



Chronic Obstructive Pulmonary Disease (COPD)

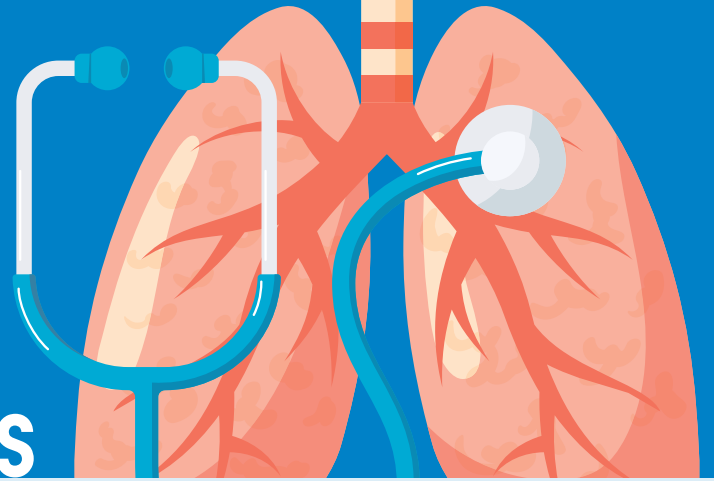


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What is Pulmonary Rehabilitation?

Pulmonary rehabilitation, or pulmonary rehab, is a program of education and exercise designed to help people with chronic lung disease, such as chronic obstructive pulmonary disease (COPD). It can help you increase how much you can do before feeling out of breath. It can help you manage your symptoms so you feel better.

Pulmonary rehab consists of:

- Education
- Exercise
- Emotional support
- Links with resources in your community

This program is supported by a team of healthcare workers:

- Doctors
- Physical therapists
- Nurses
- Dieticians
- Care managers
- Respiratory therapists

Pulmonary rehab can start while you are in the hospital. What you learn can also be done at home. Outpatient programs are offered with a prescription from your provider. This program consists of 2 to 3 sessions each week for about 6 weeks.



What is COPD?

COPD stands for chronic obstructive pulmonary disease. It means the airways in your lungs are blocked. Because of this, it can be hard to breathe. You may have trouble with daily tasks because of shortness of breath. Over time the shortness of breath gets worse, making it harder to take care of yourself and take part in daily tasks.

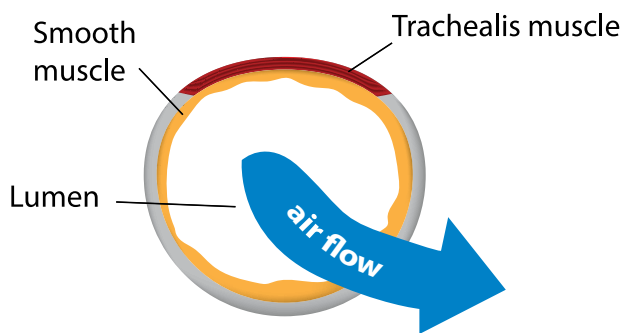
COPD is a chronic disease that can be treated. With the right diagnosis and treatment, there are many things you can do to breathe better and enjoy life for many years.

Chronic bronchitis and emphysema are two common types of COPD.

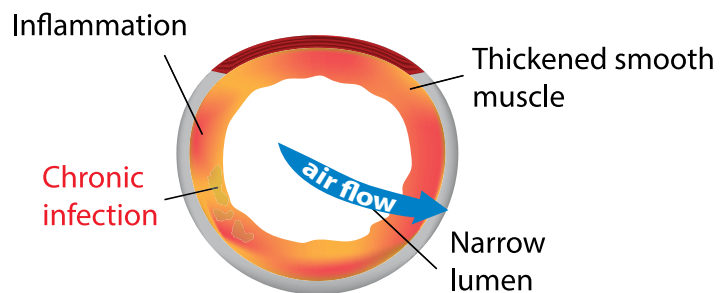
What happens in chronic bronchitis?

With chronic bronchitis, there is damage to the airway tubes. These airways become irritated and swollen. This causes coughing with mucus that is hard to bring up. This leads to shortness of breath.

NORMAL AIRWAY



OBSTRUCTIVE BRONCHIOLITIS

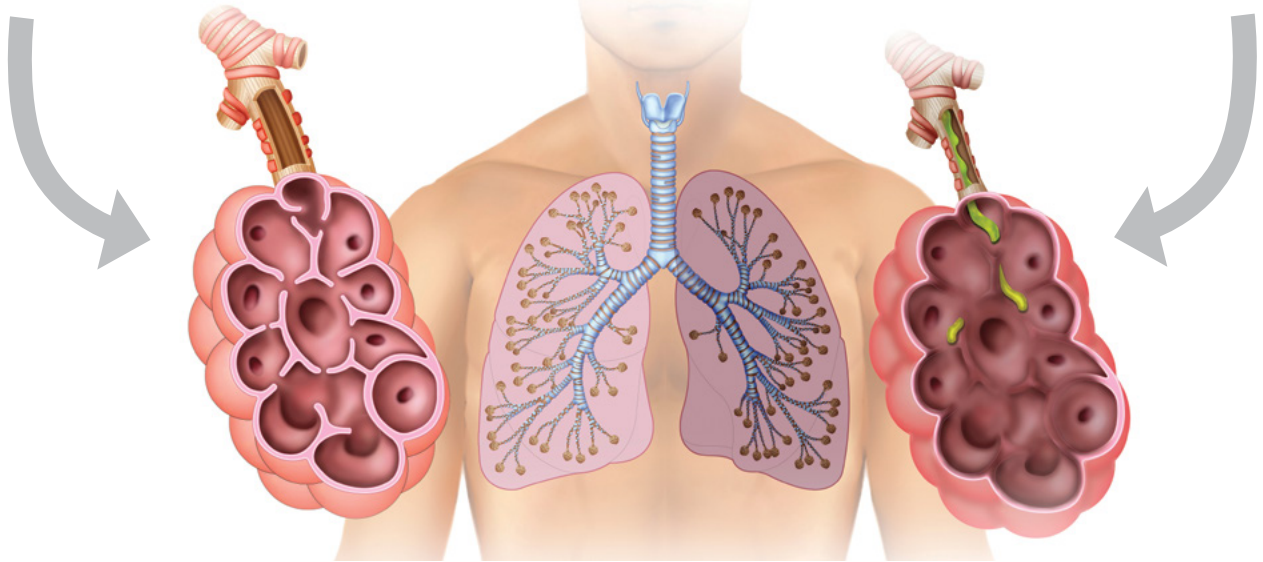


What happens in emphysema?

The small airways of the lung are damaged and lose their stretchiness. The airways collapse when you exhale, causing air to get trapped in the air sacs. This means that less oxygen enters the blood vessels to be carried to all of the cells of your body. This makes it hard to breathe.

ALVEOLI WITH EMPHYSEMA

NORMAL ALVEOLI



How did I get COPD?

Most people get COPD from smoking. Cigarette smoke damages lungs, which can develop into COPD over many years.

How can COPD make you feel?

COPD makes you work harder to breathe. Air may get trapped in the lungs, which prevents your lungs from filling all of the way when you inhale (breathe in). It's harder to take deep breaths. Over time, your lungs may become enlarged. This makes it harder for the lungs to expand fully in the chest. These problems cause you to have shortness of breath. Wheezing, chronic cough, and feeling tired or worn out are also common.

How do I know if I have COPD?

People with COPD may have:

- Shortness of breath at rest or with activity
- Cough
- Wheezing
- Fatigue
- Mucus that does not go away

If you feel this way, talk to your healthcare provider.

Your healthcare provider may have you do a breathing test called spirometry. This measures your ability to breathe out (exhale) and can detect if your airways are narrowed.



What should I do if I have COPD?

- Talk to your healthcare provider and attend your scheduled visits
- Take your inhalers or nebulizer treatments as prescribed by your provider
- Learn breathing exercises
- If you still smoke, STOP!
- Avoid cigarette smoke and other irritants in the air
- Wash your hands often to reduce your risk of getting sick
- Get the flu vaccine every year
- Participate in pulmonary rehab
- Be a part of the COPD community to learn about your disease and connect with other people who have COPD



What is a COPD flare?

COPD flare, or exacerbation, means that your disease has become worse for a period of time. The most common reason for this to happen is from an infection. It can also happen after breathing in irritants like smoke, smog, pollen or mold in the air.

Knowing the signs of a COPD flare can help you get early treatment. Early treatment can help shorten the length you feel poorly and may help decrease how bad you feel during this time.

Signs and symptoms of a COPD flare:

- More short of breath than usual
- Cough that is worse than usual or a new cough
- Change in the color or amount of your sputum (mucus)
- More fatigue than usual
- Possible fever

If you use a pulse oximeter to measure your oxygen levels, you may notice your oxygen levels to be lower than usual.



If you are sleeping more than usual, have a headache when you wake up, or feel confused (your family may notice this), you may be having high levels of carbon dioxide. This requires immediate medical attention!

Can I prevent having a COPD flare?

Not all flare ups can be prevented but there are ways to lower your risk:

- If you smoke, STOP!
- Avoid being around people who are sick with a cold or flu
- Wash your hands often to reduce your risk of becoming sick
- Get vaccines as recommended by your healthcare provider
- Use inhalers and medicines as prescribed by your healthcare provider



What happens in a COPD flare?

When you have a COPD flare up, your airways become irritated and swollen. This causes your airways to narrow and makes you feel short of breath.

How is a COPD flare diagnosed?

Your healthcare provider can make a diagnosis of a COPD flare based on how you feel and your physical checkup. Other tests may not be useful in all cases.

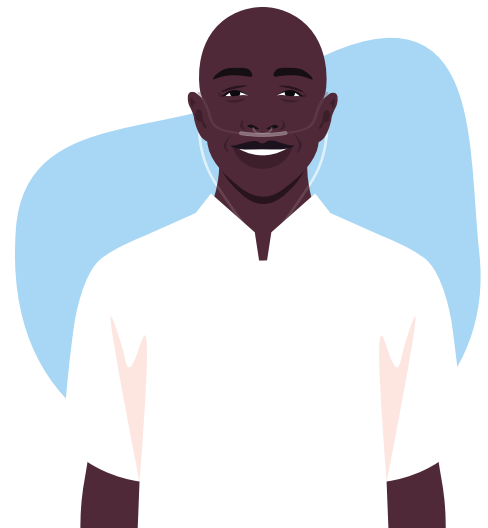
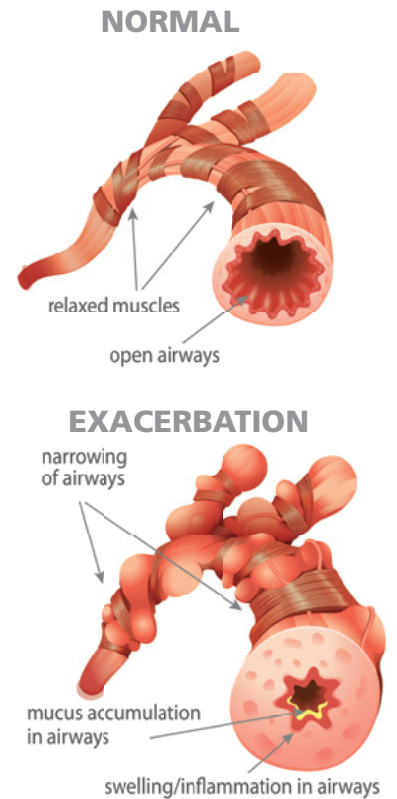
How is a COPD flare treated?

Treatment begins at home with inhalers, steroids and/or antibiotics. If your symptoms are severe, you may need to stay in the hospital. In these cases, treatment may consist of:

- Steroids that help treat the swelling in the airways
- Bronchodilators that help improve airway tightness
- Antibiotics to treat an infection

Oxygen may be needed to supply the body with oxygen and help get rid of carbon dioxide. Oxygen can be given in many ways and is based on how bad your symptoms are.

- Oxygen may be given using a flexible tube into your nose, called a nasal cannula
- Continuous positive airway pressure (CPAP) with a nose or face mask
- Mechanical ventilation is a breathing tube that can be used in severe cases that need to be treated in an intensive care unit (ICU)



My COPD Action Plan & My COPD Management Plan

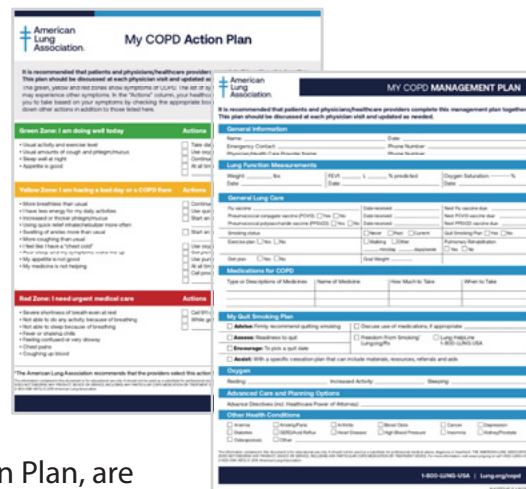
My COPD Action Plan and My COPD Management Plan are tools that can help guide the treatment of your disease based on how you feel each day. These tools are endorsed by the American Lung Association and are geared to your distinct needs.

It is recommended that patients and healthcare providers complete these plans together. They should be discussed at each visit and updated as needed.

Understanding the Action Plan

The green, yellow and red zones reflect how you are feeling each day. Under each color, on the left side of the Action Plan, are descriptions to help you tell if you are in the green zone, yellow zone, or red zone for that day.

Each zone includes a set of Actions that you can take for that day to help control your COPD symptoms. Please follow the recommended action steps based on the treatments selected by your healthcare provider.



Please call 911 or seek medical care immediately if you are in the Red Zone!!!



My COPD Action Plan

It is recommended that patients and physicians/healthcare providers complete this action plan together. This plan should be discussed at each physician visit and updated as needed.

The green, yellow and red zones show symptoms of COPD. The list of symptoms is not comprehensive, and you may experience other symptoms. In the "Actions" column, your healthcare provider will recommend actions for you to take based on your symptoms by checking the appropriate boxes. Your healthcare provider may write down other actions in addition to those listed here.

Green Zone: I am doing well today

Actions

- Usual activity and exercise level
- Usual amounts of cough and phlegm/mucus
- Sleep well at night
- Appetite is good

- Take daily medicines
- Use oxygen as prescribed
- Continue regular exercise/diet plan
- At all times avoid cigarette smoke, inhaled irritants*
- _____

Yellow Zone: I am having a bad day or a COPD flare

Actions

- More breathless than usual
- I have less energy for my daily activities
- Increased or thicker phlegm/mucus
- Using quick relief inhaler/nebulizer more often
- Swelling of ankles more than usual
- More coughing than usual
- I feel like I have a "chest cold"
- Poor sleep and my symptoms woke me up
- My appetite is not good
- My medicine is not helping

- Continue daily medication
- Use quick relief inhaler every _____ hours
- Start an oral corticosteroid (specify name, dose, and duration)

- Start an antibiotic (specify name, dose, and duration)

- Use oxygen as prescribed
- Get plenty of rest
- Use pursed lip breathing
- At all times avoid cigarette smoke, inhaled irritants*
- Call provider immediately if symptoms don't improve*
- _____

Red Zone: I need urgent medical care

Actions

- Severe shortness of breath even at rest
- Not able to do any activity because of breathing
- Not able to sleep because of breathing
- Fever or shaking chills
- Feeling confused or very drowsy
- Chest pains
- Coughing up blood

- Call 911 or seek medical care immediately*
- While getting help, immediately do the following:
- _____

*The American Lung Association recommends that the providers select this action for all patients.

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It is recommended that patients and physicians/healthcare providers complete this management plan together. This plan should be discussed at each physician visit and updated as needed.

General Information

Name: _____ Date: _____
 Emergency Contact: _____ Phone Number: _____
 Physician/Health Care Provider Name: _____ Phone Number: _____

Lung Function Measurements

Weight: _____ lbs FEV1: _____ L _____ % predicted Oxygen Saturation: _____ %
 Date: _____ Date: _____ Date: _____

General Lung Care

Flu vaccine _____	Date received: _____	Next Flu vaccine due: _____
Pneumococcal conjugate vaccine (PCV13) <input type="checkbox"/> Yes <input type="checkbox"/> No	Date received: _____	Next PCV13 vaccine due: _____
Pneumococcal polysaccharide vaccine (PPSV23) <input type="checkbox"/> Yes <input type="checkbox"/> No	Date received: _____	Next PPSV23 vaccine due: _____
Smoking status	<input type="checkbox"/> Never <input type="checkbox"/> Past <input type="checkbox"/> Current	Quit Smoking Plan <input type="checkbox"/> Yes <input type="checkbox"/> No
Exercise plan <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Walking <input type="checkbox"/> Other _____ min/day _____ days/week	Pulmonary Rehabilitation <input type="checkbox"/> Yes <input type="checkbox"/> No
Diet plan <input type="checkbox"/> Yes <input type="checkbox"/> No	Goal Weight: _____	

Medications for COPD

Type or Descriptions of Medicines	Name of Medicine	How Much to Take	When to Take

My Quit Smoking Plan

<input type="checkbox"/> Advise: Firmly recommend quitting smoking	<input type="checkbox"/> Discuss use of medications, if appropriate: _____
<input type="checkbox"/> Assess: Readiness to quit	<input type="checkbox"/> Freedom From Smoking* <input type="checkbox"/> Lung HelpLine Lung.org/ffs 1-800-LUNG USA
<input type="checkbox"/> Encourage: To pick a quit date	
<input type="checkbox"/> Assist: With a specific cessation plan that can include materials, resources, referrals and aids	

Oxygen

Resting: _____ Increased Activity: _____ Sleeping: _____

Advanced Care and Planning Options

Advance Directives (incl. Healthcare Power of Attorney): _____

Other Health Conditions

Anemia Anxiety/Panic Arthritis Blood Clots Cancer Depression
 Diabetes GERD/Acid Reflux Heart Disease High Blood Pressure Insomnia Kidney/Prostate
 Osteoporosis Other: _____

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How is COPD treated?

There is no cure for COPD. Your healthcare provider will decide which medicines are right for you. Your provider may prescribe the following drugs below to help improve your quality of life. ***It is important that you take your medications as directed.***

- Steroids
- Aminophylline
- Theophylline
- Roflumast
- Mucolytics
- Bronchodilators

Bronchodilators

Bronchodilators (beta 2 antagonists, anticholinergics) are medicines that relax the muscles around your airways. This allows the tubes to become larger and make it easier to breathe.

These medications may be short or long acting:

- Short acting are used for emergencies and last for 3-4 hours
- Long acting are used daily and last 12-24 hours

These medication may come in different inhaler devices. Inhalers send measured doses of medicine into your lungs.

- Dry Powder Inhalers
- Soft Mist Inhalers
- Metered Dose Inhalers

Not all inhalers work the same way. Your healthcare provider will prescribe the inhaler device that is right for you. When using an inhaler device for the first time, it is important that you are trained and coached by your healthcare provider on how to use the inhaler correctly.

Dry Powder Inhalers (DPI)

The dry powder inhaler (DPI) delivers the medicine to your lungs when you inhale through the device. Unlike a metered dose inhaler (MDI), a DPI does not use a propellant to push medicine into your lungs.

Some inhalers use tiny grains of powder to deliver medicine. These don't need spacers. They often have counters that track how many doses you use. There are many brands of dry powder inhalers. They don't all work the same way. Be sure you know how to use yours correctly.



Soft Mist Inhalers (SMI)

The soft mist inhaler creates a cloud of medicine that you can inhale. The soft mist leaves the inhaler slowly so more of the medicine gets into your lungs. Unlike a metered dose inhaler (MDI), a SMI does not use a propellant to push medicine into your lungs.

There are many brands of soft mist inhalers. Be sure you know how to use yours correctly.

A spacer/chamber is useful if you cannot manage the SMI.



Metered Dose Inhaler (MDI)

A metered dose inhaler (MDI) is a device that delivers medicine to your lungs as a spray. It uses a propellant to carry the medicine into the lungs. It is important to use your MDI correct so your lungs get the medicine they need.

These special inhalers have a dose counter to let you know how many doses are left in the container. It is important to clean your MDI so it does not get clogged.

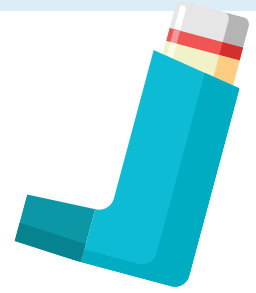
Be sure to check the expiration date on the label of the metal canister or on the box it came in before use.

A spacer/chamber is useful if you cannot manage the MDI. The next page gives you instructions for using a MDI with and without a spacer/chamber.



Using MDIs without spacers

A metered-dose inhaler sends a measured amount of medicine to your lungs. The medicine must be breathed deeply into your lungs for it to work.



If you don't use a spacer, follow these steps:

1. First, wash your hands. Then, check the expiration date and the counter on the inhaler. Make sure the inhaler still has doses left. Also check that the metal canister is put correctly into the plastic boot.
2. Remove the cap from the inhaler mouthpiece. Shake the inhaler several times.
3. If this is the first time you are using the inhaler, you need to prime it. That means making sure it is ready to use. Follow the manufacturer's instructions. Prime the inhaler in the air away from your face.
4. The inhaler is now ready to use.
5. Your healthcare provider will tell you whether to use the closed-mouth or open-mouth method.
6. Empty your lungs completely by taking a deep breath in and tilting your head back slightly and blowing air out.
7. For the closed-mouth method, put the inhaler mouthpiece in your mouth, past your teeth and above your tongue. Close your lips tightly around the mouthpiece to create a tight seal so the medicine doesn't spray in your eyes.
8. Or, for the open-mouth method, hold the inhaler up to your mouth, with the mouthpiece 2 finger-widths away from your lips.
9. Make sure you are standing up or sitting up straight in a chair. Always keep your inhaler at chin level.
10. Press down on the canister 1 time to release the medicine. At the same time, breathe in deeply and slowly for 3 to 5 seconds.
11. Remove the mouthpiece from your mouth if you are using the closed-mouth method. Or, move it away from your mouth if you are using the open-mouth method. Then, close your lips.
12. Hold your breath for up to 10 seconds, if you can. Then breathe out slowly through your mouth.
13. Repeat these steps for each puff of medicine. Wait at least 15 seconds to 1 minute before taking the next puff, or as long as directed by your provider.

If you're using a steroid inhaler, rinse your mouth and gargle with water to prevent thrush, a fungal infection. Spit the water out. Don't swallow the water. Clean your inhaler after every use or at least once a week or as directed by the manufacturer of the device.

Using metered-dose inhalers (MDIs) with spacers

A metered-dose inhaler sends a measured amount of medicine to your lungs. The medicine must be breathed deeply into your lungs for it to work. Your inhaler has a spacer. The spacer increases the amount of medicine that goes to your lungs.

Here's how to use an inhaler with a spacer.

1. First, wash your hands. Then, check the expiration date and the counter on the inhaler. Make sure the inhaler still has doses left. Also check that the metal canister is put correctly into the plastic boot.
2. Remove the cap from the inhaler. Shake the inhaler several times.
3. If this is the first time you are using the inhaler, you need to prime it. That means making sure it is ready to use. Follow the manufacturer's instructions. Prime the inhaler in the air away from your face. The inhaler is ready to use.
4. Next, remove the cap and look into the mouthpiece of the spacer to make sure nothing is in it (the spacer).
5. Attach the spacer to the inhaler. Remove the cap from the spacer mouthpiece.
6. Empty your lungs completely by taking a deep breath in and tilting your head back slightly and blowing air out.
7. Put the mouthpiece of the spacer in your mouth, past your teeth and above your tongue. Make sure your tongue doesn't block the opening of the spacer mouthpiece. Close your lips tightly around it to create a tight seal.
8. If you are using a spacer with a mask, make sure the mask covers your nose and mouth. There should be no space between your skin and the mask.
9. Make sure you are standing up or sitting up straight in a chair. Always keep your chin level.
10. Press down on the canister 1 time to release the medicine. Then breathe in slowly and deeply until all of the medicine in the spacer is gone, or as directed by your healthcare provider. If your spacer has a whistle built in, hearing the whistle means you are breathing in too quickly.
11. Remove the spacer mouthpiece from your mouth and close your lips.
12. Hold your breath for up to 10 seconds, if you can. Then breathe out slowly through your mouth.
13. Repeat these steps for each puff of medicine. Wait at least 15 seconds to 1 minute before taking the next puff, or as long as directed.
14. If you're using a steroid inhaler, rinse your mouth and gargle with water to prevent thrush, a fungal infection. Spit the water out. Don't swallow the water. If a mask was used, wash your face, especially around your mouth and nose, with warm water to prevent a skin rash.
15. Clean your inhaler and spacer after every use or at least once a week or as directed by the manufacturer of the device.

Do I need oxygen?

Most people do not know when they need oxygen. Your healthcare provider will use special tools or a blood test to check the amount of oxygen in your blood.

A pulse oximeter is a medical device that can estimate how much oxygen is in your blood. This reading is called your oxygen saturation (O₂ sat) level. The device is clipped on to a finger to get a reading. A false reading may happen if you have poor blood flow, have low blood count levels, or are wearing dark colored nail polish.

Oxygen is a medication that needs to be prescribed by your healthcare provider. It will be prescribed at a specific flow rate and for a specific number of hours per day. If appropriate, your doctor may give you a specific range for your pulse oximeter readings.

Oxygen should be used 24 hours per day unless your healthcare provider tells you that you only need to use it for exercise or during sleep.

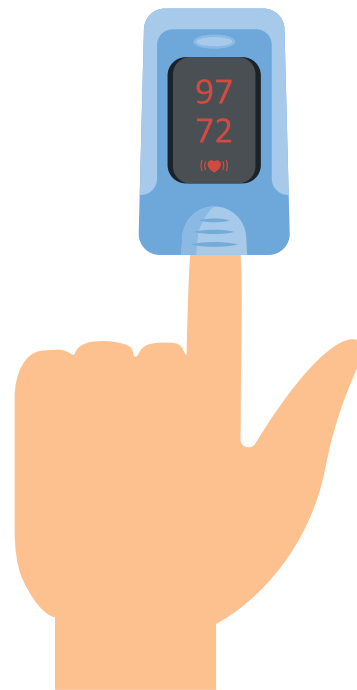
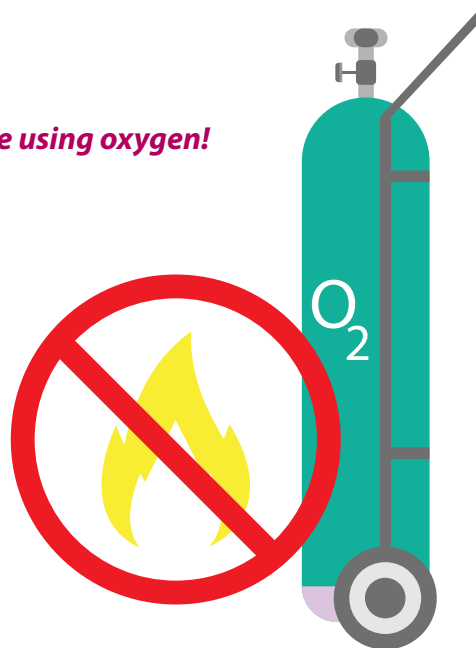
Sometimes oxygen is only needed for a short amount of time, either during or after an illness.

Oxygen can be delivered in 3 types of systems:

- Oxygen concentrator
- Liquid system
- Oxygen pressurized in a metal cylinder



NEVER smoke or be near an open flame while using oxygen!



How to Quit Smoking

Smoking is a hard habit to break. About half of all people who have ever smoked have been able to quit. Here are some of the best ways to stop smoking.



Quit cold turkey

Quitting cold turkey means to stop smoking all at once. Trying to cut back slowly often doesn't work. This may be because it continues the habit of smoking.

Get support

Support programs can be a big help. These groups offer lectures, ways to change behavior, and peer support. Here are some ways to find a support program:

- Free national quit line: (800) QUIT-NOW (800-784-8669)
- American Lung Association: (800) 586-4872
- American Cancer Society: (800) 227-2345
- For veterans receiving healthcare through the US Department of Veterans Affairs: (800)-QUIT-VET
- Smart phone apps: "QuitGuide" and "quitSTART"

Try over-the-counter medicine

Nicotine replacement therapy may make it easier to quit. Some of these treatments are available without a prescription from your doctor. Options include nicotine patches, gum, and tablets. It is best to use these products under the guidance of your healthcare provider. If you have nausea, vomiting, dizziness, weakness, or a fast heartbeat, stop using these products and consult your provider.

Ask about prescription medicine

Your healthcare provider may offer a prescription medicine as an option to help you stop smoking. These should be considered when other attempts to stop smoking have failed. These medicines may include bupropion, varenicline, a nicotine inhaler, or nasal spray. Your provider can help you decide if any of these are right for you.

Don't give up!

Most people have to try many times before being able to stop smoking successfully. Have patience with yourself. It is important that you not give up.

Keep in mind the health benefits of quitting

The health benefits of quitting smoking happen right away and keep improving the longer you go without smoking. Knowing this can help you to stay on your non-smoking plan. These health benefits happen for everyone, no matter how old you are.

Some of the health benefits after your last cigarette include:

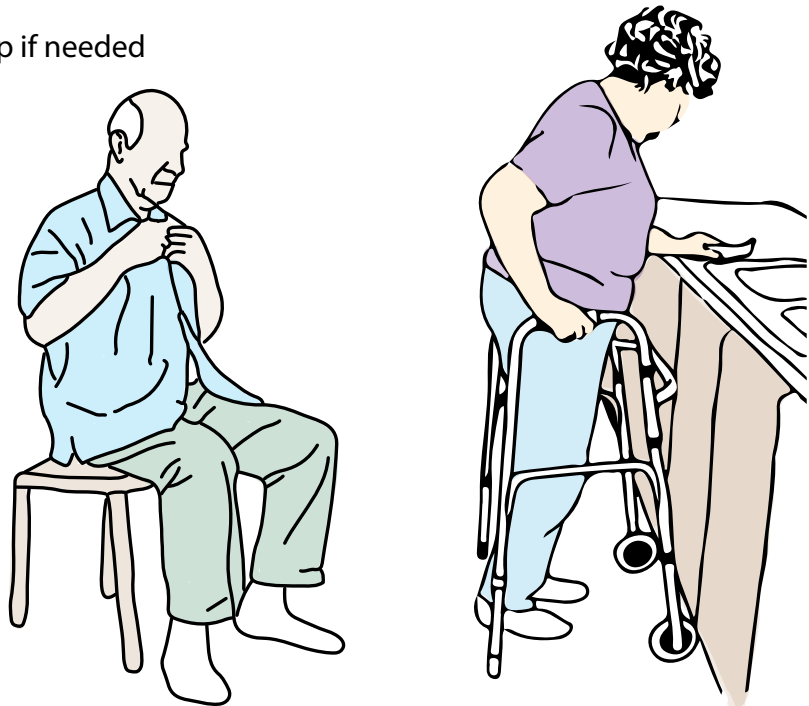


Energy Conservation Skills

Performing daily activities can cause you to be tired when you have COPD. There are things you can do to help decrease how much energy you have to spend doing these tasks.

Try these tips:

- When possible, perform tasks from a sitting position since this takes less energy than standing
- Spread tasks out during the day and/or week to ensure periods of rest
- Use a cane or rolling walker to improve balance when needed
- Use proper breathing techniques to control your breathing
- Eat slowly and take small bites
- Rest for 20-30 minutes after meals
- Leave plenty of time for tasks so you are not rushed
- Place things at home at waist or shoulder level to avoid reaching or bending
- Do not be afraid to ask for help if needed



Exercising with COPD

I'm tired and out of breath, why do I need to exercise?

Aerobic exercise and strength training can improve your circulation and help your body better use oxygen. It allows you to build more energy so you can do more without getting as short of breath or tired. It can also improve common symptoms in COPD such as shortness of breath, muscle weakness and poor tolerance to physical activity.

Exercising will not harm your lungs. The shortness of breath you feel during physical activity means that your body needs more oxygen. By slowing your breathing and exhaling through pursed lips, you will restore oxygen to your body quickly.

What type of exercises is best?

The American Thoracic Society (ATS), American College of Sports Medicine (ACSM) and European Respiratory Society (ERS) recommend:

- 20 to 60 minutes of exercise per session
- 3 to 5 sessions of endurance exercise per week
- Short breaks (less than 1 minute at a time) to reduce intolerable symptoms
- Resistance exercise training 2 days per week using your major muscle groups

Walking program

Walking is one of the easiest and most important exercises that you can do. Aim to walk short distances, 5 to 6 times per day. As a goal, you should be able to take at least 2 walks that are at least 6 minutes long each.

Guidelines for exercise:

- Start slow
- Gradually increase your activity level especially if you have not been active
- Drink liquids during exercise to prevent dehydration (Caution: Be sure to also follow any fluid guidelines set by your doctor)
- Wait 1 ½ hours after a meal before you begin your exercise.
- Schedule exercise into your daily routine
- Planning to exercise at the same time every day helps to create a routine
- Dress comfortably and according to the weather if outside
- Wear supportive footwear

How light or how hard should the exercise be?

The Rating of Perceived Exertion (RPE) scale is used to measure how hard you are working during exercise. The scale below can help you decide if the activity is too easy or hard. Your goal is to exercise between a level of at least 2 and 6.

RPE SCALE	RATE OF PERCEIVED EXERTION
10 /	MAX EFFORT ACTIVITY Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time
9 /	VERY HARD ACTIVITY Very difficult to maintain exercise intensity. Can barely breathe and speak only a few words
7-8 /	VIGOROUS ACTIVITY Borderline uncomfortable. Short of breath, can speak a sentence
4-6 /	MODERATE ACTIVITY Breathing heavily, can hold a short conversation. Still somewhat comfortable, but becoming noticeably more challenging
2-3 /	LIGHT ACTIVITY Feels like you can maintain for hours. Easy to breathe and carry a conversation
1 /	VERY LIGHT ACTIVITY Hardly any exertion, but more than sleeping, watching TV, etc

How should I breathe during exercise?

Breathing slowly will help save your breath. Follow these steps:

- Inhale through your nose while keeping your mouth closed
- Purse your lips when breathing out
- Inhale for 2 seconds and exhale for 4 seconds



Home Exercise Program

These are resistive exercises that will help you get stronger. The exercises listed below can be done while sitting or standing. It is important that you are mindful of your breathing while doing these exercises. Do not hold your breath. Breathe in through your nose and out through pursed lips. Each exercise should be done until your muscles feel tired, usually around 10 times for each exercise. Do this exercise program at least 1 time every day.

The exercises can be done with or without the use of an elastic band. Your physical therapist will give you an elastic band if you are ready to exercise with it. When doing your standing exercises, try to keep your posture upright and avoid bending forward.

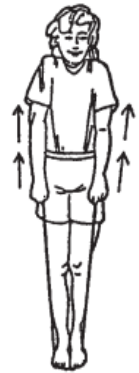
Upper Body Exercises

Scapular elevation

Slowly shrug your shoulder up towards your ears

Hold for count of 3 and then relax

Advanced: Put the elastic band under your feet and hold both ends in your hands

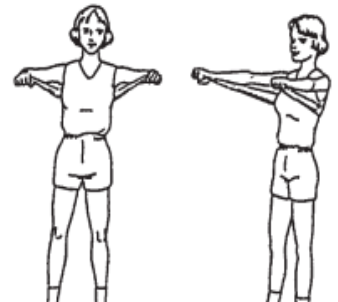


Chest press

With your elbows bent at your side, slowly push forward and straighten your elbow

Slowly bring your elbows back to your side

Advanced: Put the elastic band around your middle of your back and hold ends in your hands



Chest pull

Start with your arms straight out in front of you

Slowly move your arms out to the side

Hold for a count of 3

Bring your arms back to being straight out in front of you

Advanced: Hold the elastic band in each hand and pull apart



Shoulder raises

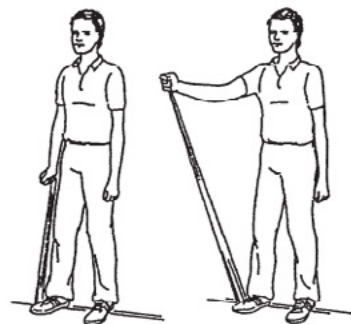
Lift your right arm up over your head (or as high as you can)

Hold for a count of 3

Slowly lower your arm to be by your side

Repeat with your left arm

Advanced: Put the elastic under your foot and hold in the end in your hand



Lower Body Exercises

Knee extension

Sit in a chair

Straighten your right leg with your toes pointing towards the ceiling

Your muscle on the front of your thigh should be firm when the leg is straight

Hold for a count of 3

Slowly return your foot to the ground

Repeat with your left leg



Calf raises

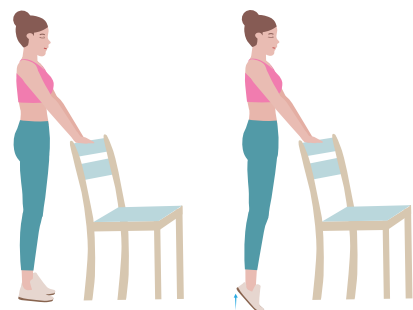
Hold firmly on to a chair or counter while standing

Raise up on to your toes so your heels are off the ground

Your calf muscles should be firm when on your toes

Hold for a count of 3

Slowly lower down on to your whole foot



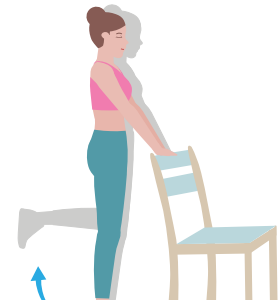
Hip extension

Hold firmly on to a chair or counter while standing
Slowly kick your right leg back
Your buttocks muscles should be firm when your leg is back
Hold for a count of 3
Slowly lower your foot to the starting position
Repeat with your left leg



Knee flexion

Hold firmly on to a chair or counter while standing
Raise your right foot off of the floor towards your buttocks
Hold for a count of 3
Slowly lower your foot to the starting position
Repeat with your left leg



COPD and My Diet

The symptoms of COPD and its treatment can make it hard for you to eat and drink enough. It is important that your body gets enough nutrients.

Meal Planning Tips

The goal of having a good diet is to help maintain, or restore, your nutritional well-being, such as your weight. Follow these tips to help with your diet:

- Eat at times when you are hungry
- Divide your daily foods into 5-6 small meals or large snacks
- Drink enough fluids, including water, throughout the day and evening
- Drink high-calorie, high-nutrient beverages
 - Milkshakes, whole milk, fortified milk (powdered nonfat milk added to fluid milk), flavored - milk, and other nutrition drinks
 - Freeze drinks into popsicles or ice cubes for a refreshing treat
 - Use these drinks when cooking and baking for added nutritional value
- Eat high calorie foods
 - Healthy oils, cream cheese, margarine, butter, and nut-butters
 - Cheeses, salad dressings, dips, sour cream, ice cream, and cold cuts
 - Select yogurt and cottage cheese made from whole or 2% milk
- Choose foods high in protein
 - Eggs, milk, cheese, yogurt, meats, poultry, fish, nuts, and beans
- Choose foods with fiber
 - Whole grains such as breads, crackers, pasta, and rice
 - Fruits and vegetables with skins or seeds, like sweet potatoes with skin, tomatoes, grapes, and blueberries.
- Choose foods with vitamins and minerals.
- Opt for colorful, fresh fruits and vegetables and not ones that are overcooked or refined
- Use enriched grains and fortified processed foods
- If prescribed, take medical food supplements, and use supplemental oxygen around mealtimes

Helpful Hints

- Variety, color, and texture all are important. Choose foods you like.
- Portion size can vary. At first, 1-2 tablespoons may be enough. Increase your portion size as your appetite increases.
- Purchase and prepare foods ahead of time. Eat some and freeze some for future meals.
- Let others help you with shopping, food preparation, and clean up.
- Enjoy the company of others at mealtimes as you are able.
- Eat in pleasant, calm, and cheerful surroundings.
- Eat slowly and chew foods well. Savor aromas and flavors.

Foods to avoid

- Foods that are low in nutrients and calories are of little help. They can make you feel bloated and uncomfortable.
- Examples are:
 - Light or diet foods, like diet sodas
 - Plain drinks, like plain coffee, tea, punch, and bottled or



COPD Resources

There are many places that you can find out more about COPD.

Try these helpful websites:

COPD Foundation

<https://www.copdfoundation.org/>

American Lung Association

<https://www.lung.org/lung-health-and-diseases/lung-disease-lookup/copd/>

Patient Education & Research Foundation

<https://perf2ndwind.org/>

American Thoracic Society

<https://www.thoracic.org/patients/patient-resources/topic-specific/copd.php>



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