



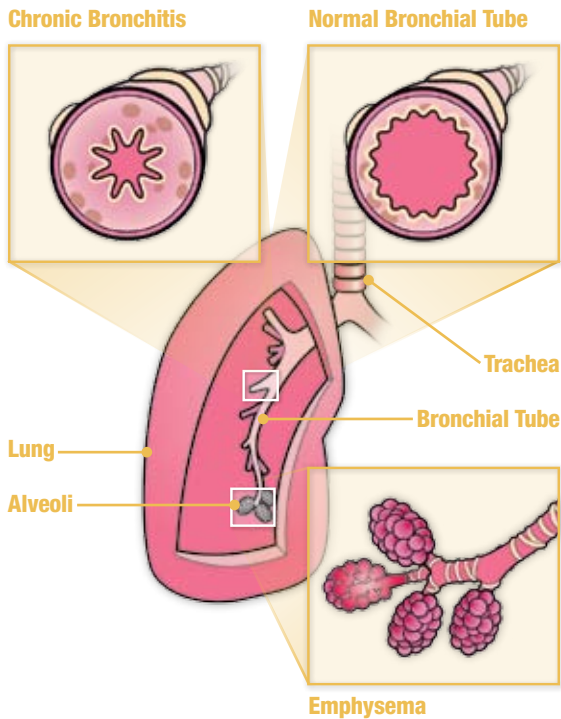
COPD

It Can Take Your Breath Away



What Is COPD?

COPD stands for chronic obstructive pulmonary disease. There are two major diseases included in COPD: 1) chronic bronchitis, and 2) emphysema. In both, narrowed bronchi make it hard to exhale. In chronic bronchitis, enlarged mucous glands and too much mucus production contribute to the narrowing. In emphysema, narrowing comes from damage to the bronchi themselves and is more severe. Inflammation triggered by inhaled irritants also contributes to COPD.



What Causes COPD?

Smoking accounts for about 85% of COPD cases. Heavy smokers are at highest risk. Secondhand smoke and other inhaled toxins account for COPD in some nonsmokers. In others, an inherited protein deficiency is to blame. In some cases, the cause is unknown.

Symptoms

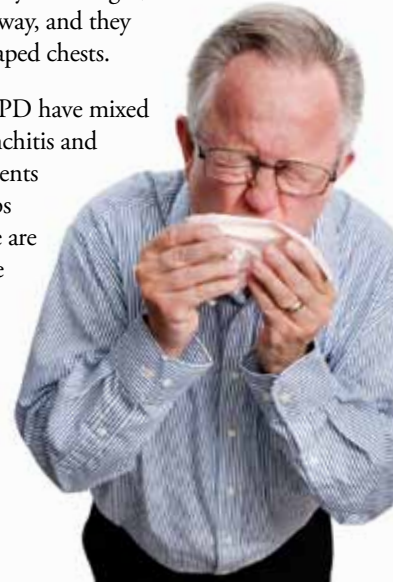
COPD starts gradually and progresses slowly. At first, there are no symptoms. Little by little, problems appear, usually by middle age.

- A morning “smoker’s cough” is often the first complaint. Over time, the cough gets worse and occurs throughout the day.
- Next, shortness of breath develops—at first, only during exercise. As the disease gets worse, breathing becomes difficult even at rest.
- Wheezing is another common symptom.
- Most patients also become tired and weak.

Chronic bronchitis. Patients with chronic bronchitis have a recurrent cough that brings up large amounts of thick, discolored phlegm almost every day for 3 months or longer over at least 2 years. Over time, the lung disease can put a strain on the heart, and some patients develop *congestive heart failure* (a condition where the heart can’t pump enough blood to the body).

Emphysema. Patients with emphysema have slightly different symptoms. Their cough is scant and dry. But shortness of breath is more severe. People with emphysema breathe faster than normal. They don’t accumulate fluid, but they lose weight, their muscles tend to waste away, and they develop large, barrel-shaped chests.

Most patients with COPD have mixed features of chronic bronchitis and emphysema. Many patients also have 2 or 3 flare-ups each year. Usually, these are abrupt flare-ups that are often triggered by lung infections. Symptoms get much worse, and aggressive treatment may be needed.



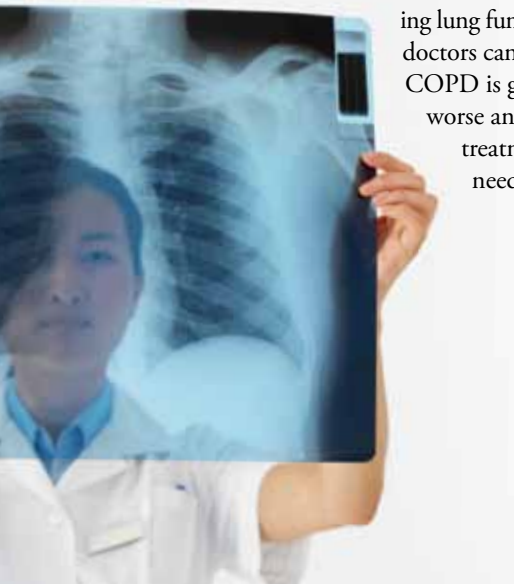
Diagnosis

Your doctor will ask about your smoking history and exposure to secondhand smoke, fumes, and dust. Be sure to report any family history of COPD, particularly if your symptoms began in young adulthood and you haven't been exposed to tobacco smoke. You'll also be asked about symptoms, such as coughing, phlegm, shortness of breath, wheezing, fatigue, and weight changes.

Physical exam. Your doctor will check your lips, skin, and nails for bluish discoloration that suggests low oxygen levels. Your nails may be abnormally rounded. You may have fluid in your legs and feet. Your chest exam is the most important part of the visit. With chronic bronchitis, your doctor may hear wheezing and abnormal gurgling sounds. With emphysema, your chest may be enlarged and sound hollow when your doctor taps on it.

Tests and x-rays. The most important test is a lung function test called the forced expiratory volume at one second (FEV₁). It measures the amount of air you can exhale with a maximal effort in 1 second.

Normal FEV₁ values depend on a person's age, sex, and height. Doctors can diagnose COPD and estimate how bad it is based on how a patient's FEV₁ compares to normal. By repeating lung function tests, doctors can tell if COPD is getting worse and adjust treatment as needed.



If you have emphysema, your chest x-ray will show enlarged lungs. Scarring and large, air-filled cavities may also be evident. CT scans can show damage at an earlier stage, but no imaging test can gauge the severity of COPD or predict its outcome. In many cases, your doctor will order additional tests, such as complete blood counts, an EKG to look for heart strain, an analysis of your sputum, and a test to measure the oxygen in your blood.

Treatment: Lifestyle



Avoid tobacco and secondhand smoke. See the Patient Education Center brochure titled, "5 Tips Every Smoker Should Know" online at www.patientedu.org/quitsmoking for more information.

Good nutrition is also important. Make sure you eat plenty of fruits, vegetables, and fish. To learn more, see the Patient Education Center brochure titled, "Good Eating for Good Health." Also, drink a lot of fluids too to keep phlegm loose and easy to cough out.

Exercise. A gradual program of low- to moderate-intensity exercise helps muscles get the most benefit from the oxygen that damaged lungs can deliver. Structured pulmonary rehabilitation programs also offer breathing exercises that are designed to strengthen chest muscles.

Preventing infection is essential. Be sure your flu and pneumonia immunizations are up to date. Keep your distance from folks with respiratory infections. Wash your hands carefully, using an alcohol-based hand rub.

Treatment: Medications

Early treatment is important. Talk to your doctor about which treatments are best for you. While drugs will not cure your COPD, they can help you breathe better.

Quick relievers/rescue inhalers. Also known as *short-acting beta agonists*, quick-relief drugs ease symptoms quickly by relaxing the muscles that surround bronchial tubes, enabling the tubes to open wider. Carry your quick-relief medication with you at all times. Ask your doctor about when and how often you should use a quick reliever.

Maintenance medications. These drugs, which include beta-agonists, corticosteroids, and anticholinergics, are taken every day to help make breathing easier over the long term. Because these drugs act on different aspects of the disease, your doctor may recommend you use several types of therapy in combination.

Since most COPD medicines are inhaled, your doctor will most likely prescribe a handheld device or inhaler. Be sure to ask for instructions on how to use your inhaler. Doctors also may prescribe anti-inflammatory drugs and antibiotics, as needed, to treat flare-ups and respiratory infections. Contact your doctor immediately if your breathing becomes worse, if you develop a fever, or if your phlegm becomes thicker, discolored, or more abundant.



Treatment: Oxygen

COPD patients with low blood oxygen levels can benefit from long-term, round-the-clock oxygen therapy. For home use, oxygen can be stored in cylinders or generated by machines called oxygen concentrators.

Portable tanks can provide several hours of oxygen when you're away from home. Safe oxygen therapy requires physician supervision. Patients and household members need to follow directions carefully and conscientiously.



Treatment: Surgery

Some patients with severe emphysema may benefit from special types of lung operations. It's important to be evaluated by an experienced physician before considering this type of surgery. In severe cases, COPD patients may be eligible for lung transplantation.



To learn more about
COPD, visit the Patient
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