

COPD

What is it?

COPD is the term for chronic obstructive pulmonary disease. The term includes several lung diseases. In COPD, a person's lungs gradually work less and less well. This usually happens after years of irritation to the lungs.

When a person breathes, air comes into the lungs. The air travels through smaller and smaller passages. Finally it reaches the tiny air sacs. Here oxygen from the air enters the blood. At the same time, carbon dioxide from the blood passes into the sacs. The carbon dioxide is exhaled when a person breathes out.

There are millions of these air sacs in the lungs. They can get blocked or obstructed by swelling or mucus. Long-term irritation causes the air passages to swell and make mucus. Eventually in COPD, the walls of the tiny sacs are destroyed. This is called emphysema. Emphysema is one of the primary diseases of COPD. When these things happen, the blood does not get enough oxygen. To make up for the decrease in oxygen, the person needs to breathe more often and gets short of breath easily.

People who have COPD often also have chronic bronchitis. This means that the person has a productive cough for at least 3 months each year for at least 2 years in a row. A productive cough is one that brings up mucus. Chronic bronchitis is the other main disease of COPD.

Some people also have bronchospasm. This means the lungs react to irritants by tightening up temporarily. The small airways are also inflamed. All of these things make it harder to breathe.

What is the cause?

The main cause of COPD is smoking. Tobacco smoke irritates the small air passages in the lungs. This causes them to make mucus. This narrows the air passages and destroys the air sacs. The lungs become less elastic and are unable to stretch to let in a full breath. They may react more to irritants.

Long-term exposure to air pollution or fumes at work can also cause COPD. A long history of lung infections or poorly treated asthma can bring on COPD. In some cases, there may be a genetic cause.

What are the symptoms?

You will feel short of breath. Your chest may feel tight and you breathing may have a wheezy sound to it. COPD comes on slowly. At first you may only be aware of being out of breath sometimes. You may be winded after climbing a flight of stairs. Over time the shortness of breath happens more often. It takes less and less activity to give you trouble.

You may have a chronic cough. You may have more respiratory infections than normal. It may be hard to cough up thick mucus. You may cough up small amounts of blood. You may lose weight without trying.

How is it treated?

If you have not quit smoking, now is the time to stop. It is the most important thing you can do. It is never too late to stop. Quitting smoking may help COPD from getting worse.

One of our goals of treatment is to keep your COPD from worsening. The other is to teach you how to use your lungs better.

Do your best to avoid getting respiratory infections. Stay away from people who have the flu or other respiratory infections. If you have allergies, it is especially important to avoid the things you are allergic to. We may want to do allergy testing to help you know what to avoid.

There are medicines to help you breathe easier. Sometimes extra oxygen may make breathing easier. There are several things you can do to help your breathing. Coughing up the mucus from your lungs is easier if you drink enough fluids during the day. Getting exercise and eating a healthy diet are also important. Sometimes antibiotics are used if we think you have a lung infection.

What can I expect?

There is no way to reverse the damage already done to your lungs. If you follow your treatment program you may be able to keep your condition from getting worse. If you smoke you must stop. Many people with COPD lead healthy, active lives. A lot depends on the condition of your lungs when you start treatment. It also depends on how well you follow your program. In some cases we may recommend surgery to remove a damaged section of lung. If your COPD is severe, we may recommend a lung transplant.

What to watch for.

Call us if there are signs that your COPD is getting worse.

These may include:

- Greater shortness of breath, wheezing, or chest tightness
- Mucus that is colored, thicker, or increased in amount
- Heart beating very fast
- Less energy or trouble staying alert

If you are using your inhaler more than usual or more than directed

Talk to us if you are having trouble quitting smoking.

COPD, Acute Exacerbation

What is it?

COPD stands for chronic obstructive pulmonary disease. In COPD, a person's lungs gradually work less and less well. This usually happens after years of irritation to the lungs.

When a person breathes, air comes into the lungs. The air travels through smaller and smaller passages. Finally it reaches the tiny air sacs. Here oxygen from the air enters the blood. At the same time, carbon dioxide from the blood passes into the sacs. The carbon dioxide is exhaled when a person breathes out.

There are millions of these air sacs in the lungs. They can get blocked by swelling or thick mucus. Long-term irritation causes the air passages to swell and make thick mucus. Sometimes in COPD, the walls of the tiny sacs are destroyed. When these things happen, the lungs do not work normally. To make up for this, the person needs to breathe harder and faster and gets short of breath easily. When air sacs are destroyed in this way, it is called COPD.

Some people with COPD also have bronchospasm. This means the small airways in the lungs react to irritants or infection by tightening up temporarily. The small airways are also inflamed. All of these things make it harder to breathe.

Although COPD is a chronic illness, there can be times where it gets much worse suddenly. This is called an exacerbation or flare.

What is the cause?

The main cause of COPD is smoking. Tobacco smoke irritates the small air passages in the lungs. This narrows the air passages and destroys the air sacs. The lungs become less elastic and are unable to stretch to let in a full breath. They may react more to irritants. This also causes them to make mucus. Long-term exposure to air pollution or fumes at work can also cause COPD. A long history of lung infections can bring on COPD.

A COPD flare can be caused by many things:

- Irritation of the lungs by smoke or some other substance
- Illness that affects the lungs
- Not following your COPD treatment program

What are the symptoms?

The signs of a flare of your COPD include some or all of the following:

- Increased trouble breathing
- Heart beating fast
- Coughing more, coughing up more sputum, sputum is different (for instance, different color)
- Swelling in hands or feet
- Wheezing or wheezing more
- Trouble being alert
- Loss of energy
- Fever (if you have an infection)

- Tightness in chest

How is it treated?

If your flare is severe, we may treat you in the hospital. We may do an X-ray to see if something has changed in your lungs. We may give you medicine to make you breathe easier. We may put you on oxygen, if you are not already using it. We may need to treat an infection in the lungs with antibiotics.

What can I expect?

Most of the time, we can treat a flare successfully. You may not get back all of the lung function you had before the flare, however.

To avoid flares as much as possible, follow your treatment program. Be sure to get the flu vaccine every year to avoid getting the flu. Get the pneumonia vaccine if you have not already had it.

If you still smoke, you must stop. Smoking will only make your COPD worse and worse. We can help you with this. Being around others while they smoke is harmful.

In some cases we may suggest surgery to remove a damaged part of the lung. We may suggest a lung transplant.

What to watch for.

Let us know if our treatments for your flare are not working or if you are getting worse. Call us if there are signs that your COPD is getting worse again. Call us if you are having trouble sticking with your treatment program.

Instructions:

3 times a day practice pursed lip and abdominal breathing.

Pursed lip breathing can help you get rid of air trapped inside the lungs. Breathe slowly through your nose. Hold your breath for two to three seconds. Purse your lips together as though you are going to whistle. Exhale, or breathe out slowly, through pursed lips.

Abdominal breathing can slow down your breathing and help you relax. Lie down on your back. Raise your head with a pillow if necessary. Put one hand on your stomach and the other hand on your chest. Slowly inhale and exhale through your nose by pushing your stomach out. Your stomach should move but your chest should not move or should move very little.

A spacer can be used with your metered dose inhaler medication.

Spacers can help you get the most out of each dose of inhaled medication. To use a spacer:

- Remove caps from the inhaler and the mouthpiece of the spacer.

- Place the inhaler into the spacer.
- Shake the inhaler as you normally do.
- Breathe out completely.
- Place the mouthpiece of the spacer into your mouth.
- Spray one puff from the inhaler.
- Inhale slowly and deeply.
- Hold your breath for 5 to 10 seconds if you can.
- If you have been instructed to use more than one puff, wait one full minute before using the inhaler and spacer again.
- Wash your spacer with warm soapy water. Rinse and allow to air dry.

Avoid exposure to cigarette smoke.

Family members who smoke should not smoke in the house or in the car. Smoking and being exposed to smoke can make your condition worse.

Avoid exposure to infections.

Avoid close or prolonged contact with people who are sick. If possible avoid crowded or enclosed settings, especially if children may be present.

Avoid exposure to things that make your problem worse.

Common things that can cause irritation are:

- Pet dander
- Pollen
- Certain foods and food dyes
- Wood smoke from a fireplace or wood stove
- Cigarette smoke
- Cold air
- Damp, moldy areas
- Perfumes
- Paint

Continue with our present treatment plan.

We don't see any need to change your care at this time. Continue any medicines and home treatments as directed. Keep all scheduled follow-up appointments with us. If you have any questions or concerns before your next visit, call us.

Decreasing the stress in your life may help your condition improve.

It is impossible to eliminate all stressful events in your life. However, it is possible to change the way you react to those events.

You can:

- exercise daily (walking is easy)
- take time for a hobby you enjoy (reading, listening to music)
- learn how to meditate or take time to be quietly with yourself
- learn techniques to relax your muscles
- get a massage
- find someone you can talk to about how you feel

Avoid:

- excessive alcohol (more than 2 drinks a day)
- excessive caffeine (coffee, tea, colas)
- taking on more than you can do

Drink at least 8 glasses of clear liquids a day.

Clear liquids include:

- water
- clear broth (no milk-based soups)
- Jell-O
- Popsicles
- apple and grape juice
- herbal tea

Avoid milk, regular teas, and coffee.

Eat a normal well-balanced diet. Follow the food pyramid for healthy eating.

Follow the food pyramid for healthy eating. The food pyramid shows how many servings you should have from each food group each day. We recommend that you follow these guidelines for healthy eating.

	1600 cal	2200 cal	2800 cal
Servings			
Grains	6	7.5	11
Vegetables	4	4-5	5
Fruit	4	4-5	5
Dairy (low-fat)	2.5	3	3
Meat	1.5	2	2

Most women and some older men need about 1600 calories each day. Very young children may need less than this. However, they should get at least 2 servings of dairy every day.

Most children, teenage girls and active women need about 2200 calories each day. Men who are not very active need about the same. Women who are pregnant or breastfeeding may need more.

Teenage boys and active men need about 2800 calories each day. Very active women need about the same. Athletes may need more.

Starches give you energy. They also give you some vitamins and minerals. Starches include bread, pasta, cereal, rice and potatoes. A serving is 1 piece of bread or a half-cup of cooked pasta. A half-cup of cooked cereal, rice, or 1 cup of ready-to-eat cereal equals one serving. A spaghetti dinner usually equals about 3 servings.

Fruits and vegetables provide fiber. They also provide many vitamins and minerals. One serving is a medium-sized apple, peach, banana, or orange. One serving is $\frac{1}{2}$ cup of chopped fruit or cooked vegetables. 1 cup of raw lettuce or other greens or 1 cup of juice equals 1 serving as well.

Dairy products include milk, cheese, and yogurt. They are good sources of protein and calcium. A serving is 1 cup of milk or yogurt and 1.5 ounces of cheese. Look for low-fat or non-fat versions.

Meat is a good source of protein. Meats include beef, pork, poultry, and seafood. A serving is 3 ounces. This translates to a piece about the size of a deck of cards. Non-meat sources of protein include dry beans, eggs, and nuts. A serving is $\frac{1}{2}$ cup of cooked beans, 1 egg, 2 tablespoons of peanut butter, or $\frac{1}{3}$ cup of nuts.

Eat only a little of sweets and fats. Drink alcohol in moderation.

Sweets like candy and desserts are high in calories. They don't usually give us much else. The same is true of alcoholic drinks. Make them a special treat, not a regular part of each meal. Fats are also high in calories. Your body needs some fat in the diet, but most people eat too much. Avoid saturated and hydrogenated fats as much as possible. These fats are found in meat, lard, eggs, dairy products, margarine, and shortening. Instead, use non-fat or low-fat dairy products. Trim skin and fat off meat. Choose olive, canola, soybean, safflower, corn, or sunflower oil for cooking.

Eat small frequent meals.

Eat 4 or 5 small meals a day. Eating one or two large meals a day can be stressful for your body. You may have a better appetite when you have less food to eat at a meal.

There are many things to consider when choosing a nursing home or long-term care facility.

Age or illness sometimes makes it hard for a person to continue to live at home. They may only need nursing care while they recover from an illness. Or, they may need permanent help with daily living. Choosing a care facility for yourself or a loved one is not an easy task. It will take some time to get all the information you need to make a good choice.

There are several different kinds of care facilities.

- Retirement center. These often offer several levels of service in one place. For instance, they may have apartments, assisted living, and nursing home care.
- Assisted living home. These generally offer room and board. The staff offers help with medications and supervised activities. They do not provide health care, however.
- Intermediate care home for people who are not seriously ill. These homes provide nursing care some of the day. They also provide help with tasks of living like going to the toilet, dressing, and personal care.
- Skilled nursing home for people who require nursing care 24 hours a day.
- Special care facility. This is for people with specific conditions. For example, there are many facilities for people who have Alzheimer's or other forms of dementia. This may be attached to a skilled nursing home.

The following is a checklist of questions to ask or things to look for when you tour a facility.

Administration:

- ✓ Does the facility have a current state license? If a state license is not required, does it have a letter of approval from a licensing agency?
- ✓ Is there a written statement of patient's rights? Is this statement placed where it can be seen and read by the patients?
- ✓ Is there a grievance procedure for patients?
- ✓ Is there a service to take patients to medical appointments or other outside activities?
- ✓ What is the family expected to continue to do for the patient?
- ✓ How are valuables protected?

Financing:

- ✓ What services are covered by Medicaid or Medicare?
- ✓ What is the daily room rate?
- ✓ What is not covered by the daily room rate? For example, are cable television, telephone, and toiletries covered?

Comfort:

- ✓ Do patients look cared for and generally content?
- ✓ Do they have privacy?
- ✓ Do they have access to things like television and radio?
- ✓ Do staff member show patients respect, interest, and affection?
- ✓ Are patients allowed to wear their own clothes?
- ✓ Is the nursing home clean and orderly?
- ✓ Is the home reasonably free of unpleasant odors?

- ✓ Are rooms well-ventilated and kept at a comfortable temperature?

Safety:

- ✓ Are toilet and bath areas easy for handicapped patients to use?
- ✓ Are there wheelchair ramps where necessary?
- ✓ Are there grab bars in toilet and bathing areas?
- ✓ Are there handrails on both sides of the hallways?
- ✓ Are there automatic sprinkler systems and emergency lighting?
- ✓ Are there portable fire extinguishers?
- ✓ Are exit doors free and accessible? Are they unlocked on the inside and easy to reach?
- ✓ Are emergency evacuation plans posted in prominent locations?
- ✓ Are there smoke detectors and fire alarms on every floor?
- ✓ Is there a fire station near the home?

Professional Services:

- ✓ Is a physician available at all times, on staff or on call?
- ✓ Does the home have an arrangement to provide patients with dental care?
- ✓ Are pharmacy services supervised by a qualified pharmacist?
- ✓ Is there a hospital nearby?
- ✓ Does the home have arrangements with a nearby hospital for emergency transfer of patients?
- ✓ Do they reserve a bed if a patient is transferred to a hospital?

Nursing Services: (skilled nursing home)

- ✓ Is at least one registered nurse (RN) or licensed practical nurse (LPN) on duty day and night?
- ✓ Are nurse call buttons located at each patient's bed and in toilet and bathing areas?
- ✓ How many residents does one nurse's aides serve (ask by shift-days, evenings, and nights)?

Food Service:

- ✓ Is the kitchen clean and reasonably tidy?
- ✓ Are at least three meals served each day?
- ✓ Is the food well-prepared, tasty, and hot when served?
- ✓ Are patients given enough food?
- ✓ Are snacks available at other times?
- ✓ Are special meals prepared for patients on therapeutic or other diets?
- ✓ Do patients who need help receive it, whether in the dining room or in their own rooms?

Other Services and Activities:

- ✓ Is there a physical therapy program?
- ✓ Are there special programs to help residents who have lost functions? For instance, to help those who cannot walk or feed themselves?
- ✓ Are there special services available to aid patients and their families?
- ✓ What recreational, cultural, and mental activities are offered for patients?
- ✓ Do volunteers come in from the community?
- ✓ Are activities offered for patients who are inactive or confined to their rooms?

Rooms:

- ✓ Is a married couple allowed to share a room?
- ✓ Do all rooms have a window to the outside?
- ✓ Is there a curtain or screen available to provide privacy for each bed whenever necessary?
- ✓ Can a patient bring some personal furniture?
- ✓ Are patients allowed to decorate their rooms and keep personal property on hand?
- ✓ Does each patient have a reading light, a comfortable chair, and a closet and chest of drawers for personal belongings?
- ✓ Does the person get to choose to which room they are assigned?
- ✓ Can a patient request another roommate if they don't get along with the one they have?

Visiting:

- ✓ Is the home convenient for friends, relatives, and the person's doctor to visit?
- ✓ What are the visiting hours?
- ✓ Are visitors allowed to come anytime?

You can call your local Area Agency on Aging for information on the places you are considering. Ask for information about any complaints that have been lodged against them. Ask how those complaints were resolved. Then ask the nursing home staff what has been done to prevent the problem that led to the complaint from happening again.

To us an inhaler:

- Remove the cap and shake the inhaler. Hold the inhaler with the nozzle down and the mouthpiece close to your mouth.
- Exhale as much air as you can.
- Put the mouth piece in your mouth. Do not close your lips on it.
- Take a slow, deep breath while squeezing the canister and mouthpiece together to release the medication.
- Hold your breath for a few seconds.

- Exhale slowly, keeping your lips together.
- If you use a second dose, wait the prescribed time and then repeat.
- Remove and wash the mouthpiece every day.
- Store the inhaler with the dust cover on.
- If you have been instructed to use more than one puff, wait one full minute before using the inhaler again.

To check how much medicine is left, take the canister out of the mouthpiece and float it in a glass of water. If it floats on top it is empty. It should be replaced.

Use your oxygen at 2 liters per minute 12 hour a day.

Never adjust the level of your oxygen without talking to us. Too much oxygen can be dangerous. Oxygen is flammable. Never allow anyone to smoke in the same room with you and your oxygen. Stay away from gas heaters, fireplaces, gas stoves, or barbecues. In case of a fire, turn off the oxygen and leave the house. Use a portable tank when you leave the house. Know how long your portable oxygen cylinder will last. Some cylinders last 4 to 5 hours. Allow plenty of time to get home to replace your oxygen. Bring an extra tank if necessary.

While traveling in the car, keep your oxygen tank upright to keep the oxygen from leaking. Keep a window open for ventilation.

Discuss vacation plans with us. We can help you make your trip safe. You will need to always carry a prescription for your oxygen. Call your oxygen supply company. They can help you plan when and where you can get refills. Call airlines, train stations, or cruise lines well in advance of your trip and tell them about your oxygen needs. They can help you with any forms that may need to be filled out by your doctor. They can also tell you about any special requirements and rules they may have. If you are flying, oxygen can be arranged by the airline.

Hotels will usually be able to assist you. Some can arrange to have oxygen delivered to the room before you arrive. Call for early reservations.

Call for a replacement tank when your tank reads $\frac{1}{4}$ full. Check the level every day so you do not run out. It is a good idea to have a back up tank in case of emergency.

Call if you feel drowsy, more short of breath, or have a headache. These can mean you are not getting the right amount of oxygen.

Use your peak flow meter twice a day or whenever you feel your breathing is getting worse.

Peak flow meters help determine how your lungs are functioning. They measure the speed with which you can

exhale. The speed with which you can exhale depends on your effort and the condition of your lungs. Your lungs will give different readings depending on the time of the day and how you feel.

To use a peak flow meter:

- Measure peak flow before you use your inhaler.
- Set the indicator on the lowest setting.
- Sit up straight, or stand.
- Take in a deep breath.
- Close your lips around the mouthpiece.
- Blow out as fast and hard as you can, like a short "huff."
- Record the reading.
- Take three readings. You will need to rest between readings.
- Record the highest reading.
- Wash your flow meter with warm soapy water. Rinse and allow to air dry.

You need to quit smoking.

We know this is not easy. There are several methods available to help you. Ask us if we can help in any way.

Precautions:

Call 911 if:

You are too short of breath to talk, you can speak only one or two words between breaths, or your lips or nails look blue.

Call Your Physician if:

The cough is worse or secretions become darker or colored.

You have difficulty breathing while lying down and you are comfortable only when sitting up.

You have pain in the chest that gets worse with deep breathing or coughing.

Your cough is not better in 1 week.

Your temperature is higher than 102 F.

Seek Immediate Medical Attention if:

You are having trouble staying awake.

You or your family members notice any confusion or difficulty with memory.

Your shortness of breath is getting worse.