

Chronic Obstructive Pulmonary Disease



Summary Guide

Healthy and fulfilling lifestyle

Living well with COPD means doing more of the things you like, adopting and maintaining healthy life habits and behaviours in order to maximize your quality of life.





Quitting smoking

Exercising regularly



Getting a good night sleep





Complying with your medications



Adopting a healthy diet



Planning for leisure activities and trips



Having a satisfying sex life

Relaxation techniques

Deep breathing (diaphragmatic breathing) technique

You will be more relaxed if you close your eyes and think about a quiet place or the word "calm".

- 1. Put one hand on your abdomen.
- 2. Breathe in deeply.
- **3.** Feel your abdomen inflate. Push your abdomen out as much as possible when you are inhaling. This will help your lungs fill up with air.
- **4.** Exhale through your mouth while keeping your lips pursed (as if you were about to whistle).
- **5.** Feel your abdomen returning to its normal position.
- **6.** Wait after each exhalation until you are ready to take another deep breath.
- **7.** After a few times, you will find your own rhythm. For example: one deep breath for 5 normal breaths.

If you start feeling dizzy, take a few normal breaths before starting again.





Chronic Obstructive Pulmonary Disease

A plan of action for life

The skills you need to manage your COPD

COPD is a disease that can seriously affect every part of your life. Simple activities you once took for granted, such as taking a walk or getting dressed, can become major challenges. Flare-ups or worsening symptoms – the main cause of hospitalization in people with COPD – can further affect your quality of life. Fortunately, there is a lot that you can do to overcome and prevent these limitations, and improve your well-being. This is why we have created this series of workbooks on COPD self-management.

How can this program help me with self-management of the disease?

This is an educational program in which you learn skills to manage your disease and adopt healthy new lifestyle behaviours. This series of workbooks is part of that program, based on real-life experiences.

Medical experts and patients with COPD – people just like you – worked together to update this program that you can customize for yourself. National' and international^{2,3} guidelines agree that patient education and self-management are valuable for people with COPD.

We also tested this educational program as part of a clinical trial. And the results were very encouraging. Patients who used these workbooks in collaboration with their healthcare worker, "case manager" or resource person and physician had fewer hospitalizations and fewer emergency room visits. Their overall health also improved, enabling them to do more of the activities they enjoyed, and better cope with their disease.⁴⁵

This is your guide. Use it to write down your questions or concerns. Share it with people close to you so that they can understand what you are going through. Discuss whatever thoughts and feelings you have with your case manager or resource person and your physician.

Good luck with your program.

Dr. Jean Bourbeau Diane Nault, RN, MSc

Relaxation techniques

These techniques will help you to relax your body and quiet your mind.

Positive Thinking

- 1. Concentrate on a positive image.
- 2. Begin to relax.
- **3.** Use all your senses (i.e. sight, sound, touch, taste and smell) to make your image seem more real. For example, if you are visualizing yourself on a cruise, see the clear blue sky, the sparkling water and the wonderful scenery.
- **4.** End this visualization exercise by retaining your image.
- **5.** Do these exercises once a day.



Stress management

Shortness of breath (the main symptom of COPD) can cause anxiety and panic attacks.

The Anxiety-Breathlessness cycle



How to break the Anxiety-Breathlessness cycle

- Recognize and examine your fears; do not hesitate to consult a health professional.
- Do not worry about future events.
- Instead of worrying, plan your actions in advance.
- Do things you enjoy.
- Try to solve one problem at a time.
- Maintain a positive attitude.
- Learn to relax.
- If you feel uneasy, ask questions and find answers.
- Be more assertive about stating your needs.

Introduction

Chronic obstructive pulmonary disease (COPD) – a chronic, respiratory disease – is a leading cause of disability and death in Canada. Unfortunately, it is also increasing in prevalence. COPD is not a hopeless diagnosis. Use this patient information booklet to learn about COPD, medications and your action plan in treating and managing your disease.

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Chronic Obstructive Pulmonary Disease (COPD)

COPD: Obstructive Chronic Bronchitis

Obstructive chronic bronchitis and emphysema are also known as COPD (chronic obstructive pulmonary diseases). They are major breathing diseases that cause airways to become "obstructed" or blocked. They often occur together but they can also occur separately.



Obstructive Chronic Bronchitis

Definition:

- Your bronchi become inflamed, swollen and filled with thick, sticky mucous.
- Later, your bronchi may become obstructed (limited airflow). Because of an airway obstruction, your lungs do not fully empty and air is trapped.

Signs and symptoms:

- Sputum every day
- Frequent coughing
- Wheezing
- Shortness of breath (SOB) when exercising or during daily activities

Energy conservation principles

Energy conservation principles can help you better perform the daily activities that cause fatigue and shortness of breath.

The 6 "P's"

- 1. **P**rioritize your activities
- 2. Plan your schedule within your limits
- 3. Pace yourself
- **4. P**osition your body and arrange your environment to reduce shortness of breath
- 5. Use Pursed-lip breathing when doing activities requiring effort 6. Keep a Positive attitude



Coughing techniques

Controlled Cough Technique

Steps

- **1.** Seat yourself in a comfortable position.
- 2. Lean your head slightly forward.
- **3.** Place both feet firmly on the ground.
- 4. Inhale deeply through your nose.
- **5.** Cough twice while keeping your mouth slightly open. The first cough will loosen your sputum. The second cough will move the sputum up into your throat. Spit the
- sputum out into a tissue.
- **6.** Take a break and repeat once or twice if there are no immediate results.

"Huffing" Technique

Steps

- **1.** Seat yourself in a comfortable position.
- **2.** Lean your head slightly forward.
- **3.** Place both feet firmly on the ground.
- 4. Inhale deeply through your nose.
- **5.** Exhale in short, non-forceful bursts while keeping your mouth open, as if you were trying to make mist on a window.
- 6. Repeat once or twice.

Note: Avoid forceful expiration.

Remember: If there are changes in your sputum, follow your **Plan of Action** recommendations.



Chronic Obstructive Pulmonary Disease (COPD)

COPD: Emphysema



Emphysema

Definition:

- Your alveoli are damaged:
- > there is a loss of lung elasticity, your lungs do not fully empty and air is trapped.
- > exchange of oxygen (O_2) and carbon dioxide (CO_2) becomes more difficult, less oxygen gets into your body.

Signs and symptoms:

• Shortness of breath (SOB) when exercising or during daily activities

Smoking: The leading cause of COPD

Cigarette smoke is the primary pollutant that can damage your lungs and the leading cause of COPD.

It is never too late to quit.

Smoking and lung function

Lung function decreases with age.

If you stop smoking, the decline in your lung function can be slowed or stopped and further disability may be avoided.



Your lung function needs to be measured to make a diagnosis of COPD.



Body positions to reduce shortness of breath

Standing Positions

A

- Lean your chest forward slightly
- Rest your hands on your thighs



В

- Rest your elbows on a piece of furniture
- Rest your head on your forearms
- Relax your neck and shoulders



С

- Rest your hands on a piece of furniture
- Avoid "grabbing the table" while using this position. This can overwork some of your accessory breathing muscles and cause breathlessness if you hold the position too long.



Body positions to reduce shortness of breath

Sitting Positions

A

- Place both feet on the ground
- Lean your chest forward slightly
- Rest your elbows on your knees
- Rest your chin on your hands



Factors that can make your symptoms worse (COPD exacerbation)

Here are the most common ones:



Indoor pollutants

• cigarette smoke, household cleaning products, strong odours, dust



Outdoor pollutants

• exhaust fumes, gas fumes, smog



Emotions

• anger, anxiety, stress



Changes in temperature

• extreme heat or cold, wind, humidity



Respiratory infections

• cold, flu, bronchitis, pneumonia

В

- Place both feet on the ground
- Lean your chest forward slightly
- Rest your arms on a table
- Rest your head on a pillow



Suggestions to reduce or avoid exposure to those factors

Indoor and Outdoor Pollutants

- Quit smoking and avoid second-hand smoke.
- Avoid strong odours. Work in well-ventilated areas.
- Avoid smog. If the air quality is not good, then try to stay indoors.
- Avoid exhaust and gas fumes.

Emotions

- If you are stressed and anxious, talk to your friends and family about your feelings.
- Practice breathing and relaxation techniques.

Changes in Temperature

A) When it is **cold**, dress warmly and cover your nose with a scarf.

B) When it is hot:

- Stay in an air-conditioned environment.
- Drink plenty of water (if there are no medical restrictions).
- Avoid strenuous activities.
- Wear light clothing, preferably in light colours, and a hat.



S.O.S. in an acute attack of shortness of breath

Learning to find a comfortable position, stay calm and use the pursed-lip breathing technique can get your breathing – and anxiety – back under control during an acute attack of shortness of breath.

Steps

- 1. Stop and find a comfortable position
- 2. Stay as calm as possible; relax your shoulders
- **3.** Introduce the pursed-lip breathing technique: inhale through your mouth if you cannot through your nose; **purse your lips to exhale**
- **4. Slow down your breathing** by taking more time to breathe out than you would to breathe in. Do not force your lungs to empty
- **5.** Continue to exhale slowly while keeping your lips pursed; start to inhale through your nose if you have not been able to do it so far
- 6. Continue to pursed-lip breathe for at least 5 minutes

Points to remember:

- Make sure that you master well the pursed-lip breathing technique while at rest before using it during an acute attack of shortness of breath
- It is very important that you give yourself the space and time to get your breathing back to normal. **Remember to slow down your breathing**



Breathing technique to reduce shortness of breath

Pursed-lip breathing technique

Steps to follow



Step 1

Inhale slowly through your nose until you feel that your lungs are filled with air.

Respiratory Infections

- Avoid people who have a respiratory infection such as a cold or the flu. Wash your hands if you are in contact with them.
- You and the people you are living with should **get a flu shot every fall**. Ask your doctor about pneumonia vaccine.





Step 2

Purse your lips as you would if you were whistling or about to kiss someone.



Step 3

Exhale slowly while keeping your lips pursed. Make sure to take longer to breathe out than you would to breathe in. Remember to keep your lips pursed.

Do not force your lungs to empty.

Discuss with your physician or resource person about the use of an action plan to better prevent and manage your symptoms earlier.



Bronchodilators



Bronchodilators are the most important medications to relieve your symptoms. They open up the airways, prevent and relieve shortness of breath. Certain ones are absolutely essential during an attack.

Short-Acting Anticholinergics

- Foundation therapy in COPD
- Prevent bronchi from narrowing
- Usually taken regularly, four times a day

Long-Acting Anticholinergics

- Indicated for maintenance treatment of COPD to reduce disability, reduce exacerbation and improve quality of life
- Prevent bronchi from narrowing
- Taken regularly, one capsule inhaled daily





Turbuhaler[®] inhalation technique

TECHNIQUE

- 1. Unscrew plastic cover
- 2. Hold the Turbuhaler upright
- **3.** Turn the coloured handle in one direction as far as possible. Then turn it back until you hear a click. This indicates that the dose is ready (you cannot load more than one dose at a time)
- **4.** Hold the Turbuhaler far away from your mouth and exhale normally
- **5.** Place the mouthpiece between your teeth and close your lips around it. Breathe in deeply and forcefully through your mouth
- **6.** Remove the Turbuhaler from your mouth and hold your breath for 4-10 seconds
- 7. If another dose is required, repeat steps 2 to 6
- 8. Put the protective cap back on



HandiHaler[®] inhalation technique

TECHNIQUE

- 1. Open the dust cap by pulling it upwards
- 2. Open the mouthpiece
- **3.** Remove a SPIRIVA[®] capsule from the blister (only immediately before use) and place it in the centre chamber
- 4. Close the mouthpiece firmly until you hear a click
- **5.** Hold the HandiHaler with the mouthpiece upwards and press the green button completely in once, and release
- **6.** Hold the HandiHaler far away from your mouth and exhale normally
- 7. Place the mouthpiece in your mouth and close your lips around it. Breathe in slowly and deeply to hear the capsule vibrate
- **8.** Remove the HandiHaler while holding your breath for 4 to 10 seconds, then exhale normally
- **9.** You can inhale again to ensure that you have taken all the medication
- **10.** Open the mouthpiece again. Tip out the used capsule and dispose (avoid touching the capsule; if you do, do not touch your eyes and be sure to wash your hands properly)
- 11. Close the mouthpiece and dust cap for storage



Bronchodilators

Short-Acting Beta, -Agonists

- Rescue medication
- Open up airways immediately
- Can also be taken regularly



Long-Acting Beta₂-Agonists

- Indicated for maintenance treatment of COPD to reduce disability, reduce exacerbation and improve quality of life
- Prevent bronchi from narrowing
- Usually taken regularly two times a day
- Should not be used to replace "rescue" medications



Bronchodilators

Combination

- A short-acting anticholinergic plus a short-acting beta,-agonist
- Prevent bronchi from narrowing and open up airways immediately
- Taken regularly, four times a day



Theophyllines

- Open up airways
- Can decrease breathlessness
- Taken once or twice daily
- Caution: Can interact with food and other medications. Check with your doctor and/or resource person



Diskus[®] inhalation technique

TECHNIQUE

- 1. Hold the outer case in one hand and put the thumb of the other hand on the thumb grip. Push the thumb away as far as it will go until a click is heard
- 2. Slide the lever away as far as it will go until a click is heard
- **3.** Hold the Diskus inhaler away from the mouth and exhale completely. With the mouthpiece to the lips, inhale quickly and deeply through the Diskus inhaler. Remove the Diskus inhaler, hold your breath for about 4-10 seconds, then breathe out slowly
- **4.** Slide the thumb grip back as far as it will go until a click is heard. If you need more than one dose, repeat steps 1 to 3



Using your metered-dose inhaler with a spacing device

TECHNIQUE

- 1. Remove the caps
- **2.** Shake inhaler and connect it to the spacing device, keeping the inhaler upright
- 3. Exhale normally
- **4.** Place the spacing device in your mouth between your teeth and seal your lips around the mouthpiece
- 5. Actuate canister once
- 6. Breathe in slowly and deeply through your mouth
- **7. a. Single breath technique:** Try to hold your breath for 4 to 10 seconds, then exhale normally
 - **b. Tidal volume technique:** If you find it difficult to take one deep breath or to hold your breath for long, breathe slowly in and out of the spacing device, 3-4 times in a row
- **8.** If you need more than one dose, wait 30 seconds to 1 minute between puffs and repeat steps 2-7



Anti-inflammatories

Inhaled Anti-Inflammatories

- Reduce inflammation and swelling in your airways
- Mainly helpful for COPD patients with frequent exacerbations
- Do not provide quick relief of symptoms



Combination Long-Acting $\mathsf{Beta}_{_2}\text{-}\mathsf{Agonists}$ and Inhaled Anti-Inflammatories

- Combination effect:
- Reduce inflammation and swelling
- Open up airways
- Helpful for COPD patients with frequent exacerbations
- Can also be helpful for some patients to further relieve symptoms
- Do not provide quick relief of symptoms



Medications to treat exacerbations

Oral Anti-Inflammatories (Prednisone)

- Usually prescribed for short periods (1-2 weeks) when your symptoms get worse (exacerbations)
- Rarely prescribed on a permanent basis
- Can relieve symptoms such as SOB, cough and secretions



Antibiotics

- Are useful in treating respiratory infections (sinusitis, infected bronchitis, pneumonia, etc.)
- Come in a variety of types
- The treatment has to be taken exactly as prescribed



Mana West COPE

Plan of Action

These medications can be part of your **Plan of Action** to be used in the event of an exacerbation.

Metered-Dose inhaler

TECHNIQUE

- 1. Remove the cap
- **2.** Shake the device (to mix the drug particles)
- 3. Exhale normally
- **4. a. Closed-mouth technique:** Place the mouthpiece in your mouth and seal your lips around it.

Inhalation techniques

- **b.** Open-mouth technique: Hold the inhaler upright about 4 cm away from your lips (about two finger widths). Keep your mouth wide open.
- **5.** Begin inhaling slowly through your mouth, pressing down once on the canister at the same time (only once to liberate one dose of medication)
- 6. Continue to breathe in slowly and deeply until your lungs are full
- 7. Hold your breath for 4 to 10 seconds, so the medication will have time to settle in your airways
- **8.** If another dose is required, wait one minute between puffs and repeat steps 2-7

