



East Hawaii Health

Patient Education

Chronic Obstructive Pulmonary Disease (COPD), Including Emphysema

The Basics

Written by the doctors and editors at UpToDate

What is COPD? - COPD is a lung disease that makes it hard to breathe. In people with COPD, the airways (the branching tubes that carry air within the lungs) become narrow and damaged (figure 1). This makes people feel out of breath and tired.

COPD can be a serious illness. It cannot be cured and can get worse over time. But there are treatments that can help.

You might have heard COPD referred to as "chronic bronchitis" or "emphysema." These are types of COPD.

How should I manage my COPD during the COVID-19 pandemic? - COVID-19 stands for "coronavirus disease 2019." It is caused by a virus called SARS-CoV-2. The virus first appeared in late 2019 and has since spread throughout the world.

People with COVID-19 can have fever, cough, and other symptoms. In severe cases, it can cause pneumonia and trouble breathing. Some people with COPD are more likely to have serious symptoms if they get COVID-19. If you have COPD, it's especially important to get the COVID-19 vaccine as soon as you are able. This will greatly lower your risk of getting sick.

If you take medicines for your COPD, it's important to **keep taking them** as usual. If you have symptoms of COVID-19, or think you might have been exposed to the virus, call your doctor or nurse.

The rest of this article has general information about COPD.

Why did I get COPD? - The most common cause of COPD is smoking. Smoke can damage the lungs forever and cause COPD. People can also get COPD from



breathing in toxic fumes or gases. In rare cases, COPD is caused by a genetic problem. A blood test can check for this.

What are the symptoms of COPD? - At first, COPD often causes no symptoms. As it gets worse it can make you:

- Feel short of breath, especially when you are moving around
- Wheeze (make a whistling or squeaking noise as you breathe)
- Cough and spit up phlegm (mucus)

People who have COPD are also at increased risk for:

- Infections, such as pneumonia
- Lung cancer
- Heart problems

Is there a test for COPD? - Yes. Your doctor or nurse can give you a test called "spirometry" to check for COPD. During spirometry, you take a deep breath and then blow out as fast and hard as you can into a tube. A machine connected to the tube measures how much air you can blow out of your lungs and how fast you can blow.

If the results of your spirometry are **not** normal, you will get a medicine in an inhaler to see if your breathing gets better. Then after a few minutes, you will repeat the spirometry. This will help the doctor or nurse find out if your problem is caused by COPD or another lung problem, such as asthma. People with asthma usually get normal results after they use an inhaler. People with COPD do not.

Will I need other tests? - Your doctor might order other tests, too. These can check to see if other problems besides COPD might be causing your symptoms.



They can also look for some of the problems that COPD can lead to. Tests you might get include:

- A blood test for a genetic problem called "antitrypsin deficiency" that can cause COPD.
- A chest X-ray
- An electrocardiogram (also called an "ECG") - This test measures the electrical activity in your heart.
- A low-dose CT scan - This is an imaging test used to screen for lung cancer. (Imaging tests create pictures of the inside of the body.) Your doctor or nurse might suggest lung cancer screening depending on your age, how much you have smoked in the past, and whether you still smoke.

Is there anything I can do to feel better? - Yes. Here are 2 important things you should do:

- Stop smoking! If you smoke, the most important thing you can do for your COPD is to quit. It does not matter how long you have smoked or how much you smoke. Quitting will slow your disease and help you feel better. This can be hard, but your doctor or nurse can help you figure out the best way to quit.
- Get the flu shot every fall, and the pneumonia vaccine at least once. Infections like the flu and pneumonia can be very hard on your lungs. It's important to try to prevent them.

How is COPD treated? - There are 4 main types of treatment for COPD:

- Medicines - There are a lot of medicines to treat COPD. Most people use inhalers that help open up their airways or decrease swelling in the airways. Often people need more than one inhaler at a time. You might need to take



a steroid medicine in a pill for a flare of COPD. This steroid medicine is not the kind that athletes take to build up muscle.

- Oxygen - If the disease gets worse, you might need to use oxygen. Your doctor or nurse can test your blood oxygen to see if you need this.
- Pulmonary rehab - In pulmonary rehab, you learn to improve your symptoms in new ways. You learn exercises and ways to breathe that can help ease symptoms. Even if you don't do a pulmonary rehab program, staying active can help your breathing.
- Surgery and endobronchial valves - Rarely, people with the emphysema type of severe COPD will need surgery. Surgery removes the most damaged parts of the lung. This surgery can reduce symptoms, but it does not always work.

Also rarely, doctors will place small "endobronchial valves" in the damaged airways. This can help the healthier parts of the lungs work better. The valves are placed using a thin tube that goes down your throat, called a "bronchoscope."

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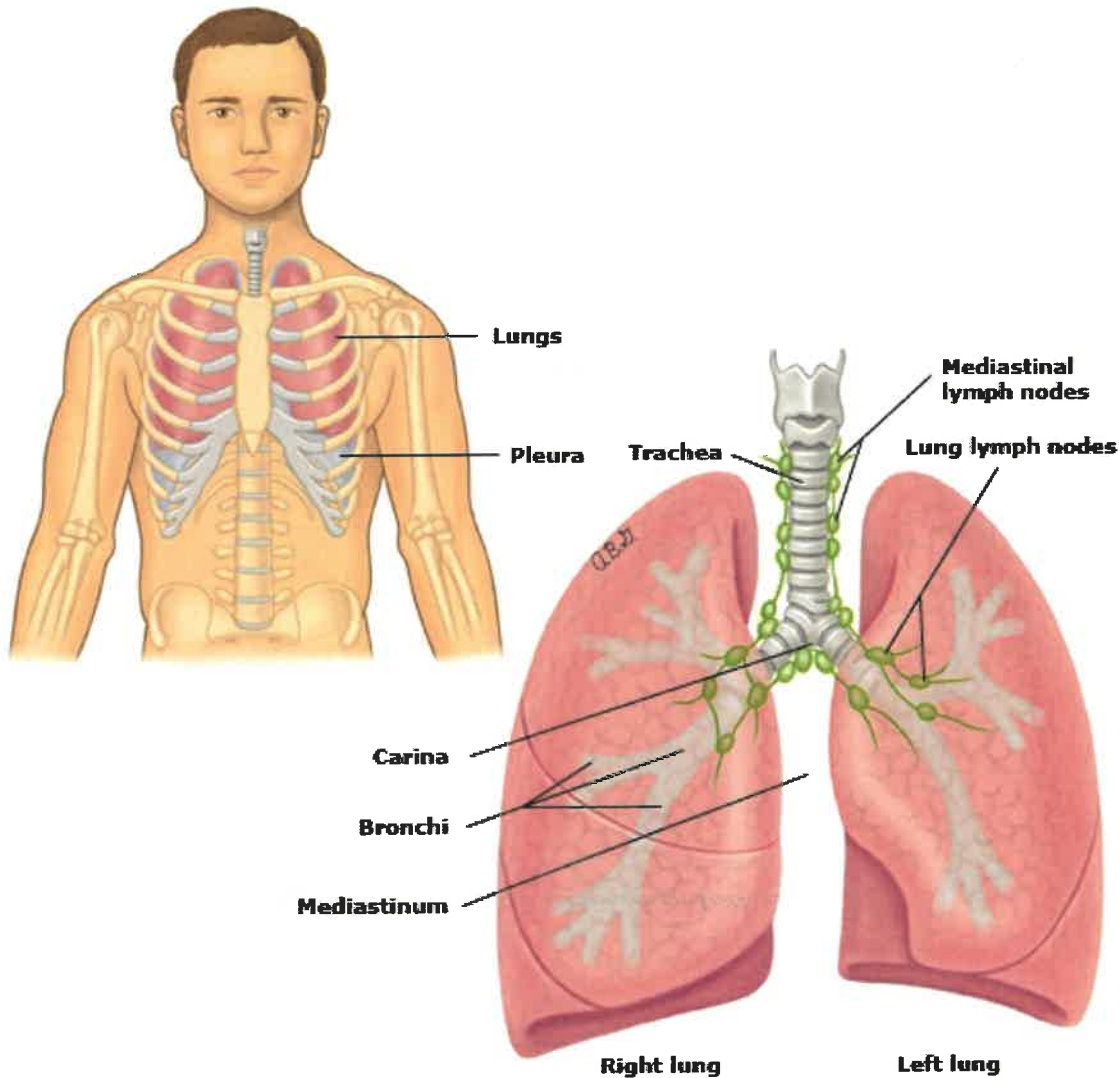
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Topic 15430 Version 19.0

Release: 29.5.2 - C29.340

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figure 1: Normal lungs



The lungs sit in the chest, inside the ribcage. They are covered with a thin membrane called the "pleura." The windpipe, or trachea, branches into two smaller airways called the left and right "bronchi." The space between the lungs is called the "mediastinum." Lymph nodes are located within and around the lungs and mediastinum.

Graphic 67527 Version 13.0

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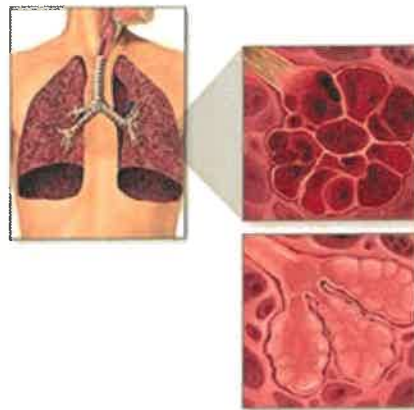
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COPD (Chronic Obstructive Pulmonary Disease)

WHAT YOU NEED TO KNOW:

What is chronic obstructive pulmonary disease (COPD)? COPD is a lung disease that makes it hard for you to breathe. It is usually a result of lung damage caused by years of irritation and inflammation in your lungs. This limits air flow in your lungs. Smoking, pollution, genetics, or a history of lung infections can increase your risk for COPD.



 ADAM

What are the signs and symptoms of COPD?

- Shortness of breath
- A dry cough
- Coughing fits that bring up mucus from your lungs
- Wheezing and chest tightness



How is COPD diagnosed? Your healthcare provider will ask about your symptoms and examine you. He or she will ask if a family member has COPD or breathing problems. He or she will ask if you are a current or former smoker. Tell your provider if you have other medical conditions, such as heart disease or asthma. Tell him or her how long you have had symptoms, what makes them worse, and how they affect your life. You may need the following:

- **Lung function tests** measure the airflow in your lungs and show how well you can breathe.
- **Blood tests** check for infection and measure oxygen levels in your blood.
- **A chest x-ray** is done to check for other lung problems.
- **CT scan pictures** may be taken of your lungs. You may be given contrast liquid to help your lungs show up better in the pictures. Tell the healthcare provider if you have ever had an allergic reaction to contrast liquid.

How is COPD treated?

- **Medicines** may be used to open your airways, decrease swelling and inflammation in your lungs, or treat an infection. You may need 2 or more medicines. A short-acting medicine relieves symptoms quickly. Long-acting medicines will control or prevent symptoms. Ask your healthcare provider for more information about the medicines you are given and how to use them safely.
- **Pulmonary rehabilitation** is a program to help you manage your symptoms and improve your quality of life. It may include nutritional counseling and exercise to strengthen your lungs.
- **Oxygen** may help you breathe easier and feel more alert if you have severe COPD.
- **Surgery** is sometimes done if all other treatments have failed. A lung reduction is surgery to remove part of your damaged lung. A lung transplant



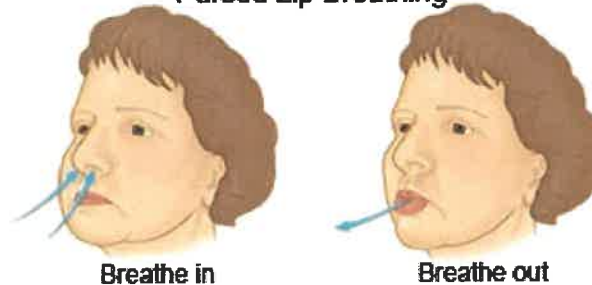
is the replacement of your lung with a donor lung. Ask your healthcare provider for more information about surgery for COPD.

What are the risks of COPD? COPD raises your risk for diabetes, high blood pressure, and heart disease. Without treatment, COPD can become life-threatening.

What can I do to help make breathing easier?

- **Use pursed-lip breathing any time you feel short of breath.** Take a deep breath in through your nose. Slowly breathe out through your mouth with your lips pursed for twice as long as you inhaled. You can also practice this breathing pattern while you bend, lift, climb stairs, or exercise. It slows down your breathing and helps move more air in and out of your lungs.

Pursed Lip Breathing



- **Do not smoke, and avoid others who smoke.**

Nicotine and other substances can cause lung irritation or damage and make it harder for you to breathe. Do not use e-cigarettes or smokeless tobacco. They still contain nicotine. Ask your healthcare provider for information if you currently smoke and need help to quit. For support and more information:

- Smokefree.gov
Phone: 1-800-784-8669
Web Address: www.smokefree.gov



- **Be aware of and avoid anything that makes your symptoms worse.** Stay out of high altitudes and places with high humidity. Stay inside, or cover your mouth and nose with a scarf when you are outside during cold weather. Stay inside on days when air pollution or pollen counts are high. Do not use aerosol sprays such as deodorant, bug spray, and hair spray.

How can I manage COPD and help prevent exacerbations? COPD is a serious condition that gets worse over time. A COPD exacerbation means your symptoms suddenly get worse. It is important to prevent exacerbations. An exacerbation can cause more lung damage. COPD cannot be cured, but you can take action to feel better and prevent COPD exacerbations:

- **Protect yourself from germs.** Germs can get into your lungs and cause an infection. An infection in your lungs can create more mucus and make it harder to breathe. An infection can also create swelling in your airways and prevent air from getting in. You can decrease your risk for infection by doing the following:

- Wash your hands often with soap and water. Carry germ-killing gel with you. You can use the gel to clean your hands when soap and water are not available.



- Do not touch your eyes, nose, or mouth unless you have washed your hands first.
- Always cover your mouth when you cough. Cough into a tissue or your shirtsleeve so you do not spread germs from your hands.



- Try to avoid people who have a cold or the flu. If you are sick, stay away from others as much as possible.

- **Drink more liquids.** This will help to keep your air passages moist and help you cough up mucus. Ask how much liquid to drink each day and which liquids are best for you.
- **Exercise daily.** Exercise for at least 20 minutes each day to help increase your energy and decrease shortness of breath. Talk to your healthcare provider about the best exercise plan for you.
- **Ask about vaccines.** Your healthcare provider may recommend that you get regular flu and pneumonia vaccines. Pneumonia can become life-threatening for a person who has COPD. Ask about other vaccines you may need. **Ask your healthcare provider about the flu and pneumonia vaccines.** All adults should get the flu (influenza) vaccine every year as soon as it becomes available. The pneumonia vaccine is given to adults aged 65 or older to prevent pneumococcal disease, such as pneumonia. Adults aged 19 to 64 years who are at high risk for pneumococcal disease also should get the pneumococcal vaccine. It may need to be repeated 1 or 5 years later.

Call 911 if:

- You feel lightheaded, short of breath, and have chest pain.

When should I seek immediate care?

- You are confused, dizzy, or feel faint.
- Your arm or leg feels warm, tender, and painful. It may look swollen and red.



- You cough up blood.

When should I contact my healthcare provider?

- You have more shortness of breath than usual.
- You need more medicine than usual to control your symptoms.
- You are coughing or wheezing more than usual.
- You are coughing up more mucus, or it is a different color or has a different odor.
- You gain more than 3 pounds in a week.
- You have a fever, a runny or stuffy nose, and a sore throat, or other cold or flu symptoms.
- Your skin, lips, or nails start to turn blue.
- You have swelling in your legs or ankles.
- You are very tired or weak for more than a day.
- You notice changes in your mood, or changes in your ability to think or concentrate.
- You have questions or concerns about your condition or care.

**CARE AGREEMENT:**

You have the right to help plan your care. Learn about your health condition and how it may be treated. Discuss treatment options with your caregivers to decide what care you want to receive. You always have the right to refuse treatment. The above information is an educational aid only. It is not intended as medical advice for individual conditions or treatments. Talk to your doctor, nurse or pharmacist before following any medical regimen to see if it is safe and effective for you.

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