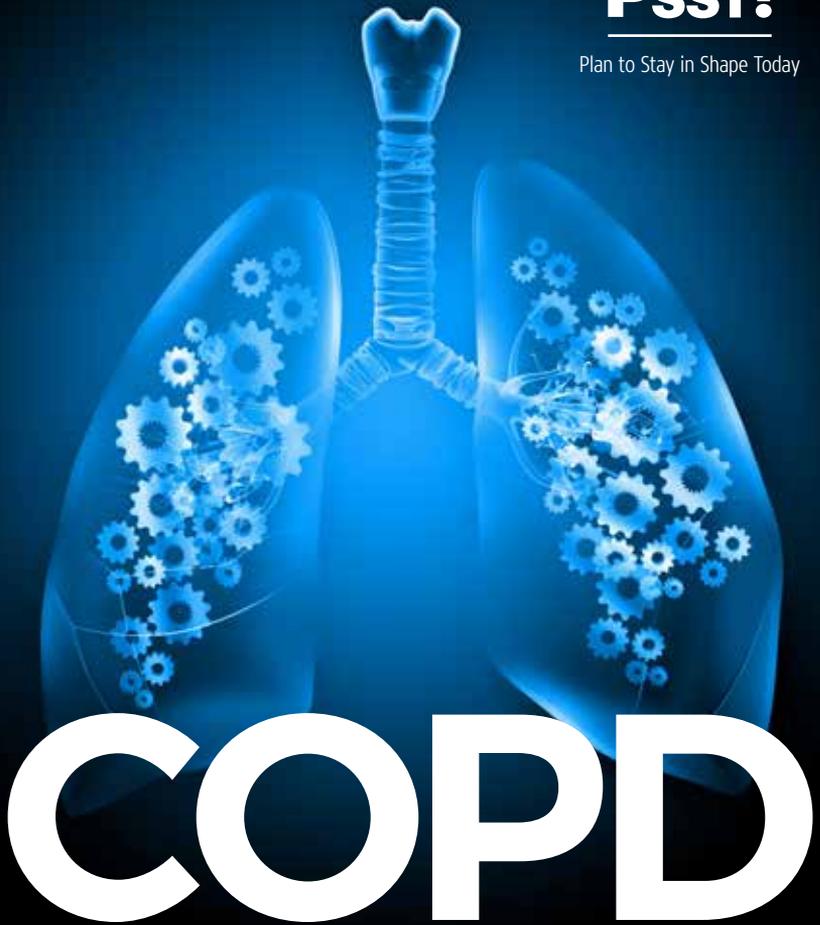


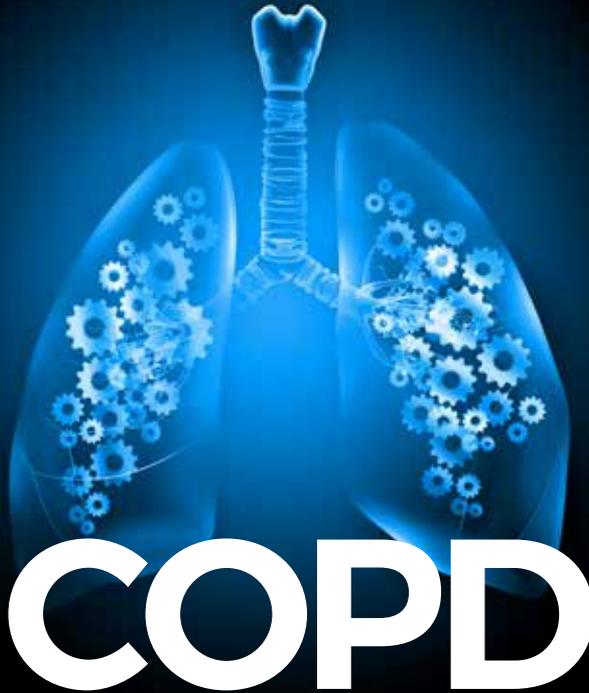
Psst!

Plan to Stay in Shape Today



COPD

.....
Chronic Obstructive Pulmonary Disease



COPD

To keep healthy, it's vital that your lungs are in good working order. Your lungs allow you to breathe, and that's how you get oxygen into your cells so your body can stay alive. Human beings can survive for a while without food or water, but we absolutely can't do without oxygen.

Unfortunately some lifestyle choices may lead to changes in how our lungs work. COPD stands for "chronic obstructive pulmonary disease" and it's one of many conditions that can affect the bronchial tubes. This guide tells you more about this disease, which is relatively little known even though it's very common.



TABLE OF CONTENTS

What is COPD?	4
What are the symptoms of COPD?	8
What causes COPD?	11
What everyday factors can make the condition worse?	12
How is the condition diagnosed?	14
How can you prevent the disease or slow its progress?	15
What treatments are available?	24
The Action Plan	30

What is COPD?

COPD is an umbrella term for several chronic lung conditions that you may have heard of, including **emphysema** and **chronic bronchitis**. Someone who is diagnosed with COPD might be suffering from chronic bronchitis, or from emphysema, or they may even have both.

COPD is far from rare, affecting more than 750,000 Canadians—especially those over 40. It strikes men and women equally, and is the fourth leading cause of death in Canada. That's why it's important to get a diagnosis and start treatment as early as possible.

DID YOU KNOW?

60-85% of people with COPD may not even know they've got it?

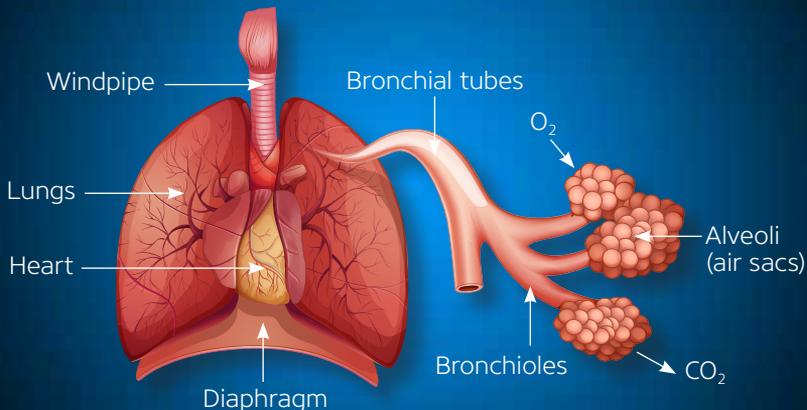


To get to grips with this condition, you need to understand how the lungs of a healthy person work differently compared to someone with COPD.

The main purpose of breathing is to allow your lungs to filter the air you inhale and give your body the oxygen (O_2) it needs, and also to get rid of waste gases like carbon dioxide (CO_2) from the body.

When you breathe in through your nose and mouth, air flows down your windpipe and then through the airways of the lungs—called bronchial tubes and bronchioles—to tiny air sacs called alveoli, where the gas exchange happens. The oxygen you breathe in is absorbed into the blood, and the carbon dioxide (CO_2) produced by your body moves across into the air sacs, travelling in the opposite direction until it is breathed out.

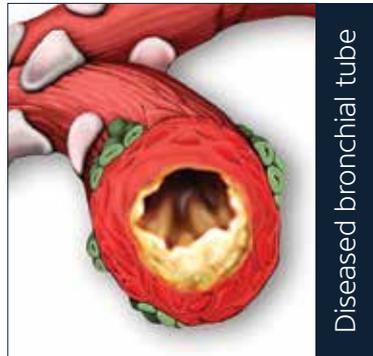
RESPIRATORY SYSTEM



You can see how vital it is to have healthy airways and alveoli so breathing is easy, and your lungs can work efficiently.

Although some people may suffer from both chronic bronchitis and emphysema at the same time, it's important to understand the difference between the two conditions.

Chronic bronchitis is when your airways are permanently inflamed because of breathing in irritants like cigarette smoke. The bronchial tubes react to these irritants with redness and swelling and fill up with mucus. That makes it hard for air to flow freely, so you have difficulty breathing.



Emphysema is different—it's a long-term condition that progresses slowly by attacking the little air sacs, or alveoli, at the end of the bronchial tubes where the gas exchange happens between "pure" air (oxygen, O_2) and stale air (carbon dioxide, CO_2). Emphysema gradually destroys the alveoli and makes them less elastic. This damage to the air sacs means the body gets less oxygen, leaving sufferers always short of breath and lacking energy.



What are the symptoms of COPD?

It may take several years before the first signs are noticeable, because COPD is often a **silent** disease. Sometimes early symptoms only show up when lung damage is already well underway.

Someone suffering from COPD will usually have the following symptoms:

- ⚙️ Persistent cough
- ⚙️ Coughing up phlegm that never seems to go away
- ⚙️ Wheezing
- ⚙️ Shortness of breath when you exert yourself, and even during everyday activities
- ⚙️ Tightness in the chest
- ⚙️ Frequent chest infections

COPD generally makes it hard to breathe and dramatically reduces a sufferer's quality of life, especially if the disease is not treated.



COPD can be divided into four separate stages*:

1. At-Risk Stage	The condition has not appeared yet. This is the case for smokers or ex-smokers who haven't shown any symptoms, don't have a cough, and don't cough up any phlegm.
2. Mild	Sufferers may feel short of breath after mild physical activity, like hurrying over level surfaces or walking up a slight slope.
3. Moderate	Sufferers are so short of breath after walking for a few minutes on flat ground, or a distance of about a hundred meters, that they have to stop to catch their breath.
4. Severe	Sufferers are so short of breath all the time that they can't leave the house, or do everyday activities like getting dressed.

* Source: Canadian Thoracic Society

Being out of breath, having a persistent cough, and struggling to breathe can have a direct impact on your daily life. Depending on how bad the condition gets, people with chronic obstructive pulmonary disease are more and more limited in their day-to-day and leisure activities. They may even find it hard to get a good night's sleep, to get themselves up and dressed in the morning, and to do basic tasks like household chores.

WHAT'S THE DIFFERENCE BETWEEN COPD AND ASTHMA?

COPD and asthma both affect the lungs and make it hard to breathe, but there are big differences between the two conditions.

	COPD	ASTHMA
Age when symptoms first appear	Mainly after 40	Generally during childhood or the teenage years
Influence of smoking tobacco on the development of the illness	Directly related	Less of a link
How often symptoms appear	Every day: lung function continues to deteriorate over time	Occasionally: few day-to-day symptoms, as long as triggers are kept in check
Origin	Occurs when bronchioles and alveoli are already damaged	Results from inflammation and constriction of bronchial tubes
Basic treatment	Bronchodilators	Corticosteroids

What causes COPD?

Smoking or inhaling the smoke of others (second-hand smoke) is the cause in nearly 90% of cases. And the risk of developing COPD rises the more packs of cigarettes you smoke, and the longer you smoke. Tobacco causes permanent damage to the lungs, which means they can no longer do their job so well. In some cases, COPD can be associated with air pollution at work or in the environment, and more rarely it can be caused by a genetic disorder.

DID YOU KNOW?

It's estimated that 15-25% of smokers will get COPD.



What everyday factors can make the condition worse?

When someone has COPD, they may find they have flare-ups—times when they get sicker for a while. Physicians call these periods **“exacerbations”** and you can recognize them by these symptoms:

- ⚙ Increase in the amount of phlegm produced
- ⚙ Shortness of breath worse than usual
- ⚙ More coughing than usual
- ⚙ Wheezing more noticeable
- ⚙ Phlegm more yellow, green or brown

As well as tobacco and second-hand smoke, there are some other things that can trigger these episodes:

- ⚙ Indoor air irritants such as chemical products or strong odours
- ⚙ Smog
- ⚙ Stress, anxiety and nervous exhaustion
- ⚙ Changes in temperature and humidity
- ⚙ Respiratory infections like colds, flu, pneumonia, or bronchitis

Taking steps to avoid these triggers is the best way to keep flare-ups to a minimum. That way, there's less risk of the disease progressing, as well as seeing an improvement in quality of life.

Usually people with COPD find that their physical health gets worse over time, as they have less energy and their muscles get weaker. This makes it harder and harder for them to carry out routine tasks and catch their breath. They lose weight, and oxygen levels in their blood decrease.

Other complications include colds, flu, more frequent infections such as pneumonia, heart trouble, and even depression. These inevitably take their toll on quality of life—not just for the sick, but for everyone around them too.

If COPD worsens, it needs to be treated or sufferers may end up in hospital. They could even die, which is why it's so important to understand the condition fully and make sure sufferers get proper care.

How is the condition diagnosed?

Physicians generally use a test called **spirometry** to check how well their patients' lungs work and find out if they have COPD. It doesn't take long and involves breathing in deeply and breathing out again as hard as you can for as long as possible into a special device. The spirometer measures how much air you breathed out and how fast. **This is considered to be the most reliable way of screening for COPD.**

Sometimes the physician might want to do other tests, such as a lung X-ray to see how much damage there is and blood tests to measure the oxygen level in your blood.

It's very important to remember that the sooner chronic obstructive pulmonary disease is diagnosed and the faster it's treated, the easier it will be to slow it down and keep it in check.

WARNING!

All those over age 40 should have a spirometry test if they smoke, or used to smoke, and suffer from any of the symptoms listed on page 8—persistent cough, phlegm that never seems to clear, wheezy breathing, or frequent chest infections that drag on.



How can you prevent the disease or slow its progress?

At the moment there is no cure for COPD, but you can definitely slow it down by treating it as soon as it appears. This also helps prevent complications, reduces symptoms, and improves quality of life for sufferers. Here are some everyday steps for coping better with this condition.

STEP 1: QUIT SMOKING

Cutting out cigarettes is the key step in preventing this disease, or at least slowing its progression. It's never too late to stop smoking! If you suffer from COPD and quit cigarettes, you won't regain the lung function you've lost, but you can limit any further damage. **In fact, this is the only thing that can prevent the disease or delay its progression.**



By quitting smoking, you'll gradually reap the following benefits:

- ⚙️ Coughing diminishes and your lungs secrete less phlegm
- ⚙️ Damage to your lungs slows down
- ⚙️ Chest infections happen less frequently and they're less severe
- ⚙️ The risk of cancer decreases

It's not easy to quit because addiction can cause really strong cravings in some people. Nicotine stimulates the nervous system, so you might smoke to feel calmer—or more energized, depending on your mood—or reaching for a cigarette might just be a habit.

There are several programs available to help and support you while you quit smoking. Your healthcare professional can be a valuable ally when you decide to make the break, so make sure you ask them for advice if you want more information about quitting. They can offer guidance and recommend treatments to fit your condition.



STEP 2: GET MOVING

Often, people with COPD get so short of breath they end up not moving around too much—but that’s a bad thing, because **physical exercise is an important part of controlling the disease.**

Exercise actually improves quality of life for COPD sufferers by raising their tolerance for physical effort. Shortness of breath is reduced, and the breathing muscles get stronger, making it easier to breathe out.

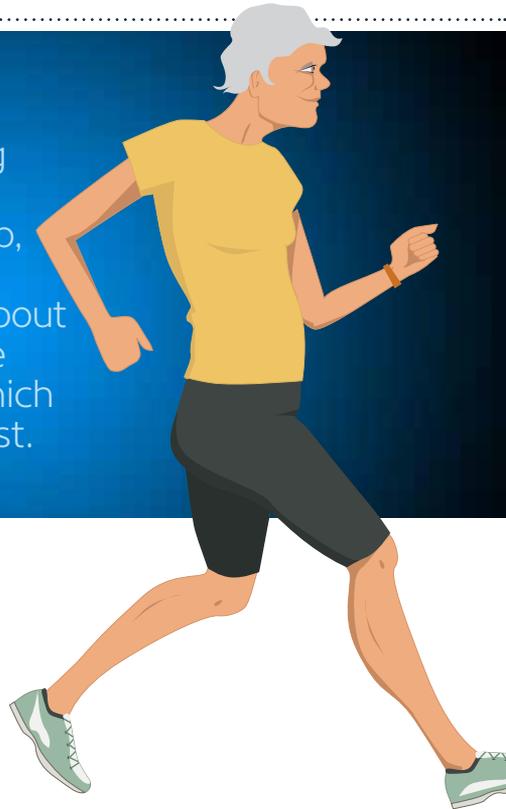
To gain these benefits, it’s recommended that you should **exercise for 30 minutes a day, three to five times each week.** Favour an activity that gets your heart rate up, like fast walking or swimming. If you prefer to break it down into three sessions of ten minutes’ exercise instead of 30 minutes in one go, that’s just as beneficial.

Make sure you choose an activity that fits with your lifestyle. If the great outdoors is your thing, a daily walk in the forest could be just the ticket for getting you moving. Exercising with other people can be fun, so maybe a swimming or aerobics class could be right for you. When choosing an activity, think about what factors might make your symptoms worse. For instance, you should probably go for an indoor activity if wind or high humidity levels tend to put your system out of kilter.

Bear in mind that the endurance and muscle strength you build up through exercise will start to diminish after just a few days of going back to being a couch potato again. The trick is to keep at it and not give up!

WARNING!

Before starting a training program or activity that will get your heart rate up, you should talk to your healthcare professional about the right level of exercise intensity for you, and which activities will suit you best.



STEP 3: EAT A HEALTHY DIET

It might seem odd to link your diet to your breathing, but it's important to understand that someone with lung disease uses up much more energy breathing than someone without this illness. But eating healthy food can give you all the vitamins and energy you need to maintain an active lifestyle. As well as helping keep your body at a comfortable weight, you'll notice it makes your lungs work more efficiently and you'll be better able to exercise regularly.



STEP 4: WASH YOUR HANDS OFTEN

It's really important to avoid catching a cold or flu if you suffer from COPD, because these infections make it even harder to breathe and often cause flare-ups of the disease. Probably about 80% of these kinds of infections are caught through getting germs on your hands. It could be by touching something that many other people have also touched, like a door handle in the mall washroom, or a shared telephone – so washing your hands often and thoroughly can be a big help.

REMEMBER:

To wash your hands properly, you should spend at least 15 seconds rubbing your hands, nails, the spaces between your fingers, and your wrists with hot water and soap. Then dry your hands thoroughly and ideally turn off the tap using a paper towel so your hand doesn't get contaminated again.



STEP 5: GET VACCINATED

Catching the flu is more likely to lead to complications if you have COPD, so it's a very good idea to get a flu shot every fall. That way, there's less risk that you'll have to go to the hospital if you do catch the influenza virus. It's also a good idea for COPD sufferers to ask their healthcare professional if they should get vaccinated against pneumonia as well.



STEP 6: MANAGE YOUR ENVIRONMENT

Lung disease is made worse by temperature changes and humidity, as well as air pollutants, including dust. To help keep problems at bay, it's essential to control your everyday environment. Here are a few suggestions:

- ⚙️ Avoid traffic pollution, smog, cold air, strong fragrances, cleaning products and paint
- ⚙️ Ask people around you to smoke outside
- ⚙️ Make sure your home's ventilation system is regularly maintained so you have healthy, clean air indoors
- ⚙️ Dust the surfaces in your home at least once a week

PLANNING A TRIP?

Before you go, check out the weather conditions and air quality at your destination. You don't want to find yourself in a place where your symptoms are triggered by the temperature, humidity, smog, or high altitude! Make sure you have an action plan that takes account of the weather and air quality.

STEP 7: LEARN TO CONTROL YOUR BREATHING

People with COPD often have more mucus in their bronchial tubes, which makes it harder to catch your breath. To cope with shortness of breath and the feelings of anxiety it may cause, it's essential to control your breathing so you don't have to work so hard to get the air you need. There are various pulmonary rehabilitation programs that teach you how to breathe better, exercise, manage your symptoms, and altogether help you live more comfortably with COPD.

These programs were put together by nurses, respiratory therapists, and physiotherapists. They are proven to have a positive impact on managing shortness of breath and fatigue, as well as helping COPD sufferers better control their disease.

What treatments are available?

Medication can't cure COPD but it helps sufferers to breathe more easily, reduces coughing and shortness of breath, prevents complications from setting in, and keeps the illness from getting worse.

EVERYDAY “MAINTENANCE” TREATMENT

To keep COPD in check, the most common medicines work by opening up the airways so air can travel down into the lungs more easily. They're called **bronchodilators** and mostly come in the form of inhalers.

Daily treatment of COPD involves taking one or several long-acting bronchodilator medications once or twice a day, depending on what type of inhaler you've got. These inhalers for everyday treatment of COPD are slower acting, but work over a longer period. They help keep symptoms under control all the time, so users can enjoy better quality of life and there's less risk of their condition getting worse.



TREATMENT DURING FLARE-UPS

There are other inhalers that can be used from time to time for quick relief, when the illness gets worse, or when you notice increased shortness of breath or more phlegm is being coughed up. These are fast-acting inhalers that work within a few minutes, but their effect only lasts a couple of hours. They're called short-acting bronchodilators and are used as a quick fix to bring temporary relief to COPD sufferers. They should only be used as rescue medication during flare-ups.

If the condition seriously worsens, healthcare professionals may recommend adding an antibiotic and/or an anti-inflammatory inhaler to the basic treatment for a few days. Whenever you start a new treatment or refill your prescription, it's a good idea to ask someone in your healthcare team to explain how each of your inhaler medications works, as well as the best time to use it. Understanding your treatment is the best way to make it work for you!

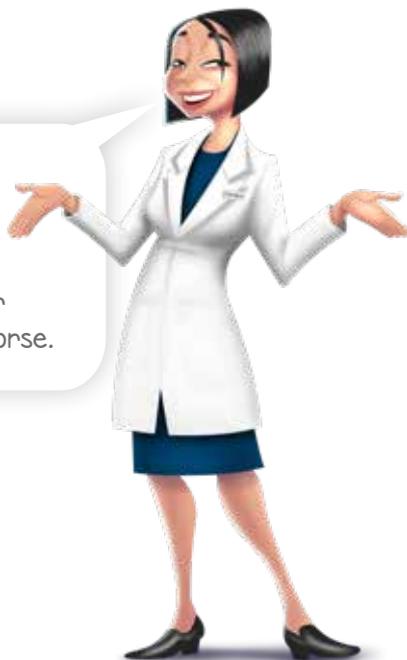
USING INHALERS

It's important to use your inhalers regularly, but you also have to make sure you're doing it right.

The first time your healthcare professional gives you an inhaler, they will show you how to use it correctly. They'll also be checking it regularly so you can be confident that your medication is working to maximum effect. Any time you like during your treatment, you can ask them to watch how you use your inhalers so you know you're doing it right. Getting your technique down pat helps you take control of your COPD!

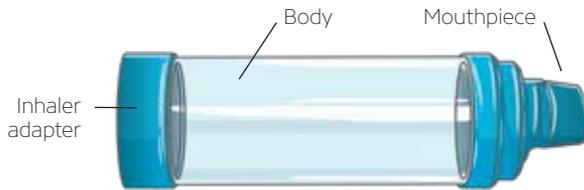
WARNING!

Keep in mind that if you're using your inhaler wrong, you definitely won't get the best results from your treatment and your illness will get worse.



Your physician or pharmacist may suggest you use a **spacer device** to make it easier for you to use your inhalers. It can be hard to get the timing right between when you breathe in and when you fire a puff from your inhaler—you have to be quite coordinated! Spacers are plastic tubes with valves that hold the medicine for a while until you're ready to inhale it. Some of them come with a facemask or mouthpiece, and they help by making sure as much medicine as possible goes straight to your lungs, leaving as little as possible behind in the mouth and throat.

SPACER DEVICE



CLEANING THE SPACERS

There's a special technique for washing spacers. Ideally, they should be washed every week, and the plastic chamber should be replaced every year. Here's some basic advice about how to wash a spacer, although it's still a good idea to read the manufacturer's recommendations.

- 1.** Take off the end where the inhaler goes. Don't remove the facemask from the chamber, and try not to touch the valves while you're washing the spacer.
- 2.** Let the two parts soak in warm, soapy water for 15 minutes.
- 3.** Take them out of the water and drain.
- 4.** Leave them standing in an upright position to air dry. Don't use a dish towel to wipe the inside dry, because that can create static, which will tend to make the medicine stick to the chamber walls afterwards.
- 5.** Once the spacer is completely dry, put the end back onto the plastic chamber.

OXYGEN THERAPY

Remember that our bodies need oxygen to function properly. As COPD sets in and gradually worsens, less oxygen is able to reach the bodily organs. At the same time, COPD sufferers stockpile more carbon dioxide in the bloodstream because their lungs are less efficient at getting rid of it. Some people may require oxygen therapy in due course, which involves breathing in oxygen through a facemask.

This treatment helps keep the oxygen level in their blood high enough so their organs can keep working like they should. That way, they suffer less shortness of breath and can enjoy a more active lifestyle.

Oxygen therapy is not a basic treatment for COPD, but is used to tackle the disease in its more advanced stages. There are various devices available to deliver oxygen therapy—some of them are portable, others not. Using this equipment may seem a bit drastic, but it really improves the daily lives of those who need it.

With oxygen therapy, these people can exercise or play sports, get to sleep more easily, and enjoy more restful sleep. In some cases they may even be able to travel by plane!

Action Plan

An action plan helps COPD sufferers recognize signs and symptoms that mean their condition is getting worse and gives clear guidance on what to do if they suffer a flare-up. Plans are tailored to each individual patient and should be reserved for periods when their condition gets more serious. They are designed to safeguard the patient's health, if possible to keep them from having to be hospitalized, and to slow the progression of their disease.

Patients draw up their action plans together with their physicians. The plan clearly divides symptoms into three different bands, and spells out what action should be taken in each situation:

- **I FEEL WELL** means the condition is well under control.
- **I FEEL WORSE** means that symptoms have changed, e.g. their phlegm looks different, or they're shorter of breath than usual. The patient must follow the agreed procedure in their Action Plan:
 - ⚙ Use their inhalers more
 - ⚙ Use breathing techniques more
 - ⚙ Start antibiotic treatment
 - ⚙ Etc.
- **I FEEL MUCH WORSE OR IN DANGER** means the time has come to seek urgent medical advice.

Conclusion

COPD is a chronic disease that gradually gets worse. It's essential to follow basic treatment guidelines to slow its development as much as you can. You should quit smoking, stay away from second-hand smoke, and learn to recognize when symptoms are particularly bad so you can act faster and avoid having to be hospitalized. You also need to understand what each of your inhalers is for, when to use them, and exactly how you should use them to get the best results. Lastly, draw up an Action Plan with your physician and stick to it. If you do all the right things, you'll be able to lead an active life despite your COPD!

SOURCES AND USEFUL LINKS

Association of Allergists and Immunologists of Quebec

<http://www.allerg.qc.ca/>

Canadian Lung Association

www.poumon.ca

Canadian Thoracic Society

www.respiratoryguidelines.ca

Familiprix

www.familiprix.com

Public Health Agency of Canada

www.phac-aspc.gc.ca

Quebec Lung Association

www.pq.poumon.ca

IN THIS GUIDE

What is COPD?

.....

What are the symptoms of COPD?

.....

What causes COPD?

.....

**What everyday factors can make
the condition worse?**

.....

How is the condition diagnosed?

.....

**How can you prevent the disease
or slow its progress?**

.....

What treatments are available?

.....

The Action Plan

Only pharmacists are responsible for the professional activities of the pharmacy practice. They use various tools such as the Psst! (Plan to Stay in Shape Today) program.