

# What Is COPD?



## COPD

COPD, or chronic obstructive pulmonary (PULL-mun-ary) disease, is a progressive disease that makes it hard to breathe. “Progressive” means the disease gets worse over time.

COPD can cause coughing that produces large amounts of mucus (a slimy substance), wheezing, shortness of breath, chest tightness, and other symptoms.

Cigarette smoking is the leading cause of COPD. Most people who have COPD smoke or used to smoke. Long-term exposure to other lung irritants—such as air pollution, chemical fumes, or dust—also may contribute to COPD.

### Overview

To understand COPD, it helps to understand how the lungs work. The air that you breathe goes down your windpipe into tubes in your lungs called bronchial (BRONG-ke-al) tubes or airways.

Within the lungs, your bronchial tubes branch into thousands of smaller, thinner tubes called bronchioles (BRONG-ke-ols). These tubes end in bunches of tiny round air sacs called alveoli (al-VEE-uhl-eye).

Small blood vessels called capillaries (KAP-ih-lare-ees) run through the walls of the air sacs. When air reaches the air sacs, oxygen passes

through the air sac walls into the blood in the capillaries. At the same time, carbon dioxide (a waste gas) moves from the capillaries into the air sacs. This process is called gas exchange.

The airways and air sacs are elastic (stretchy). When you breathe in, each air sac fills up with air like a small balloon. When you breathe out, the air sacs deflate and the air goes out.

In COPD, less air flows in and out of the airways because of one or more of the following:

- 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
- The airways make more mucus than usual, which can clog them

### Normal Lungs and Lungs With COPD

In the United States, the term “COPD” includes two main conditions—emphysema (em-fih-SE-ma) and chronic bronchitis (bron-KI-tis). In emphysema, the walls between many of the air sacs are damaged. As a result, the air sacs lose their shape and become floppy. This damage also can destroy the walls of the air sacs, leading

to fewer and larger air sacs instead of many tiny ones. If this happens, the amount of gas exchange in the lungs is reduced.

In chronic bronchitis, the lining of the airways is constantly irritated and inflamed. This causes the lining to thicken. Lots of thick mucus forms in the airways, making it hard to breathe.

Most people who have COPD have both emphysema and chronic bronchitis. Thus, the general term “COPD” is more accurate.

## Outlook

COPD is a major cause of disability, and it’s the third leading cause of death in the United States. Currently, millions of people are diagnosed with COPD. Many more people may have the disease and not even know it.

COPD develops slowly. Symptoms often worsen over time and can limit your ability to do routine activities. Severe COPD may prevent you from doing even basic activities like walking, cooking, or taking care of yourself.

Most of the time, COPD is diagnosed in middle-aged or older adults. The disease isn’t passed from person to person—you can’t catch it from someone else.

COPD has no cure yet, and doctors don’t know how to reverse the damage to the airways and lungs. However, treatments and lifestyle changes can help you feel better, stay more active, and slow the progress of the disease.

## What Are the Signs and Symptoms of COPD?

At first, COPD may cause no symptoms or only mild symptoms. As the disease gets worse, symptoms usually become more severe.

Common signs and symptoms of COPD include:

- An ongoing cough or a cough that produces a lot of mucus (often called “smoker’s cough”)
- Shortness of breath, especially with physical activity
- Wheezing (a whistling or squeaky sound when you breathe)
- Chest tightness

If you have COPD, you also may have colds or the flu (influenza) often.

Not everyone who has the symptoms above has COPD. Likewise, not everyone who has COPD has these symptoms. Some of the symptoms of COPD are similar to the symptoms of other diseases and conditions. Your doctor can find out whether you have COPD.

If your symptoms are mild, you may not notice them, or you may adjust your lifestyle to make breathing easier. For example, you may take the elevator instead of the stairs.

Over time, symptoms may become severe enough to see a doctor. For example, you may get short of breath during physical exertion.

The severity of your symptoms will depend on how much lung damage you have. If you keep smoking, the damage will occur faster than if you stop smoking.

Severe COPD can cause other symptoms, such as swelling in your ankles, feet, or legs; weight loss; and lower muscle endurance.

Some severe symptoms may require treatment in a hospital. You—with the help of family members or friends, if you're unable—should seek emergency care if:

- You're having a hard time catching your breath or talking
- Your lips or fingernails turn blue or gray. (This is a sign of a low oxygen level in your blood.)
- You're not mentally alert
- Your heartbeat is very fast
- The recommended treatment for symptoms that are getting worse isn't working

## Talk to Your Doctor

Talk to your doctor if you think you may have signs of COPD.

**Source:** US Department of Health and Human Services. National Institute of Mental Health (NIMH) Web site. <http://www.nhlbi.nih.gov/health/health-topics/topics/copd/>. Accessed June 2, 2014.