Mouthpiece, move it gently from the slot. Make sure it is still attached on one side.



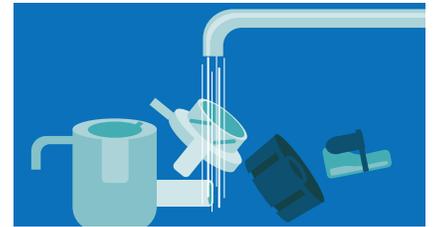
**STEP 6:** Remove the Aerosol Head by lifting the handle. Set it aside to clean separately.



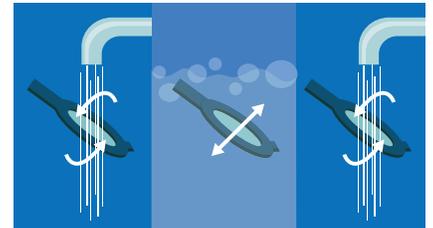
**STEP 7:** Rinse each handset part with warm running water for 10 seconds.



**STEP 8:** Wash all handset parts in warm soapy water for 10 seconds.



**STEP 9:** Rinse each handset part again under warm running water for 10 seconds.



**STEP 10:** Now clean the Aerosol Head the same way as in Steps 7, 8, and 9 above.

**STEP 11:** Make sure everything is clean.



**STEP 12:** Shake each handset part and Aerosol Head to remove excess water and air dry on a lint-free towel.

**STEP 13:** After the parts are dry, place them in the carrying bag or on a dry, dust-free area for storage.

**STEP 14:** Do not put the pieces back together again until it's time for your next treatment.

## Using Oxygen

Over time, some people with COPD need to use supplemental oxygen. This:

- Can make your breathing easier
- Enhances your quality of life
- May help you live longer
- Oxygen should be used 24 hours a day at rest
- Oxygen can also be used with physical activities and/or during sleep

Oxygen is not addictive. Increased use won't make you need it more. However, it is considered a medication. Not all patients with COPD will need or benefit from oxygen. For people with COPD who don't get enough oxygen naturally, oxygen therapy can:

- Improve sleep, mood, and mental alertness
- Better allow the body to conduct its everyday functions
- Improve survival

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## Traveling With Oxygen

**Air travel has restrictions related to oxygen. You cannot travel on an airplane with an oxygen canister. You must use either an airline-supplied oxygen canister or an FAA-certified portable oxygen concentrator. Other requirements may apply. Check with your airline and/or oxygen supplier at least 2 weeks before you travel.**

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There are three types of oxygen:

- **Compressed gas oxygen**, which comes in steel or aluminum containers in different sizes for home use and traveling.
- **Liquid oxygen**, which changes liquid into a breathable gas. (not readily available)
- **Oxygen concentrators**, electrical devices that remove nitrogen from the air, concentrating the oxygen.

If your doctor prescribes oxygen, ask about:

- The oxygen flow rate or setting, so you receive the right amount of oxygen per minute of use
- When you should wear your oxygen, such as:
  - During activities
  - While sleeping
  - Continuously
- Which type of oxygen equipment best suits your lifestyle

You should NEVER SMOKE when you are getting oxygen therapy. There is increased fire hazard. You may harm yourself or your surroundings.



## Oral Medications



Oral medications may be prescribed by your doctor to:

- Reduce symptoms
- Relax the airways
- Treat inflammation

They may be used with inhaled medications on a short or long-term basis. Following is an overview of oral medications for COPD.

### Oral Corticosteroids

Oral corticosteroids (eg; prednisone) reduce inflammation and swelling in the airways. They make it easier for air to flow in the lungs. However, they have several adverse effects. Their use is often limited for short courses (5-7 days) to treat acute exacerbations (flare-ups).

### Theophylline

In some cases, people with COPD don't respond well to the most commonly prescribed inhaled medications. Theophylline relaxes the muscles in the airway. It is often combined with other medications, particularly bronchodilators. Theophylline is a non selective phosphodiesterase (PDE) inhibitor. It has been used to treat COPD and asthma for over 20 years. It is often considered a fourth line therapy for COPD due to its side effects. It requires patients to have blood draws to follow drug levels. Theophylline

use may be associated with many adverse effects. It may interact with other medications you are taking. Your doctor will need to check this. He or she may order blood levels to make sure your dose is not too high.

### Roflumilast

The phosphodiesterase (PDE) inhibitor roflumilast (Daliresp) inhibits inflammation in the airway. It's indicated for people with frequent episodes of chronic bronchitis. It has been shown to reduce COPD flare-ups in patients who are prone to flare-ups. Roflumilast use may be accompanied by diarrhea and nausea. Your health-care provider may need to adjust your dose or stop the medication.

### Expectorants

Expectorants (mucolytic medicines) are sometimes used to treat the increased or thicker mucus that can occur with COPD. This mucus clogs airways, making it harder to breathe.

These medicines may help keep mucus thin and more easily cleared from the airways. The expectorant most commonly used for COPD is guaifenesin. Most studies, however, show that drinking fluids is as good as taking mucolytics.

### Antibiotics

People with COPD are more prone to:

- Colds
- Flu
- Pneumonia

To treat a bacterial infection and reduce symptoms, your doctor may prescribe a course of antibiotics. Azithromycin may be prescribed to reduce the risk of flare-ups. You may be asked to take this three times a week.

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**It's important to take all your medications correctly to get the best benefits and improve your breathing. Read the package inserts for all your medications. Follow the instructions exactly to take each one. If you have any questions about your medications, ask your doctor or pharmacist.**

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## Taking Charge of Your Health



Everything you do to stay healthy also helps you manage your COPD.  
It's important to:

- Continue physical activities
- Follow a nutritious diet
- Conserve energy
- Control stress



## Exercise

Fitness is a very important contributor to health. Those who are fit feel better and experience fewer illnesses. Many of us avoid exercise. Those with COPD tend to avoid it even more. This is because they struggle to minimize their shortness of breath. Work with your doctor on an exercise program that:

- Decreases Shortness of Breath
- Improves Quality of Life
- Improves Exercise Ability
- Increases Muscle Strength

Make time to exercise most days. Do something simple that you enjoy. It might be walking outside or at a mall. Develop a pattern. Try to slightly increase it each week. If recommended by your doctor, consider enrolling in a pulmonary health rehabilitation program with supervised exercise and other services.

## Pulmonary Rehabilitation

Pulmonary rehabilitation is a very important part of treatment of symptoms in patients with moderate/severe and advanced COPD. These programs (covered by Medicare and most insurance companies) may help you reduce the physical impact of COPD. Pulmonary rehabilitation is designed to help you:

- Control or reduce breathlessness

## This comprehensive program offers:

- Structured, monitored exercise training
- Nutrition advice
- Techniques for reducing and controlling breathing problems
- Education about maintaining and improving body function
- Help to quit smoking
- Emotional and psychological support
- Improved muscle function to decrease shortness of breath

Pulmonary rehabilitation improves the quality of life for many people with COPD. To learn more about the benefits, talk to your doctor. These programs are usually done in an outpatient setting. If referred for this program, you will be expected to go at least two to three times a week for 6-8 weeks. When you complete the program, you will get instructions on how to do your exercise program at home.



## Good Nutrition

Good nutrition – eating the right foods – can also help you better manage your COPD. Some people with COPD have trouble keeping weight on. When you lose weight, you lose muscle mass. It can weaken your strength and cause other physical limitations. Other people with COPD may be overweight. This makes it harder to breathe. It's important to work with your doctor to find your ideal weight.

## To maintain a healthy weight:

- Eat several smaller meals throughout the day instead of three large ones
- Drink plenty of fluids to keep airway mucus thin and free-flowing
- Eat slowly
- Chew food thoroughly



## Conserving Energy

To live well with COPD, you must pace yourself to avoid getting worn out. To conserve energy and do more without getting short of breath:

- Move slowly
- Use a cart with wheels to complete daily tasks
- Sit to dress, undress, shave, put on makeup, and cook
- Put the things you use regularly at waist level or within easy reach
- Rest after meals when your body is working hard to digest food
- Use a shower stool and hose sprayer for bathing
- Use helping devices, such as long-handled grabbers for putting on socks and shoes, and for reaching high places



## Managing Stress

Stress is a normal part of life. It can happen when things are going well. It can happen when things are going poorly. Stress and anxiety can make breathlessness worse. It's vital for people with COPD to:

- Focus on lowering stress and anxiety
- Learn to relax

### How does stress impact COPD?

To reduce the impact of stress and anxiety, find the best coping strategies for you. Some examples:

- Yoga
- Meditation, mindfulness
- Prayer
- Listen to relaxing music

- Slowly tense and relax each part of your body
  - Start with your toes
  - Work all the way up to your scalp
  - Breathe in as you tighten
  - Breathe out as you relax
- Concentrate on things that make you smile, in a comfortable place and position

## Breathing Techniques



People with COPD can master breathing techniques, such as:

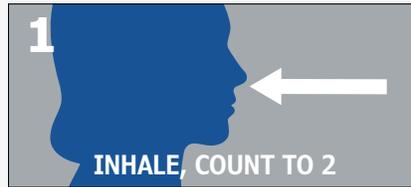
- Pursed-lips breathing
- Diaphragmatic breathing

This increases air to your lungs and reduces shortness of breath. It's also useful to learn techniques for clearing mucus from your lungs.

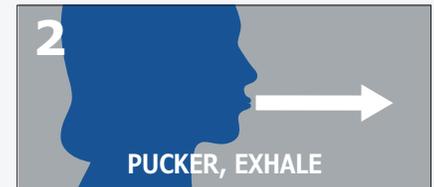
## Pursed-Lips Breathing

- Helps you relax
- Helps you get more oxygen into your lungs
- Reduces shortness of breath

This technique teaches you how to extend the time you exhale. This allows you to eliminate more carbon dioxide from your body. That makes more room for inhaled oxygen. Pursed-lips breathing is easy to do. It only takes a little practice to master.



**STEP 1:** Relax your neck and shoulder muscles. Breathe in slowly through your nose while counting to 2.



**STEP 2:** Pucker your lips as if you were about to whistle. Breathe out slowly and gently through your lips while counting to 4 or more. Always exhale for longer than you inhale. This allows your lungs to empty more effectively.

## Diaphragmatic Breathing (Abdominal Breathing)

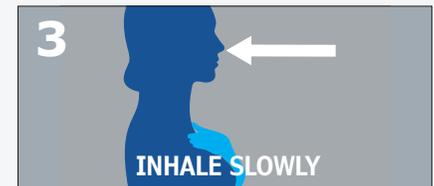
With COPD, trapped air in damaged air sacs often causes the lungs to over-expand. This breathing technique can help reduce shortness of breath.



**STEP 1:** Get into a comfortable position. Relax your neck and shoulders.



**STEP 2:** Put one hand on your abdomen (stomach). Put one hand on your chest.



**STEP 3:** Breathe in slowly through your nose to the count of 2. Feel your stomach push out. Your chest should stay still.



**STEP 4:** Tighten your stomach muscles. Breathe out while you count to 4. Feel your stomach muscles tighten. Your chest should stay still.

## Avoiding Flare-Ups



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**Studies have shown that all of the following are related to more COPD flare-ups:**

- **Smoking**
  - **Lack of pulmonary rehabilitation**
  - **Improper use of an inhaler**
  - **Taking medications improperly**
- 

A COPD “flare-up,” also known as an “exacerbation,” is a worsening of symptoms. A flare-up may lead to:

- Poorer lung function
- More shortness of breath
- A decline in quality of life

Most important, it can be dangerous. It may put you at risk for death. COPD flare-ups may require hospitalization. It’s imperative that you:

- Know the signs and symptoms of flare-ups.
- Take immediate action should one occur.
- Report a flare-up to your health-care provider.

**What causes flare-ups?**

- Infections caused by viruses and bacteria
- Very hot or very cold weather
- Air pollution

### Signs of a COPD flare-Up

- Changes in mucus color (yellow or green), texture, and amount
- More mucus or difficulty coughing up mucus from the lungs
- More severe cough or more frequent coughing
- Cold or flu symptoms, such as:
  - Runny nose
  - Sore throat
  - Achy feeling
  - Chills
  - Fever
  - Feelings of feverishness

- Increased shortness of breath with activities or at rest
- Wheezing or whistling sound in the chest

COPD flare-ups are treated by:

- Changing your medications
- Adding oral corticosteroids and/or antibiotics
- Possibly adding oxygen
- Hospitalization, for serious flare-ups

There are steps you can take to help avoid flare-ups.

- Prevent infections by avoiding germs and washing your hands regularly.
- Watch for cold and flu symptoms. Act quickly if things get worse.
- Maintain a regular exercise program (to help you notice smaller changes in lung function).
- Talk with your doctor about changes in your symptoms.
- Create a plan with your doctor for what to do if you get sick (an Action Plan).

Call your health-care provider if:

**You are more short of breath than usual**

**Your cough gets worse**

**You are coughing up more mucus or having trouble getting mucus up**

**Your mucus changes from clear or white to green or yellow**

**You are coughing up blood or mucus with blood in it**

**You have fever or chills or feel general achiness or fatigue**

**Your sleep is very disturbed or you are more sleepy than normal**

**You are feeling confused**



## Advanced Treatment Options



COPD is usually a progressive condition. Over the long-term you may need to evaluate more advanced treatment options.

Lung transplantation surgery involves replacing one, or sometimes both, of your diseased lungs with a donor lung. To be considered, a candidate generally must:

- Have emphysema
- Be oxygen-dependent
- Have severe COPD that no longer responds to medical treatment and may be fatal in 2 years
- Be physically able to undergo surgery and treatment that follows
- Usually be between the ages 65 and 75

Lung transplantation has many risks. Donor lungs are not easily available. Waiting for a donor lung can sometimes take 2 or more years. Also, after surgery, you will need to take many different medications for the rest of your life. This is necessary to prevent:

- Rejection of the transplanted lung(s)
- Infection

Undergoing either of these procedures is a big decision. It may not be the right course for everyone with COPD. Discuss these options thoroughly with your regular doctor and expert clinicians.



## Lung Volume Reduction

Lung volume reduction surgery removes diseased portions of one or both lungs. When the diseased portions of the lung are removed, the excess volume of the lungs inside the rib cage is reduced. This makes it easier to breathe. To be a candidate, you must:

- Have a type of COPD called emphysema
- Be strong enough to undergo the procedure
- Follow proper medical therapy
- Participate in a pulmonary rehabilitation program
- Be in good general health
- Not smoke

Choosing to undergo lung volume reduction procedures or lung transplantation is a big decision and is not the right course for everyone with COPD. Be sure to discuss these options thoroughly, both with your regular health-care provider and clinicians who are experts at these procedures.

## Bronchoscopic Volume Reduction

In certain medical centers lung volume reduction can be performed using valves placed with a bronchoscope. Consult with your doctor for more information on this procedure option.

## **Additional Resources**

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*The information provided herein is not intended to be medical advice.*

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[chestfoundation.org](http://chestfoundation.org)

Other patient education guides available from the CHEST Foundation in print and on our website:  
[foundation.chestnet.org/patienteducation](http://foundation.chestnet.org/patienteducation)



Additional Resources:

[www.allergyasthmanetwork.org](http://www.allergyasthmanetwork.org)  
[www.lung.org](http://www.lung.org)

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