

# A COPD HANDBOOK

BREATH E  
the lung association





## What Is COPD?

COPD means Chronic Obstructive Pulmonary Disease. It is a term that covers two types of chronic (long-term) diseases where the airways (breathing tubes) in the lungs become swollen and partly blocked. COPD gets worse over time. It cannot be cured, but it can be treated and managed.

COPD consists of two major breathing diseases: emphysema and chronic bronchitis.

**Emphysema** damages the tiny alveoli (air sacs) at the tips of your lungs. Normally these air sacs stretch like balloons as you breathe in and out. Emphysema makes these air sacs stiff. Because they cannot stretch, air gets trapped inside them. This makes it difficult for you to breathe in and makes you feel tired.

**Chronic bronchitis** makes your airways red, swollen and irritated. Glands in your airways make extra mucus (phlegm), which blocks some air from passing through. This makes you cough, cough up mucus and feel short of breath.

Many people with COPD have both of these diseases.

## Signs and Symptoms of COPD

COPD diagnosis often surprises people. It might start with being short of breath while walking up or down the stairs or a cough that does not go away. Some people think that feeling short of breath is a normal sign of aging, but that is not the case.

People with COPD usually have some or all of these symptoms:

- Feeling short of breath, especially during physical activity
- Feeling tired
- A cough that lasts longer than three months
- Coughing up mucus
- Wheezing
- Getting several infections such as the cold, flu or pneumonia and taking longer to recover

See your doctor if you have these signs and symptoms.

## Causes of COPD

Below are some of the main causes of COPD:

- Smoking is the number one cause of COPD
- A rare genetic disorder called Alpha-1 antitrypsin deficiency
- Second-hand smoke
- Air pollution (dust or chemicals)
- Repeated lung infections during childhood
- Severe asthma
- Asthma combined with smoking

## Diagnosis

To diagnose COPD, your doctor or other healthcare provider will ask you questions about your health history. Some of the questions may include:

- Do you currently smoke or have you smoked in the past?
- How often are you short of breath?
- What makes your shortness of breath worse?
- Do you cough? How long have you been coughing?
- Do you cough up sputum (phlegm, mucus)?
- Do you or does anyone in your family have a lung disease?
- Did you have a lot of lung infections when you were younger?

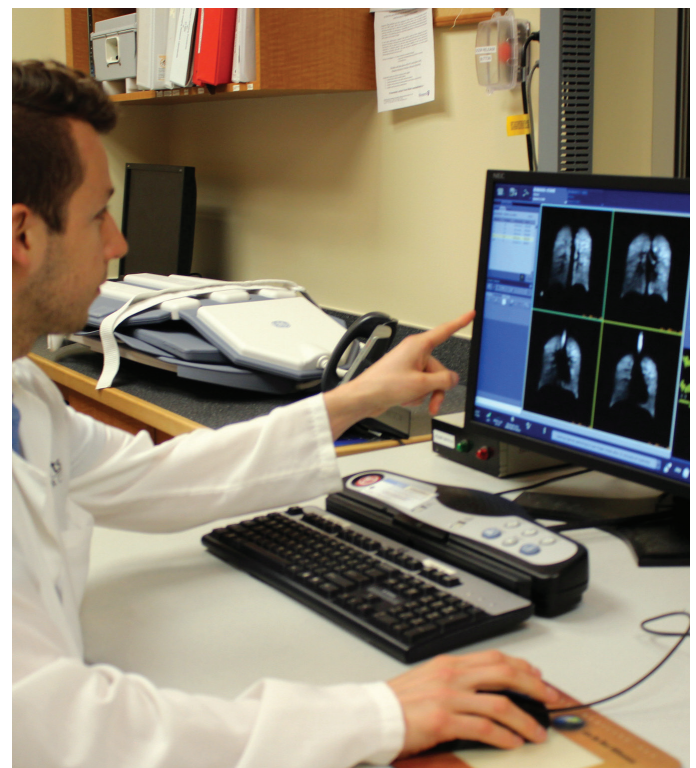
## Spirometry

Spirometry is the most reliable way to diagnose COPD. It is a simple breathing test that measures the speed and the amount of air you are able to blow out of your lungs. If you have any of the symptoms or are short of breath doing simple tasks, ask your healthcare provider about sending you for a spirometry test.



## Chest X-ray

The chest x-ray will help the doctor see if there is damage to your lungs. An x-ray can show emphysema in your lungs. A chest x-ray alone is not enough to diagnose COPD; spirometry is the recommended test for a diagnosis.





## Oximetry

This painless test measures how much oxygen is in your blood (oxygen saturation). Your doctor or another healthcare provider will clip a “probe” to your finger to measure and monitor the saturation of oxygen in your blood. This alone does not diagnose COPD but could be one of the tests that leads to a diagnosis.

## Other Tests

Your healthcare provider may order other tests like a CT scan, blood work and other laboratory tests. Blood work and/or other lab tests are done in combination with other tests for a proper diagnosis.







## Communicating Well with Your Healthcare Provider

When you are diagnosed with COPD, it can feel overwhelming. You will likely have many questions and the answers may not always be clear at first. Not all people with COPD have the same symptoms and treatment may differ from person to person. It is important to talk to your healthcare provider about your treatment options and get answers to all of your questions.

Make sure you build a good relationship with your doctor and other healthcare providers. They are there to help you manage your COPD, help you create your action plan [See p. 11 - *What is a COPD Action Plan?*] and answer any questions you may have. Below are some things you can do to help your medical appointments go more smoothly and ensure you get the best care possible.

- ☐ Create a COPD team for yourself that includes your doctor, respiratory therapist, respiratory educator and/or pharmacist.
- ☐ Bring a written list of your questions, with the most important ones at the top of the list.
  - Ask: Can I have a COPD action plan so I know what to do if my symptoms get worse?
- ☐ Bring a written list of your symptoms. Be honest. Your doctor cannot help you without knowing how you feel.
  - Make sure you include how many times you have been sick and what you did to manage your sickness.
- ☐ Take notes as the doctor is answering your questions. If you do not understand, ask for more details until you do.
- ☐ Bring a friend or relative to help you understand, remember the details and take notes.
- ☐ Bring a list of *all* the medications you are taking, including herbal medicine or cannabis.
  - Ask: What medication will I be using and how do I take it?
- ☐ If you are not sure if you are taking your medication correctly, show the doctor and ask for feedback.
- ☐ Ask about programs, such as a pulmonary rehabilitation program, in your community for people with COPD.
  - If you smoke, ask: What help can you get to help you quit smoking?

**After the appointment:** If you realize you forgot a question or did not understand something you were told, phone the office and ask for more information. You can also talk to another member of your healthcare (COPD) team.



## Build Your COPD Team

Learning how to manage COPD is the first step to maintaining your health and regaining quality of life. This is much easier with a team. If COPD was a team sport, who would you want on your team? Consider family, friends and healthcare professionals such as:

- ☐ Your doctor (and possibly a lung doctor called a respirologist or a pulmonologist)
- ☐ Your nurse
- ☐ Your pharmacist
- ☐ Your respiratory therapist, nurse or cardio-pulmonary physiotherapist who leads your pulmonary rehabilitation program
- ☐ Canadian Lung Association Certified Respiratory Educator, available through the Helpline at 1-866-717-COPD (2673). [See p. 26]

Some things you may wish to discuss with your COPD team include:

- ☐ Your symptoms, especially if they are getting worse
- ☐ Chores and activities you find difficult
- ☐ Things you can do to stay healthy (nutrition, eating well, exercise) [See p.16 - *COPD and Physical Activity*; p. 27 - *COPD and Healthy Eating*]
- ☐ Your triggers [See p. 12 - *Triggers and Flare-ups*]
- ☐ Using your quick-relief medicine more than usual
- ☐ Questions about your medications or their side effects
- ☐ What to expect in the future
- ☐ Navigating the healthcare system – this can be a challenging task. Discussing it with your team will allow you to make a plan and a list of contacts and resources you will need help with. Ask questions and take notes (along with your caregivers) to understand what needs to be done in order to manage your COPD.

Those who become your informal caregivers (family and friends) will play a very important role in your life. It is your informal caregivers who will likely help you with daily tasks such as transportation to appointments, management and helping with overall clarifications. It is important to keep them informed about any changes or needs you might have.





## Quitting Smoking

If you have already quit smoking – congratulations! You have done the best thing possible to improve your health and slow the progression of your COPD.

If you smoke, now is the time to quit.

Some people think that once they have COPD, there is no point in quitting, but that is not true. Quitting prevents additional lung damage and makes it less likely that you will get chest infections, coughs and mucus build-up.

Quitting is the most important thing you can do to improve your health, but we know it can be hard.

The good news is that there are people, programs and medications to help you quit. Your chance of success is highest if you use a combination of methods, like counseling and support services along with nicotine replacement therapy (e.g. - gum or patch) or other medications.

For help to quit smoking, talk to:

- The Canadian Lung Association at 1-866-717- 2673 or [lung.ca/copd](http://lung.ca/copd)
- Your family doctor or pharmacist
- A local support group or cessation (quitting) specialists
- Your family and friends for on-going support

Medical treatments to help you quit smoking include:

- **Nicotine replacement therapy**, such as the nicotine patch, gum or lozenges. You can get these without a prescription at most pharmacies.
- **Bupropion hydrochloride** and **varenicline tartrate**: These are prescription medicines that work on the “addiction centre” in the brain, reducing your craving to smoke.

Most people try to quit many times. If you have tried and failed, know that you are not alone and keep trying. Quitting smoking gets easier with practice. Each time you try to quit, you boost your chances of quitting for good. Most people try four or five times before they quit for good.

**Some people use e-cigarettes to help them quit smoking. However, this is not the best solution. The long-term health effects of vapourized products (like e-cigarettes) are unknown.**

**There is also evidence that vaping products cause some damage to your lungs. The best thing to do is quit smoking AND vaping. Ask your healthcare provider for alternative suggestions to help you quit.**



## Prescription Medication

You can prevent or ease your COPD symptoms, like shortness of breath, cough, mucus build-up and tiredness by taking your prescribed medication. Different types of medications treat different symptoms. Sometimes, you may have a flare-up [See p.12 - *Triggers and Flare-ups*], where your symptoms get worse and your doctor may prescribe extra medications to help you feel better.

To get the full benefit from your medication, you must follow the doctor’s instructions and take the medications exactly as prescribed.

Some medications need to be taken only when you need them, like a quick-relief bronchodilator. Others need to be taken regularly. If you are unsure when or how to take your medications or use your devices, ask your doctor, respiratory educator, pharmacist or other healthcare provider.

Keep a list of all of the medications you take and show it to your doctor and pharmacist, so they can check for drug interactions.



## Types of Medications

There are many types of medications and treatments available to make your life with COPD easier. These include both inhaled and oral (taken by mouth) medications:

- Bronchodilators to relieve shortness of breath
- Combination bronchodilators and anti-inflammatories to relieve shortness of breath and to prevent flare-ups [See p.12 - *Triggers and Flare-ups*]
- Antibiotics to fight infections
- Supplemental oxygen (oxygen tank) to help with low oxygen and energy levels
- Vaccines for flu and pneumonia to help prevent infections

## Inhalers

The main medication treatment for COPD comes in inhalers (sometimes, these are called puffers). There are many types of inhalers and devices.

### Bronchodilator Inhalers

Bronchodilators open up the airways in the lungs, making it easier to breathe. There are two main groups of bronchodilators: beta2-agonists and anticholinergics.

**Beta2-agonists** relieve breathlessness. They can be taken for prevention or providing a quick relief. They are inhaled medicines that can be short-acting or long-acting. Short-acting beta2-agonists are often used as a “rescue” or quick-relief medicine to open airways quickly. Long-acting beta2-agonists may also be taken regularly to prevent breathlessness.

**Anticholinergics** relieve breathlessness, but in a different way than beta2-agonists. They are also inhaled medicines that are effective in treating COPD, especially when they are taken on a regular basis. There are short-acting and long-acting anticholinergics.

Here is a list of short-acting bronchodilators you may be prescribed:

- Atrovent® MDI
- Airomir® MDI
- Bricanyl® Turbuhaler®
- Ventolin® Diskus®
- Ventolin® MDI

Here is a list of long-acting bronchodilators you may be prescribed:

- Incruse™ Ellipta®
- Seebri® Breezhaler®
- Spiriva® Handihaler®
- Spiriva® Respimat®
- Tudorza® Genuair®
- Foradil® Aerolizer®
- Onbrez® Breezhaler®
- Serevent® Diskus®
- Striverdi® Respimat® (available in Canada only in combination)

**Doctors may prescribe more than one kind of bronchodilator to treat COPD.**

### Combination Inhalers

If you have on-going breathing problems, your doctor may prescribe a combination medicine. Combination inhalers are “preventer” medicines that need to be taken every day. There are many different medication combinations available and may contain some of the short and long-acting bronchodilators listed above. The most common combinations contain two or three medicines in one inhaler.

Here is a list of combination inhalers you may be prescribed:

- Short-acting beta2-agonist and short-acting anticholinergic
  - Combivent Respimat®
- Long-acting beta2-agonist and corticosteroid
  - Advair® Diskus®
  - Breo™ Ellipta®
  - Symbicort® Turbuhaler®
- Long-acting beta2-agonist and long-acting anticholinergic
  - Anoro® Ellipta®
  - Duaklir® Genuair®
  - Inspiro™ Respimat®
  - Ultibro® Breezhale®
- Long-acting beta2-agonist, long-acting anticholinergic and corticosteroid
  - Trelegy™ Ellipta®

Long-acting bronchodilators will help relieve shortness of breath for longer periods of time, and if combined with an inhaled corticosteroid, will also bring down the swelling in your airways. Don't worry - these are not the same steroids as those taken by some bodybuilders to build muscle. Over time, combination medicines can help prevent COPD flare-ups [See p. 12 - *Triggers and Flare-ups*].

Combination medicines may not help right away. If you need immediate help, take your quick-relief bronchodilator medicine.

## Nebulizer Medication

Nebulizer is a device that turns medication into fine mist and delivers it into your airways, using a mouthpiece or a mask. Nebulizers can be used for those patients who have a difficult time using inhalers.

## Oral Medications

### Corticosteroid Pills

Corticosteroids also come as pills, most often known as prednisone. Corticosteroid pills have more side effects than the inhaled corticosteroids that are in combination medicines. Corticosteroid pills are often used for short periods of time - usually when you have a COPD flare-up. If you need to take corticosteroid pills on a regular basis, your healthcare provider will work to keep you on the lowest dose necessary. You can talk with your healthcare provider about side effects of your medication.

### Antibiotics

Bacterial infections in your airways may cause some of your COPD flare-ups. Antibiotics can help in these cases. However, antibiotics will not work if your flare-up was caused by a viral infection. Sometimes people may be experiencing both bacterial and viral infections at the same time. Prednisone is often prescribed along with antibiotics.

Sometimes antibiotics are prescribed on a regular basis for those patients with frequent flare-ups. Your respirologist or family doctor will monitor you closely for improvements and side effects.

Working with your COPD team on a COPD action plan will ensure you have clear directions on what to do and what medicine to take if you have a flare-up [See p. 12 - *Triggers and Flare-ups*].

### Phosphodiesterase-4 Inhibitors

Phosphodiesterase-4 Inhibitors (PDE-4) medications are a type of oral medication that decreases inflammation in the lungs. This pill is used for patients with a history of frequent flare-ups and chronic cough with mucus (phlegm). It can prevent flare-ups and should be used along with regular inhalers.



**Be sure you discuss your medication with your doctor to understand how it works and the possible side effects you may experience.**



## Mucolytics

Mucolytics help to remove secretions (unwanted contents like phlegm) from the lung by thinning mucus so it is easier to cough up. These medications are for patients with frequent flare-ups. Mucomyst (N-acetylcysteine – NAC), may prevent flare-ups.

## Vaccines for Flu and Pneumonia

Vaccines (shots) for flu and pneumonia help protect you against these illnesses and lower your chance of a flare-up. You need to get a flu shot every year. Most people only need the pneumonia shot once, but some might need a booster (a second dose). Ask your doctor if you need a booster.

## Supplemental Oxygen

Not everyone who has COPD needs to “be on oxygen.” However, if you have lung damage from COPD and have low oxygen levels in your blood, you may need supplemental oxygen to keep your oxygen levels up. Home oxygen, like other treatments for COPD, is not a cure but it can help improve your quality of life and help you live longer. If your doctor prescribes you home oxygen, it is very important to treat it like any other medication prescription. This means that you must use your home oxygen as your doctor prescribes and use the flow rate and frequency he or she recommends. For some people, this might mean using oxygen all day, for others it might mean using oxygen only at night or while exerting yourself (like when you’re walking or moving a lot).

- » **There are different types of home oxygen equipment.**
- » **Long-term oxygen use needs humidification.**
- » **Keep grease and flame away from the oxygen tank!**



Home oxygen does not replace other treatments you may have been prescribed. It is an additional treatment to your other prescriptions of inhalers and/or pulmonary rehabilitation [See p. 26]. It means your home oxygen & other prescriptions go hand-in-hand.

If it is determined that you need home oxygen to improve your blood-oxygen levels, you will need to talk to a home oxygen company’s health care professional to determine what equipment is best for you.

Oxygen therapy is generally delivered as a gas from a cylinder or concentrator. Most often you will be on oxygen through small nasal prongs that fit into your nostrils, but sometimes you may need to use a mask that covers your mouth and nose. Breathing in this extra oxygen raises low blood-oxygen levels, eases the strain on your body and makes breathing easier. Your body cannot store oxygen, so the therapy works only while you use it. If you take off your oxygen mask or remove the prongs, your blood oxygen level will drop within a few minutes. Like any other prescription medicine, oxygen must be used carefully and properly. You need to follow instructions and follow all the safety precautions.

If you have any questions about proper use of your inhalers or other treatments, be sure you ask someone from your COPD team.





## Surgery

In addition to medications, there are a couple of different types of surgeries that may be recommended by your doctor.

### Lung Transplant

Lung transplant is not a cure, but a treatment. Lung transplants may be an option for some people with advanced COPD, who no longer smoke and who will not survive without a lung transplant. There are specific requirements to qualify for a lung transplant, and, if you meet these, you will be put on a wait list for a transplant. The wait might be long. In a lung transplant, surgeons take out one or two of the lungs and replace them with healthy lungs. The surgery can be risky. People who receive transplants must take immunosuppressants (anti-rejection medicines) for the rest of their lives.

### Lung Volume Reduction Surgery

This type of surgery is done in order to help some people with COPD breathe better. If your doctor decides you qualify for this type of surgery, it may help with shortness of breath. During the surgery, pieces of the damaged lung tissue are removed. This allows the healthy tissue to “work better.”

### What is a COPD Action Plan?

Think of a COPD Action Plan as a written contract between you and your doctor or your COPD team. This document gives you a clear outline of what triggers your COPD, how you can avoid these triggers, and what to do in case of a flare-up [See p.12 - *Triggers and Flare-ups*]. You will develop this plan with your doctor and a Certified Respiratory Educator. This document is a very important tool you can use to manage your COPD. Your action plan helps to identify the signs you experience before a flare-up and helps you recognize these in the future. This way, you will know when a flare-up is coming and be ready to treat this early.

For example, you will write down how you feel before you have a flare-up. Your doctor or Certified Respiratory Educator will work with you on how to deal with it. Next time when you are experiencing the same symptoms, you refer to your COPD action plan and act according to your doctor's instructions.

While your action plan serves as a guide for helping you avoid emergency departments in case of a flare-up, you should continue to take your medication as prescribed even if you are feeling well.





## Triggers and Flare-ups

When you have COPD your lungs have been weakened. They are unable to protect themselves from air pollution, or fight off colds. It is important to know how to avoid and prevent things that may make your COPD worse.

### Avoiding Triggers

Triggers are things that make your COPD worse. Many people with COPD find that dusty or smoky air makes it harder for them to breathe. Others may be affected by scents, cold air, indoor and outdoor air pollution, humidity or wind. As you learn what your triggers are, you can learn how to avoid them.

### Outdoor Air

Smog or low air quality days can happen at any time – not just in the summer. Poor air quality can be the result of a vehicle exhaust, forest fires, or any other wood smoke.

Stay informed about the air quality. Check the internet, listen to the radio, watch television, or read

the newspaper to find out about air quality alerts near you. When an alert is issued, stay inside, close the windows and turn on the air conditioner. Make sure you stay cool and drink enough water to stay well hydrated.

Whenever possible, avoid travelling during the rush hour and using underground parking.

### Indoor Air

Indoor air quality is just as important as outdoor air quality, especially if your COPD keeps you indoors. It is important to make sure the air you breathe inside is as clean as possible. Keep indoor air clean by making your home smoke-free. Air out your living environment. Keep fresh air moving. Keep rooms clean and uncluttered and dust often.

Try not to use chemicals in your home. Paint, varnish, household cleaning products, hair spray and perfume can trigger breathing problems. Avoid things with strong smells and use natural cleaning products instead.

## Avoiding Flare-ups

A flare-up is the worsening of your COPD symptoms. They are the main reason people with COPD go to the hospital. Flare-ups should be taken very seriously.

They are usually caused by a trigger such as air pollution or allergens, or a chest infection from a virus (cold or flu) or bacteria. Do your best to prevent flare-ups and treat them quickly when they occur.

### Stay Healthy to Avoid Flare-ups

- ☐ Take care of yourself and try to avoid cold, flu and other infectious diseases.
- ☐ Take all your medications as directed.
- ☐ Eat right.
- ☐ Get enough sleep.
- ☐ Exercise.
- ☐ Stay away from people who are sick.
- ☐ Get your flu shot, and ask about getting a pneumonia shot.
- ☐ Wash your hands properly and often.
- ☐ Follow your COPD Action Plan.

### Recognize the Early Warning Signs of a Flare-up

You can often tell when a flare-up is about to begin. Pay attention. If you catch it in time, it can be easier to treat and you may not have to go to the hospital.

Watch for symptoms that last longer than 48 hours:

- more fatigue or shortness of breath than usual
- more coughing than usual
- a change in colour of your mucus – can be yellow, green, or brown mucus
- an increase in the amount, thickness or stickiness of the mucus
- a fever, sore throat or cold symptoms
- swollen ankles
- need to sleep sitting up instead of lying down
- feeling unusually sick or unwell

## Start Treating a Flare-up Quickly

COPD flare-ups can begin suddenly and unexpectedly. That is why you must know and follow your COPD action plan promptly. It might involve keeping a supply of antibiotics or corticosteroid pills along with instructions from your doctor on how to use them. If your doctor tells you to start taking antibiotics or corticosteroids at the first sign of a cold or infection, do not wait. Treating your flare-up quickly can reduce your chances of getting seriously ill and prevent further damage to your lungs. If you do not have an action plan and have these symptoms, do not delay in seeing a doctor.

More serious warning signs include **chest pain, blue lips or fingers, and confusion**. If you have these signs, call 911 immediately or ask someone to take you to the nearest emergency department. Do not drive yourself.

### When to Call the Doctor or Go to the Emergency Department

Follow your COPD action plan. Some flare-ups will be minor, but others can be very serious. If you are having a flare-up and your medications are not working or you are getting worse, call your doctor or go to the nearest emergency department.

### Know Your Medications

If you do have to go to the hospital, you will be asked what medications you are taking. It is a good idea to always have an up-to-date list of all your medications (including how much you take and how often).

### At the Hospital

You will be given medicine to open your airways so you can breathe easier. Your pulse, temperature and blood pressure will be taken.

The amount of oxygen in your blood will be measured and you may be given oxygen (with or without a mask). You may also be given an anti-inflammatory medication to decrease swelling in your airways or an antibiotic if your flare-up is due to a bacterial lung infection.



## Before You Go Home

Make sure you understand any changes that have been made to your medication. This can mean different doses of your current medications or new prescriptions. You should know how long to keep taking each medicine and when you should lower the dose or stop taking them.

**If the staff at the hospital think it will take more than a few days for your emergency department record to reach your doctor, it might be a good idea to ask for a copy to take home with you.**



## After the Hospital Visit

Within two to three days of leaving the hospital, call your doctor for an appointment so you can talk about why you ended up in the emergency department and how to prevent it from happening again. Let your doctor know about changes to your medications that were made at the hospital.

Finding a Certified Respiratory Educator who can help you manage your COPD as part of your healthcare team is essential.

**Remember to take care of yourself every day, not just when you are feeling unwell.**

## Shortness of Breath

Breathlessness – or shortness of breath – is very common for people with COPD. Some people feel breathless most of the time, while others are short of breath only when walking or exercising. Good nutrition, enough sleep, anxiety control, regular physical activity and healthy environment can limit your breathlessness.

Being short of breath can be scary but there are some things you can do to make it easier. Some items that may help you relieve shortness of breath include walking aids and learning breathing exercises. Some people find using a fan in front of their face helps relieve symptoms of shortness of breath.

Below are types of breathing that can help you. Please speak with your healthcare provider to see if they are right for you. It is also a good idea to practice these types of breathing exercises with your respiratory educator to make sure you are doing them properly.

### Pursed-lip Breathing

This type of breathing helps to let out stale air and slow down your breathing. As you practice, try to exhale (breathe out) twice as long as you inhale (breathe in).

1. With your mouth closed, breathe in a normal amount of air through your nose.
2. Purse your mouth as if you are whistling.
3. Keeping your lips pursed, slowly blow the air out through your mouth.



*Inhale*

*Exhale*

## Diaphragmatic Breathing

The diaphragm is the main breathing muscle. If you know how to control this muscle well, it can help you with breathlessness. It is not hard.

1. Relax your shoulders and sit comfortably in an easy chair.
2. Place your hands lightly on your stomach.
3. Breathe in slowly through your nose. Your stomach should rise under your hands.
4. Breathe out slowly through pursed lips. Your stomach should fall.



*Inhale*

*Exhale*

## Controlling Your Breathing

Feeling short of breath can make you panic and breathe faster than normal. This can send your breathing out of control. In addition to pursed lip breathing, here are some tips you can use to control your breathing if you feel shortness of breath coming on:

- Stop and rest comfortably.
- Breathe through your mouth.
- Breathe in and blow out as fast as necessary.
- Begin to blow out longer. (Used pursed lip method if it works for you.)
- Slow down your breathing.
- Begin to use your nose when breathing in.
- Once your breathing is under control, try diaphragmatic breathing.

When you feel better, stay in the resting position and continue pursed-lip breathing for five minutes or until you feel back to normal.

## Proper Positioning

Positioning your body properly can help reduce breathlessness as well. Poor posture can make it difficult to breathe. Keeping your back straight will help.

### Sitting

1. Place both feet on the ground.
2. Lean head and shoulders forward slightly.
3. Rest your arms on your knees.
4. Keep your arms relaxed.

### Standing

1. Lean your back against a wall, chair or counter.
2. Place your feet slightly apart.
3. Relax and lean your head and shoulders forward slightly.
4. Rest your hands lightly on your thighs or a piece of furniture.

## Budget Your Energy

Pace and plan your tasks so you can conserve energy wherever you can. These can be simple changes to your routine like limiting the number of times you need to walk upstairs or sitting down while preparing supper.

## Ease Anxiety

Emotional stress can cause you to feel breathless. Here are some ideas for coping with anxiety to get your breathlessness under control.

- Think ahead and try to avoid situations that cause you stress.
- Make plans for situations you cannot avoid. For example, this can mean arranging for a wheelchair if you are flying somewhere.
- If you start feeling anxious, sit down, relax and practice pursed-lip breathing.
- Talk to your friends and family about what makes you anxious. If they know, they can help you.
- Consider therapy for your anxiety.
- Relax and try to remember that not everything needs to be done in one day.





## COPD and Physical Activity

### Exercise

Exercise is good for everyone, but it is especially important for people with COPD. In fact, it is one of the most powerful tools to manage COPD — second only to quitting smoking.

Exercising can help you breathe better and give you more energy. Start by talking to your doctor or other healthcare provider about exercise. Find out if using your bronchodilator inhaler before exercising will help you exercise more easily. Make sure you are familiar with breathing and coughing techniques that can help you as you are exercising.

### The Benefits

When every breath is a chore, it may be tempting to take it easy. However, as you become less and less physically active, your muscles (including your heart) become less and less efficient. They have to work harder, leaving you more tired and breathless. Regular exercise can help your heart, lungs and muscles work more efficiently, so you can do more with the same amount of effort.

Regular exercise can also help you reach a healthy weight. It strengthens your bones and your body's ability to fight off infection. It can increase your

energy level, boost your mood and help you maintain or regain your independence. Being as fit as possible can also reduce the chances of your COPD symptoms sending you to the hospital.

Exercise does not have to be intimidating. In fact, simple walking is one of the best ways to increase your fitness level.

Start slow and gradually do a little more or work a little harder as you become stronger. Make sure you exercise regularly. Remember, any amount of exercise is better than no exercise and small steps are better than no steps.

### Before You Start

#### Get Your Doctor's Approval

It can be tough to get started when you do not feel well. You may also be anxious about becoming short of breath. Talk to your doctor and COPD team about the type of exercise program that would be best for you and how to use your medications before, during and after exercise.

Your doctor may also suggest strategies to help you get started, such as using a walker or referring you to a pulmonary rehabilitation program.

# Tips for a Successful Exercise Plan

## Stay on Track

### 1. SET PERSONAL GOALS

Work with your COPD team to establish goals that are reasonable for you and develop an exercise plan that is tailored to your fitness level and breathing ability.

### 2. BUILD UP SLOWLY

Do not push too hard, but try to go a little further or exercise a little longer every few days. This will increase the efficiency of your body and your muscles.

### 3. HAVE FUN

Find an activity you enjoy. You will be more likely to keep going if exercise feels more like fun than work. Consider activities like aquafit, dancing, yoga or even walking with a friend. If you have more fun alone, watch a movie or listen to a podcast or music while you exercise. Of course, be sure you are staying safe and aware of your surroundings.

### 4. ALTERNATE ACTIVITIES

When you have COPD, you need strength in all your muscles. However, you may not be able to exercise all your muscles at once. Try exercising your arm muscles one day and your leg muscles the next to get a complete workout without tiring yourself out.

### 5. SCHEDULE WISELY

Exercise when you know your energy level will be high; maybe shortly after taking your medication. Do not exercise on a full stomach – try before a meal or an hour or two after eating. Once you figure out what works best for you, treat your exercise time like an appointment. Organize your day around it. Do not start wondering if you have enough time to exercise — that will make it easier to find an excuse not to. Eventually exercising will become a part of your routine.

### 6. LISTEN TO YOUR BODY

If you are overtired or feeling sick, you may need to limit your exercise for that day. If you have a big event one day, think about limiting your usual time, or postponing your exercise until the next day.

### 7. DRESS FOR COMFORT

Wear loose-fitting clothing. Dress in layers, so you can take off a sweater if you get too hot. Choose shoes that fasten easily and offer good support as well as ample cushioning.

### 8. WATCH WEATHER AND POLLUTION

Avoid exercising outdoors if pollution levels are high or the weather is too cold, too hot or too humid. If possible, plan to exercise indoors on those days.

### 9. TREAT YOURSELF

To stay motivated, give yourself a little reward after exercising.

### 10. EXERCISE REGULARLY

Make fitness a priority and set aside specific times during the week to exercise. Aim for at least three times per week.

Remember, if you do have to stop exercising due to illness or another reason, do not get discouraged. Start again slowly when you are able. You will gradually regain your muscle conditioning.

## Design Your Own Workout

Effective fitness routines need to include flexibility, aerobic and strengthening exercises. Once you have your doctor's approval to start exercising, consider creating your own routine.

### Flexibility Exercise

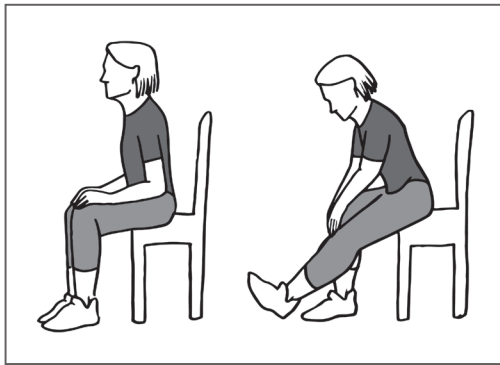
Stretching is an important part of every exercise routine to keep muscles flexible and relaxed, help joints move more freely and increase range of motion. It can also prevent soreness and relieve tension and strain. Breathe slowly and naturally as you stretch.



## Back Thigh Stretch

Sit with your back straight, one foot flat on the floor and the other foot extended in front of you with the heel on the floor and the toes pointing upward.

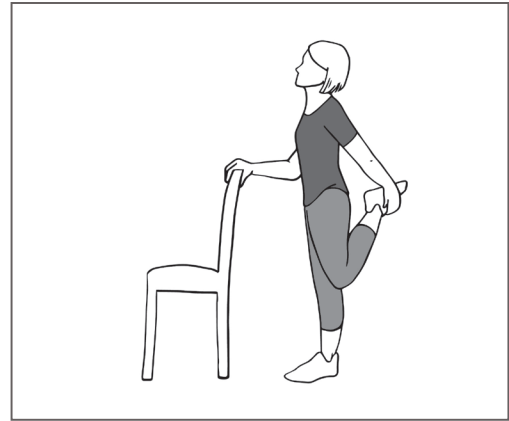
- Reach down to touch your foot, calf or knee (as far as you are able without pain). Remember to bend from the hip, not from the back.
- You should feel a stretch in the back of the thigh.
- Hold this position for 30 seconds. Work up to holding the position for 60 seconds.
- Stretch the back of the other thigh in the same way.
- Repeat 3 times on each leg.



## Front Thigh Stretch

Stand resting one hand on a wall or on the back of a chair for balance.

- Hold your ankle or the hem of your pants with your hand and pull up gently.
- You should feel a stretch in the front of the thigh.
- Hold this position for 30 to 60 seconds.
- Stretch the other thigh in the same way.
- Repeat 3 times on each leg.



## Buttock Stretch

Sit with your back straight and one ankle placed on the knee of the opposite leg.

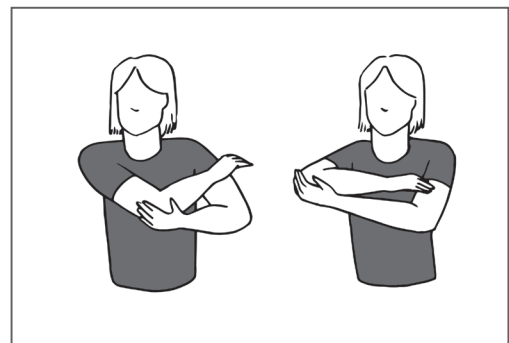
- Bend forward at the waist. You should feel a stretch in the buttock.
- Hold this position for 30 to 60 seconds.
- Stretch the other side of the buttock in the same way.
- Repeat 3 times on each leg.



## Shoulder Stretch

Sit or stand with your back straight and one hand placed on the outside of the elbow of the opposite arm.

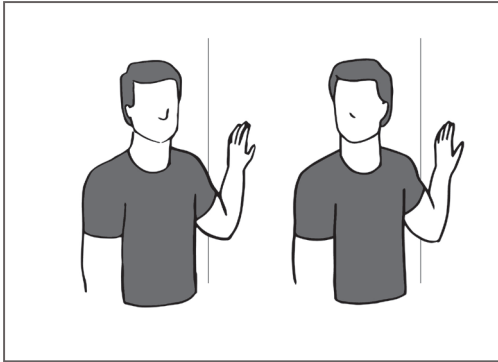
- Pull the elbow gently across the chest.
- You should feel a stretch in the shoulder of the arm being pulled.
- Hold this stretch for 30 to 60 seconds.
- Stretch the other shoulder in the same way.
- Repeat 3 times on each arm.



### Shoulder and Chest Stretch

Stand with one hand and forearm placed against a wall. The forearm should be level with the shoulder. The elbow should be slightly behind the shoulder.

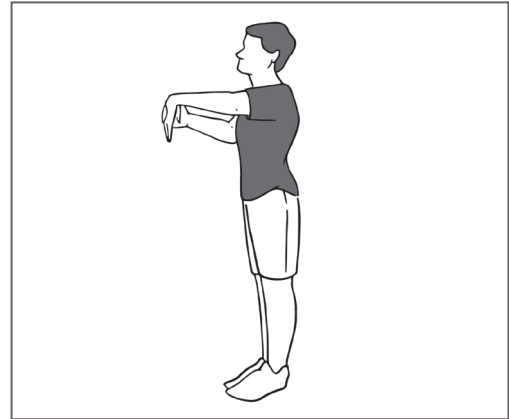
- Turn your head away from the wall.
- You should feel a stretch in your arm and chest.
- Hold this stretch for 30 to 60 seconds.
- Stretch the other side of the chest in the same way.
- Repeat 3 times on each arm.



### Palm Down Forearm Stretch

Sit or stand with your back straight and one arm extended in front of you with the palm facing down.

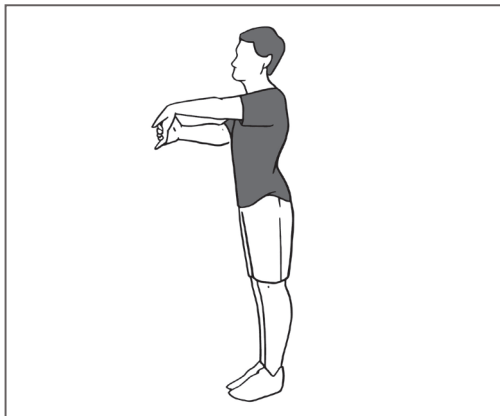
- With your other hand, gently push down on the back of the extended hand. You should feel a stretch in the forearm.
- Hold this position for 30 to 60 seconds.
- Stretch the other palm in the same manner.
- Repeat 3 times on each hand.



### Palm Up Forearm Stretch

Sit or stand with your back straight and one arm extended in front of you with the palm facing up.

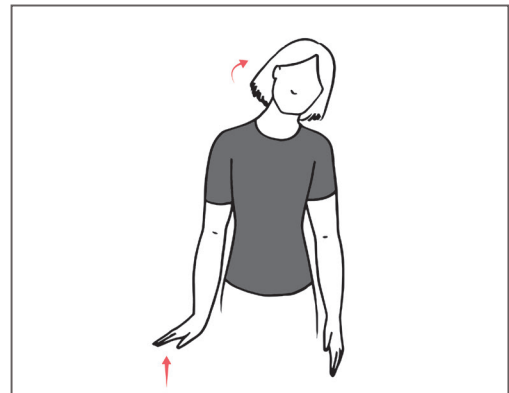
- With the other hand, gently push down on the fingers of the extended hand.
- You should feel a stretch in the forearm.
- Hold this position for 30 to 60 seconds.
- Stretch the other palm in the same manner.
- Repeat 3 times on each hand.



### Neck Stretch

Sit or stand with your back straight and your feet flat on the floor.

- Tilt your head to one side.
- Push down on opposite hand.
- You should feel a stretch in the side of the neck opposite the tilt.
- Hold this position for 30 to 60 seconds.
- Stretch the other side of the neck in the same manner.





## Aerobic Exercise

Aerobic exercises increase your heart rate for a longer period and makes your heart muscle stronger and more efficient, so your body uses less oxygen to do the same amount of work.

Aerobic exercise is anything that gets your heart rate up. In addition to walking, you might want to try:

### RIDING A BICYCLE

Cycling can increase your heart and lung fitness as well as increasing your strength and stamina. It can be a part of your exercise program. You can begin at your own pace and increase your speed and distance as you are able. Like any aerobic activity, cycling can help to build endurance, maintain a healthy weight and reduce stress. It can also reduce the risk of developing other health problems such as diabetes.

### SWIMMING

Swimming is a great aerobic exercise that works your whole body. It improves aerobic conditioning, muscle strength, endurance and flexibility all at the same time. Advantages include lower risk of injury and improved posture.

## Strengthening exercise

Resistance training strengthens and conditions your muscles so they will not tire as quickly. Strong, fit muscles also use oxygen more efficiently, which eases the load on your lungs. For people with COPD, resistance exercises that work the upper body are especially helpful, since they strengthen breathing muscles too.

To build strength, pedal a stationary bike, stretch using rubber tubing or work out with weights. You do not need special equipment. For example, you can strengthen your arm muscles by carrying groceries or doing elbow bends and other upper body exercises while holding a soup tin as a weight.

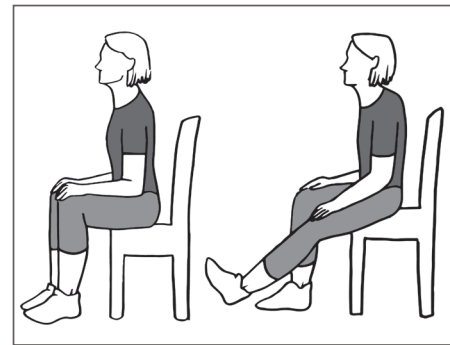
## For the Front of the Thighs

(choose either A, B, or C)

### A. Leg Extension

Sit with your back straight, with your hands resting comfortably on your knees and your feet flat on the floor.

- Extend one leg straight out in front of you so your heel is on the floor and your toes are pointing upwards.
- Return the leg to its original position.
- Repeat 5 to 15 times for each leg.

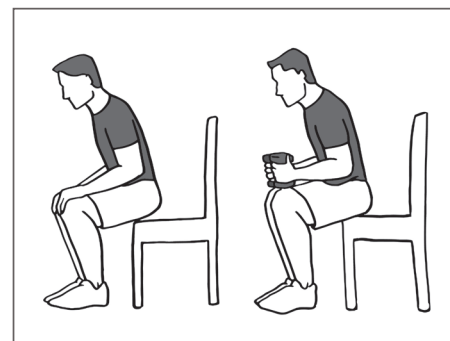


### B. Leg Extension

Sit with your back straight, with your knees forming a 90-degree angle to the floor and your hands resting comfortably on your knees.

- Lean slightly forward and stand up from the chair to a straight position with your hands at your sides. (If the chair has armrests, use them to help you stand up if needed.)
- Return to the original position.
- Repeat 5 to 15 times.

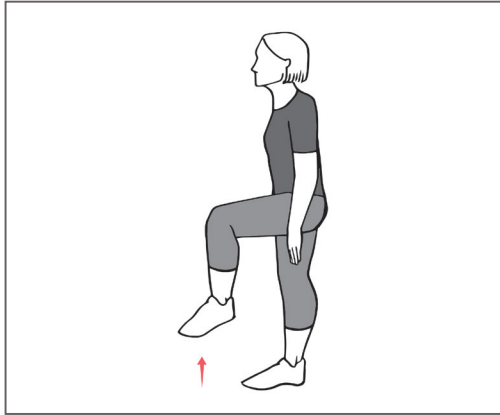
**Progression:** Do this exercise holding weights in your hands.



### C. Knee Lift

Stand with your back straight and your hands by your sides, or stand with one hand on a wall or a chair for balance.

- Lift one leg in front of you so your knee forms a 90-degree angle.
- Return the leg to its original position.
- Repeat 5 to 15 times for each leg.



### For the Back of the Thighs

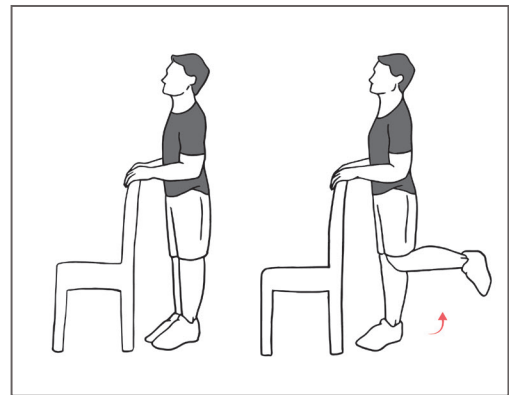
(Choose either A or B)

#### A. Knee Bend

Stand with your back straight, resting your hands on a wall or the back of a chair for balance.

- Lift your foot out behind you so your lower leg is parallel with the floor.
- Return the foot to its original position.
- Repeat 5 to 15 times for each leg.

**Progression:** Do this exercise with weights on your ankles.

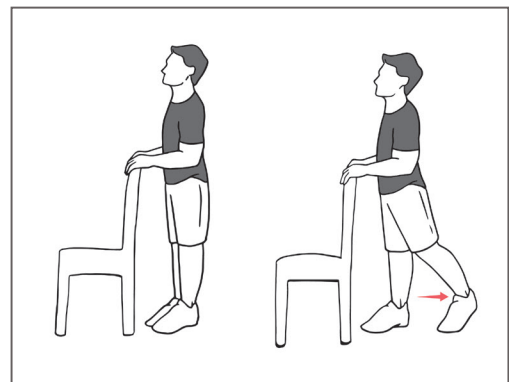


#### B. Leg Lift

Stand with your back straight, resting your hands on a wall or on the back of a chair for balance.

- Give one leg a small, slow kick backwards.
- Return the leg to its original position.
- Repeat 5 to 15 times for each leg.

**Progression:** Do this exercise with weights on your ankles.





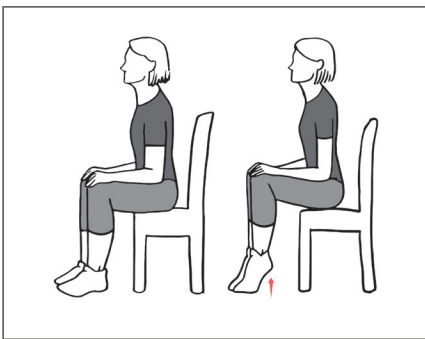
## For the Ankles

### Heel Lift

Sit with your back straight, with your hands resting comfortably on your knees and your feet flat on the floor.

- Raise your heels.
- Return the heels to their original position.
- Repeat 5 to 15 times.

**Progression:** Do this exercise from a standing position.

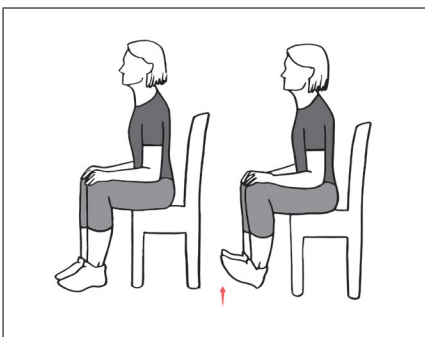


### Toe Lift

Sit with your back straight, with your hands on your thighs and your feet flat on the floor.

- Lift the front of your feet, pointing your toes upward.
- Return the feet to their original position.
- Repeat 5 to 15 times.

**Progression:** Do this exercise from a standing position.



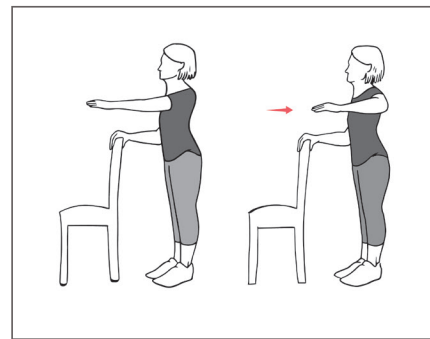
## For the Back

### Arm Extension

Stand with your back straight and one arm held straight out in front of you, parallel to the floor. If you need help to maintain your balance, hold the back of a chair with your opposite hand.

- Pull your elbow back to form a 90-degree angle.
- Return the arm to its original position.
- Repeat 5 to 15 times for each arm.

**Progression:** Do this exercise pulling both elbows back at the same time.

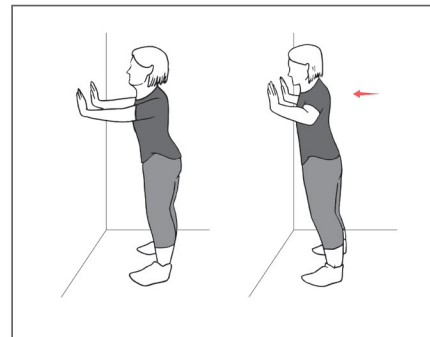


## For the Chest

### Standing Push-ups

Stand facing a wall, with your feet flat on the floor and far enough away from the wall so you can place your hands flat on it. Your hands should be at shoulder height and shoulder width apart.

- Keeping your feet flat on the floor, let your shoulders move in toward the wall.
- Return body to its original position, as if doing a push-up.
- Repeat 5 to 15 times.



## For the Shoulders

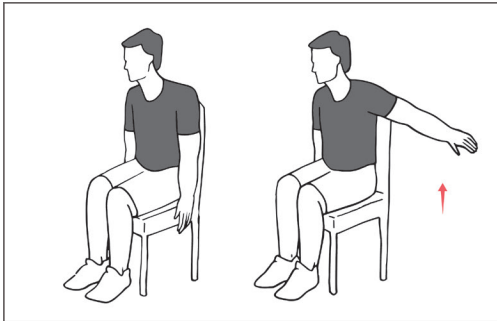
### Side Arm Lift

Sit with your feet flat on the floor and your arms straight down at your sides.

- Lift one arm out to the side so it is parallel to the floor.
- Return the arm to its original position.
- Repeat 5 to 15 times for each arm.

**Progression 1:** Do this exercise lifting both arms at the same time.

**Progression 2:** Do this exercise with weights in your hands.



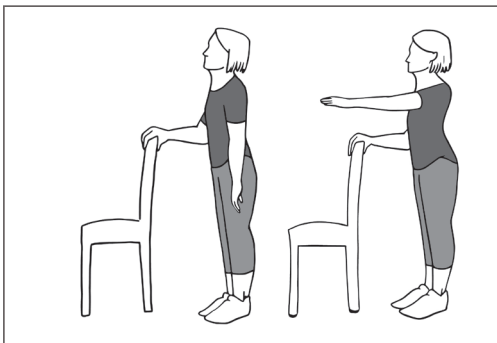
### Front Arm Lift

Sit with your back straight, your feet flat on the floor and your arms straight down at your sides.

- Lift your arm in front of you so it is straight out from the shoulders and parallel to the floor.
- Return the arm to its original position.
- Repeat 5 to 15 times for each arm.

**Progression 1:** Do this exercise lifting both arms at the same time.

**Progression 2:** Do this exercise with weights in your hands.



## For the Arms

### Front Elbow Bend

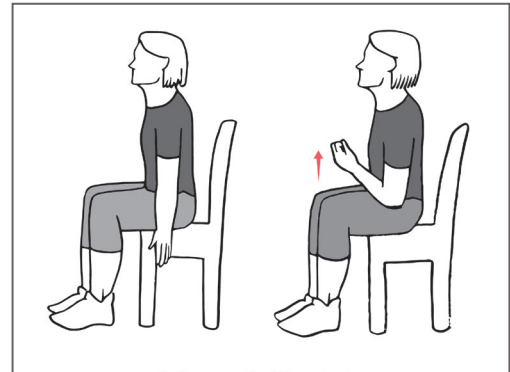
Sit with your back well supported and your arms hanging straight down by your sides.

- Bend your elbow and lift your hand and forearm upwards.
- Return the arm to its original position.
- Repeat 5 to 15 times for each arm.

**Progression 1:** Do this exercise from a standing position while holding on to the back of a chair.

**Progression 2:** Do this exercise bending both elbows at the same time.

**Progression 3:** Do this exercise with weights in your hands.





## Back Elbow Bend

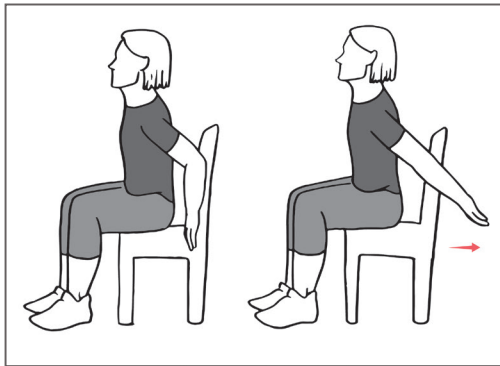
Sit with your feet flat on the floor, with your back well supported and your arm held out behind you. Bend your elbow with your palm facing back.

- Extend your lower arm straight back.
- Return the arm to its original position.
- Repeat 5 to 15 times for each arm.

**Progression 1:** Do this exercise from a standing position.

**Progression 2:** Do this exercise extending both arms at the same time.

**Progression 3:** Do this exercise with weights on your wrist.



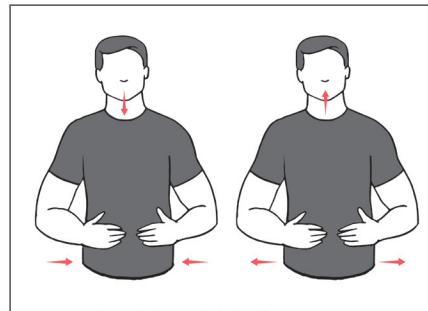
## For the Abdomen

### Abdominal Contractions

Sit with your back straight, your feet flat on the floor, and your hands on your abdomen with your fingers pointing towards your navel.

- Contract your abdominal muscles as you pull your navel inward and breathe out at the same time.
- Release the abdomen to its original position as you breathe in slowly.
- Repeat 5 to 15 times.

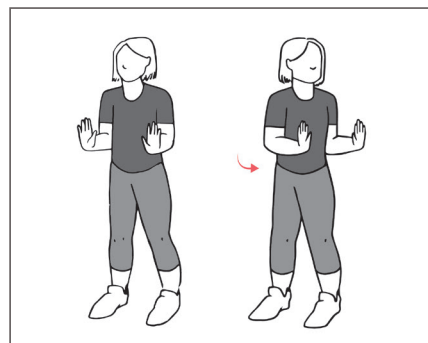
**Progression:** Do this exercise from a standing position.



### Upper Body Rotation

Sit or stand with your back straight, with your feet flat on the floor about shoulder width apart. With your upper arms down at your sides, bend your elbows and hold your hands out in front of you. Your elbows should be about level with your navel. Or you can simply cross your arms on your chest.

- Keeping your feet and hips still, turn the top half of your body to the side.
- Return the upper body to its original position.
- Turn the top half of the body to the other side.
- Repeat 5 to 15 times for each side.



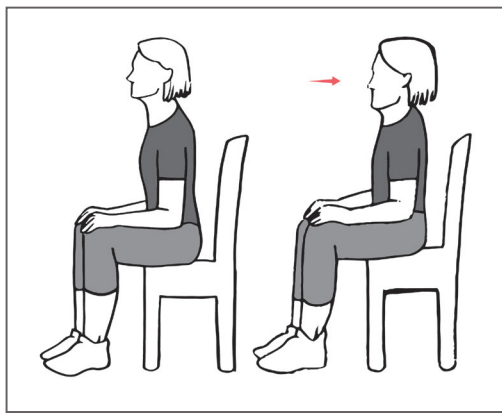
## For the Neck

### Chin Pull

Sit with your back well supported and your feet flat on the floor.

- Pull your chin and head back gently.
- Return the chin to its original position.
- Repeat 5 to 15 times.

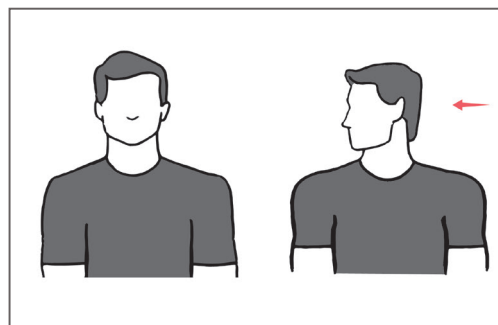
For increased range of movement, you may want to place one finger on the middle of the chin and push gently when you pull your head and chin back.



### Head Rotation

Sit with your back well supported and your feet flat on the floor.

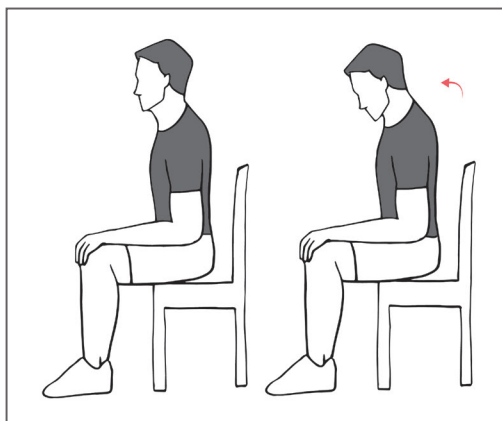
- Turn your head to the side as if looking over one shoulder.
- Return the head to its original position.
- Turn the head to the other side.
- Repeat 5 to 15 times on each side.



### Chin Drop

Sit with your back well supported and your feet flat on the floor.

- Bring your chin to your chest.
- Return the chin to its original position.
- Repeat 5 to 15 times.





## Join a Pulmonary Rehabilitation Program

A great way to learn how to exercise and find support and encouragement is to join a pulmonary rehabilitation (also called respiratory rehabilitation or rehab) program. Pulmonary rehabilitation is strongly recommended for most people with COPD. It is usually led by a respiratory therapist, a nurse or a cardio-pulmonary physiotherapist.

Rehab will teach you:

- how to exercise and give you a chance to practice exercising
- how to manage COPD (nutrition, conserving energy)
- breathing and coughing techniques

Pulmonary rehabilitation is also a social outlet where people with COPD can share stories and encourage one another.

Full-scale pulmonary rehabilitation is usually offered at hospitals or clinics in larger cities. If you live in a smaller centre that does not offer pulmonary rehabilitation classes, try some combining alternatives such as:

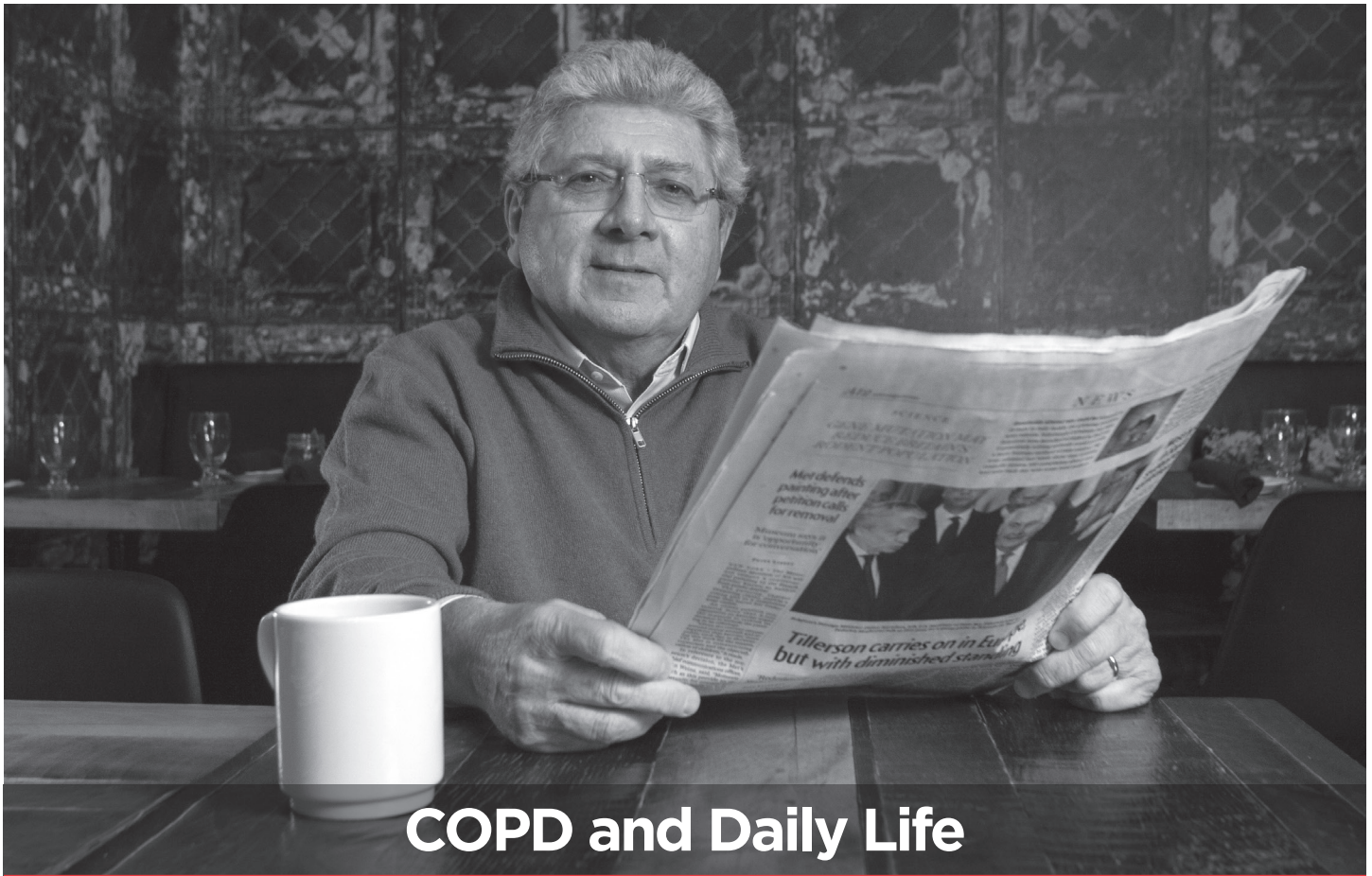
- informal programs offered by smaller hospitals or within your community
- exercise maintenance programs
- nutrition classes at your local community centre
- a mall-walking club
- an aquafit class

Many people with COPD develop their own self-directed rehab program.

You may need a referral from your doctor to join a pulmonary rehabilitation program. If you and your doctor determine that pulmonary rehabilitation is for you, visit <https://www.lung.ca/lung-health/get-help-to-find-one-near-you>.







## COPD and Daily Life

### COPD and Healthy Eating

Nutrition and lung disease can be a complex issue. This is because different lung diseases come with unique nutritional challenges. Some lung diseases include asthma, bronchitis, cystic fibrosis and chronic obstructive pulmonary disease (COPD). Each disease comes with different treatments, its own set of symptoms and with that, side effects that may affect our body's nutritional status. Common challenges may include increased or decreased appetite, weight gain or weight loss, and inability to adequately meet your nutritional needs.

However, there is one thing they all have in common: no matter what your lung disease is, the food you eat should contribute to your overall health. Working with a registered dietitian and developing a meal plan that best works for you might be a good idea. Be sure that you consume whole foods and avoid processed foods whenever possible.

Before starting your own meal plan, consider the following:

#### **1. DO YOU KNOW WHAT SIDE EFFECTS YOU ARE EXPERIENCING BECAUSE OF YOUR DISEASE OR MEDICATION?**

For instance, fatigue, headaches, shortness of breath, difficulty swallowing or acid reflux may be common symptoms you experience on a daily basis. These symptoms can leave you feeling exhausted and defeated when it comes to having your next meal.

Choosing easily prepared foods that require minimal prep work is a great idea, because you avoid spending too much energy prior to eating. If you are experiencing difficulty swallowing, choosing soft or puréed foods can help increase intake without risk of choking. You may also want to consider adding a well-balanced smoothie or protein shake in between meals to ensure you get all the necessary nutrients.





Liquids like smoothies and shakes also keep you hydrated. Many patients with lung disease experience gastroesophageal reflux or GERD as a result of excessive coughing, throat irritation or certain foods. There are a few things you can do to help ease these symptoms.

This includes:

- Eating smaller, frequent meals so food can be digested more easily
- Maintaining an upright position for 30-60 minutes before, after and during meal times
- Avoiding patient-specific “trigger” foods such as foods that are high in fat, spicy, highly acidic (such as citrus or tomato-based products)

## **2. ARE YOUR MEALS WELL BALANCED?**

While the specific amounts of different foods may vary case by case depending on your individual needs, all foods should be healthy and well rounded. When creating a meal, an easy rule to try and follow is more colour equals more nutrients! Including a variety of fruit and vegetables helps to adequately meet your micronutrient needs. People with lung disease often require increased protein because of their

medication, to prevent muscle weakening. Including protein-rich foods in all meals and snacks will help ensure you reach your daily goals. Remember that all foods are not created equal and consult Canada’s Food Guide and adjust amounts to your specific needs. Be sure you include water as a staple for all meals and avoid drinks with added sugar.

## **3. ARE YOUR AMOUNTS MANAGEABLE?**

Meeting your daily calorie needs can be difficult, frustrating and tiring. Since air and food fight for space, it can be difficult to get enough calories and protein throughout the day. Eating smaller meals and snacks more frequently instead of fewer larger meals can be helpful. Choosing smaller, nutrient dense meals that focus on adequate protein sources (think fish, chicken, beans, tofu and low-fat dairy products) are essential to maintaining lean muscle mass and preventing weight loss. Don’t be afraid to modify the texture of foods to chopped or puréed to make eating easier.

Keep in mind that no matter what your dietary needs may be at a given time, the overall goal is to achieve and maintain a healthy weight and nourishing your body through healthy food.



## COPD and Intimacy

Intimacy is something that can still be a part of your life. It is important to be honest with your partner and discuss your limitations as a result of shortness of breath and other symptoms associated with COPD. Plan to have sex when you are rested. Avoid eating a large meal or drinking a lot of alcohol beforehand, so you will not get breathless.

Your COPD medications should not interfere with sexual function. You may want to take a dose of your quick-relief medicine (bronchodilator) before sex to reduce breathlessness. Go slowly and use any sexual position that is comfortable and pleasurable for you and your partner.

## Advance Care Planning

It's important to have a voice in your treatment plan. But there may come a time when you are unable to express your treatment wishes to healthcare providers. This is why it is important to plan ahead and make sure your loved ones are aware of your wishes and can act on them if you are unable to.

- Discuss your wishes with your friends and family or whomever may make decisions on your behalf if you are unable to do so.
- Write down your wishes and speak with your healthcare providers and financial or legal professionals. Work together to develop an "Advance Care Plan" or "Healthcare (Advance) Directive"
- Discuss and identify a substitute decision maker. This person can make decisions on your behalf if you are unable to do so.
- Review your treatment options with your doctor.

Please visit <http://www.advancecareplanning.ca> for great information on talking to your loved ones.

## COPD Checklist

COPD can feel overwhelming and it can be difficult to keep track of everything.  
Here is a quick checklist to keep in mind.

- ☐ Create a list of questions for your healthcare provider.
- ☐ Build a COPD team.
- ☐ Create a COPD action plan with your COPD team.
- ☐ Join a pulmonary rehabilitation program.
- ☐ Meet with a registered dietitian to create a proper meal plan.
- ☐ Create an exercise routine and plan.
- ☐ Ask your healthcare provider for an application for an accessible parking permit.
- ☐ Create an advance care plan.
- ☐ Create a list of your medications to carry in your wallet.
- ☐ Create a list to help you navigate the healthcare system, including contact information for all services you will need to use.

## Contact The Canadian Lung Association

Understanding COPD and learning how to manage it can help you live to the fullest. After reading this guide, you might want more information. Maybe you want to learn more about exercise or breathing techniques.

The Canadian Lung Association can help.

To speak with a Certified Respiratory Educator, call the free Helpline at 1-866-717-COPD (2673) or visit our website at [lung.ca/copd](http://lung.ca/copd).

## About The Canadian Lung Association

The Canadian Lung Association is the leading organization in Canada helping Canadians breathe – working to save lives, prevent lung disease and improve lung health through research, advocacy, education and support. As a non-profit and volunteer-based health charity, we depend on donations from the public to support our mission to lead nationwide and international lung health initiatives and help people manage lung disease and promote lung health.

## Editorial and Expert Team

This health information handbook was made possible thanks to the experience and expertise of the following individuals:

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**Ask for help when you need it and stay connected with others. Loneliness and boredom can set in quickly if you do not maintain social connections with friends and family.**



B R E A T H E  
the lung association

[www.lung.ca](http://www.lung.ca)