

# Chronic Lung Disease

*... the Patient Experience*



A Guide to Help You Better Understand  
Your Condition and Treatment

## **ACTION PLAN**

1. What medications to take and when
2. Getting vaccinated
3. Arrange for pulmonary rehab
4. Contact smoking cessation counselor
5. Signs of impending exacerbation
6. Primary provider's contact information

## **Professional Educating Patient on COPD**

Respiratory Therapist: Initial \_\_\_\_ Date: \_\_\_\_

Pharmacist: Initial \_\_\_\_ Date: \_\_\_\_

# CHRONIC OBSTRUCTIVE PULMONARY DISEASE ZONES

<p><b>EVERYDAY</b></p>	<p>EVERYDAY:</p> <ul style="list-style-type: none"> <li>◆ Take all medicines (even if you feel better)</li> <li>◆ Do breathing exercises</li> <li>◆ Avoid stress</li> <li>◆ Use oxygen as ordered</li> <li>◆ Drink plenty of fluids</li> <li>◆ Exercise</li> <li>◆ Do not smoke</li> </ul>
<p><b>GREEN ZONE</b></p>	<p>ALL CLEAR ZONE—THIS IS WHERE YOU WANT TO BE! Your symptoms are under control. You have:</p> <ul style="list-style-type: none"> <li>◆ No worsening of shortness of breath</li> <li>◆ Taken all your medicines</li> <li>◆ Done breathing exercises</li> <li>◆ Avoided stress</li> <li>◆ Used oxygen as ordered for you</li> <li>◆ Drank fluids</li> </ul>
<p><b>YELLOW ZONE</b></p>	<p>CAUTION ZONE—THIS IS AN AREA OF WARNING SIGNS!</p> <p>Call your doctor's office if:</p> <ul style="list-style-type: none"> <li>◆ You have more or less mucus production</li> <li>◆ Stickier mucus</li> <li>◆ Change in color of mucus</li> <li>◆ Increased shortness of breath</li> <li>◆ Swollen ankles</li> <li>◆ Sudden weight gain or loss</li> <li>◆ Feeling tired a lot</li> <li>◆ Headaches, dizziness or trouble sleeping</li> <li>◆ Cough more often or worse</li> <li>◆ Have a faster pulse than normal for you</li> <li>◆ Aren't hungry or don't want to eat</li> <li>◆ Are thirsty a lot</li> <li>◆ Have a fever over 101F</li> </ul>
<p><b>RED ZONE</b></p>	<p>EMERGENCY! GO TO THE EMERGENCY ROOM OR CALL 911 IF YOU HAVE ANY OF THE FOLLOWING:</p> <ul style="list-style-type: none"> <li>◆ Struggling to breathe. Unrelieved shortness of breath while sitting still</li> <li>◆ Have chest pain</li> <li>◆ Have confusion—can't think clearly</li> </ul>

## About Chronic Lung Disease

Living with a chronic lung disease—means learning to manage it. This is the key to breathing better. You can live a normal, healthy life.

## Managing Your Chronic Lung Disease

- ◆ take all your medicines (even if you feel better)
- ◆ use oxygen if your doctor has ordered it for you
- ◆ do breathing exercises
- ◆ avoid stress
- ◆ drink fluids (water)
- ◆ exercise:
  - walk \* bike \* arm curls \* calf raises \* leg extensions
  - exercise your diaphragm \* chair dancing
  - Tai Chi to reduce stress and anxiety
- ◆ **DO NOT SMOKE**



## Taking Your Medications and Spacers

Some medications are taken with water. However, some have to be inhaled (breathed in) through the use of spacers.

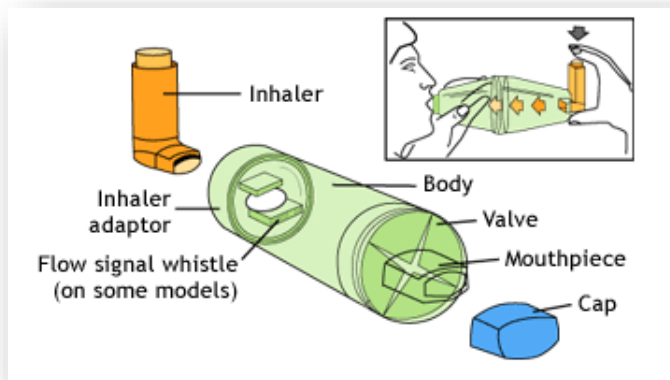
## What Are Spacers?

Spacers (also known as aerosol-holding chambers, add-on devices and spacing devices), are long tubes that slow the delivery of medication from pressurized MDIs. They should always be used with MDIs that deliver inhaled corticosteroids. Spacers can make it easier for medication to reach the lungs, also lessening the amount of medication from being deposited in the mouth and throat, where it can lead to irritation and mild infections. The Asthma Society of Canada recommends that anyone, of any age, using a puffer should consider using a spacer.

While a spacer can make it easier to coordinate breathing in and activating an MDI, it can also make the MDI less portable because a spacer takes up extra space in a purse or a bag. However, inhaled corticosteroids are usually prescribed to be taken twice a day, so the spacer can be left at home for morning and evening use.

## How to Use a Spacer

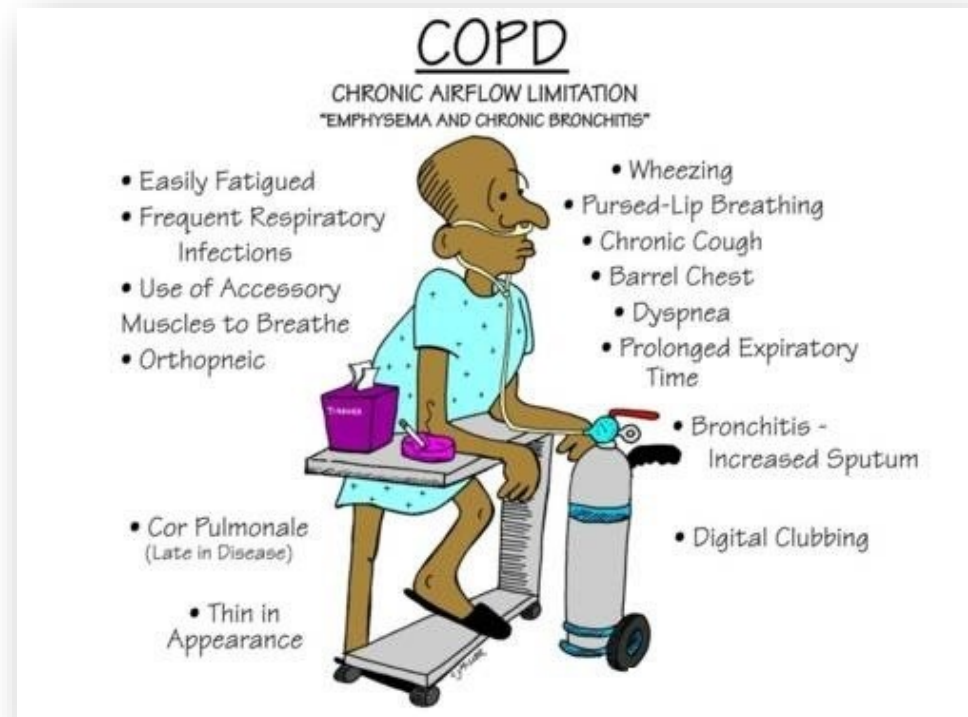
1. Shake the inhaler well before use (3-4 shakes).
2. Remove the cap from your inhaler and from your spacer, if it has one.
3. Put the inhaler into the spacer.
4. Breathe out, away from the spacer.
5. Bring the spacer to your mouth, put the mouthpiece over tongue and between your teeth. Close your lips around it.
6. Press the top of your inhaler once.
7. Breathe in **very slowly** until you have taken a full breath. If you hear a whistle sound, you are breathing in too fast.
8. Hold your breath for about **ten seconds** then breathe out.
9. Wait **one minute** in between puffs.



## What Can Make COPD Worse?

To save energy, get help doing things if you need it. Avoid the following that can make COPD worse:

- ◆ Smoking
- ◆ Pollution
- ◆ Dust
- ◆ Allergies
- ◆ Weather
- ◆ Stress
- ◆ Foods:
  - ⇒ Decrease carbohydrate intake (they produce carbon dioxide which forces your lungs to work harder)
  - ⇒ Limit salt intake (salt makes you retain fluid which can increase work of breathing)
  - ⇒ Avoid foods that produce gas and make you feel bloated (this can impair and increase your work of breathing)
  - ⇒ Try eating six small meals a day instead of three large ones. This will keep you from filling up your stomach and causing shortness of breath.



## How is COPD Treated?

- ◆ Medications: There are lots of medications to treat COPD.
- ◆ Oxygen: As the disease worsens, some people need to use oxygen.
- ◆ Pulmonary Rehab: Patients learn to improve their symptoms in new ways.
- ◆ Surgery: Rarely, people with severe COPD will have surgery to remove the most damaged parts of their lungs. This surgery can reduce symptoms, but does not always work.
- ◆ Pharmacologic Therapy
  - ⇒ Short-acting adrenergic
  - ⇒ Long-acting adrenergic
  - ⇒ Anticholinergic bronchodilator
- ◆ Inhaled Corticosteroids
  - ⇒ In combination with long-acting beta agonist
  - ⇒ Roflumilast (oral anti-inflammatory) increased pre-FEV1
- ◆ Antibiotic Therapy
- ◆ Vaccinations
  - ⇒ Influenza
  - ⇒ Pneumonia >65 years
- ◆ Smoking Cessation
  - ⇒ Nicotine replacement therapy
  - ⇒ Varenicline (Chantix)
  - ⇒ Anti-depressants
  - ⇒ Counselor

## Ways to Improve Activities of Daily Living

- ⇒ Drink 8-16 glasses of fluid each day. Water is best!
- ⇒ Exercise 3-4 times each week for at least 30 min.
- ⇒ Ask about a pulmonary rehab program.

## Cleaning Your Spacer

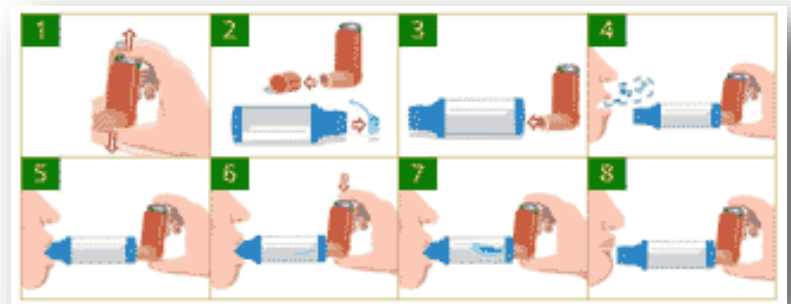
When cleaning your spacer, follow the instructions that come with it. In most cases, they will advise you to:

1. Take the spacer apart.
2. Gently move the parts back and forth in warm water with mild soap or white vinegar. Never use high-pressure or boiling hot water, rubbing alcohol or disinfectant.
3. Rinse the parts well in clean water.
4. Do **not** dry inside of the spacer with a towel as it will cause static. Instead, let the parts air dry (leave them out overnight).
5. Put the spacer back together.

## Important Reminders About Spacers

Always follow the instructions that come with your spacer, and:

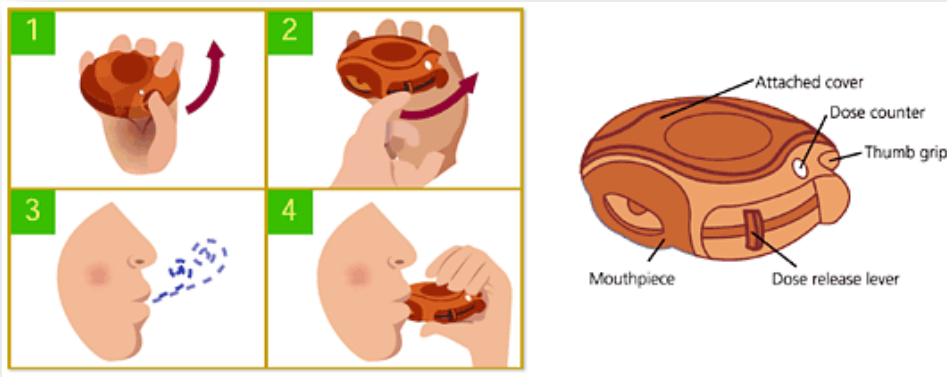
- ◆ Only use your spacer with a pressurized inhaler, **not** with a dry-powder inhaler.
- ◆ Spray only one puff into a spacer at a time.
- ◆ Use your spacer as soon as you've sprayed a puff into it.
- ◆ Never let anyone else use your spacer.
- ◆ Keep your spacer away from heat sources.
- ◆ If your spacer has a valve that is damaged, or if any other part of the spacer is damaged, do not use it. The spacer will have to be replaced.
- ◆ Some spacers have a whistle. Your technique is fine if you do not hear the whistle. However, if you hear the whistle, this means you should slow your breath down.
- ◆ It is very important that you consult your doctor, asthma educator or other healthcare professional to review proper inhaler technique.





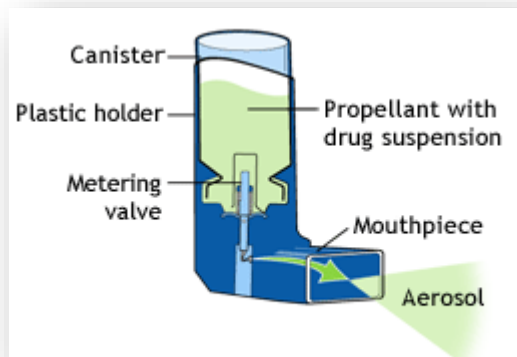
## Dry Powder Inhalers

- ◆ A dry powder inhaler is breath-activated. This means that when you breathe in through the inhaler, the inhaler releases the medicine into your lungs.
- ◆ Dry powder inhalers come in different shapes and sizes. Some come with the medicine already loaded inside the inhaler. With other inhalers, you have to put in the medicine right before you use it.
- ◆ **NEVER USE AN AEROCHAMBER WITH A DRY POWDER INHALER.**



## Meter Dose Inhalers

- ◆ Delivers most of a measured dose of medicine directly to your lungs.
- ◆ Can help keep your symptoms under control and minimize long-term damage to your lungs.
- ◆ May prevent or reduce side effects of the medicine.
- ◆ May let you use less medicine than is found in a pill but get the same



## How is COPD Diagnosed?

- ◆ PFT-Pulmonary Function Test: Determines how well you can breathe by measuring your FEV1/FVC% <70%.
- ◆ ABG-Arterial Blood Gas Test: Blood is taken from an artery in your wrist, arm or groin.
- ◆ Sputum Sample: Sputum is collected in a cup when you cough. It is then sent to the lab where they will check for any lung infections.
- ◆ Chest X-Ray: This is a picture of your lungs and heart to see if there is any damage.
- ◆ Exercise Test: Checks how long you can walk or do other exercises. It will show how well your lungs work so you can get the right treatment plan.

## When Should You Call Your Doctor?

Call your doctor if you have one or more of the following symptoms:

- ◆ An increase of shortness of breath, to where it is difficult to speak in complete sentences
- ◆ Fever over 101F
- ◆ Change in color and quantity of sputum
- ◆ Cyanosis (bluish tint nails, lips, skin)
- ◆ Swollen ankles
- ◆ Sudden weight gain or loss
- ◆ Loss of appetite and/or increase in thirst
- ◆ Feeling tired a lot
- ◆ Headaches, dizziness or trouble sleeping
- ◆ Coughing more often or worse
- ◆ Have a faster pulse than normal

## When to Call 911

- ◆ You are confused, dizzy or feel like you may pass out
- ◆ Gasping for air
- ◆ Signs of heart problems such as chest pains
- ◆ Notice signs of other life-threatening medical problems such as stroke

## Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease, also known as COPD, is a medical condition that causes breathing problems. COPD includes chronic bronchitis and emphysema. COPD damages the bronchiole tubes and alveoli in your lungs. The damage makes it hard for oxygen to get into your bloodstream and for you to breathe.

### What Causes COPD?

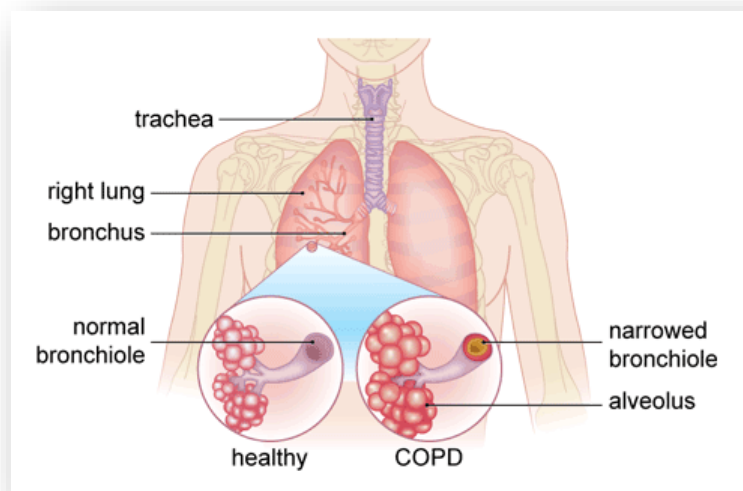
You may have COPD at any age. You may be at higher risk of having COPD if you have had other lung conditions. These include asthma and lung infections such as tuberculosis. COPD is most commonly caused by exposure to the following:

- ◆ Tobacco smoke, including second-hand smoke
- ◆ Dust, chemicals or smoke used in the workplace
- ◆ Air pollution

### What are the Signs and Symptoms of COPD?

You may have one or more of the following signs and symptoms:

- ◆ Trouble breathing, especially when moving around
- ◆ Chronic cough
- ◆ Chronic production of sputum/phlegm (thick fluid from your lungs)
- ◆ Wheezing (difficult breathing that makes a whistling sound)
- ◆ A feeling of tightness in your chest
- ◆ A bluish tint to your skin, lips, or nails



## Oxygen

If you use oxygen, please complete the following information or have your provider complete for you:

- ◆ Oxygen Company: \_\_\_\_\_
- ◆ Phone Number: \_\_\_\_\_
- ◆ Liter flow at rest: \_\_\_\_\_
- ◆ Liter flow with exercise: \_\_\_\_\_
- ◆ Liter flow when asleep: \_\_\_\_\_
- ◆ Hours and/or time of day to use: \_\_\_\_\_

There are two ways to use oxygen—oxygen tank or oxygen concentrator. Ask your provider which is best for you.

### Oxygen Safety

- ◆ Know how to use your equipment.
- ◆ Store it away from heat or direct sunlight.
- ◆ If using a cylinder, make sure it cannot tip over.
- ◆ No smoking near oxygen.
- ◆ Do not increase the liter flow without asking your doctor first.
- ◆ Do not use any oil-based products (like Vaseline) with it.
- ◆ Do not use it near an open flame.
- ◆ Be careful when using things that might spark.

### Breathing Exercises

Strengthen breathing muscles, get more oxygen and breathe with less effort. This will help you control your breathing when you have shortness of breath.

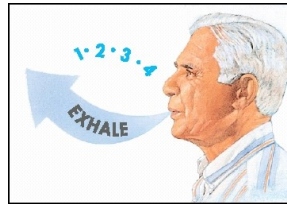
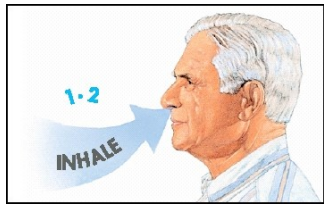
1. Breathe in through your nose and out through your mouth slowly.
2. Use pursed lip breathing if it helps.
3. Slow your breathing and breathe through your nose.
4. Begin diaphragmatic breathing.
5. Stay this way for five minutes or until you can breathe better.

## Pursed Lip Breathing

*The simplest way to control shortness of breath*

Pursed lip breathing improves breathing, releases trapped air in lungs, keeps airways open longer, decreases the work of breathing and prolongs exhalation to slow breathing rate. Pursed lip breathing can be done anywhere, at any time:

1. Breathe in slowly through your nose and count to two.
2. Purse (pucker) your lips like you are going to whistle.
3. Breathe out slowly through pursed lips and count to four.
4. Keep doing this until you are not short of breath.

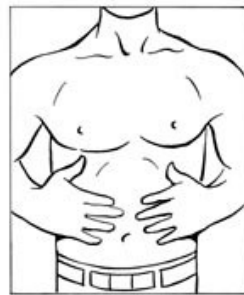


## Diaphragmatic Breathing

1. Sit up straight or lie on your back with pillows under your head and knees.
2. Put one hand on your chest so you can feel your rib cage muscles move.
3. Put your other hand in the middle of your stomach to feel your diaphragm move.
4. Pull your stomach in (exhale).
5. Push stomach out (inhale).
6. Rest after 3 or 4 times.



Breathing Out (Exhaling)



Breathing In (Inhaling)



## Controlled Coughing

1. Sit up and lean your head forward a little.
2. Inhale for two seconds.
3. Cough once to loosen mucus. Do not breathe in yet. Cough a second time to move mucus forward.
4. Inhale again.
5. Relax.
6. Repeat steps again if you still need to cough.



Use small, short coughs.

**Avoid Stress—it can make shortness of breath worse.**

**Learn to relax!**

