

Living Well with COPD™

Chronic Obstructive Pulmonary Disease

A Learning Tool for Patients and Their Families

Managing Your Breathing and Saving Your Energy

- Understanding how breathing works
- Reducing shortness of breath
 - Breathing techniques
 - Body positions
- Clearing your secretions: cough techniques
- Applying energy conservation principles

This guide belongs to:

2nd Edition 2005

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. National¹ 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.^{4,5}

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



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Welcome to “Managing your Breathing and Saving your Energy” of the learning series Living Well with COPD

When you have COPD, the simple act of breathing can become an effort. Not being able to breathe easily can affect every part of your life. It can affect your body by making you tire out quickly. It can also affect your emotions by making you feel tense and anxious.

Living Well with COPD means reducing your symptoms by managing your breathing and saving your energy in day-to-day activities.

In this module you will learn:

1. How breathing works
2. Pursed-lip breathing technique
3. Body positions to reduce shortness of breath
4. Cough techniques: controlled cough and huffing technique
5. Principles of energy conservation

Feel your breathing

When you have COPD, you have more difficulty breathing than a person who does not have lung disease.

Take a few minutes to feel your breathing

Put one hand on your stomach and the other on your chest.

Describe what you feel.

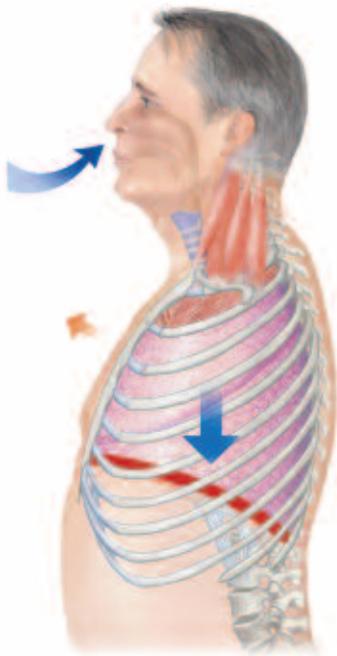


How breathing works

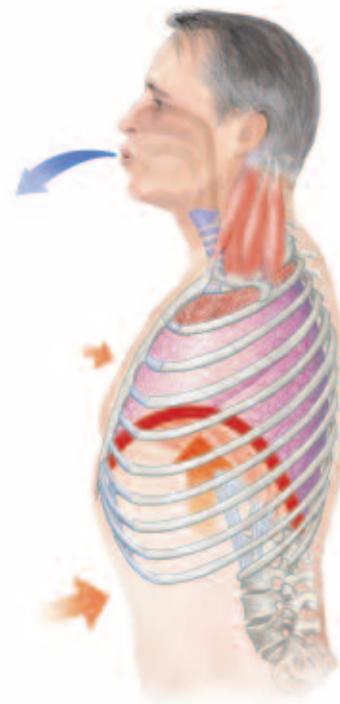
Respiration involves two phases: **inspiration** (movement of air into the lungs) and **expiration** (movement of air out of the lungs).

The diaphragm is the major muscle of respiration. When the diaphragm contracts (goes down), the chest expands so the air is pulled into the lungs. When the diaphragm returns to its normal position (goes up), air is pushed out of the lungs.

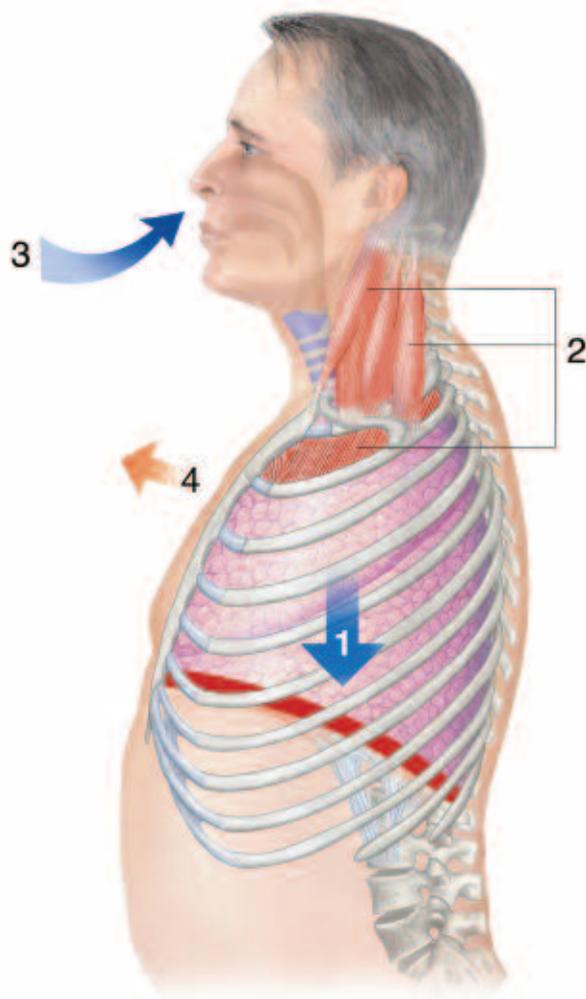
Inspiration



Expiration

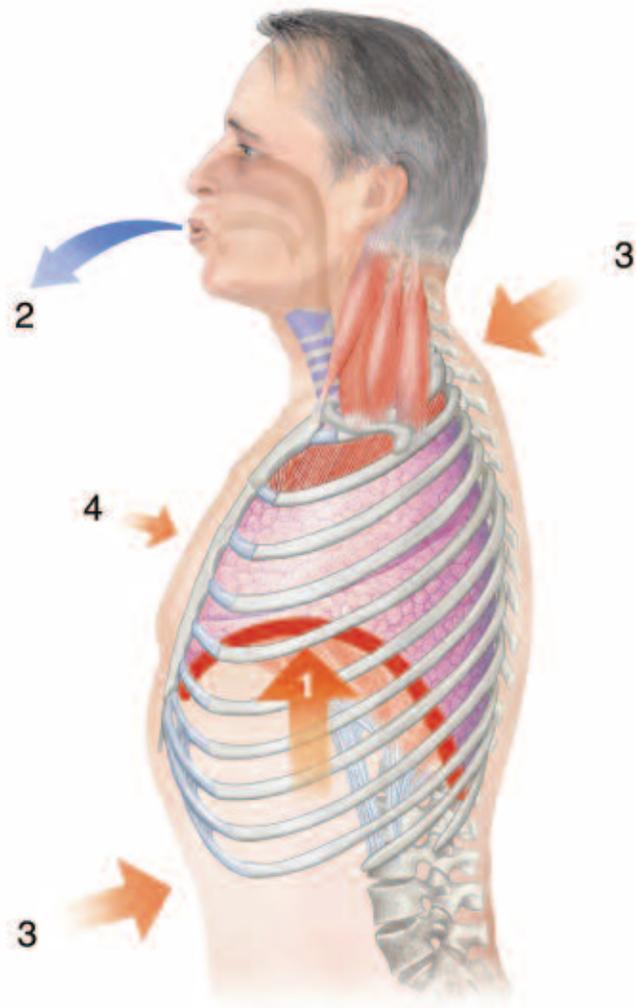


Breathing in COPD – inspiration



- 1) The diaphragm contracts (goes down) to increase the space inside the chest.
- 2) The muscles from the neck and the ribs (accessory muscles) contract to help the diaphragm.
- 3) As a result, air is pulled inside your chest.
- 4) Your chest expands.

Breathing in COPD – expiration



- 1) The diaphragm relaxes, as well as the muscles from the neck and the ribs (accessory muscles), which reduces the space inside the chest.
- 2) As a result, air is pushed out of your chest.
- 3) Stomach muscles contract to help push air out of your chest.
- 4) Your chest deflates.

When you have COPD, air is trapped inside your lungs

Air trapping

Because of airway obstruction and a loss of lung elasticity, your lungs do not fully empty and air is trapped.

Breathing becomes more difficult

As a consequence of air trapping, the diaphragm has to work more and its movement is less efficient. In addition, accessory muscles, from the neck, ribs and stomach start to be used for breathing.

You experience shortness of breath

Because of air trapping in your lungs, you have trouble breathing in new air, and you develop shortness of breath.

Reducing shortness of breath

Being constantly short of breath can make you feel frightened and exhausted. In fact, shortness of breath is one of the major symptoms of COPD leading to anxiety and disability.

The important thing is to control your shortness of breath so that it does not control you!

Your medications can help you reduce air trapping in the lungs, and so can certain breathing techniques and body positions.

If you reduce air trapping you will allow air to get in your lungs more easily, as a result you will feel less short of breath.

Pursed-lip breathing

Pursed-lip breathing is one technique that can help you feel less short of breath.

Have you heard about the pursed-lip breathing technique? If yes, are you using it? How and when?

Goal:

- With this technique, you breathe out slowly, which allows you to exhale more air, thus leaving less air trapped inside your lungs.

Benefits:

1. Reduces breathing frequency and shortness of breath.
2. Helps you return to your normal breathing pattern after exercise.
3. Improves your ability to perform different activities.
4. Increases your sense of control over your own breathing.

Points to remember:

- The focus should be on expiration.
- Expiration should be made longer, but not forced.
- First master this breathing technique while at rest. Then you will be able to use it with activities requiring effort.

Pursed-lip breathing technique



Steps

1. Inhale slowly through your nose until you feel that your lungs are filled with air.
2. Purse your lips as you would if you were whistling or about to kiss someone.
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.
4. **Do not force your lungs to empty.**

Pursed-lip breathing technique – on exertion

Learning how to inhale through your nose and slowly exhale through your lips can help to reduce shortness of breath when you are doing a physical activity. It can also keep anxiety from turning into panic if you experience an acute attack of shortness of breath. You can apply pursed-lip breathing to various physical activities:

Walking

- Inhale 1...2...
- Exhale 1...2...3...4

Suggestions

- Make sure the outdoor temperature is not too hot or cold.
- Wear comfortable shoes and clothing.
- Relax your muscles.
- Walk as fast and as far as you can while respecting your own limits.
- Do not hold your breath.
- Stop as often as you need to.

Climbing stairs

If you suffer from severe shortness of breath:

- Inhale at rest.
- Climb one step while exhaling, and stop for inhaling. Repeat for each step.

If you are able to climb some steps:

- Inhale at rest.
- Climb 3-4 steps while exhaling, stop for inhaling.

If you are able to climb at least a flight of stairs:

- Inhale at rest.
- Climb 3-4 steps while exhaling.
- Climb 2 steps while inhaling.
- Climb 3-4 steps while exhaling, etc.

Suggestions

- Wear slip-resistant shoes.
- Keep stairs free of obstacles.
- Keep one hand over the railing for security.
- Do not pull the railing to climb.
- Climb slowly.
- Stop as needed.
- Do not force your exhalation.
- Respect your own limits.



Carrying parcels

- Before lifting a heavy object, inhale through the nose.
- Bend down and pick up the object while exhaling through pursed lips.
- Use pursed-lip breathing while carrying the object. Repeat the process when putting the object down.
- Always bend at the knees, keeping your back straight.

Applying pursed-lip breathing technique may seem to take too much time. However, you will actually end up saving time, since you will take fewer breaks because you will be less short of breath.

You have now learned a new technique to reduce shortness of breath

Can you describe some other ways to reduce shortness of breath?

Do you think the way that you stand or sit can affect your breathing?



Body positions to reduce shortness of breath

Poor posture – with shoulders tensed or hunched over – can also lead to increased shortness of breath, because your chest cannot expand to its full capacity. Changing your body position while sitting or standing can help you breathe better.

Goal:

- To offer relief to accessory muscles and improve diaphragm function.

Benefits:

1. Help the diaphragm to move easier.
2. Help reduce shortness of breath.

Points to remember:

- Use pursed-lip breathing with the different body positions.
- Lean your chest forward slightly. This will lessen pressure against your diaphragm, allowing it to relax more.

Sitting

Sitting position A

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



Sitting position B

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



Standing

Standing position A

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



Standing position B

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



Standing position C

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



Take another look at your breathing

Did your breathing change when you used one of the body positions previously described?

How did it feel different?

Your breathing will change according to how you hold your body.

Remember:

- Use the body positions you have just learned when you feel short of breath. They will help you accomplish your daily activities.

S.O.S. in an 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.

What do you do when you experience an acute attack of shortness of breath?

Goal:

- To bring your breathing back to normal during an acute attack of shortness of breath.

Benefits:

1. Learn how to control shortness of breath.
2. Help reduce the panic associated with an attack.

Points to remember:

- Make sure that you master 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.**

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**.

Do you think your friends and family can help you when you are experiencing an attack of shortness of breath?

Consider how they can help you.

Suggestions for friends and family

Watching someone going through an attack of shortness of breath can be upsetting and frightening.

Be prepared. Let the people close to you know what to do if you find yourself short of breath.

Ask your friends or family members to:

- Talk to you slowly, be supportive and provide reassurance.
- Help you to concentrate on your breathing.
- Remind you to take a position to reduce shortness of breath. This can help you breathe easier.
- Help you to take your rescue medication as prescribed in your Plan of Action.
- Monitor your symptoms closely.
- Call for help and ask questions from the contacts identified in the Plan of Action.
- Help you find a way to get to the hospital.

Cough and sputum are two other symptoms of COPD...

But did you know that some coughing techniques could help to better clear your lungs?

When you have COPD, your airways can be blocked with thick, sticky mucous or sputum. Not only does this make it harder for you to breathe, it also provides a breeding ground for infections.

Coughing, therefore, is important, because it helps to remove sputum from your lungs.

A regular, hacking cough, however, will not do the job.

There is a proper way of coughing, just as there is a proper way of breathing.

Do you know how to cough properly?

How can learning to cough properly help you breathe better and save your energy?



Controlled cough technique

Goal:

- To remove sputum from your lungs while using less effort.

Benefits:

1. Prevents infections caused by increased sputum in your lungs.
2. Reduces shortness of breath caused by the sputum blocking your airways.

Points to remember:

- Avoid coughing in small fits.
- It is important to save energy.

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 white tissue. Check the colour of your sputum. If there is a change in your sputum colour, follow your doctor's recommendations. If there is blood in your sputum, talk to your doctor.
6. Take a break and repeat once or twice if there are no immediate results.

“Huffing” technique

Goals:

- To remove sputum from the lungs while using less effort.
- To save energy.
- To prevent infections caused by an increase of sputum in your lungs.

Benefits:

1. Conserves your energy by helping remove sputum with an efficient technique.
2. Prevents infections caused by an increase of sputum in your lungs.

Steps

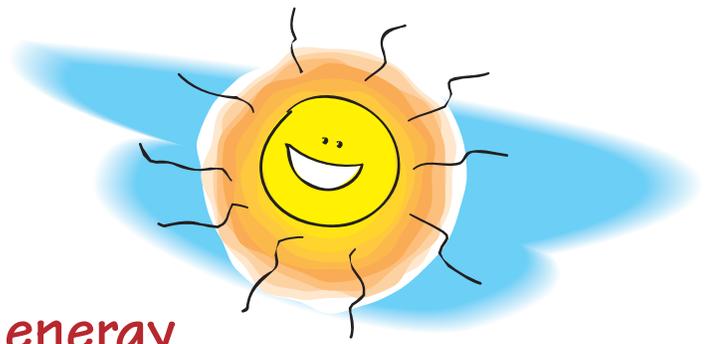
1. Seat yourself in a comfortable position.
2. Lean your head slightly forward.
3. Place both feet firmly on the ground.
4. Inhale deeply through your nose.
5. Exhale in short, non-forceful bursts while keeping your mouth open, as if you were trying to make mist on a window.
6. Repeat once or twice.



Here are some more suggestions to help you remove sputum

1. Sputum can accumulate in your airways overnight. You should try to do these cough techniques each morning at least 10 minutes after using your short-acting bronchodilator.
2. Repeat these coughing techniques as needed throughout the day, e.g. before going out.
3. Avoid bursts of coughing. This wastes energy and causes shortness of breath.
4. If you have a greater amount of sputum production, single “huffs” may be coordinated with your controlled cough techniques.
5. If there is little or no sputum, do not keep trying to cough. You will not get any benefit.





Making the most of your energy

Imagine yourself waking up on a beautiful, sunny morning

You stretch your arms and look through the window at the bright sunlight. You see that it is a perfect day for getting out and about.

Describe your breathing when you are brushing your teeth, shaving or combing your hair.

Describe your breathing when getting dressed or taking a shower.

Do you have to stop? Are you out of breath? In which way is your breathing different?

Energy Conservation Principles

Staying active and keeping up your routine is important when you have COPD. Learning how to manage your breathing when performing your day-to-day activities will help you save energy and prevent fatigue.

Goal:

- To better perform the daily activities that cause fatigue and shortness of breath.

Benefits:

1. Minimize fatigue and shortness of breath.
2. Better perform daily activities according to your level of energy.

Points to remember:

- Try to get a sense of the times of the day when you have the least and most amount of energy.
- Do not forget to do activities that help you relax and recharge.
- Avoid rushing, even if you are the type of person who finds it hard to slow down.
- Do not try to do everything at once.
- Be aware of your body position when performing an activity.

Energy Conservation Principles – The Six “Ps”

1. Prioritize your activities

- Evaluate what you have to do and what you would love to do.
- Eliminate activities that are not necessary.

2. Plan your schedule

- Stay active within your limits.
- Plan a realistic schedule for the day, week or month.
- Try to schedule the activities that require more energy (e.g. grocery shopping, medical appointments, vacuuming), at the time of day you have the **most** energy.

3. Pace yourself

- Understand your limits and respect them.
- Slow down your rhythm: a slower and regular rhythm uses up less energy.
- Slow down when you speak, laugh, eat or cough, since these actions can interrupt your regular breathing rhythm, causing shortness of breath.
- Alternate heavy and light tasks, e.g. don't go grocery shopping the same day you're vacuuming.
- Sub-divide difficult tasks into smaller steps.
- Include relaxation breaks in your schedule.
- Get a good night's sleep.

4. Positioning

- Be aware of what movements (e.g. bending or reaching) cause you more shortness of breath or fatigue.
- See how you can organize the storage spaces in your house to reduce the need for reaching and bending.
- Try to work with your elbows and/or forearms supported.
- Avoid carrying heavy objects. Pushing, pulling or sliding objects is less demanding.
- When you must carry something heavy, hold it as close to your body as possible.
- Work at a height that allows you to keep a good posture.
- If you feel tired, perform most of your activities while sitting (you will use less energy sitting than standing).

5. Pursed-lip breathing to reduce shortness of breath

- Use pursed-lip breathing when doing physical activities.
- Exhale when an effort is required (e.g. when opening a heavy door: inhale, then exhale as you pull the door open).

6. Positive attitude

- Try to be patient and tolerant towards yourself and your family and friends.
- Keep your sense of humour.
- Visualize yourself as a person who makes the most of what they have, rather than as a victim of your disease.

How would you apply some of these principles when doing some of your daily activities? Give some examples.

If you feel confident to manage your breathing and save your energy, continue to apply the techniques taught in this module on your daily life.

If you feel that you are not able to manage your breathing and save your energy, what are the reasons?

What could you do to feel more confident in using the techniques taught in this module?

Remember:

Shortness of breath in COPD is a part of daily life. Nothing will make it go away completely.

However, regularly using the breathing and coughing techniques, body positions and energy conservation principles outlined in this module will help you to reduce your shortness of breath and fatigue significantly – and live better with COPD.

Notes:

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Acknowledgements

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Living Well with COPD has also been updated in consultation with groups of healthcare professionals and COPD patients from different regions of Quebec.

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