



# Patient Information

## Do you have COPD?

**C**hronic obstructive pulmonary (**puh**-muh-ner-ee) disease, commonly referred to as COPD, makes breathing difficult, worsening over time, due to a lack of air flowing in and out of the airways. Less air flows because the airways and air sacs lose their elastic quality, the walls between many of the air sacs are destroyed, the walls of the airways become thick and inflamed, and/or the airways make more mucus than usual and become clogged.

COPD, which is the fourth leading cause of death in the United States and a major cause of disability, develops slowly, and often limits your ability to complete routine activities. Severe symptoms can prevent you from doing even basic activities, such as walking, cooking, or taking care of yourself.

COPD includes 2 main conditions: emphysema (em-fuh-**see**-muh) and chronic bronchitis (brong-**kahy**-tis).

In emphysema, the walls between the air sacs are damaged, causing them to lose their shape and become limp. This damage may destroy the walls of the air sacs, creating fewer and larger ones that ultimately reduce the amount of gas exchanged in the lungs.

When the lining of the airways is constantly irritated and inflamed, chronic bronchitis occurs. This irritation causes the lining to thicken and, with the addition of thick mucus, you may experience difficulty breathing.

### How do I know if I'm at risk?

Long-term exposure to an irritant that causes damage in the lungs results in COPD. The

most common irritant is cigarette smoke, but pipe, cigar, and other types of tobacco smoke also can cause damage, even if inhaled secondhand.

Most people with COPD do not begin to recognize symptoms until they reach about 40 years of age, though some may begin to experience symptoms at a younger age.

The disease, in some cases, may be passed down genetically. A disease called alpha-1-antitrypsin (AAT) deficiency, in which, the body does not make a type of protein that helps protect the lungs, may be inherited.

### What are the warning signs?

Symptoms of COPD include an ongoing cough—particularly one that produces a lot of mucus, shortness of breath, wheezing, or chest tightness. The symptoms of COPD are similar to the symptoms of other diseases and conditions; therefore, only your doctor can confirm the disorder. Weight loss and decreased muscle endurance also are warning signs for COPD.

People with COPD may contract colds or the flu (influenza) more often. If severe, you also may experience swelling in your ankles, feet, or legs; a bluish tint on your lips because of low blood oxygen level; and shortness of breath. Symptoms may worsen slowly over time, but, if mild enough, you may be able to adjust your lifestyle to make breathing easier. The severity of your COPD symptoms can help you and your doctor determine how much damage has been done to the lungs and the treatment you will need.



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### What tests do I need?

COPD is diagnosed upon examination of your signs and symptoms, medical and family histories, and the results of numerous tests. Your doctor may ask about your smoking history or ask if you've had any contact with lung irritants, such as second-hand smoke, air pollution, chemical fumes, or dust.

Your doctor may order a lung function test, which measures how much air is breathed in and out, how fast the air comes out, and how well the lungs deliver oxygen to the blood stream.

The main test for measuring lung function is spirometry. The technician will ask you to take a deep breath in and blow the air into a tube connected to a small machine, called a spirometer. The spirometer measures the speed and amount of air you're breathing out. Medicine also may be added to the machine to help open your airways and to measure how the medicine changes your breathing.

An arterial blood gas test measures your blood oxygen level using a blood sample taken from an artery.

### How can I avoid the problem?

COPD, unlike some diseases, has a clear cause and a definite path of prevention. Not smoking, or quitting smoking, is the best way to prevent COPD since smoking is the leading cause of the disease. If you're a lifetime smoker, talk with your doctor to find a tobacco cessation program to help you through the process.

Exposure to chemical fumes and dust at your job also should be avoided. Talk to your supervisor if you work in the type of environment that hosts these irritants, and inquire about ways to prevent exposure to your lungs. In some cases, a mask can be

provided to protect you from breathing in the harmful materials.

### How is it treated?

COPD has no cure and it is not known how to reverse the damage it can cause to the airways and lungs. However, with treatment of symptoms and lifestyle changes, you can feel better, stay more active, and slow the progress of the disease. If you are a smoker, your doctor can help you find programs and products that will help you quit. Avoiding secondhand smoke is also a key to lessening your symptoms.

Medication, such as bronchodilators, may be prescribed to treat COPD. They relax the muscles around your airways to open the passage and make breathing easier. The medication is taken through a device, called an inhaler, that brings the drug directly to your lungs.

In severe cases, doctors may recommend surgery to correct the damage caused by COPD. Lung volume reduction surgery removes damaged tissue from the lungs, helping them to work better. A lung transplant removes the entire damaged lung and replaces it with a healthy one.

For more information on COPD, visit the COPD page of the National Heart, Lung and Blood Institute's Web site at [http://www.nhlbi.nih.gov/health/dci/Diseases/COPD/Copd\\_WhatIs.html](http://www.nhlbi.nih.gov/health/dci/Diseases/COPD/Copd_WhatIs.html).

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