

U.S. Department of Health & Human Services • National Institutes of Health

 **National Heart Lung and Blood Institute**
Diseases and Conditions Index

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COPD

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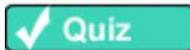
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What Is COPD?

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 tubes, or airways.

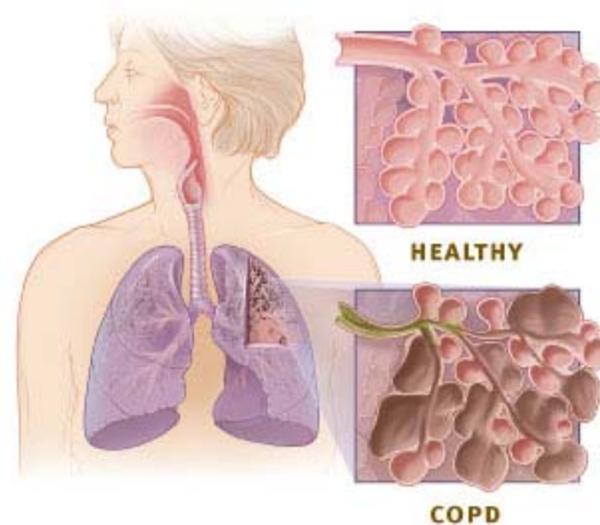
The airways are shaped like an upside-down tree with many branches. At the end of the branches are tiny air sacs called alveoli (al-VEE-uhl-eye).

The airways and air sacs are elastic. When you breathe in, each air sac fills up with air like a small balloon. When you breathe out, the air sac deflates 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 (swollen).
- The airways make more mucus than usual, which tends to clog the airways.

Healthy Alveoli and Damaged Alveoli



The illustration shows the respiratory system and images of healthy alveoli and alveoli damaged by COPD.

In the United States, the term "COPD" includes two main conditions—[emphysema](#) (em-fi-SE-ma) and chronic obstructive bronchitis (bron-KI-tis).

In emphysema, the walls between many of the air sacs are damaged, causing them to 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.

In chronic obstructive 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 obstructive bronchitis. Thus, the general term "COPD" is more accurate.

Outlook

COPD is a major cause of disability, and it's the fourth leading cause of death in the United States. More than 12 million people are currently diagnosed with COPD. An additional 12 million likely have the disease and don't 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 people. 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.

March 2009

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