

Living Life to the Fullest with

# COPD

Chronic Obstructive  
Pulmonary Disease





# When You Can't Get Enough Air

**COPD** is a condition that keeps your lungs from working normally. It causes shortness of breath that can interfere with your daily life. If you have COPD, you'll be glad to know that treatment can help you breathe easier. This booklet will help you understand what you can do to feel better.

## What Is COPD?

COPD stands for **chronic obstructive pulmonary disease**. The airways in your lungs are blocked (obstructed). Because of this, breathing takes more effort. You may have started limiting your activities to avoid shortness of breath. Without treatment, you may not be able to do as much for yourself and need to depend more on others. This can make life less enjoyable.

## How Did I Get COPD?

Most people get COPD from smoking. Cigarette smoke causes lung damage, which can develop into COPD over many years. You may be diagnosed with COPD if one or more of these problems is preventing air from flowing normally through your lungs:

- **Chronic bronchitis** occurs when damaged lungs produce more mucus than they should.
- **Emphysema** occurs when damaged lung passages collapse as you breathe out.
- **Chronic asthma** occurs when substances in the air cause the lung passages to become inflamed. Asthma can sometimes be reversed with medication. But with chronic asthma, the passages stay inflamed all the time.

See page 5 to learn more about these problems.



COPD often develops after years of smoking.

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

©2004 The StayWell Company, 1100 Grundy Lane, San Bruno, CA 94066-3030.

[www.krames.com](http://www.krames.com) 800-333-3032. All rights reserved. Lithographed in Canada. Last reviewed May 2007.



# How Treatment Can Help

Your doctor will work with you to come up with a personalized treatment plan. This plan will likely include medication and exercise. You'll also learn new techniques for breathing and for dealing with shortness of breath during daily tasks. Treatment will improve your symptoms. It will help you breathe better, be more active, and live life to the fullest.



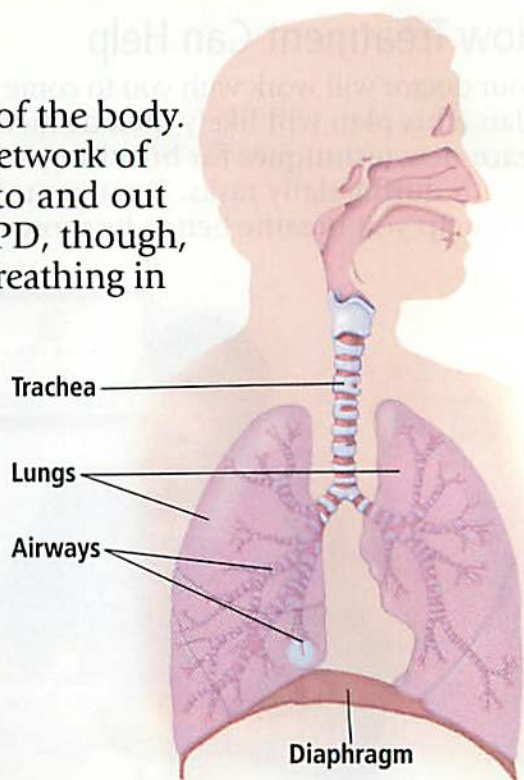
## Table of Contents

<b>Page 4</b>	<b>A Look Inside the Lungs</b> How COPD interferes with breathing	<b>Page 19</b>	<b>Preventing Exacerbations</b> How to avoid infections
<b>6</b>	<b>Diagnosing COPD</b> How your doctor evaluates COPD	<b>20</b>	<b>Coping with Shortness of Breath</b> Stopping the shortness-of-breath cycle
<b>7</b>	<b>Your Treatment Plan</b> Treatments that may help	<b>22</b>	<b>Maximizing Your Energy</b> Doing more with less shortness of breath
<b>8</b>	<b>COPD Medications</b> Types of COPD medications	<b>24</b>	<b>Becoming More Active</b> Adding exercise to your daily life
<b>10</b>	<b>Using Inhalers</b> How to take inhaled medication	<b>26</b>	<b>Maintaining a Healthy Weight</b> Why your weight matters with COPD
<b>12</b>	<b>If Oxygen Is Prescribed</b> Using oxygen to reduce symptoms	<b>27</b>	<b>Clearing Your Airways</b> Clearing excess mucus from the lungs
<b>14</b>	<b>Using Oxygen Safely</b> Guidelines for using oxygen	<b>28</b>	<b>Pulmonary Rehabilitation</b> A program to help you breathe better
<b>16</b>	<b>Quitting Smoking</b> How quitting now can help you	<b>29</b>	<b>For Severe Cases</b> Things that may help if COPD gets worse
<b>18</b>	<b>Avoiding Irritants and Allergens</b> Substances that may affect your lungs	<b>30</b>	<b>Your Emotional Well-Being</b> Staying in control to feel better



# A Look Inside the Lungs

The lungs' job is to get air into and out of the body. Inside the lungs, air travels through a network of **airways** (tubes). Air can pass easily into and out of normal airways. When you have COPD, though, some airways are blocked. This makes breathing in and out harder.



## Healthy Lungs

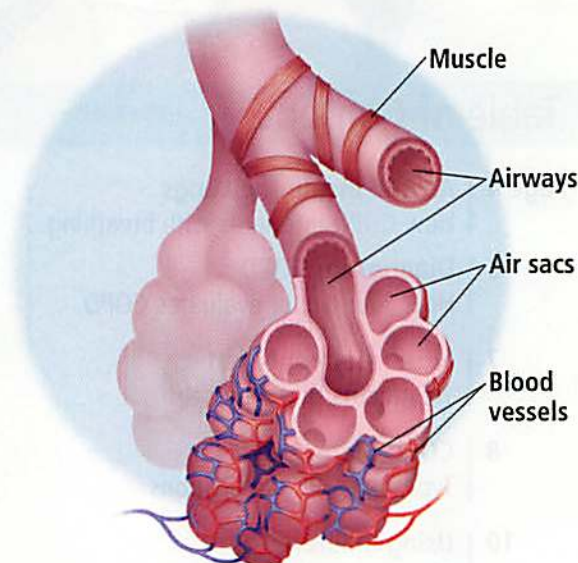
Inside the lungs are branching airways made of stretchy tissue. Each airway is wrapped with bands of muscle that help keep it open. The airways branch out and get smaller as they go deeper into the lungs. The smallest airways end in clusters of tiny balloon-like air sacs (alveoli). These clusters are surrounded by blood vessels.

## When You Breathe

When you inhale (breathe in), air enters the lungs. It travels down through the airways until it reaches the air sacs. When you exhale (breathe out), air travels up through the airways and out of the lungs.

## What the Lungs Do

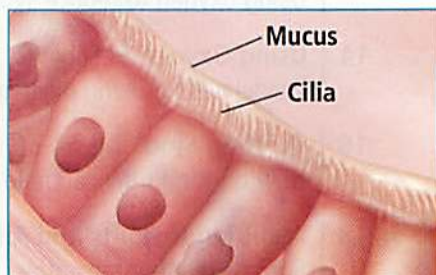
The air you inhale contains oxygen, a gas your body needs. When this air reaches the air sacs, oxygen passes into the blood vessels. Oxygen-rich blood then leaves the lungs and travels to all parts of the body. As the body uses oxygen, carbon dioxide (a waste gas) is produced. The blood carries this back to the lungs. Carbon dioxide leaves the body with the air you exhale.



Cross section of healthy airways

## To Keep the Lungs Clean

The cells in the lining of the airways produce a sticky secretion called **mucus**. The mucus traps dust, smoke, and other particles in the air you breathe. The cells have tiny hairs called **cilia**. They sweep mucus up the airways to the throat, where it's coughed out or swallowed.



A microscopic view of normal cilia

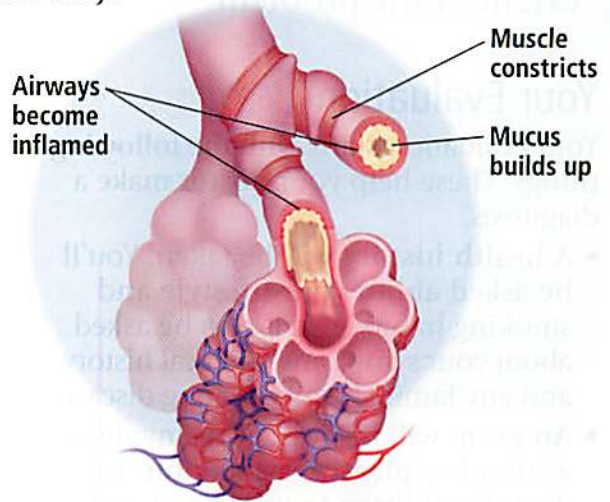


# How COPD Affects Breathing

With COPD, some airways are obstructed. You must work harder to breathe. Air may get trapped in the lungs, which prevents as much new air from entering when you inhale. So, it's harder to take a deep breath. Over time, your lungs may become enlarged. This makes it more difficult for the lungs to expand fully in the chest. These problems can lead to shortness of breath (also called **dyspnea**). You may also experience wheezing (hoarse, whistling breathing) and fatigue (feeling tired and worn out).

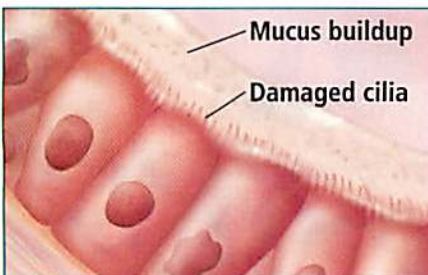
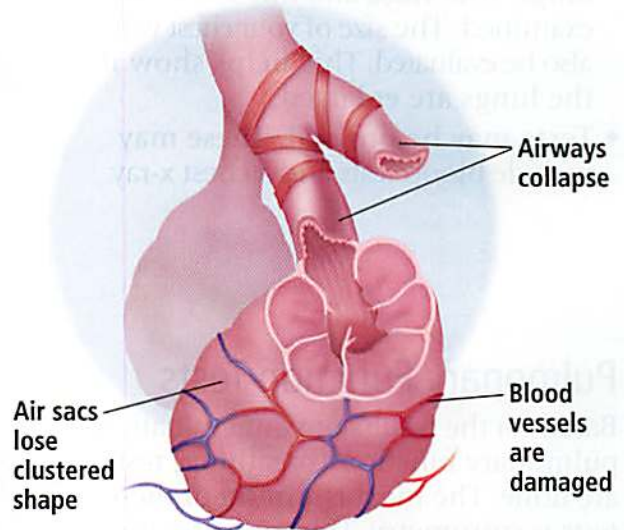
## When Airways Are Blocked (Chronic Bronchitis or Chronic Asthma)

When cells in the airways make more mucus than normal, blockages sometimes result. The mucus builds up, narrowing the airways. This means less air travels into and out of the lungs. The lining of the airways may also become inflamed (swollen). And, the muscle surrounding the airways may constrict (tighten). These problems cause the airways to narrow even more.



## When Airways Collapse (Emphysema)

When airways are damaged, they lose their stretchiness and become baggy and floppy. Damaged airways may collapse when you exhale, causing air to get trapped in the sacs. This trapped air makes breathing harder. Over time, the air sacs lose their clustered shape. This may mean that less oxygen enters the blood vessels.



A microscopic view of damaged cilia

## When Cilia Are Damaged

Smoking harms the cilia that line the airways. Damaged cilia can't sweep mucus and particles away. Some of the cilia are destroyed. This damage makes the problems described above even worse.



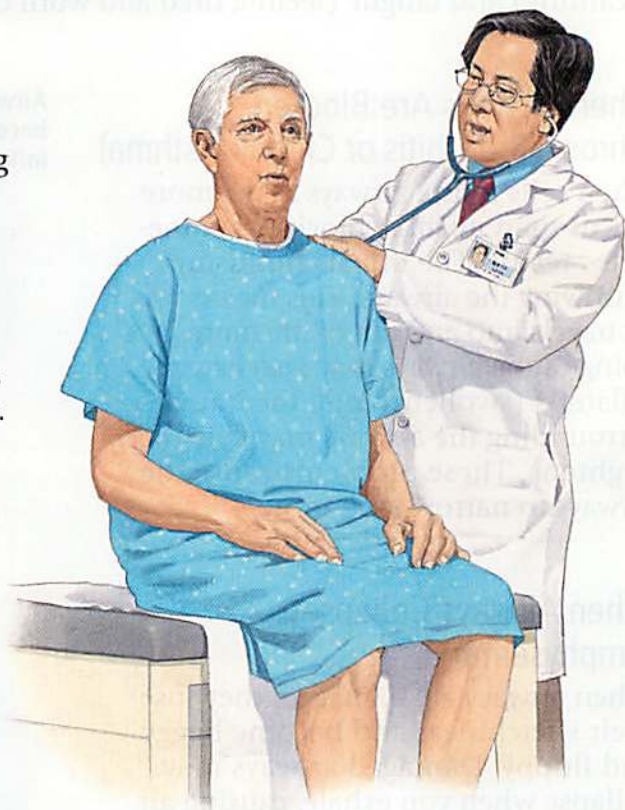
# Diagnosing COPD

Shortness of breath may have prompted you to see the doctor. In many cases, though, COPD progresses for years without obvious symptoms. To diagnose COPD, a medical evaluation and tests must be done. Once your doctor suspects COPD, breathing tests are done to learn the extent of the problem.

## Your Evaluation

Your evaluation starts with the following things. These help your doctor make a diagnosis.

- **A health history** will be taken. You'll be asked about your lifestyle and smoking habits. You'll also be asked about your symptoms, medical history, and any family history of lung disease.
- **An exam** will be done. This involves a complete physical evaluation. Your doctor will listen to your heart and lungs. Your nose and throat will be examined. The size of your chest will also be evaluated. This helps show if the lungs are enlarged.
- **Tests** may be ordered. These may include blood tests and a chest x-ray.



## Pulmonary Function Tests

Based on the results of your evaluation, pulmonary function (breathing) tests are done. The most common of these tests is **spirometry**. This measures how fast you can exhale (flow), and how much air you can blow out (volume). First, you breathe in as deeply as you can. Then, you exhale hard into a special instrument called a spirometer. This is connected to a computer that measures the air you breathed out.





# Your Treatment Plan

Your COPD treatment plan will likely include several forms of treatment. These are based on your symptoms and the underlying cause of your COPD. Your doctor will prescribe the best treatments for your needs. Parts of a typical plan are listed below. Read the rest of this booklet to learn more about them.



## Treating Your Lungs

- **Medications** will be prescribed to treat the lung problems contributing to your COPD. Some medications help relieve symptoms when you have them. Others are taken daily to control inflammation in the lungs. Always take your medications as prescribed. Know the names of your medications, as well as how and when to use them.



- **Oxygen therapy** may be prescribed if tests show that your blood contains too little oxygen. In this situation, prescribed oxygen may make you feel better and even prolong your life. Oxygen may be used all the time. Or, it may be used only during certain activities.

## Preventing COPD from Progressing



- **Quitting smoking** is the best way to keep COPD from getting worse. No matter what shape your lungs are in, quitting now will make a difference!
- **Learning how to avoid infection** can help keep COPD symptoms from getting worse.

## Coping with Shortness of Breath



- **Exercising** will improve energy levels and strengthen your muscles, so you can do more.
- **Learning the best ways to breathe** helps you gain control over your breathing. You'll learn techniques for breathing more efficiently. And, you'll learn how to keep anxiety from making shortness of breath worse.
- **Conserving your energy and pacing yourself** will help you do more and have less shortness of breath in your daily life.
- **A pulmonary rehabilitation program** may be prescribed to teach you about all aspects of your treatment plan. You'll get hands-on help with breathing techniques, exercise, and more.

# COPD Medications\*

These pages will help you learn more about the medications used to control COPD. Learn the names of the medications you take and how they work. Be sure to take them as prescribed by your doctor. Be aware that medications don't cure COPD, but they do help keep it under control.

Types of Medications	How They Work
<b>Bronchodilators</b> Fast-acting beta-2 agonists	<ul style="list-style-type: none"><li>• Relax and open airways</li><li>• Increase movement of cilia to help clear mucus</li><li>• Help prevent exercise-induced wheezing</li><li>• Help stop attacks</li></ul>
Long-acting beta-2 agonists	<ul style="list-style-type: none"><li>• Relax and open airways</li><li>• Take effect more slowly and work longer than fast-acting beta-2 agonists</li><li>• Increase movement of cilia to help clear mucus</li><li>• Help prevent exercise-induced wheezing</li></ul>
Anticholinergics	<ul style="list-style-type: none"><li>• Relax and open airways</li><li>• Take effect more slowly than fast-acting beta-2 agonists</li></ul>
Methylxanthines	<ul style="list-style-type: none"><li>• Stimulate the diaphragm and breathing</li><li>• May be useful if symptoms occur during sleep</li><li>• Are long-acting</li></ul>
<b>Corticosteroids</b> (These are not the same as the anabolic steroids used by some bodybuilders.)	<b>INHALED:</b> <ul style="list-style-type: none"><li>• Reduce inflammation and swelling in airways</li><li>• Reduce mucus production</li><li>• Decrease sensitivity of airways to irritants and allergens</li></ul>
	<b>SWALLOWED:</b> <ul style="list-style-type: none"><li>• Reduce inflammation and swelling in airways</li><li>• Reduce mucus production</li><li>• Decrease sensitivity of airways to irritants and allergens</li></ul>
<b>Combination Medications</b>	<ul style="list-style-type: none"><li>• Combine effects of different types of medication</li></ul>



Examples of Medications	Possible Side Effects and Special Precautions
<b>INHALED:</b> albuterol sulfate (VENTOLIN, PROVENTIL); levalbuterol HCl (XOPENEX); metaproterenol sulfate (ALUPENT); pirbuterol acetate (MAXAIR); terbutaline sulfate (BRETHAIRE, BRETHINE, BRICANYL)	Trembling, nervousness, insomnia, fast heartbeat, or increased blood pressure. Should be taken before other bronchodilators and inhaled corticosteroids.
<b>INHALED:</b> formoterol fumarate (FORADIL); salmeterol xinafoate (SEREVENT)	Fast heartbeat, headache, nervousness, or trembling. Do not use for quick relief. Do not take more often than prescribed.
<b>INHALED:</b> ipratropium bromide (ATROVENT); tiotropium (SPIRIVA)	Nervousness, dizziness, drowsiness, headache, upset stomach, constipation, or dry mouth.
<b>SWALLOWED:</b> theophylline (SLO-BID, SLO-PHYLLIN, THEO-DUR, THEO-24, UNIPHYL)	Headache, nervousness, insomnia, irregular heartbeat, diarrhea, or nausea. Can interact with other medications. Blood levels must be monitored regularly. Limit caffeine intake.
<b>INHALED:</b> beclomethasone dipropionate (QVAR); budesonide (PULMICORT); flunisolide (AEROBID); fluticasone propionate (FLOVENT); triamcinolone acetonide (AZMACORT)	<b>INHALED:</b> Very little enters bloodstream, so few side effects. Do not use for fast relief of shortness of breath. Must be used every day; rinse mouth and spit after use. Do not stop using without consulting your doctor. High doses must be tapered, not stopped abruptly.
<b>SWALLOWED:</b> methylprednisolone (MEDROL); prednisone (many brand names)	<b>SWALLOWED:</b> Enter bloodstream, so may cause insomnia, mood changes, skin bruising, weight gain, stomach problems, high blood pressure, glaucoma, cataracts, osteoporosis, or high blood sugar. Always take with food or milk. Do not stop using without consulting your doctor. High doses must be tapered, not stopped abruptly.
<b>INHALED:</b> fluticasone propionate plus salmeterol xinafoate (ADVAIR); ipratropium bromide plus albuterol sulfate (COMBIVENT)	Varies depending on medication. Talk to your healthcare provider.

\* This table is not a complete list of COPD medications and does not imply endorsement of any type or brand. It also does not include all actions, adverse reactions, precautions, side effects, or interactions for these medications. Only your healthcare provider can prescribe these medications. Talk to your healthcare provider or pharmacist about the possible side effects and drug or food interactions of any medication you use. New medications are constantly being developed. If yours is not on this chart, check with your healthcare provider.



# Using Inhalers

Some COPD medications are taken using a device called an **inhaler**. The inhaler helps you take a measured dose of medication into your lungs. These pages discuss common types of inhalers. Not all types work the same way. Have your healthcare provider show you how to use and care for the type of inhaler you're given.

## Using Metered-Dose Inhalers (MDIs) with Spacers

Metered-dose inhalers use a fine spray to dispense medication. You may be asked to use a spacer (holding tube) with your inhaler. The spacer helps make sure all the medication you need goes into your lungs.

- 1 Remove the caps from the inhaler and spacer. Shake the inhaler well and attach the spacer.
- 2 Breathe out normally. Put the spacer between your teeth and close your lips tightly around it. Keep your chin up.
- 3 Spray 1 puff into the spacer by pressing down on the inhaler. Then slowly breathe in as deeply as you can. This should take 3 to 4 seconds. (If you breathe too quickly, you may hear a whistling sound in the spacer.)
- 4 Take the spacer out of your mouth. Hold your breath for a count of 10. Then slowly breathe out. If a second dose is prescribed, wait at least 30 seconds before taking the next puff.



## Using MDIs Without Spacers

Inhalers work best with spacers. But if you don't have your spacer with you, these tips will help:

- Shake the inhaler and remove the cap. Breathe out.
- Hold the inhaler 1 to 2 inches (the width of 2 fingers) from your mouth. Don't put the inhaler into your mouth. If you do, less medication is able to reach your lungs.
- As you breathe in deeply, press down on the inhaler to release the medication. Hold your breath for a count of 10. Then breathe out slowly.





## When to Replace Your MDI

Each inhaler contains only a certain amount of medication. Find out how many puffs your inhaler contains. Then keep track of how many puffs you use. Have a new inhaler ready when the old one is used up.

- If you use your inhaler only once in a while, use the card at right to keep track of your puffs. Be sure to check the expiration date on your inhaler.
- If you take a certain number of puffs each day, divide that number into the total number of puffs in the inhaler. This tells you how many days the inhaler will last. Then mark on a calendar the date the inhaler will run out.

Fill in or check off a bubble for every puff you take.

A 10x10 grid of small circles, representing a 100-item scale.

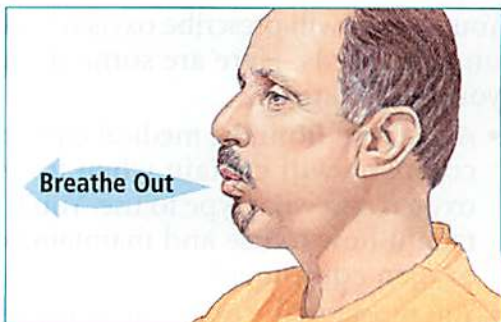
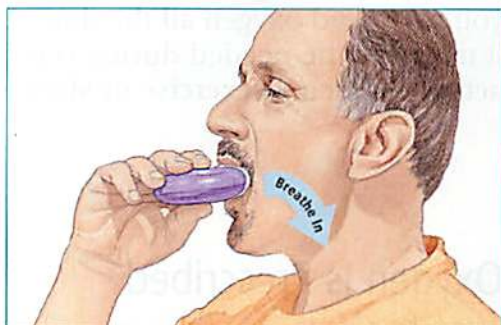
**Total: 200 puffs**

Photocopy this page. Then cut out the card along the dotted line. Tape the card to your inhaler. Fill in or check off a bubble each time you take a puff.

## Using Dry-Powder Inhalers (DPIs)

Some inhalers use tiny grains of powder to dispense medication. These don't require spacers. They often have counters that track how many doses you use. Dry-powder inhalers don't all work the same way. Be sure you know how to use yours properly.

- 1 Load the prescribed dose of medication by following the instructions that come with the inhaler.
- 2 Breathe out normally, holding the inhaler away from your mouth. Hold your chin up.
- 3 Put the mouthpiece between your lips. Breathe in quickly and deeply through the inhaler—not through your nose. You may not feel or taste the medication as you breathe in. This is normal.
- 4 Take the mouthpiece out of your mouth. Hold your breath for a count of 10.
- 5 Breathe out slowly—but not through the inhaler. Moisture from your breath can make the powder stick inside the inhaler. Also, be sure to close the inhaler and store it in a dry place.



### If a Nebulizer Is Prescribed

A nebulizer is a machine that converts liquid medication into a mist that can be inhaled. It may be used in addition to or instead of an inhaler. If one is prescribed, you'll be shown how to use it.

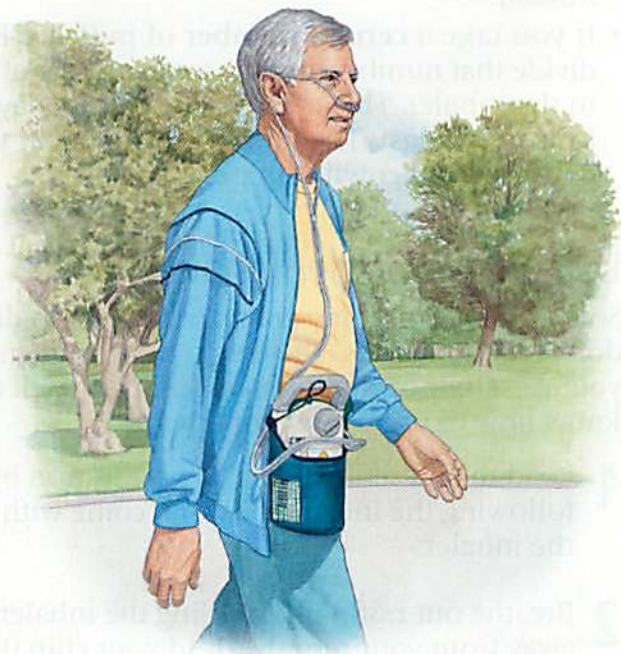


## If Oxygen Is Prescribed

If your lungs aren't getting enough oxygen to your blood, supplemental oxygen may be prescribed. Oxygen will help you feel better and stay more active. You'll be referred to a medical equipment company. They will set up the oxygen unit and teach you how to use it. Some oxygen units are portable, so you can take them wherever you need to go.

### Why You Need Supplemental Oxygen

Supplemental oxygen is prescribed if tests show that the level of oxygen in your blood is too low. If the level stays too low for too long, serious problems can develop in many parts of the body. Supplemental oxygen helps to relieve your symptoms and prevent future problems by getting more oxygen to the blood. Depending on your test results, you may need oxygen all the time. Or it may only be needed during certain activities, such as exercise or sleep.



### Oxygen Is Prescribed Just for You

Your doctor will prescribe oxygen based on your needs. Here are some things you should know:

- A therapist from the medical equipment company will explain when to use oxygen and what type to use. You'll be taught how to use and maintain your oxygen equipment.
- You must use the exact rate of oxygen prescribed for each activity. Don't increase or decrease the amount without asking your doctor first.
- Supplemental oxygen is a medication. It's not addictive and causes no side effects when used as directed.





## Types of Oxygen

Prescribed oxygen comes in several forms. You may use more than one type, depending on when you need oxygen. Oxygen is most often inhaled through a **nasal cannula** (lightweight tube with two hollow prongs that fit just inside the nose).



A nasal cannula should be placed in the nose with the prongs arching toward you.



## Compressed Oxygen

Compressed oxygen gas is stored in a tank. Because the oxygen is stored under pressure, these tanks must be handled carefully. Gauges on the tank can be used to adjust the oxygen flow rate. Your doctor will determine what this should be. Small tanks can be carried. Larger tanks are on wheels and can be pulled around the house.



## An Oxygen Concentrator

This is a machine about the size of a large suitcase. It plugs into an electrical outlet. The machine takes oxygen from the air and concentrates it. It's then delivered to you through plastic tubing. The tubing is long enough so that you can move around the house. When you're using the concentrator, it must be kept somewhere that has a good supply of fresh air. (Don't keep it in a confined space, like a closet.) You may be set up on a concentrator if you need oxygen all the time or while you're sleeping.



## Liquid Oxygen

When oxygen gas is cooled to a very low temperature, it becomes liquid. It's kept in special containers that maintain this low temperature. When you use liquid oxygen, it's warmed and becomes gas before reaching the cannula. Most tanks come with a portable unit that you can carry or pull on a cart. Some of these weigh only a few pounds. Liquid oxygen units are easy to carry around. If you need it all the time or during activity, this kind of unit can help you stay active.





# Using Oxygen Safely

Oxygen is meant to help you, not to limit you. In most cases, it won't keep you from doing things such as leaving the house, being active, and traveling. But you must follow some safety guidelines. Oxygen makes fire burn hotter and faster. So, it's important to reduce chances of fire when you're using oxygen.

## Traveling with Oxygen

It's okay to travel with oxygen. You just need to plan ahead. Call your healthcare provider to get copies of your oxygen prescription and any other paperwork you'll need. Depending on where you're going and how you're getting there, you may need to arrange for oxygen to be delivered. Your doctor's office or medical equipment company can help with this. Before you travel, call the carrier to find out the requirements for traveling with oxygen. Give yourself plenty of time to make needed arrangements.



### By Car

Keep the windows open a crack so air can circulate. If you're using liquid oxygen, place the unit upright on the floor or on the seat beside you. If possible, secure it with a seat belt. Put extra oxygen units behind the seat. (Don't put them in the trunk—it's too hot.) **DO NOT SMOKE** or let anyone else smoke in the car.



### By Bus or Train

Call the carrier in advance and tell them you're traveling with oxygen. You can likely take your own oxygen on board. You may need to show a copy of your prescription first.



### By Plane

Oxygen tanks aren't allowed on airplanes. But many airlines will supply you with oxygen for a fee. Call the airline in advance to make arrangements. Keep in mind that this oxygen is only supplied while in the plane—not in the airport. You must arrange to have oxygen delivered to your destination, as well as to any layovers during your flight.



### By Ship

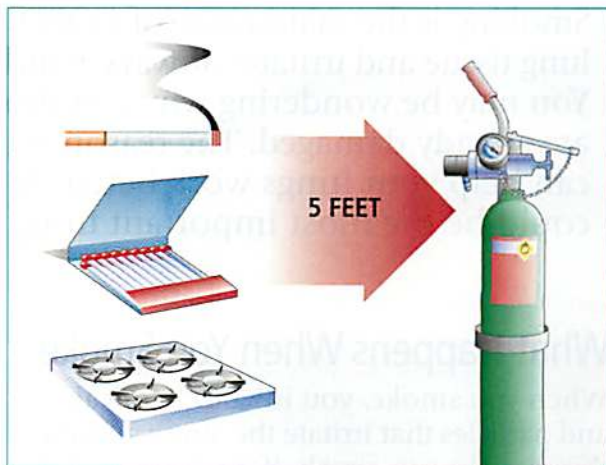
You can probably bring your own oxygen on board the cruise ship. Call to make arrangements. The cruise line will likely need a letter from your doctor, a brief medical history, and a copy of your oxygen prescription. You must arrange for oxygen units to be delivered to the cruise ship.



## Oxygen DO's

Make sure to do these things while using oxygen:

- Do keep sources of flame at least 5 feet away from where your oxygen unit is being used or stored. This includes cigarettes, matches, candles, fireplaces, gas burners, pipes, or anything else that could start a fire.
- Do keep the oxygen unit at least 5 feet away from sources of heat such as space heaters, steam pipes, furnaces, and radiators.
- Do ask the medical equipment company if you should keep the oxygen unit away from other appliances, such as TVs and radios.
- Do turn off the oxygen unit completely when it's not in use.
- Do have a fire extinguisher nearby. Make sure you and others in your household know how to use it.



## Oxygen DON'Ts

You and the people in your household must be sure not to do the following things when oxygen is being used:



**Don't smoke, and don't allow others to smoke near you.** Post a "No Smoking" sign in your home.



**Don't use aerosol sprays** such as air fresheners or hairspray near the oxygen unit. Aerosols are very flammable.



**Don't use vapor rubs, petroleum jelly, or oil-based hand lotion.** These are flammable. Use water-based products instead.



**Don't use oxygen while cooking with gas.** Ask the medical equipment company about other types of cooking.



**Don't oil the oxygen unit.** And don't use it with oily or greasy hands.



**Don't place a liquid oxygen canister on its side.** The oxygen inside can evaporate.

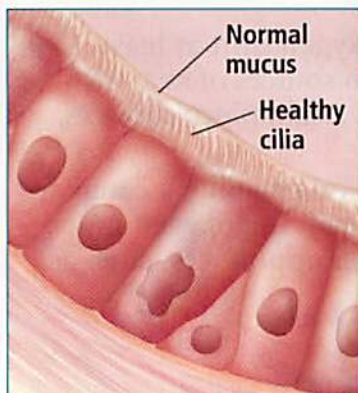


# Quitting Smoking

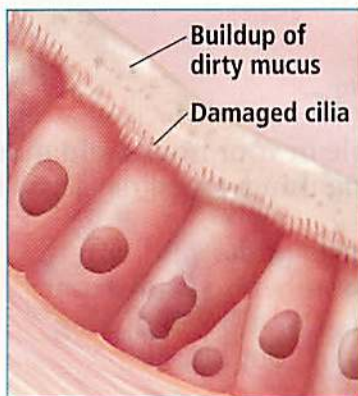
Smoking is the main cause of COPD. Cigarette smoke damages lung tissue and irritates airways, which makes breathing harder. You may be wondering why you should stop, if your lungs are already damaged. The reason is that, even now, quitting can help your lungs work better. In fact, quitting smoking could be the most important thing you do for your health.

## What Happens When You Smoke

When you smoke, you inhale chemicals and particles that irritate the airways. These things make you cough. If you have COPD, this coughing can make breathing even harder. The airways produce more mucus to try to clean the harmful particles away. However, smoking also damages the cilia in the airways. The damaged cilia can't move. Some cilia are also destroyed. So, the mucus, smoke, and other particles can't be swept out of the lungs. As a result, germs aren't cleared away and the lungs are more likely to become infected. Lung infections make COPD symptoms worse and can make you very sick.



**In nonsmokers,** cilia work as a team to sweep mucus and harmful particles out of the lungs.



**In smokers,** cilia are unable to protect the lungs from harmful particles.

## What Will Happen When You Quit

It's never too late to quit smoking. Your health will start to improve on the same day you smoke your last cigarette:

- Within 8 hours, the level of oxygen in your blood will go up.\*
- Within 2 weeks to 3 months, blood and oxygen will circulate through your body better. Lung function also improves.\*
- Within 1 to 9 months, coughing, fatigue, and shortness of breath decrease.\* Remaining cilia will begin to function again. This helps reduce mucus, keep the lungs clean, and prevent infection.\*\*

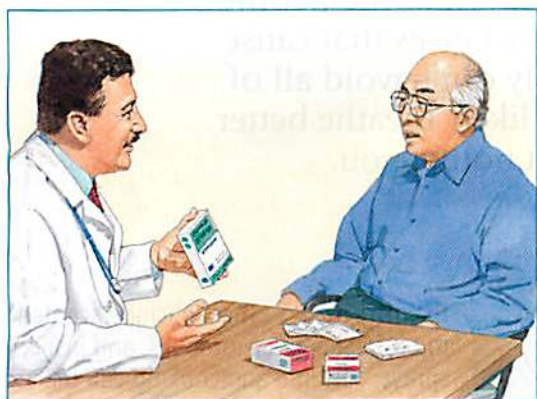
\*American Lung Association, 2003

\*\*American Cancer Society, 2003



# You Don't Have to Quit Alone

You may be more likely to quit for good if you seek support from others. Here are some things to consider:



- Talk to your doctor about your plans to quit. Ask about stop-smoking products that can help. Your options include oral medication and nicotine replacement therapy (such as gum, a patch, or nasal spray).
- Join a support group or get advice from an ex-smoker.
- Contact some of the resources listed on the back of this booklet. Ask about smoking cessation programs in your area.
- Ask other smokers in your household to quit with you. (This will also help you breathe easier at home. See page 18.)



## Tips for Quitting Smoking

There isn't one right way to stop smoking. Everyone quits in his or her own way. Some of the tips below may help:

- Make a list of the reasons you want to quit. Keep this list and read it often.
- Pick a date to quit smoking. Then stick to it.
- List the things that make you want to smoke. Think of ways to avoid these "triggers."
- Set goals for yourself, such as going for 1 week without smoking. Reward yourself when you meet your goals.
- If you don't quit the first time, keep trying! Many people have to try more than once before they stop smoking for good.



# Avoiding Irritants and Allergens

Many people with COPD need to avoid **irritants** (substances containing particles that irritate the airways). Some people are also sensitive to certain **allergens** (substances that cause inflammation in the lungs). You probably can't avoid all of these things, all the time. But you'll most likely breathe better if you stay away from the substances that bother you.

## You Should Try to Avoid...



**Smoke.** This includes cigarettes, cigars, pipes, and fireplaces.

- Don't smoke. And don't allow anyone else to smoke near you or in your home.
- Always sit in the no-smoking section at restaurants.
- Ask for smoke-free hotel rooms and rental cars.
- Make sure fireplaces and wood stoves are well ventilated, and sit well away from them.



**Strong odors.** These include scented room fresheners, mothballs, and insect sprays. Perfume and cooking can be other causes of strong odors.

- Avoid using bleach and ammonia for cleaning.
- Use scent-free deodorant, lotion, and other products.



**Other irritants.** These include dust, aerosol sprays, and fine powders.

- Wear a mask while doing tasks like dusting, vacuuming, sweeping, and yardwork.



**Smog.** This is made up of car exhaust and other air pollutants.

- Read or listen to local air quality reports. These let you know when air quality is poor.
- Stay indoors as much as you can on smoggy days.



**Cold weather.** This can make breathing more difficult.

- Protect your lungs by wearing a scarf over your mouth and nose.

## You May Also Need to Avoid...

If you have allergies, you should try to avoid the allergens that cause them. Ask your healthcare provider if you need to avoid any of these:

**Pollen.** This is a fine powder made by trees, grasses, and weeds.

- Try to learn what types of pollen affect you the most. Pollen levels vary during the year.
- Avoid outdoor activities when pollen levels are high. Use air conditioning instead of opening the windows in your home and car.

**Animal dander.** This is shed by animals with fur or feathers. The particles can float through the air and stick to carpet, clothing, and furniture.

- Wash your hands and clothes after handling pets.

**Dust mites.** These are tiny bugs too small to see. They live in mattresses, bedding, carpets, curtains, and indoor dust.

- Wash bedding in hot water (130°F) each week.
- Cover mattresses and pillows with special mite-proof cases.

**Mold.** This grows in damp places, such as bathrooms, basements, and closets.

- Run an exhaust fan while bathing. Or, leave a window open in the bathroom.
- Use a dehumidifier in damp areas.



# Preventing Exacerbations

When you have COPD, it's especially important to protect yourself from colds and other types of infections. These can lead to **exacerbations** (periods of worsened COPD symptoms). The tips below will help you stay healthy. You should talk to your doctor about what to do if you have an exacerbation.

## Take Precautions

Taking the following precautions can help you avoid illness:

- **Wash your hands often**, and keep them away from your face. Most germs are spread through hand-to-mouth contact. Wash your hands with soap and warm water. Lather well for at least 10 to 15 seconds. Then rinse well.
- **Use hand sanitizer** between washings, especially after touching things many other people have touched (such as at the supermarket).
- **Get a flu shot every year.** This may be given at the doctor's office, a pharmacy, or through work. The flu vaccine can run out, so make sure to go early in the flu season.
- **Get a pneumonia vaccination.** Ask your doctor how often you need this.
- **Avoid spending time around people with respiratory infections** such as colds or the flu. Try not to go out in crowds in the winter when more people are sick. Also try to avoid air travel during this time.



## In Case of an Exacerbation

You and your doctor should come up with a plan for what to do if you have an exacerbation. This may involve using a rescue inhaler or taking antibiotics or other medication. Here are warning signs of a problem:

- |  |  |
|--|--|
| • Increased shortness of breath, wheezing, or coughing                   | • Tightness in your chest that does not go away with your normal medications |
| • Mucus that has increased, has an odor, has changed color, or is bloody | • Sore throat or hoarseness  |
| • A fever or chills  | • Fatigue  |
|  | • Swollen ankles   |

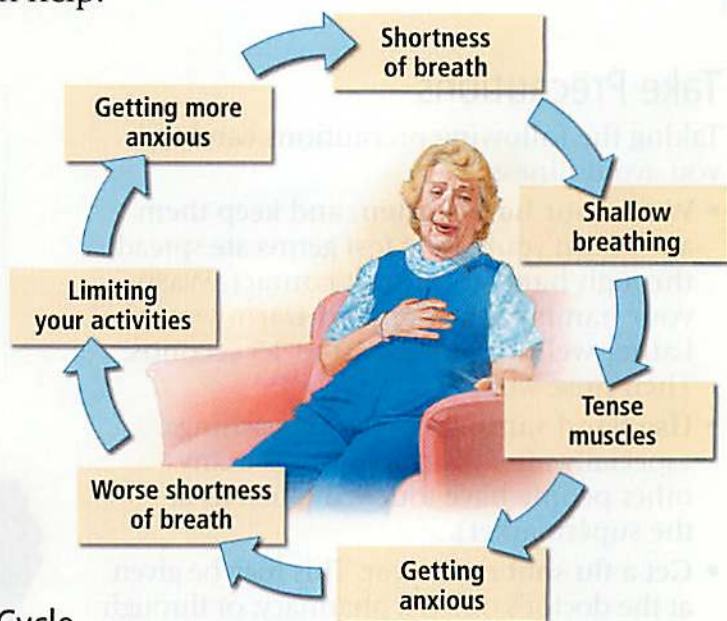


# Coping with Shortness of Breath

When it's hard to breathe, it's natural to get anxious and start to panic. This makes you even more short of breath. This sequence is known as the **dyspnea cycle**, and it's common among people with COPD. The good news is, you have the power to break the cycle. The breathing and relaxation techniques on these pages can help.

## Understanding the Cycle

When you're short of breath, your breathing muscles get tense. It's hard to take a deep breath. You may worry that you're not getting enough air. Then you start breathing faster and become more short of breath. You may even start to panic, which makes symptoms seem worse. Often, people with COPD try to prevent this cycle by limiting activity, staying at home, and avoiding anything that could cause shortness of breath.



## What You Can Do to Break the Cycle

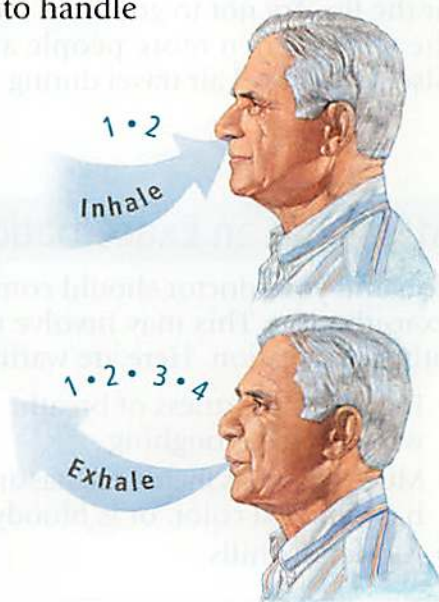
To prevent shortness of breath from limiting your life:

- **Right now:** Learn to stop an attack with pursed-lip breathing, diaphragmatic breathing, and relaxation techniques.
- **In day-to-day life:** Learn to maximize your energy and to breathe during activity, so you can do more (see page 22).
- **Over time:** Start exercising, so your body can start to handle more activity (see page 24).

## Pursed-Lip Breathing

This type of breathing helps you exhale better. It helps get trapped air out of the lungs. Do pursed-lip breathing any time you feel short of breath.

- 1 Relax your neck and shoulder muscles. Inhale slowly through your nose for 2 counts or more.
- 2 Pucker your lips as if you are going to blow out a candle. Exhale slowly and gently through your lips for twice as long as you inhaled.

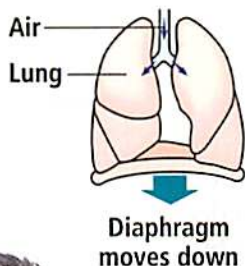




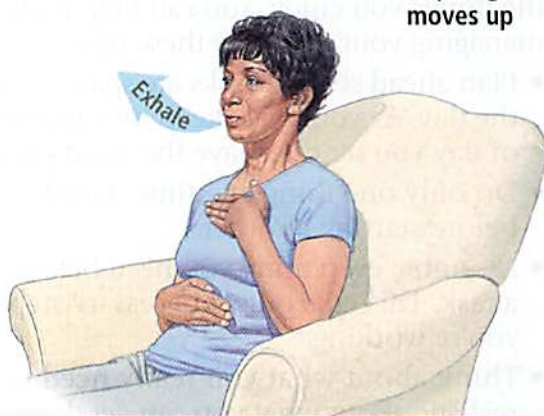
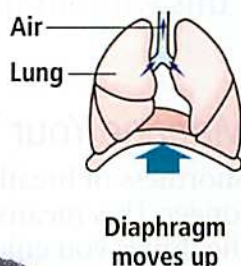
## Diaphragmatic Breathing

The diaphragm is a flat, dome-shaped muscle that sits below the lungs. Using this muscle will help you get the most air into and out of the lungs with each breath. Practice diaphragmatic breathing as shown below. When you inhale, your diaphragm will move down, giving the lungs room to expand. When you exhale, the diaphragm moves back up. This motion helps clear air out of the lungs.

- 1** Sit or lie on your back so you feel at ease. Inhale slowly through your nose. Count to 2. Your stomach muscles will relax and move out.



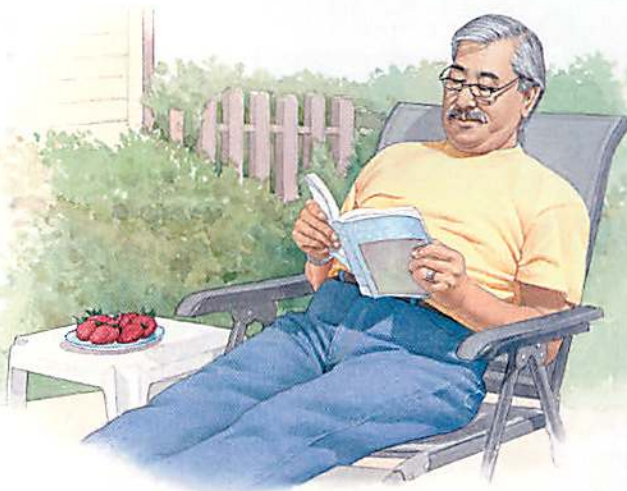
- 2** Breathe out through pursed lips. Count to 4. Feel your stomach muscles tighten and move in.



## Ways to Relax

If you find yourself getting anxious, make an effort to relax. Doing so will help break the dyspnea cycle. Sit in a quiet, comfortable place. Do pursed-lip and diaphragmatic breathing. You may also find the following helpful:

- Certain activities can help you relax. These can include reading a good book, listening to music or relaxation tapes, practicing yoga or tai chi, meditating, and praying. Find activities that work for you.
- Try visualization: Picture yourself in a peaceful place, such as the beach. Feel the warm sand. Hear the waves. Smell the ocean. Doing this may help you feel more relaxed.
- Your healthcare provider may advise using a bronchodilator along with these or other relaxation techniques.





# Maximizing Your Energy

Fear of shortness of breath may stop you from being as active as you once were. You don't have to live this way. Managing your time and pacing yourself can help you conserve energy and do more. It's even okay if you are short of breath sometimes. You can learn to work through this without limiting your activities.

## Manage Your Time

Shortness of breath can make everyday tasks take longer. This means there's not as much time to do the things you enjoy. You can help prevent this by managing your time. Try these tips:

- Plan ahead so your tasks are spaced throughout the day. As you plan, keep in mind the times of day you tend to have the most energy.
- Do only one thing at a time. Finish one task before starting another.
- Assemble everything you need before you start a task. This cuts out unnecessary steps while you're working.
- Think about what you really need to do. Be realistic about what you can get done in a day.



## Balance Activity and Rest

When you're tired, your activities will take longer. Fatigue also makes you more prone to infection. To avoid fatigue:

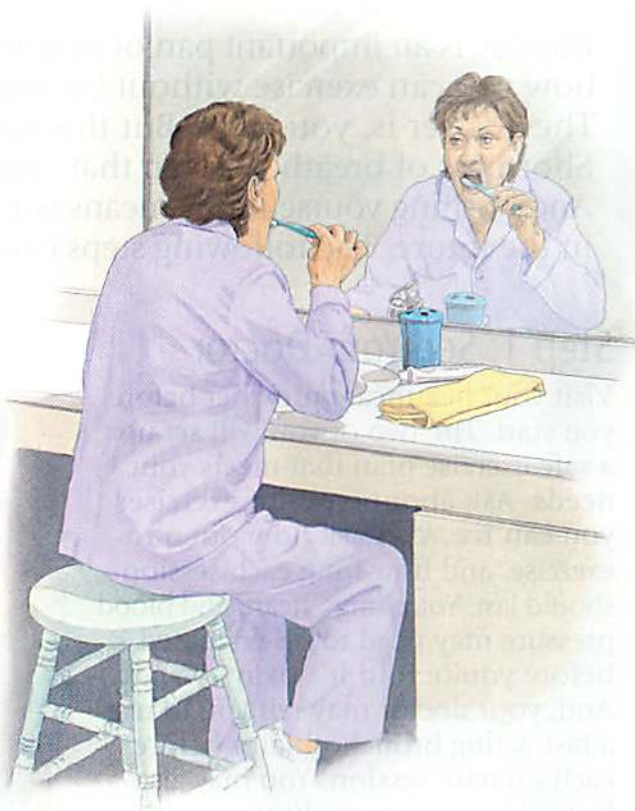
- Stop and rest when you need to. Don't wait until you're overtired.
- Alternate between hard tasks and easy ones.
- Give yourself plenty of time for each task, so you don't have to hurry.
- Take 20- to 30-minute rest breaks after meals and throughout the day.
- If an activity takes a lot of energy, break it into smaller parts. For instance, fold the laundry first. Then take a break before putting it away.



## Find Ways to Conserve Energy

The way you use your body during a task can help you conserve energy. For some tasks, you can also use special aids designed to reduce the amount of energy needed. Here are some tips:

- Sit to dress and undress, shave, brush your teeth, and comb your hair. Use a long-handled reacher to pull on socks and shoes.
- Sit on a bench to shower. Use warm water, not hot. (Steam can make breathing harder.) Dry off by wrapping yourself in a terrycloth robe.
- Use energy-saving appliances such as an electric can opener, a power toothbrush, and a dishwasher.
- Use a cart with wheels to move groceries, laundry, and other items around the house. Some carts have seats so you can rest when you need to.
- Keep the things you use most at waist level, so you can get them without reaching or bending.



## Remember to Breathe

People with COPD often try to avoid shortness of breath by rushing through tasks. This uses more energy and can actually increase shortness of breath. Instead, slow down and pace your breathing. These tips may help:

- Move slowly during tasks that take a lot of effort, such as climbing stairs or pushing a shopping cart.
- Use pursed-lip and diaphragmatic breathing while you go about a task.
- Exhale when you exert effort. For example, breathe out as you lift up a grocery bag. Once you're holding the bag, breathe in.
- Concentrate on taking slow, deep breaths. If your breathing is shallow, you don't take in as much air.
- Remember that it's okay to be short of breath. Just pace yourself and do your pursed-lip breathing.



# Becoming More Active

Exercise is an important part of treatment. You may wonder how you can exercise without becoming short of breath. The answer is, you can't. But this isn't necessarily bad. Shortness of breath is a sign that you're pushing yourself. And pushing yourself now means you'll be able to do more in the future. The following steps can help you get started.

## Step 1: See Your Doctor

Visit your healthcare provider before you start. The two of you will set up a safe exercise plan that meets your needs. Ask about types of exercises you can try. Also ask how often to exercise, and how long each session should last. Your lungs, heart, and blood pressure may need to be evaluated before you're told it's okay to start. And, your doctor may tell you to use a fast-acting bronchodilator before each exercise session. You may also be told to use oxygen during exercise. Be sure to follow all of your healthcare provider's instructions.



## Step 2: Choose Your Activity

Think about the activities you discussed with your doctor. Choose the ones that appeal to you—you're more likely to keep exercising if you're enjoying it! Your choices may include:

- Chair exercises, such as moving your arms and legs while sitting. These may be good if you're too short of breath to do other types of exercises.
- Lifting light hand weights or water bottles to build upper body strength.
- Walking. This is a good way to get oxygen moving through the body. You can walk outdoors or indoors, such as around the house or at a shopping mall.
- Swimming, water aerobics, using a stationary bike or treadmill, or other options.







### Step 3: Get Moving

Exercise is most effective when it's done at least 30 minutes a day, most days of the week. Start gradually and work up to this goal. Here are some tips for getting started:

- Make exercise a regular part of your routine. You may enjoy exercising with friends.
- Use a watch to keep track of how long you exercise each day. Record your progress in a notebook.
- Increase your endurance gradually. For instance, add 1 minute to your exercise time each week.
- Once you've reached your goal, maintain it by varying your activities.
- On days you don't feel as well, break your exercise into several shorter periods. For instance, instead of walking for 30 minutes, you can take three 10-minute walks.

### Step 4: Stay Safe

Follow these guidelines to stay safe while you exercise:

- Use pursed-lip breathing to control shortness of breath.
- Remember that everyone gets short of breath during exercise—even people without COPD! But if you can't speak, you're pushing yourself too hard.
- Pace yourself. Stop and rest when you need to.
- If you have increased or unusual shortness of breath during exercise, slow down. If this continues, stop and rest.

### Signs of Overexertion

Stop exercising right away and contact your doctor if you feel any of these:

- Chest pain or discomfort
- Burning, tightness, heaviness, or pressure in your chest
- Unusual aching in your arms, shoulders, neck, jaw, or back
- Trouble catching your breath
- A racing or skipping heart
- Extreme tiredness (especially after exercise)
- Lightheadedness, dizziness, or nausea



# Maintaining a Healthy Weight

Eating well and maintaining a healthy weight gives you more energy. So try not to let shortness of breath prevent you from getting the nutrition you need. It's important to monitor your weight. If you gain or lose weight without trying to, you may need to make changes in your diet or your treatment plan.

## Why Your Weight Matters

Being underweight can limit your energy. This makes it harder to be active and makes you more prone to infection. And being overweight can increase shortness of breath. Work with your doctor or a dietitian to establish your goal weight. To maintain this, try to eat meals that include foods from each food group. This means eating a variety of fruits and vegetables, breads, and sources of protein (such as meat, dairy, and soy). A dietitian can help you develop a healthy meal plan that includes foods you like.



## If You're Having Trouble Eating

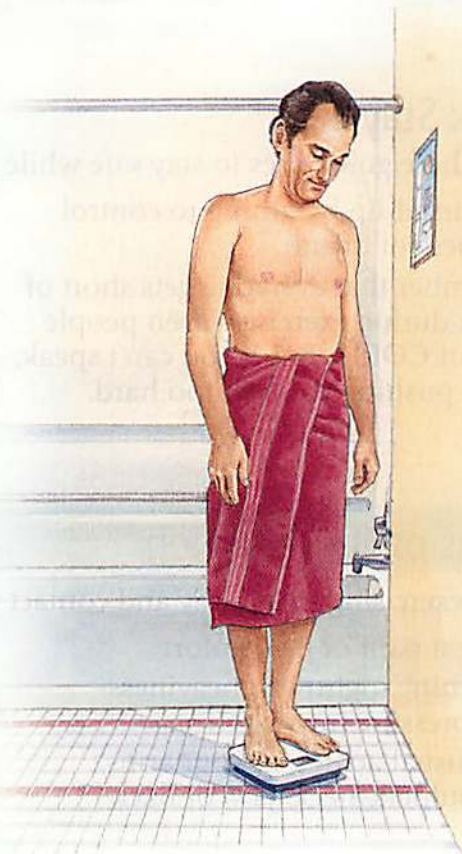
Your stomach is right under your diaphragm. So, it can be harder to breathe when you're full. This may cause shortness of breath during and after meals. These tips may help:

- Eat smaller meals throughout the day. This way your stomach doesn't get as full and your lungs have more room to expand.
- Chew slowly with your mouth closed. This helps you avoid swallowing air.
- Ask your healthcare provider about vitamins and supplements that can help you get the nutrients you need.

## Weighing Yourself

Weigh yourself once or twice a week. Call your doctor if:

- You lose weight steadily over several weeks or months. You may not be getting enough calories.
- You gain 3 to 5 pounds in a week. You may be retaining too much fluid (a sign of heart problems).





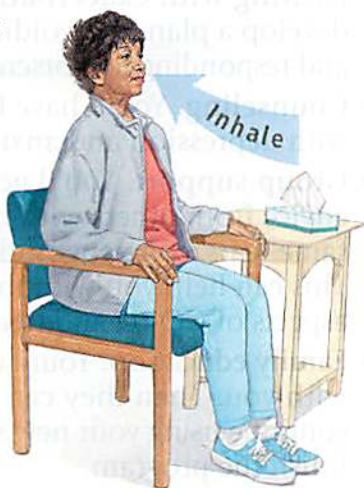
# Clearing Your Airways

If your lungs produce a lot of mucus, airway clearance techniques may be prescribed. These techniques help move excess mucus from the airways. Keeping the lungs clear of mucus helps prevent shortness of breath and other symptoms. Some common airway clearance techniques are described below.

## Airway Clearance Techniques

- **Coughing techniques** are special ways of coughing that help move mucus up the airways. You may be taught methods such as the “huff” technique (shown below).

- 1** Sit in a chair with both feet on the floor. Take a slow, deep breath through your nose.



- 2** To exhale, open your mouth and make a “huff” sound in your throat. (This is the same way you might breathe to clean a pair of glasses.) Huff 2 to 3 times as you exhale. Relax for a few seconds. Then repeat steps as needed.



- **Postural drainage** uses gravity to drain mucus from the lungs. It's done by lying in certain positions for a given amount of time. Postural drainage may be done along with a technique called chest percussion. This involves clapping on your chest to loosen mucus. Or, a vibrating device may be held against the chest to shake mucus loose.
- **Positive expiratory pressure (PEP) therapy** is done by exhaling into a hand-held device. This device changes pressures inside the lungs, which loosens mucus.
- **Vibrating vests** are worn over the chest. The vest is attached to an air generator that inflates and deflates the vest very quickly. This motion vibrates the chest and loosens mucus.

## Using These Techniques

If you need to do any of these techniques, you'll be shown how. You'll also be told how many times each day to do them, and for how long. For some techniques, you may need help from someone else. Keep in mind that these techniques are meant to move mucus up the airways and out of the lungs. Have a box of tissues handy.



# Pulmonary Rehabilitation

Pulmonary rehabilitation (rehab) is a program that helps you get the most out of COPD treatment. In this program, you work with a team of medical professionals with a special interest in treating lung problems. Entering a program can help you feel better faster. It also helps you manage COPD in your day-to-day life.

## Program Components

Pulmonary rehab covers all the topics you've read about in this booklet, and more. The program can take place in a hospital, clinic, or doctor's office. Components of a program include:

- **Exercise.** Your program will include safe ways to increase fitness, endurance, and strength. You'll also get tips for exercising at home.
- **Techniques for breathing better.** You'll be taught lung exercises, relaxation techniques, and other methods for coping with shortness of breath.
- **Activities of daily living.** You'll be given practical advice for conserving energy in your daily routine.
- **Medication education.** You'll have help understanding when and how to use each of your medications. If needed, you'll be shown how to use oxygen.
- **Dealing with exacerbations.** You'll develop a plan for avoiding infection and responding to worsening symptoms.
- **Counseling.** You'll have help dealing with depression and anxiety.
- **Group support.** You'll get support and advice from others with many of the same fears, concerns, and goals as you. This can help you with the emotional aspects of COPD and treatment.
- **Family education.** Your family can learn with you. Then they can help you to continue using your new skills after you finish the program.





## For Severe Cases

Treatment will help you live and breathe better. But you should know that COPD can eventually make you very sick. Keep in mind that as COPD progresses, it can lead to other health problems. Treatments may be available to help. In some severe cases, surgery may improve COPD symptoms.

### As COPD Progresses

When COPD gets worse, it can affect other parts of the body. This is called end-stage disease. The heart and kidneys have to work harder and may become weak. Other parts of the body may not get enough oxygen-rich blood to stay healthy. Some problems can be treated to help you live longer and more comfortably. Talk to your doctor about symptoms you should watch for and treatments that may help.

### Making Legal Arrangements

An advance medical directive is a legal document that lets you stay in control of your treatment even if you can no longer express your wishes. Taking care of this and other legal arrangements can help you feel more secure about the future. Talk to your family and your doctor to start the process.



### If You Qualify for Surgery

In a few cases, surgery may be available for people with COPD. If it may be an option for you, your doctor will tell you more.

#### Lung Reduction Surgery

A portion of each lung is removed. This helps to open up the airways, so air can travel through them more freely. Since the size of the lungs is reduced in the chest, the diaphragm may have more room to move. This helps get more air in and out with each breath. This surgery can be done for some patients with emphysema. It may reduce symptoms, but it's not a cure.

#### Lung Transplant Surgery

The lungs are removed and replaced with healthy lungs from a donor who has died. This surgery may be available for a few patients who are very sick. If you qualify for surgery, you'll be put on a waiting list for donor lungs. Patients who have this surgery must take medications for the rest of their lives. These keep the body from rejecting the new lungs.



# Your Emotional Well-Being

When you have COPD, it's normal to have good days and bad days. Make sure to take care of yourself emotionally, as well as physically. You can take steps to feel more in control of your health and your situation. Remember that your healthcare team, family, and friends are here to help. Don't be afraid to share your feelings and ask for support.



## Staying in Control

COPD can affect your independence. This can lead to feelings of anger, frustration, and depression. The following may help you feel more in control of your life:

- **Keep doing the things you enjoy.** When you're planning your day, make sure to include some activities that are just for fun.
- **Stay involved with friends and family.** This may mean inviting people over to your house more often. Talk about your feelings with people close to you.
- **Share what you learn about COPD.** Bring loved ones with you to the doctor. And let them know how they can help with treatment.
- **Follow your treatment plan.** Accept that even if you do everything you're supposed to, you'll still have ups and downs.
- **Take an active role in your treatment.** Talk to your doctor if you have any concerns or questions. New treatments are always being developed. If current treatment isn't meeting your needs, other options may be available.

## A Note About Depression

Having COPD doesn't mean you have to feel bad all the time. Talk to your doctor or a therapist if you feel worthless or helpless, or are thinking about suicide. These are warning signs of depression. Treatment can help you feel better. When depression is under control, your overall health may also improve.



## Staying Intimate with Your Partner

Even if you use oxygen, having COPD doesn't mean you have to give up sex. Talk to your partner. Work together to make sex enjoyable for both of you. Don't be afraid to talk to your doctor as well. Keep in mind that sex may feel better if you do it when you're rested. Use positions that require less energy, such as lying on your side or your back. Using a bronchodilator before sex may help (ask your doctor first). Also know that it's okay if you don't feel like having sex. You can show your love in other ways. Try hugging, giving your partner a backrub, or just saying, "I love you."



## A Few Words for Family and Friends

Being close to someone with COPD will likely mean some changes in your life. As your loved one copes with COPD, you may be asked to be a helper, caregiver, or source of support. Doing the following may help:

- Learn as much as you can about COPD. This will help you know what to expect. It will also show you ways that you can help.
- Talk to your loved one's healthcare team. Ask any questions you have. Make sure you understand your role in treatment.
- Spend time with your loved one. Take time to talk and to do things you both enjoy.
- Join a local support group. Or, contact the Well Spouse Foundation at 800-838-0879 or [www.wellspouse.org](http://www.wellspouse.org).





# Finding Support

Many resources are available to help you and your loved ones learn about COPD. Consider joining a pulmonary rehab program, support group, or Better Breather's Club (offered by the American Lung Association). To learn more, contact the groups below. The more you know about COPD, the more control you'll have over your life.

## American Association of Cardiovascular and Pulmonary Rehabilitation

[www.aacvpr.org](http://www.aacvpr.org)

## American Lung Association

800-586-4872

[www.lungusa.org](http://www.lungusa.org)

## National Heart, Lung, and Blood Institute

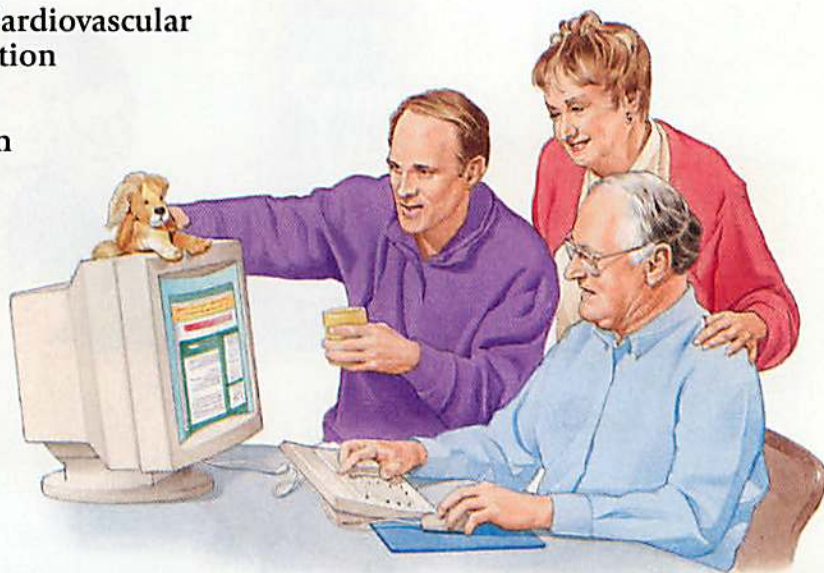
301-592-8573

[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## National Jewish Medical and Research Center

800-222-5864

[www.njc.org](http://www.njc.org)



### Consultants:

Michael Stulbarg, MD, Pulmonology

Chris Garvey, FNP, MSN, MPA, Pulmonology

### With contributions by:

Stacey Clay, RRT, Respiratory Therapy

Philip Corsello, MD, MHA, FCCP, Pulmonology

Kathryn Graham, RN, BS, Respiratory Therapy

Lana Hilling, RCP, Pulmonary Rehabilitation

William Richards, MD, Pulmonology

Mary Schmitz, OTR/L, Occupational Therapy

Gary Smith, MD, Pulmonology

Also available  
in Spanish

 **AMERICAN  
LUNG  
ASSOCIATION®**

 **KRAMES**  
To order, call: 800-333-3032  
A MediMedia USA Company