

# COPD: Chronic Obstructive Pulmonary Disease

COPD is a common lung disease affecting more than 12 million Americans, both men and women. This handout explains what happens with this **chronic** (long-lasting) condition, and what you can do to manage or prevent it.

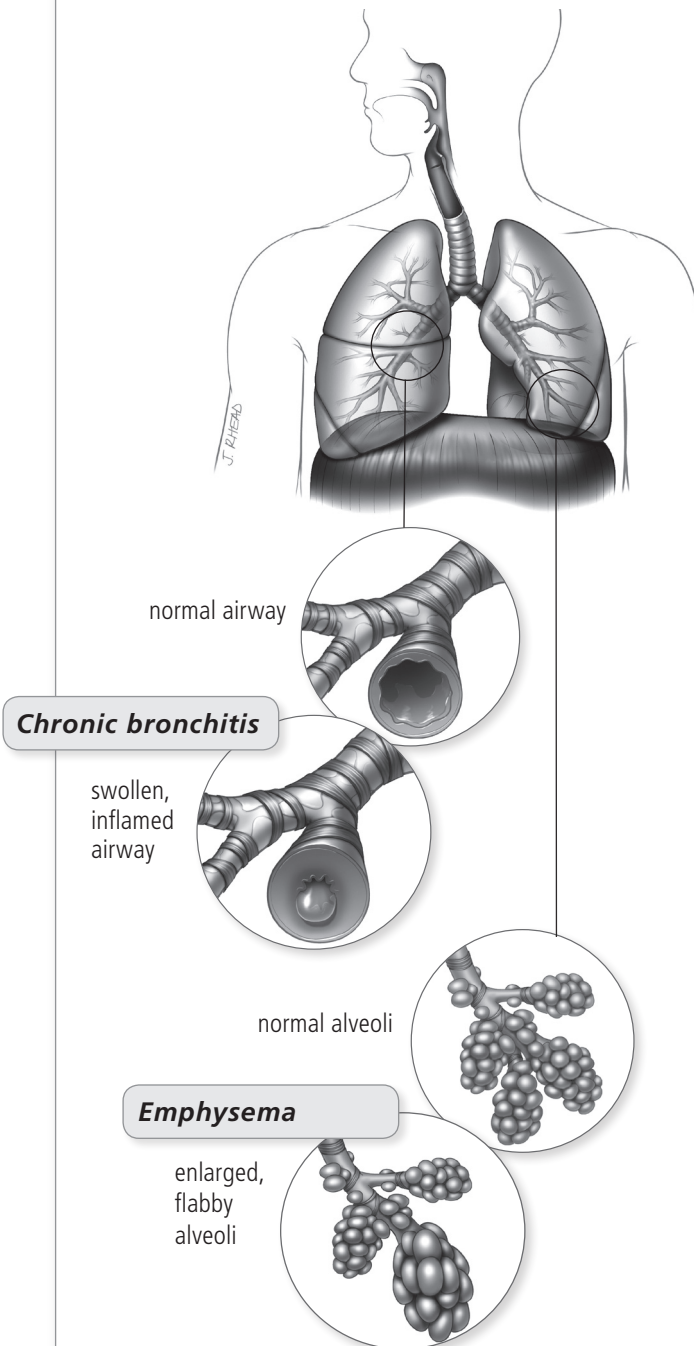
## What is COPD?

COPD stands for **chronic obstructive pulmonary disease**, a serious lung disease. The diagnosis of COPD includes chronic bronchitis and emphysema. Many people with COPD have both of these conditions. Here's what happens with each:

- With **chronic bronchitis**, the airways in your lungs are swollen and inflamed, and tend to produce too much mucus. The swelling and excess mucus narrow the airways and make breathing difficult.
- With **emphysema**, the small airways (bronchioles) and air sacs (alveoli) are damaged and lose their normal elasticity. Like worn-out balloons, the alveoli become over-expanded. They don't contract to push air out as easily when you breathe out. Inhaled air tends to stay trapped inside, and fresh air has a hard time getting in. This limits the oxygen going in — and the carbon dioxide going out — of your bloodstream. These problems are worsened by the fact that the blood vessels around the alveoli are also damaged.

The lung damage that happens with COPD cannot be repaired, and the disease cannot be cured. However, you can do a lot to reduce your symptoms and improve your life. This handout summarizes the main ways you can work with your healthcare team to prevent or manage COPD.

### The lungs and airways



## What are the symptoms of COPD?

COPD takes many years to develop, and in its early stages you may not notice symptoms. Eventually, however, you'll have **coughing** and **shortness of breath**, especially when you're active. You may notice a lot of **mucus** with your cough, and you may have chronic **wheezing** (a faint whistling sound when you breathe).

As COPD worsens, you may also have **fatigue**, **ankle swelling**, and **poor concentration** due to the low oxygen and high carbon dioxide levels.

COPD symptoms tend to sneak up on people. Without being aware of it, people with COPD gradually do less and less, limiting their daily activity so they can avoid becoming out of breath. Most people only seek medical help later in life, at age 50 or more, when their breathing problems are difficult to ignore.

## What causes COPD?

Most people develop COPD after many years of breathing in a substance that damages the lungs and airways.

- **Cigarette smoking is the most common cause of COPD.** Smoking a pipe, cigar, or anything else can also cause COPD. Even second-hand smoke — exposure from smokers you live or work with — can be a factor.
- **Your lungs can be damaged by things you breathe in at work**, such as dust from a mine or quarry (like coal dust and silica dust) or chemical fumes from a factory or paint shop.
- **In a poorly ventilated home, fuel for daily cooking or heating can damage your lungs.**

Not all cases of COPD come from environmental exposures. Heredity can also play a role. People with **alpha-1 antitrypsin deficiency**, for example, have an inherited form of emphysema.

## How is COPD diagnosed?

Breathing problems can come from many different conditions. Before diagnosing COPD, your doctor will assess your lungs and overall health in various ways:

- **Medical history.** The doctor asks questions about your symptoms (“How long have you had this problem?”), your family history (“Does anyone in your family have this problem?”), and your lifestyle (“Have you ever smoked?”). This conversation gives the doctor clues about what may be causing the breathing problem or making it worse.
- **Physical exam.** The doctor examines your body — for example, looks at your skin color or listens to your chest as you breathe — for additional information.
- **Imaging tests.** Your doctor may order imaging (such as a chest x-ray) to get pictures of the inside of your chest and lungs. The images can't be used to diagnose COPD, but they may reveal other problems such as a lung infection.
- **Lung function tests (pulmonary function tests).** Lung function tests are the only way to diagnose COPD. They're also used to monitor your response to treatment and measure your condition over time. Common types of lung function tests are:
  - **Breathing tests** to measure how well your lungs are working. The simplest breathing test is **spirometry**, which can be done in your doctor's office or in a hospital. Your doctor may also order more complex lung tests to get additional information about your lungs.
  - **Tests of oxygen level** to see how well your lungs deliver oxygen to your bloodstream. **Pulse oximetry** uses a special light clipped to your finger to measure oxygen in your blood. An **arterial blood gas** test measures the oxygen in a sample of blood from your artery.
  - **Exercise tests**, which are sometimes combined with tests of your oxygen level, as in the **6-minute walk test**. These tests help your doctor know how your heart and lungs respond to the stress of physical activity. They can also help your doctor determine the severity of your condition.

## What are the stages of COPD?

At the time of your diagnosis, your doctor will determine the severity of your COPD. COPD is a progressive illness, and your treatment may change as your symptoms change. COPD severity is classified in stages based on your breathing test results:

- **Stage I: Mild COPD.** You may not notice any symptoms, but breathing tests reveal lung damage.
- **Stage II: Moderate COPD.** At this stage of severity, you have shortness of breath when you're active. You may notice persistent coughing or mucus.
- **Stage III: Severe COPD.** At this stage, shortness of breath begins to limit your daily activity. You feel tired and may have flare-ups (**exacerbations**) during which your symptoms are worse than usual.
- **Stage IV: Very Severe COPD.** Shortness of breath limits your activities. An exacerbation or lung infection may be life-threatening.

While it can seem discouraging to consider these stages, realize that they only tell part of the story. The rest of the story is yours to create. **You have a lot of power to manage your symptoms and learn to breathe better, do more, and live well with COPD.**



### **About pulmonary rehabilitation (pulmonary rehab)**

If your doctor recommends a pulmonary rehab program, you owe it to yourself to go. Pulmonary rehab is an exercise and education program for people with COPD

and other breathing problems. Studies have shown the pulmonary rehab programs make a big difference for people at all stages of lung disease. Specifically, the program can:

- Ease your shortness of breath
- Build your capacity for exercise and activity
- Reduce anxiety and depression caused by lung disease
- Help you stay out of the hospital
- Improve your quality of life

Your doctor can refer you to a program in your area. Most health insurance companies will cover the cost for at least 12 weeks.

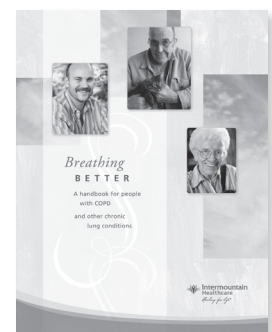
## How is COPD treated?

Treatment for COPD depends on the severity of your disease, your daily habits, and your overall health.

Generally, treatment includes:

- **Quitting smoking.** This is the most powerful step you can take toward better health. See the back of this handout for more information.
- **Other daily lifestyle changes, such as exercising, practicing breathing techniques, lowering stress, and eating well.** Your healthcare team can give you information and plans to help you care for yourself at home.
- **Medication.** Nearly everyone with COPD can be helped by medication. COPD medications include:
  - Quick-relief, or “rescue,” medications that you inhale to help you breathe better right away
  - Maintenance medications that help control symptoms and prevent exacerbations
- **Oxygen therapy.** If your COPD is mild, you may not need oxygen. Yet as COPD progresses, oxygen can be vital for helping you feel better and stay active. Studies have shown that oxygen therapy can extend your life, as well.
- **Surgery.** A small number of people with COPD may be helped by lung volume reduction surgery. This surgery removes damaged lung tissue and creates more space for the diaphragm to move and help pull air into the lungs. Lung transplant may also be an option for treatment of severe COPD.

Your doctor can explain the plan for your treatment. Be sure to ask questions, and consider attending pulmonary rehabilitation (see left) for support. Also, for more information on managing your COPD, look to Intermountain's **Breathing Better**: A handbook for people with COPD and other chronic lung conditions.



The **Breathing Better** booklet is available from your providers or at [www.intermountainhealthcare.org](http://www.intermountainhealthcare.org)

## How can I prevent COPD?

If you smoke or have regular contact with a lung irritant (such as airborne gases or dust, fumes, smoke) then you're at risk for COPD. To prevent this, you must:

- Stop smoking
- Avoid lung irritants, including second-hand smoke

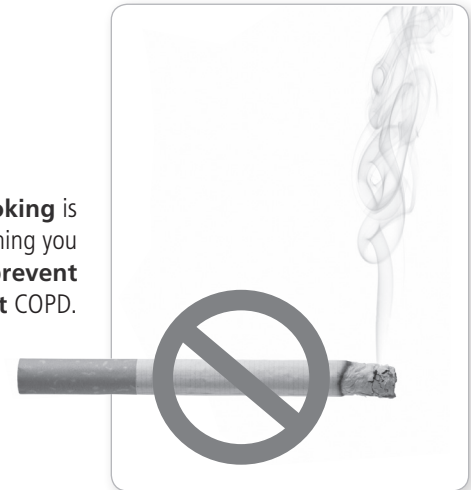
Complete avoidance — quitting, not just “cutting back” — is the only way to prevent irreversible lung damage.

## “But I already have COPD. What's the point of quitting smoking?”

The point is to help you live better and longer. Quitting now will help you:

- **Prevent further damage to your lungs.** Every cigarette you don't smoke is damage you don't do.
- **Slow the deterioration of your lungs.** Quitting is one of the most important steps you can take to slow down the progression of the disease.
- **Improve your symptoms.** Your coughing, sinus congestion, fatigue, and shortness of breath will all decrease.
- **Lower your chance of stroke, heart disease, and lung cancer.** Smoking hurts your health in many ways. Quitting improves your health in *every* way.
- **Stay out of the hospital.** Studies show that episodes of severe breathing problems – exacerbations – decrease when a person quits smoking.

Quitting smoking is the best thing you can do to **prevent** or **treat** COPD.



## “I've tried to quit before. I can't.”

The average person makes at least five unsuccessful attempts to quit before they're able to stop smoking for good. So try again. Millions of people have quit, and so can you.

Accept that you may need help to quit — many people do. Ask your doctor for medication or nicotine replacement therapy to help manage withdrawal symptoms and the urge to smoke.

Ask for Intermountain's *Quitting Tobacco: Your Journey to Freedom*. This booklet is full of information and strategies to help you quit.



*Quitting Tobacco: Your Journey to Freedom* — this booklet is available from your doctor or at [www.intermountainhealthcare.org/prevention](http://www.intermountainhealthcare.org/prevention)