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

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.

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.

Normal Lungs and Lungs With COPD

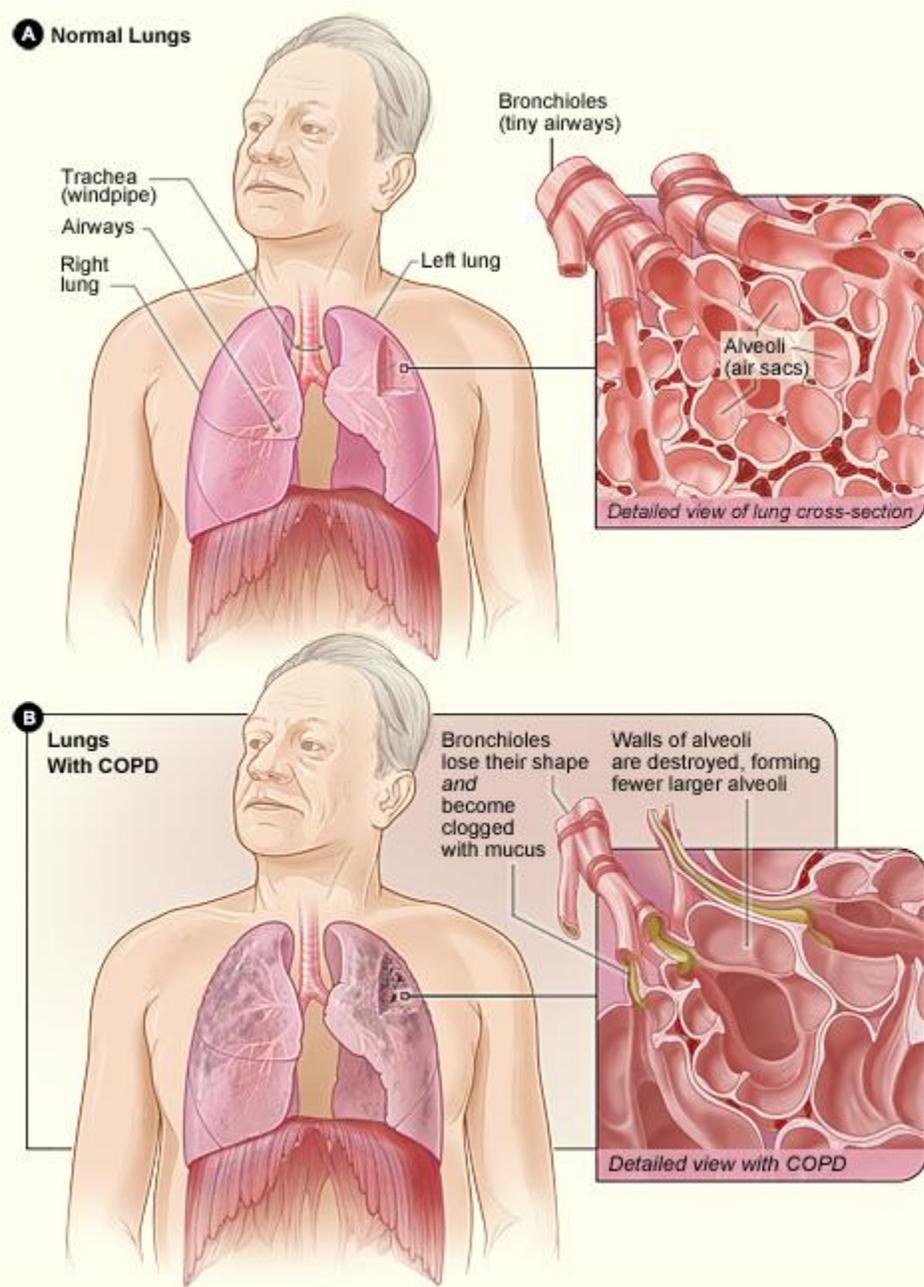


Figure A shows the location of the lungs and airways in the body. The inset image shows a detailed cross-section of the bronchioles and alveoli. Figure B shows lungs damaged by COPD. The inset image shows a detailed cross-section of the damaged bronchioles and alveolar walls.



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How Is COPD Treated?

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.

The goals of COPD treatment include:

- Relieving your symptoms
- Slowing the progress of the disease
- Improving your exercise tolerance (your ability to stay active)
- Preventing and treating complications
- Improving your overall health

Lifestyle Changes

Quit Smoking and Avoid Lung Irritants

Quitting smoking is the most important step you can take to treat COPD. Talk with your doctor about programs and products that can help you quit.

If you have trouble quitting smoking on your own, consider joining a support group. Many hospitals, workplaces, and community groups offer classes to help people quit smoking. Ask your family members and friends to support you in your efforts to quit.

Also, try to avoid secondhand smoke and places with dust, fumes, or other toxic substances that you may inhale.

Medicines

Bronchodilators

Bronchodilators relax the muscles around your airways. This helps open your airways and makes breathing easier.

Depending on the severity of your COPD, your doctor may prescribe short-acting or long-acting bronchodilators. Short-acting bronchodilators last about 4–6 hours and should be used only when needed. Long-acting bronchodilators last about 12 hours or more and are used every day.

Most bronchodilators are taken using a device called an inhaler. This device allows the medicine to go straight to your lungs. Not all inhalers are used the same way. Ask your health care team to show you the correct way to use your inhaler.

If your COPD is mild, your doctor may only prescribe a short-acting inhaled bronchodilator. In this case, you may use the medicine only when symptoms occur.

If your COPD is moderate or severe, your doctor may prescribe regular treatment with short- and long-acting bronchodilators.

Combination Bronchodilators Plus Inhaled Glucocorticosteroids (Steroids)

If your COPD is more severe, or if your symptoms flare up often, your doctor may prescribe a combination of medicines that includes a bronchodilator and an inhaled steroid. Steroids help reduce airway inflammation.



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In general, using inhaled steroids alone is not a preferred treatment.

Your doctor may ask you to try inhaled steroids with the bronchodilator for a trial period of 6 weeks to 3 months to see whether the addition of the steroid helps relieve your breathing problems.

Vaccines

Flu Shots

The flu (influenza) can cause serious problems for people who have COPD. Flu shots can reduce your risk of getting the flu.

Pneumococcal Vaccine

This vaccine lowers your risk for pneumococcal [pneumonia](#) (NU-mo-KOK-al nu-MO-ne-ah) and its complications. People who have COPD are at higher risk for pneumonia than people who don't have COPD.

Pulmonary Rehabilitation

[Pulmonary rehabilitation](#) (rehab) is a broad program that helps improve the well-being of people who have chronic (ongoing) breathing problems. Rehab may include an exercise program, disease management training, and nutritional and psychological counseling. The program's goal is to help you stay active and carry out your daily activities.

Oxygen Therapy

If you have severe COPD and low levels of oxygen in your blood, [oxygen therapy](#) can help you breathe better. For some people who have severe COPD, using extra oxygen for most of the day can help them:

- Do tasks or activities, while having fewer symptoms
- Protect their hearts and other organs from damage
- Sleep more during the night and improve alertness during the day
- Live longer
 - **Prevent Complications and Slow the Progress of COPD**
 - If you have COPD, the most important step you can take is to quit smoking. Quitting can help prevent complications and slow the progress of the disease. You also should avoid exposure to the lung irritants mentioned above.
 - Follow your treatments for COPD exactly as your doctor prescribes. They can help you breathe easier, stay more active, and avoid or manage severe symptoms.

Manage COPD and Its Symptoms

You can do things to help manage COPD and its symptoms. For example:

- Do activities slowly.
 - Put items that you need often in one place that's easy to reach.
 - Find very simple ways to cook, clean, and do other chores. For example, you might want to use a small table or cart with wheels to move things around and a pole or tongs with long handles to reach things.
 - Ask for help moving things around in your house so that you won't need to climb stairs as often.
 - Keep your clothes loose, and wear clothes and shoes that are easy to put on and take off.
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