



# Patient education: Chronic obstructive pulmonary disease (COPD) (The Basics)

Written by the doctors and editors at UpToDate

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## What is COPD?

This 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 can be clogged with mucus. The air sacs can also become 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 called "chronic bronchitis" or "emphysema." These are types of COPD.

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## What causes COPD?

The most common cause of COPD is smoking. Smoke can damage the lungs permanently 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.

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## 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 sputum (mucus)

People who have COPD are also at increased risk for:

- Infections, such as pneumonia

- Lung cancer
  - Heart problems
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## 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.

If the results of your spirometry are **not** normal, you will take medicine in an inhaler to see if your breathing gets better. Then, after a few minutes, you will repeat the spirometry. This helps 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 often do not.

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## 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:

- Blood test – This can check for a genetic problem called "antitrypsin deficiency" that can cause early COPD in people who smoke.
  - Chest X-ray
  - Electrocardiogram ("ECG") – This measures the electrical activity in the heart.
  - 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.
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## How is COPD treated?

There are 4 main types of treatment for COPD:

- **Medicines** – There are many medicines to treat COPD. Most people use inhalers that help open up their airways or decrease swelling in their airways. Often, people need

more than 1 inhaler at a time. You might need to take a steroid medicine in a pill for a COPD "flare." This is when symptoms suddenly, but temporarily, get worse.

- **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 rehabilitation ("rehab")** – 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 need surgery. Surgery removes the most damaged parts of the lung. This can reduce symptoms, but it does not always work.

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

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## What can I do on my own?

You should:

- **Quit smoking, if you smoke** – This is the most important thing you can do for your health. This is true no matter how long you have smoked or how much you smoke. If you are having trouble quitting, your doctor or nurse can help.
- **Avoid triggers** – If things like fumes, pollution, or dust make your breathing worse, try to avoid them.
- **Lower your risk of infection** – Certain infections can be very hard on your lungs and can cause COPD symptoms to flare up. You can lower your risk by getting certain vaccines. These include vaccines to protect against the flu, pneumonia, and COVID-19. Also, wash your hands often and stay away from people who are sick.
- **Make healthy lifestyle changes** – Eating a healthy diet can help improve your health. You can also improve your health by following your pulmonary rehab plan if you have one, or finding other ways to move your body.

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## When should I call the doctor?

**Call for an ambulance** (in the US and Canada, **call 9-1-1**) if you:

- Are having trouble breathing, even when resting
- Are coughing up blood
- Have signs of a heart attack, such as:
  - Severe chest pain, pressure, or discomfort with:
    - Trouble breathing, sweating, upset stomach, or cold clammy skin
    - Pain in your arms, back, or jaw
    - Worse pain with activity like walking up stairs
  - Fast or irregular heartbeat
  - Feeling dizzy, faint, or weak

Call your regular doctor for advice if you:

- Have a fever of 100.4°F (38°C) or higher, or chills
- Feel weak or more short of breath than usual when doing your normal activities
- Have new or worsening cough, wheezing, sputum, or shortness of breath

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## More on this topic

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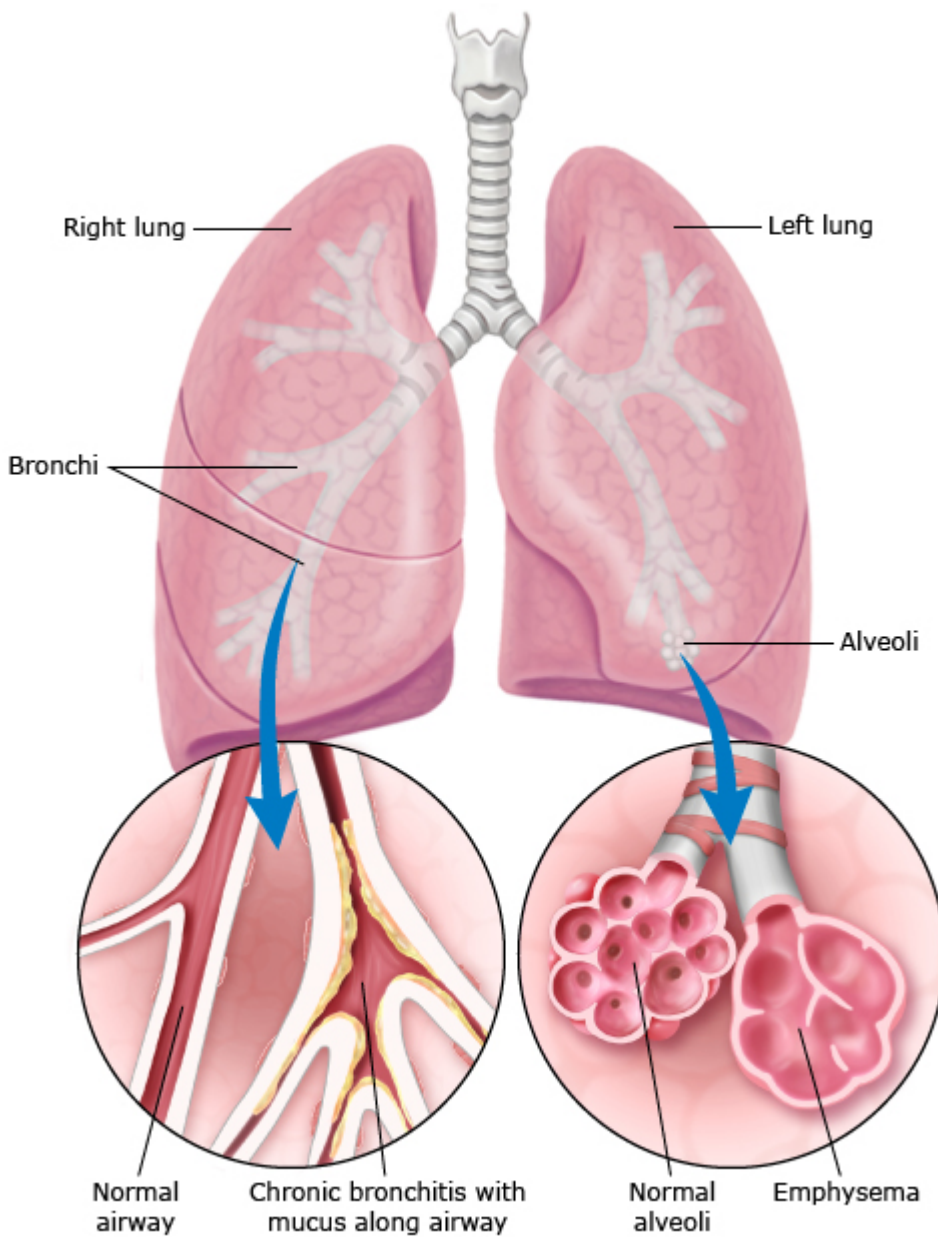
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## GRAPHICS

### Changes to the lungs in COPD



In COPD, the airways ("bronchi") of the lungs become narrow and can be clogged with mucus. The air sacs ("alveoli") that make up the lungs can also become damaged.

Graphic 121872 Version 2.0

