

Overview Chronic Obstructive Pulmonary Disease (COPD)

- Chronic means it's an ongoing problem.
- Obstructive means partly blocked.
- Pulmonary means in the lungs.
- Disease means sickness.

COPD is a common lung disease that obstructs the airways, making it difficult to breathe. COPD is usually caused by smoking or exposure to fumes or very dusty places. COPD can be prevented. When COPD develops, it can be treated, although it cannot be cured. The earlier it is detected, the better the results of treatment.

COPD includes:

- Chronic bronchitis, in which causes long-term swelling and a large amount of mucus in the main airways in the lungs. The walls of the airways become swollen and block air from passing through.
- Emphysema, in which the walls of the air sacs in the lungs lose their elasticity, allowing stale air to get trapped inside. Air sacs are then not able to move oxygen into the bloodstream as efficiently.
- Most people with COPD have symptoms of both.

People with COPD may find that breathing has become difficult while doing some of the things they used to enjoy.

Who Has COPD?

An estimated 24 million adults in the U.S. have COPD. Most COPD is caused by smoking cigarettes. In fact, 80 to 90 percent of all COPD cases are caused by smoking. Among nonsmokers, other risk factors for developing COPD include long-term exposure to secondhand smoke, occupational exposure to dust and chemicals, indoor and outdoor air pollution, and a family history of COPD.

Symptoms

Common day-to-day COPD symptoms include:

- Chronic coughing
- Coughing up mucus or phlegm
- Difficult or labored breathing; shortness of breath
- Wheezing and chest tightness
- Fatigue
- Frequent respiratory infections

All of these symptoms can make it difficult to breathe, even while doing simple, everyday activities.

Most people with COPD periodically suffer from marked worsening of their COPD symptoms. This can last for a few days and often requires antibiotics, oral steroids, and in some cases, hospitalization. Doctors call this an exacerbation.

Treatments

The good news is that there are many types of treatment options for people with COPD. You and your healthcare provider can work together to create the most effective treatment plan for you.

Stop Smoking

The best thing a person with COPD can do for their lungs is stop smoking.

Medications

There are two categories of inhaled COPD medication. The first group is fast-acting inhalers, and the second is maintenance medications.

- **Fast-acting bronchodilators**, also known as quick-relief or rescue medications. They help to open the air passageways in the lungs when symptoms happen suddenly. These medications may be in the form of inhalers or as nebulized medications and include albuterol, ipratropium (Atrovent), tiotropium (Spiriva), salmeterol (Serevent), or formoterol (Foradil).
- **Maintenance medications** such as Brovana, should be taken regularly, every day, as prescribed by your healthcare provider. Taken every day, maintenance medications help to manage COPD.
- **Steroids** such as Pulmicort are inhaled and can help reduce lung inflammation.
- **Antibiotics** are often prescribed during flare-ups such as lung infections, which can make COPD symptoms worse.

Your doctor will tell you how to take your medicine. **Follow his or her instructions with care**, so that you get the right amount of medicine.

Oxygen therapy

Some patients may need extra oxygen to help their lungs function better and to breathe better. Oxygen therapy is a treatment that has been shown to help certain people with COPD live longer and have a better quality of life. Oxygen is usually given through a cannula, which is a tube placed beneath the nostrils.

Tips to breathe easier

There is no cure for COPD. However, there are many things you can do to relieve symptoms and keep the disease from getting worse. Persons with COPD must stop smoking. This is the only way to prevent the lung damage from getting worse.

Some patients find that certain things may worsen their breathing. These may include smoke, dust, pollen, and chemical fumes. In addition to taking your medication as prescribed, you can take some steps to avoid factors that worsen your breathing.

- **Air conditioning** can help lower the humidity in your house, which helps many patients breathe better.
- **Wash sheets and bedding** in hot water.
- **Don't let other people smoke in your house**, and don't go to places where people are smoking.
- **Reduce air pollution** by eliminating fireplace smoke and other irritants.
- **Cover your nose and mouth** in cold weather. This helps warm the air before you breathe it in, making it easier to breathe.
- **Make sure you get a flu shot** every fall. And ask your healthcare provider whether you need a pneumonia vaccine. Avoid people with colds and other respiratory infections. These can make your symptoms worse.
- **Exercise** is very important, as it helps keep you strong. Believe it or not, even a mild to moderate workout routine can improve your health. In fact, physical activity can have many benefits. It improves muscle tone, increases energy level, strengthens the heart, and gives you a more positive outlook. It also helps you to do more with less effort. Your doctor will tell you how much exercise you should do, and how much is too much.
- **Eat a low-fat, low-salt diet.** Excess weight makes the lungs and heart work harder.
- **Drink enough water.** Chronic coughing is easier on your system if you keep well hydrated. Be sure to check with your healthcare provider first and ask if medical conditions require you to watch your fluid intake.

- **Try to relax.** It's natural to worry about COPD, but there are things you can do to manage anxiety. Talk to your healthcare provider.
- **Talk to your healthcare provider about pursed-lip breathing.** Patients with COPD can use a pursed-lip breathing technique to help with shortness of breath. Pursed-lip breathing is a simple way to slow your breathing and make it more effective. This is particularly effective when you are trying to catch your breath after exertion or work.

Pursed-Lip Breathing Technique

- Concentrate on relaxing your shoulder and neck muscles.
- Inhale slowly, taking in a normal breath.
- Pucker your lips, sometime called "pursed lips."
- Exhale while keeping your lips pursed, like you are breathing out through a straw. Try to exhale for at least four seconds. Sometimes it helps if you count to yourself while exhaling: one, two, three, four.
- **Talk to your healthcare provider about controlled coughing.** Some patients who suffer from COPD may have a chronic cough or produce excessive **sputum**, or **mucus**. Controlled coughing is a technique to help these patients cough more effectively.

Controlled Coughing Technique

- Sit in an upright position in a chair or on the side of your bed. Make sure your feet are flat on the floor and your body is leaning slightly forward.
- Fold your arms across your chest and take a slow, deep breath.
- Then, lean slightly forward and press your arms against your chest. Keep your mouth slightly open and cough two to three times. Concentrate on making the coughs short and sharp, not long and drawn out. This technique works by loosening the mucus on the first cough and then clearing the mucus out of the airway with the remaining coughs.
- Next, breathe in through your nose. Try to breathe lightly and without force. The light breathing will help keep the mucus from moving back into your lungs.
- Take a break and relax.
- Repeat if necessary.

Causes

Smoking causes 80 to 90 percent of COPD cases. The more a person smokes, the more likely that person will develop severe bronchitis. Cigarette smoke can cause inflammation and damage the lungs. Secondhand smoke may also cause chronic bronchitis. Air pollution, infection, and allergies make chronic bronchitis worse.

Other risk factors for COPD are:

- Exposure to certain gases or fumes in the workplace
- Exposure to heavy amounts of secondhand smoke and pollution
- Frequent use of cooking gas without proper ventilation

Tests and diagnosis

Your physician may hear wheezing or abnormal breathing sounds when listening to the chest and lungs with a stethoscope. However, lung sounds can be normal during the exam. During a flare up, the muscles between the ribs contract while the person is breathing in. This is called intercostal retractions. The person will use other muscles to breathe. The number of breaths per minute (respiratory rate) may be high.

Tests for COPD patients commonly include pulse oximetry testing and lung function testing. Physicians may also request a chest x-ray to see if the lung is expanding too much, and/or a chest CT scan to reveal emphysema.

When to contact a doctor

Go to the emergency room or call the local emergency number (911) if you have a rapid increase in shortness of breath.