



## COPD: How to Breathe Better and Save Energy

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### *Information for Patients*

#### **What is COPD?**

*COPD is a condition that affects the lungs and airways. COPD stands for chronic (KRON-ick) obstructive (ob-STRUCK-tiv) pulmonary (PULL-muh-nair-ee) disease. **Chronic** means the condition is long term. You will have it the rest of your life. COPD usually gets worse over time, but you can learn how to manage it.*

***Pulmonary** refers to the lungs and airways. The condition is **obstructive** because it limits the flow of air into and out of your lungs.*

*For an overview of COPD, see the UPMC patient education sheet [COPD: Chronic Obstructive Pulmonary Disease](#).*

#### **How COPD affects breathing**

When your lungs are healthy and work properly, the air you breathe moves freely in and out. Inside your lungs are airways, which are called bronchial (BRONK-ee-ol) tubes. The airways branch into clusters of air sacs called alveoli (AL-vee-OL-ee). When you breathe in fresh air, it moves into the air sacs, where oxygen is absorbed into the blood stream and carried to all parts of your body. The air sacs also remove carbon dioxide from the blood. When you breathe out, stale air with carbon dioxide passes out of your airways and lungs.

COPD blocks the lungs and airways. When you breathe, air cannot move freely in and out. In chronic bronchitis, the airways are inflamed and produce too much mucus, so they become narrow. The airway muscles also may spasm. In emphysema, the air sacs and airways become less stretchable. The air sacs are slowly damaged. They become less and less able to absorb oxygen and remove carbon dioxide. The airways narrow and may collapse, preventing stale air from moving out of the lungs.

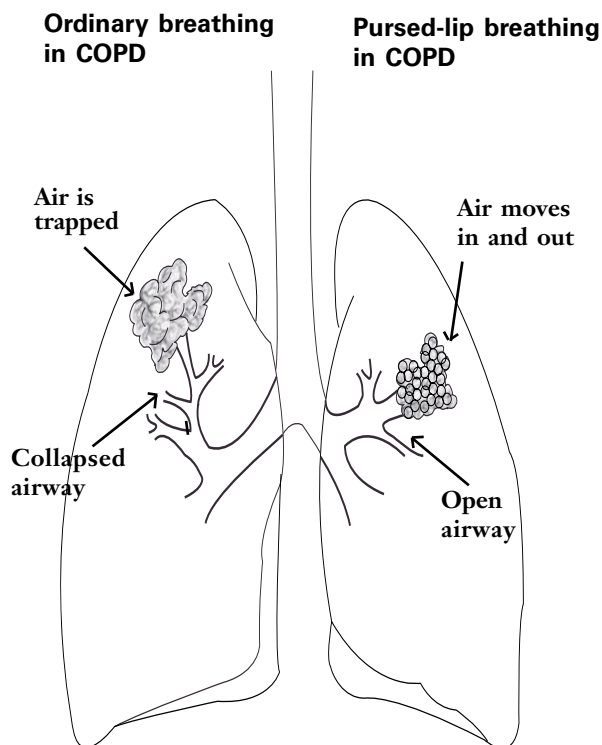
## Breathing methods

You can learn several different methods to get more air into your lungs when you breathe.

### *Pursed-Lip Breathing*

This method of breathing helps to keep your air sacs open longer so that air is not trapped in your lungs. It prevents the very small airways from collapsing when you breathe out. Pursed-lip breathing helps more stale air to get out of your lungs so that more fresh air with oxygen can get in. (See figure below.)

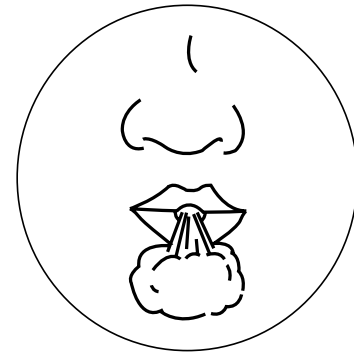
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Pursed-lip breathing may help to control shortness of breath. With this method, you breathe out through pursed lips for twice as long as you breathe in.

### Follow these steps:

1. Breathe in (inhale) slowly. This should be a normal breath (not a deep one). It is best to inhale through your nose, with your mouth closed. As you inhale, count "1, 2."
2. Pucker your lips in a whistling position. Now you have pursed lips.
3. Breathe out (exhale) slowly. Try to exhale twice as long as you inhaled. As you exhale, count "1, 2, 3, 4." (See figure below.)



4. Relax.
5. Repeat these steps until you no longer feel short of breath. If you get dizzy, rest for a few breaths. Then begin again with Step 1.

Practice this breathing method several times each day so it becomes natural to you. Use pursed-lip breathing when you do things that make you short of breath — like climbing stairs, taking a bath, or doing housework. You also should use pursed-lip breathing for breathless spells.

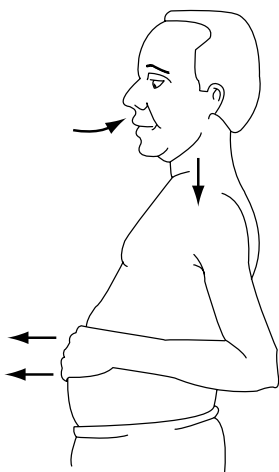
***Diaphragmatic (Belly) Breathing***

The diaphragm (DIE-uh-fram) is the main muscle we use to breathe. This muscle sits below the lungs and above the stomach. When you have COPD, air gets trapped in the air sacs in your lungs. The extra air makes your lungs push against your diaphragm. Doing diaphragmatic (die-uh-fruh-MAT-ik) breathing may help make your diaphragm stronger.

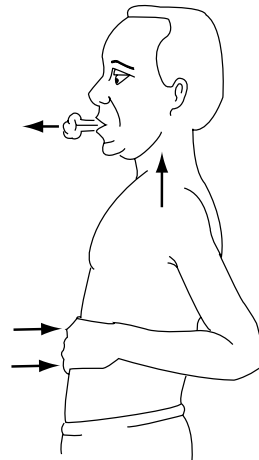
A stronger diaphragm helps you to get more fresh air into your lungs and more stale air out of your lungs. This method is also called belly breathing.

**Follow these steps:**

1. Place one hand on your belly, just below the ribs. Place the other hand on your chest.
2. Breathe in (inhale) through your nose. As you inhale, let your belly and hand move out. Keep your upper chest relaxed. The hand on your chest should not move or move very little.



3. Purse your lips in a whistling position. Then breathe out (exhale) slowly. Your hand and belly should move inward. Try to exhale twice as long as you inhaled.



4. Relax.

This method of breathing is harder to master than pursed-lip breathing. Practice each day as often as you think of it. At first, practice while you are lying down or sitting. Then begin to practice while you are walking. The more you do it, the easier it becomes. Use diaphragmatic breathing daily while you talk, eat, bathe, and dress. Your diaphragm will become stronger. A stronger diaphragm helps decrease your shortness of breath, strengthen your cough, and remove mucus.

## **Clearing mucus**

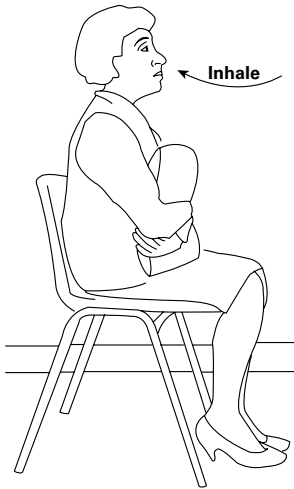
Clearing mucus from your lungs helps keep your airways open. This makes it easier to breathe and helps prevent infections. There are a variety of methods and devices designed to help clear mucus.

### ***Controlled Coughing***

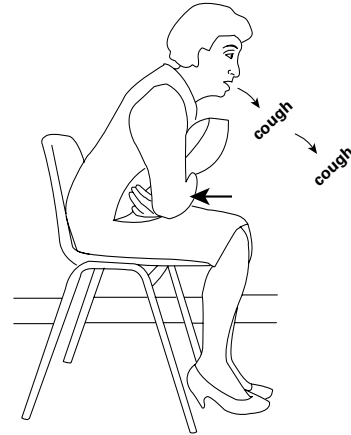
When you learn to control your cough, you can clear mucus more easily.

#### **Follow these steps:**

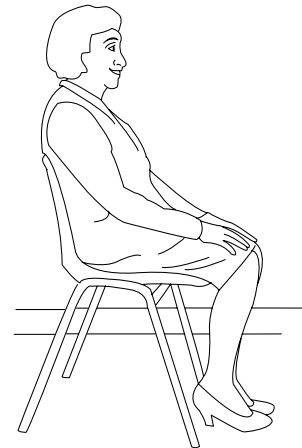
1. Sit in a chair with your feet flat on the floor. Hold a pillow against your diaphragm (upper belly).
2. Breathe in (inhale) and breathe out (exhale) through your nose slowly and deeply.
3. Repeat the above step 3 to 4 times.



4. Inhale again, bend forward, and push the pillow against your belly. Cough 2 or 3 times while pushing against your belly.



5. Relax.



6. Repeat as needed to clear your mucus.

### ***Other Methods and Devices***

Some people have very large amounts of mucus and cannot clear their lungs just by coughing. In this case, a method called postural drainage may help. Postural drainage uses gravity to help move the mucus. Your doctor also may tell you to use other methods, such as chest PT, which is short for chest physiotherapy (fiz-ee-oh-THAIR-uh-pee). Devices that are available to help remove mucus include the Flutter device and the Acapella device.

## **Relaxation**

When you become short of breath, it's very easy to panic. Shortness of breath causes fear and anxiety. These feelings are natural, but you can make your shortness of breath worse. When you become anxious, you begin to take small, fast breaths. The breathing muscles tire faster, and fresh air cannot get deep into your lungs.

To help prevent this cycle, you can use methods of relaxation. Positive imagery is one of these methods. Mentally picturing yourself in a situation you enjoy can help relax you physically. For example, if you love the beach, you could close your eyes and picture a sandy beach, the warm sunshine, the ocean waves, and the cries of seagulls.

You could also learn yoga. Remember to practice pursed-lip breathing, which also helps you physically relax.

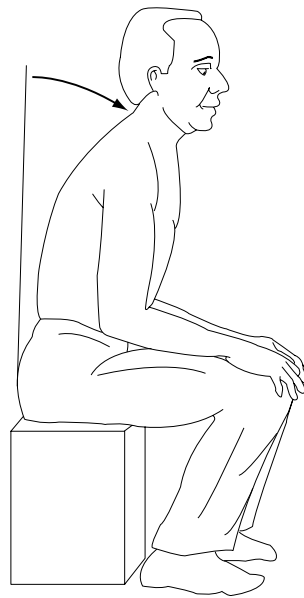
### ***Tensing and Relaxing of Muscles***

#### **Follow these steps:**

1. Sit upright in a chair, with your arms hanging loosely at your sides. Breathe deeply, slowly, and evenly.
2. Clench your fists while you continue to breathe.
3. Shrug your shoulders, and tighten your fists. Count "1, 2."
4. Let your shoulders fall down. Open your hands, and let your arms hang loosely. Count to 4.
5. Tighten your legs and feet. Count to 2.
6. Completely relax. Let all your muscles go loose. Count to 4.
7. Repeat as needed.

## ***Body Positioning***

The way you sit or stand can sometimes make it easier to breathe. When you sit, lean slightly forward. Rest your hands or forearms on your knees or over a table to support your upper body. When you stand, rest against a wall, leaning forward slightly. These positions help you avoid fatigue and shortness of breath.



## **Saving energy**

You can learn to use less energy as you go about daily life. It's important to stay active but also to pace yourself. Adopting a slower, easier pace helps save your energy. The 2 main ways to conserve energy are control of your breathing and planning your daily activities.

### ***Breathing Control***

As you learn to control your breathing, you'll be able to do more. You will feel more comfortable. Remember to use pursed-lip breathing and diaphragmatic breathing. When you do a physical task, do the hardest part of the work while you are breathing out.

**Lifting.** First, breathe in slowly. Then lift and place objects as you breathe out.

**Pushing or pulling.** First, breathe in slowly. Then push or pull objects as you breathe out. Repeat as needed.

**Walking uphill or upstairs.** Stop and breathe in slowly. Walk a few steps as you breathe out slowly. Keep your breathing even. Take the same number of steps each time you breathe out.

### ***Daily Planning***

You should wait about an hour after you eat before doing any physical activity. While your body uses oxygen and energy to digest food, you have less energy for physical activity.

Never plan a heavy day. Spread your chores over the week. Stop and rest often. Put a restful activity between activities that use a lot of energy. For example, you may get short of breath when you bathe and then dress right away. If so, bathe before breakfast, and dress after breakfast. If you live in a two-story home, plan ahead. Do what you need to do upstairs before you come downstairs.

Move everyday items close to the places where you use them. Gather items needed for a specific task to the same place. This way, you do not need to walk back and forth while doing the task. A small utility cart (with 3 shelves) can help you move things around as you do your tasks. A pair of tongs with long handles can help you reach for things. Remember to stop and rest often. Think about using services in your community for help with meals, housework, and transportation.

Make each of the tasks you must perform easier. Don't stand when you can sit. Don't hold your arms up when you can rest your arms. Here are some examples:

**Cooking or ironing.** Sit on a high stool, rather than standing.

**Shaving or putting on makeup.** Put a mirror on a table. Sit and rest your elbows.

**Bathing.** Use a bath seat. Wash your hair in the shower. A hand sprayer attached to your faucet or shower is helpful. Instead of towel drying, slip on a terry robe after bathing. Heat and humidity can also be a problem while bathing. Use your bathroom exhaust fan or leave the door open when you shower. Use a clear shower curtain if you feel closed in while showering.

**Dressing.** Wear loose-fitting clothes that do not restrict the movements of your chest or belly. Avoid socks or stockings with tight elastic bands that could restrict your blood flow. It's easier to put on shoes when you have slip-on shoes and a long shoehorn. Wear shoes with non-slip soles to avoid falls.

## **When should you seek help?**

If any of the following occur, get medical care:

- Your mucus changes in color, consistency, or amount.
- Your wheeze, cough, or shortness of breath gets worse, even after you take your medicine and it has time to work.
- Your breathing gets difficult.
- You have trouble walking or talking.

**Call 911 right away** if any of the following occur:

- You get confused.
- You have trouble staying awake.
- Your lips or fingernails are blue or gray.

## **If you have questions**

If you have any questions, call your doctor or nurse at \_\_\_\_\_.

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