

Living Well with COPD™

Chronic Obstructive Pulmonary Disease

A plan of action for life

A Learning Tool for Patients and Their Families

Preventing Your Symptoms and Taking Your Medications

- Understanding the self-cleaning mechanism of your airways
- Defining COPD, and learning about its causes, signs and symptoms
- Avoiding the things in life that make your symptoms worse
- Taking your medication and using your inhalation devices

This guide belongs to:

Healthcare professional:

Institution:

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Living Well **COPD**TM
with
Chronic Obstructive Pulmonary Disease

A plan of action for life

Preventing Your Symptoms and Taking Your Medications

6th edition - September 2019

The skills you need to manage your COPD

Chronic Obstructive Pulmonary Disease, or COPD, is a disease that can affect every part of your life. The more the disease progresses, the impact can become considerable on your daily activities. The exacerbations of the disease, or periods of symptoms aggravation, are the main cause of hospitalization in people with COPD and can also 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 module on COPD self-management.

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

This module is part of the “Living well with COPD” program. This is an educational program in which you learn skills to manage your disease and adopt healthy new lifestyle behaviours. The “Living well with COPD” program has been tested as part of a research project and the results have been very encouraging. Patients who used this program in collaboration with their health professional, “case manager” or resource person and physician had fewer exacerbations needing hospitalization or emergency room visits. Their quality of life also improved, enabling them to do more of the activities they enjoyed, and better live with their disease.

National and international guidelines agree that patient education and self- management are valuable for people with COPD. The self-management program “Living well with COPD”, that you can adapt to your own situation, has been created by medical experts in collaboration with COPD patients.

This module 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, professionals in your healthcare team and your physician.

Best of luck in your program!



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Welcome to the module “Preventing your Symptoms and Taking your Medications”

Shortness of breath, coughing, wheezing and anxiety are a fact of life for most people with COPD. Learning how to prevent and control these symptoms can help you live a fuller and more active life.

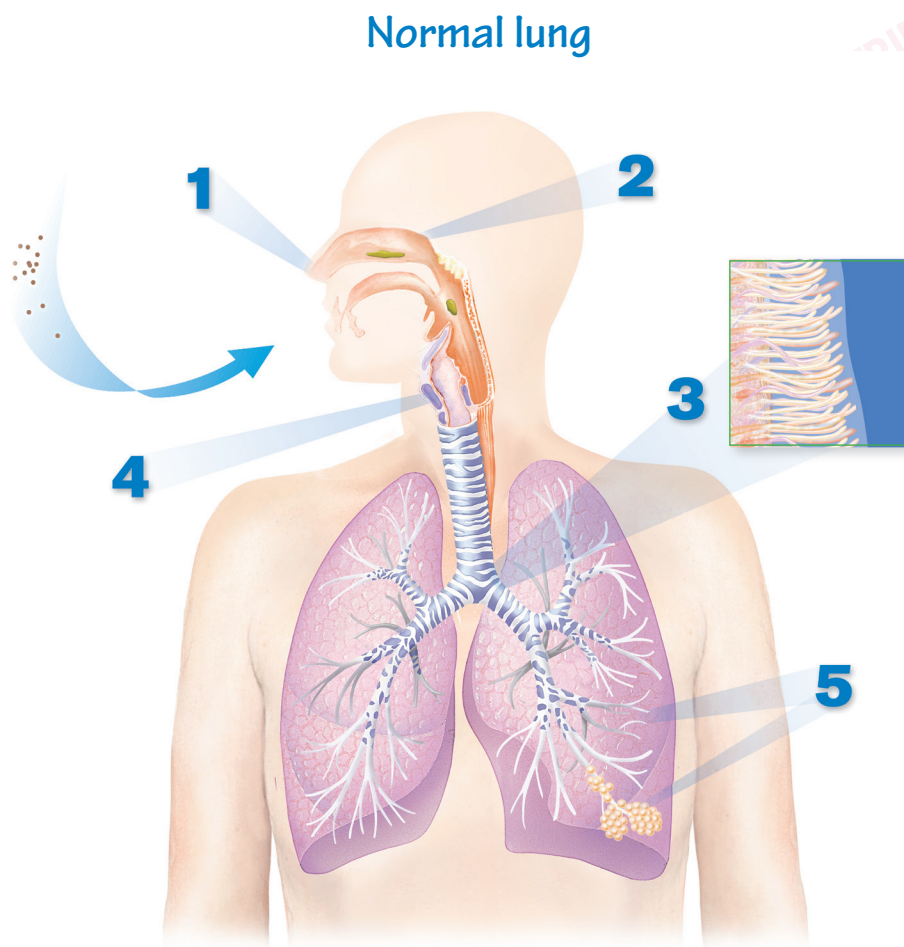
Living well with COPD means avoiding or reducing your exposure to factors that make your symptoms worse, knowing what your COPD medications do and how to take them as prescribed and with the proper technique.

In this module you will learn about:

- Self-cleaning mechanism of your airways
- COPD (chronic obstructive bronchitis and/or emphysema), signs and symptoms
- The causes of COPD
- Things in the environment that may make your symptoms worse, how to avoid them or reduce your exposure
- Medications and the importance of taking them as prescribed
- Inhalation devices, proper technique and cleaning

If you have any questions about the medications presented, please ask a healthcare professional to go through the information with you.

Our airways have an efficient self-cleaning system



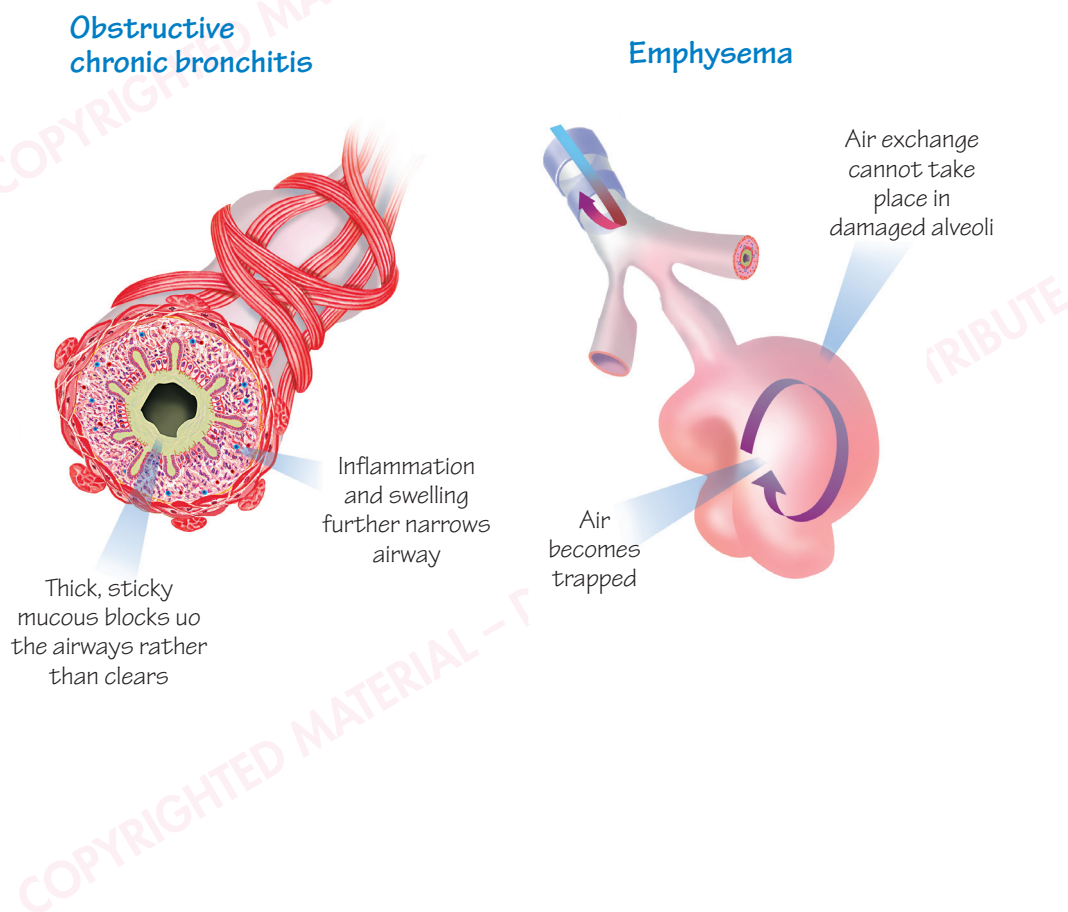
1. Every time you breathe, air is drawn into your lungs – along with dust and pollutants.
2. Many of these particles are trapped inside your nose and other smaller particles stick on tiny mucous layers in your airways.
3. Mucous secretions move up to your **trachea** by tiny hairs called **cilia** and then move further up to your throat.
4. Once in your throat, mucous is then swallowed or removed by coughing.
5. This process prevents particles from reaching the lower airways and doing damage to your **bronchi** and **alveoli**.

COPD: Obstructive Chronic Bronchitis and/or Emphysema

Obstructive chronic bronchitis and emphysema are major breathing diseases that cause airways to become “obstructed” or blocked.

They often occur together but they can also occur separately.

They are also known as COPD (Chronic Obstructive Pulmonary Disease).



COPD: its signs and symptoms

How smoking – and other pollutants – can damage your airways self-cleaning mechanism.

When your airways are constantly attacked by pollutants, such as those found in cigarette smoke, they become inflamed, red and swollen.

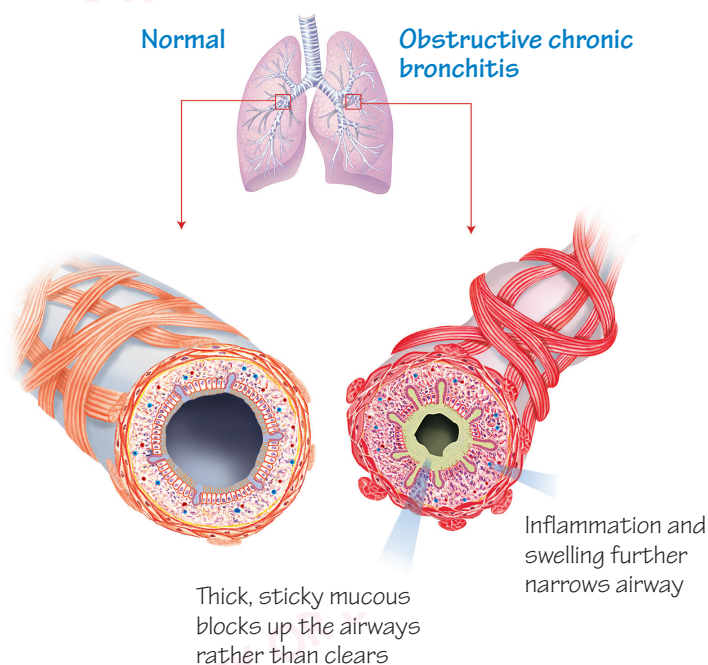
Your bronchi become filled with thick, sticky mucous. You cough to clear your airways. Later, your bronchi may become obstructed (or there is limited airflow). Because of airway obstruction, your lungs do not fully empty and air is trapped.

You have obstructive chronic bronchitis.

What are the signs and symptoms of obstructive chronic bronchitis?

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

Your spirometry test confirms that you have an airflow obstruction.

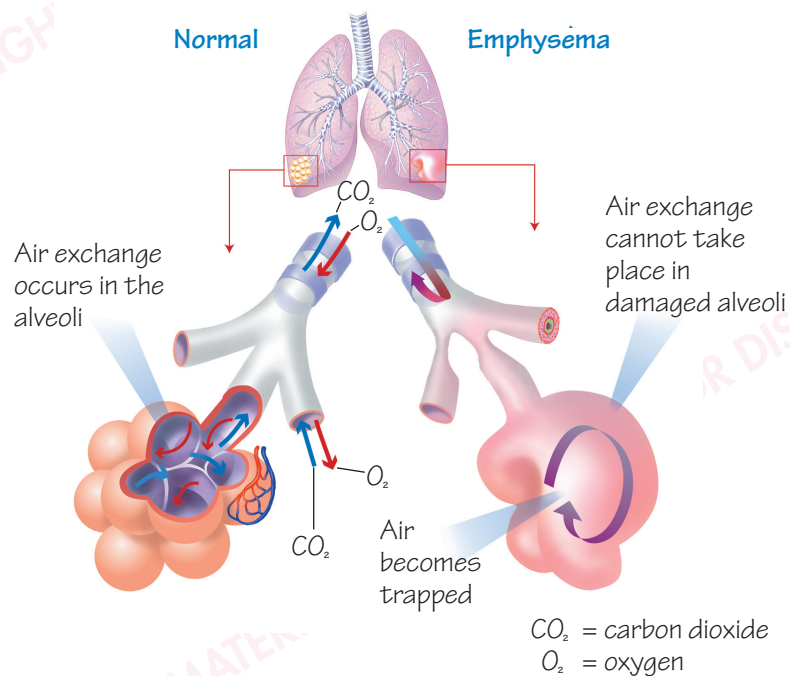


COPD: its signs and symptoms

How smoking and other pollutants may damage your alveoli

Your bronchial tubes branch into smaller and smaller tubes, which end in millions of tiny air sacs called alveoli. The exchange of oxygen and carbon dioxide takes place in the alveoli. When your alveoli are damaged or destroyed, there is a loss of lung elasticity, it becomes difficult for the lungs to exchange oxygen and carbon dioxide and less oxygen gets into your body. Your lungs do not fully empty and air is trapped.

You have emphysema.



What are the signs and symptoms of emphysema?

- Shortness of breath when exercising or during daily activities.

Your spirometry test confirms that you have an airflow obstruction.

Main cause of COPD

Can you name the primary pollutant that can damage your lungs?

Cigarette smoke is the primary pollutant and the leading cause of COPD.

Many people who suffer from COPD are current or former smokers. Only a minority are suffering from deficiencies such as alpha 1 -antitrypsin, an inherited lung disorder that may cause emphysema.

Test your knowledge about the effects of cigarette smoke

Cigarettes contain over 7,000 chemicals. Most of them are poisonous and can cause respiratory disease and/or cancer.

True False

The self-cleaning mechanism of your airways is less efficient if you smoke or you are exposed to cigarette smoke.

True False

Second-hand smoke is not harmful for non-smokers.

True False

It is never too late to quit. Quitting can help slow down the progression of COPD.

True False

If you think that you need help to quit smoking, see your doctor or a healthcare professional who can prescribe medications to help you quit smoking and support you on your path to stop smoking. You might also want to join an anti-smoking program in your region.

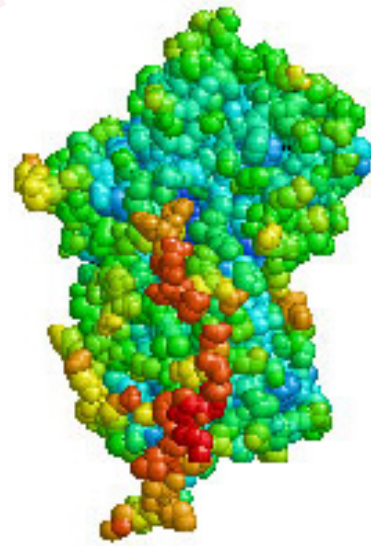
Could your COPD be hereditary?

As we have just seen, COPD can be caused by environmental exposures such as cigarette smoking. However, there are people having an inherited disorder that makes them more susceptible to develop COPD.

What is alpha-1 antitrypsin deficiency?

Alpha-1 antitrypsin deficiency (AATD) is a genetic hereditary condition that predisposes a person to the development of certain diseases (such as COPD) due to the defective production of a protein called alpha-1 antitrypsin (AAT).

AAT is a protein produced mainly in the liver and distributed to all the human body. The function of this protein is to protect the organs against harmful substances (such as cigarette smoking) and inflammation. In the absence of AAT, the lungs are more vulnerable to the action of smoking or infections and therefore to the development of emphysema.



What diseases are related to AATD?

In the lungs



- **Emphysema** : Individuals with AATD can be affected with emphysema at a younger age even with little or no exposure to smoking. However, emphysema in AATD is highly related to smoking and, therefore, the most important measure in these individuals is to avoid contact with cigarette smoke.

In the liver

AATD can produce:

- **Neonatal jaundice** (in newborns)
- **Hepatitis and cirrhosis**. More frequent in adults, due to the long term inflammation of the liver.
- Other less common diseases that have been linked to AATD are panniculitis (a skin condition) and vasculitis (inflammation of the blood vessels)



Should you be tested for AATD?

The AATD screening test is recommended in the following cases:

1. COPD, emphysema, chronic bronchitis or asthma that are not controlled after an optimal treatment.

More specifically, those who are under 65 years of age or those who have had low exposure to cigarette smoke (someone who has smoked less than one pack a day for 20 years).

2. Other situations such as:

- A family history of emphysema at a young age, with or without a history of smoking.
- A family history of liver disease.
- A skin condition known as panniculitis.
- Newborns, children or adults with unexplained liver disease.

3. Blood relatives, especially siblings and children, of those diagnosed with AATD.

If you haven't been tested for AATD, you can ask your family doctor or your respiratory physician to perform this important test.



How is AATD diagnosed?

Measuring the levels of AAT (screening test)

A simple blood test detects the level of AAT that circulates in your blood.

- If your AAT level is normal (more than 1.1 g/L), it is less likely that your lung disease is associated with AATD and it is generally not necessary to perform further tests (unless your healthcare professional has strong suspicions).
- If your AAT level is less than 1.1 g/L, further tests will be needed to determine your genotype (gene combination for AATD)



If you haven't been tested for alpha-1 antitrypsin deficiency, you can ask your family doctor or your respiratory physician to perform the test.

Why is important to know if your COPD is due to AATD?

Modify your lifestyle: Knowing that you have AATD might be the motivation needed to stop smoking (or, in certain cases to never start), to exercise more, to improve your diet, etc.

Have your family members screened : If you have AATD, your family members (siblings and children) should be tested. Even if they aren't sick, they should start integrating changes in their lifestyle (such as avoiding smoking) to prevent the development of emphysema.

Receive specific treatment : In addition to regular COPD medication, certain individuals could benefit from an AAT augmentation treatment (see the "Alpha-1 Antitrypsin Deficiency (AATD)" module for more information on this subject).



Factors that can make COPD symptoms worse

When you have COPD, some factors can cause an aggravation of your symptoms. When this symptoms' worsening is sustained, this is called a COPD **exacerbation**. You will learn how to manage a COPD exacerbation in the section "Integrating a plan of action into your life".

Most common factors:



Indoor pollutants

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



Outdoor pollutants

- exhaust fumes, gas fumes, smog



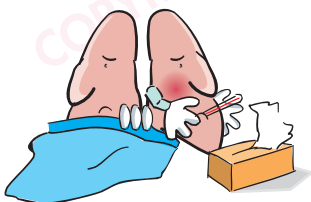
Emotions

- anger, anxiety, stress



Changes in temperature

- extreme heat or cold, wind, humidity



Respiratory infections

- cold, flu, bronchitis, pneumonia

How to avoid factors that worsen COPD symptoms

Now let us look at some of the actions you can take to reduce or avoid your exposure to those factors that make your respiratory symptoms worse.

Factors that may make your respiratory symptoms worse	What you can do to reduce or avoid exposure to these factors
Indoor pollutants	
Cigarette smoke (including second-hand smoke)	
Household cleaning products	
Strong odours	
Dust	
Outdoor pollutants	
Exhaust fumes	
Gas fumes	
Smog	
Emotions	
Anger	
Anxiety	
Stress	
Changes in temperature	
Extreme heat	
Extreme cold	
Wind	
Humidity	
Respiratory infections	
Cold	
Flu	
Bronchitis	
Pneumonia	
Other factors	

Other suggestions to reduce or avoid exposure to those factors

Indoor and Outdoor Pollutants

- **Quit smoking and avoid second-hand smoke.** Discuss with your physician and/or resource person about the strategies that can help you and your close ones to quit smoking.
- **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

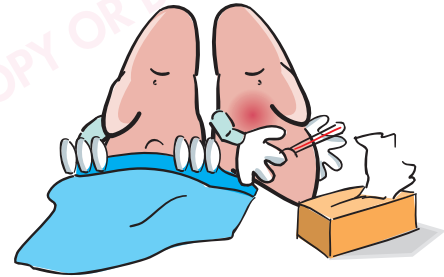
- A) When it is **cold**, dress warmly and cover your nose with a scarf.
- B) When it is **hot**:
- Stay in an air-conditioned environment.
 - Drink plenty of water (if there are no medical restrictions).
 - Avoid strenuous activities.
 - Wear light clothing, preferably in light colours, and a hat.



Other suggestions to reduce or avoid exposure to those factors

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 resource person or doctor about a pneumonia vaccine.



Why should people with COPD get a flu shot? How can I get a flu shot?

- Having respiratory problems means that you are more likely to have complications related to the flu. The flu shot prevents flu complications.
- Remember, the flu shot does not infect people with the flu virus.
- The flu shot is available each fall. You can get it at community centres, in health centres, and from your family doctor or respirologist.
- You may have some pain and discomfort at the injection site, a slight fever or aching muscles. These side effects are minor and do not last long.

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

A form titled "Living Well with COPD Plan of Action". It includes sections for "My name is:", "Contact List" (with a table for Service, Name, and Phone Number), "I Feel Well" (with checkboxes for symptoms like "I feel short of breath" and "I cough up sputum daily"), "My Actions" (with a checkbox for "I sleep and eat well, I do my usual activities and exercises"), and "My Regular Treatment is:" (with a table for Medication, Dose, Puff/pills, and Frequency). The form is dated "2nd Edition 2006".

Medications for COPD and the importance of taking them properly

Avoiding or reducing exposure to things that make your respiratory symptoms worse is just one part of managing your COPD. Another very important part is to **take your medication as prescribed and using the proper technique.**

Medications can help relieve your respiratory symptoms and improve your quality of life.

You should know the following about your medication:

- the name of each medication you are taking
- what your medication does
- the dose you should be taking
- when you should be taking your medication
- how to take your medication properly
- medication precautions and side effects



It is very important to take your medications regularly and exactly as prescribed.

Your health professional can help you to acquire a better routine to make sure to take your medications on a regular basis.

If you have any concerns about your medications, ask your doctor and/or your pharmacist. Write your questions in advance to not to forget them.

Medications for COPD and the importance of taking them properly

Can you list the medications you are currently taking for your respiratory condition?

Can you list other medications you are taking?

Test your knowledge of medications

Why are medications for COPD important?

- They reduce shortness of breath true false
- They reduce secretions true false
- They reduce cough true false

Why are most medications inhaled?

- They act directly in the lungs true false
- They work faster than orally administered medications true false
- They cause fewer side effects than orally administered medications true false

Medications to treat COPD

It may take more than one medication to keep airways open. In COPD, **bronchodilators are the main form of medication used on a day-to-day basis.** However, there are other types of medications that may be required to help reduce respiratory symptoms.

Here are the following categories of medications that will be introduced and discussed in greater detail:

A. Bronchodilators – The most important medications in COPD therapy because they help to open up the airways and reduce shortness of breath on exertion.

B. Anti-inflammatories – Anti-inflammatories reduce certain types of inflammation in your bronchi; they are available in two forms: inhaled or oral. In COPD, inhaled anti-inflammatories need to be prescribed in combination with a bronchodilator.

C. Medications for COPD exacerbation - Usually prescribed for short periods when your symptoms get worse (exacerbation).



Bronchodilators

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

There are various types of bronchodilators:

1. Anticholinergics

- Short-acting
- Long-acting

2. Beta₂-agonists

- Short-acting
- Long-acting

3. Combination of bronchodilators

- Short-acting
- Long-acting

Bronchodilators

Short-Acting Anticholinergics

- Facilitates breathing by opening narrowed airways.
- Usually taken on a regular basis, multiple times per day.
- For some COPD patients they may be taken as needed.



Long-Acting Anticholinergics

- Indicated in the maintenance treatment of COPD.
- Reduces exacerbations and improves quality of life.
- Facilitates breathing by opening the airways and provides continuous improvement for shortness of breath.
- Taken regularly.



Bronchodilators

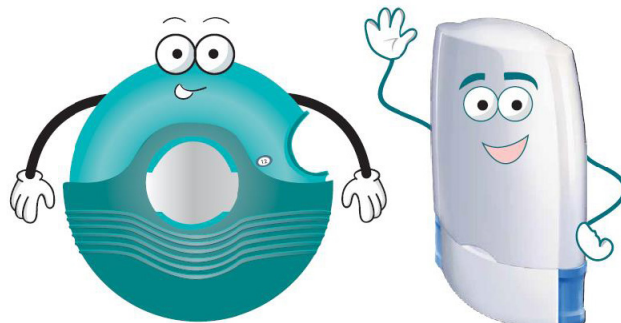
Short-Acting Beta₂-Agonists

- Rescue medication, used as needed.
- Opens the airways quickly in case of emergency.
- Can also be taken regularly.



Long-Acting Beta₂-Agonists

- Indicated as a COPD maintenance therapy.
- Reduces shortness of breath, exacerbations and improves quality of life.
- Opens the airways for 12 to 24 hours.
- Should not be used in place of “rescue” medication.



Bronchodilators

Combination of short-acting bronchodilators

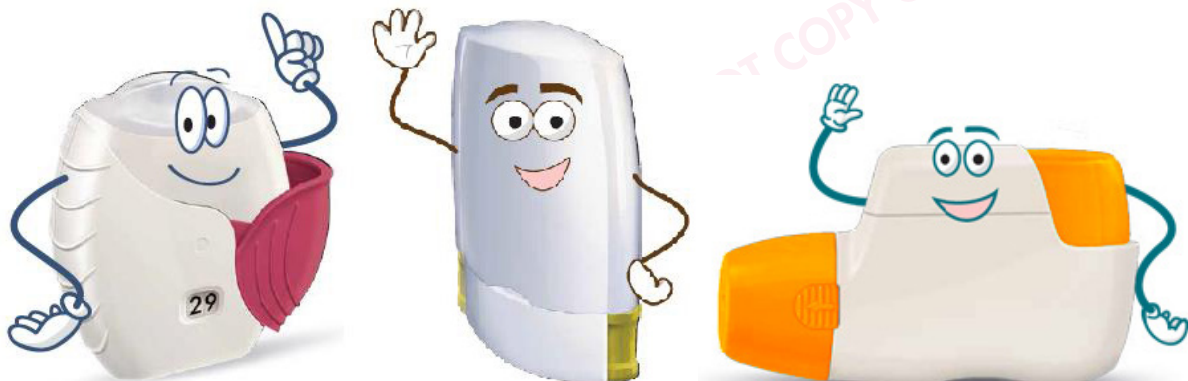
- Combination effect of Short-Acting Anticholinergics and Short-Acting Beta₂-Agonists :
 - Rescue medication – Opens up airways quickly in case of emergency
 - For some COPD patients it can be used as needed.
 - Can also be taken regularly, 4 times a day, but with the advice of your medical doctor.



Bronchodilators

Combination of long-acting bronchodilators

- Combination effect of Long-Acting Anticholinergics and Long-Acting Beta₂-Agonists :
 - Open up airways for 12 to 24 hours.
 - Indicated for maintenance treatment of COPD.
 - Prevent shortness of breath and wheezing.
 - Reduce exacerbation and improve quality of life.
 - Taken regularly, one or two inhalations daily.
 - Should not be used to replace “rescue” medications.



Anti-inflammatories

Anti-inflammatories reduce certain types of inflammation in your bronchi. Anti-inflammatories come in various forms:

Inhaled corticosteroids

- Make exacerbations less frequent.
- In COPD, inhaled corticosteroids can only be used in combination with bronchodilators.

Inhibitors of phosphodiesterases (PDE) (such as Roflumilast or theophyllines)

- These medications are taken orally on a regular basis.

Oral corticosteroids (such as Prednisone)

- Help to treat exacerbations but are usually not recommended as maintenance treatment.
- **For more information, see the section “Medications to Treat Exacerbations”.**

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Anti-inflammatories

Inhaled Corticosteroids

In COPD inhaled corticosteroids can only be used in combination with bronchodilators.

Combinations of Long-Acting Beta₂-Agonists and Inhaled Corticosteroids

- Combination effect:
 - Reduce inflammation and swelling.
 - Open up airways.
- Make exacerbations less frequent.
- Can also be helpful for some patients to further relieve symptoms.
- Are not recommended as a rescue medication.



Anti-inflammatories

Inhibitors of phosphodiesterases (PDE)

- These medications result in less inflammation in the lungs and help to stop the narrowing of airways which occurs in COPD.
- They can be only used in addition to an inhaled bronchodilator medication.
- They can decrease breathlessness.
- They must be taken orally (pill form), on a regular basis.
- They must not be used as rescue medication.

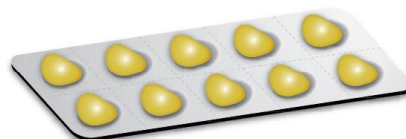


A. Inhibitors of phosphodiesterases (PDE) - such as Theophyllines

- They can interact with food and other medications. Make sure your doctor and pharmacist know all the other medications you are taking.
- You may require blood tests to monitor how much of the medication is in your body.

B. PDE-4 inhibitors – such as Roflumilast

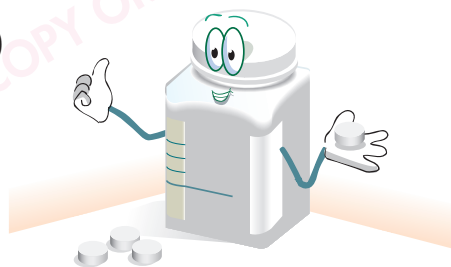
- They are used in patients with a history of frequent exacerbations.
- They can have serious side effects that are not usually seen with inhaled medication. Diarrhea is a very common side effect.



Medications to treat exacerbations

Oral Anti-Inflammatories (corticosteroids)

- These medications reduce inflammation in the lungs.
- Usually prescribed for short periods (5- 14 days) when your symptoms get worse (exacerbation).
- Rarely prescribed on a permanent basis.



Antibiotics

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



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

Living Well with COPD
Plan of Action

My name is: _____

Contact List

Service	Name	Phone Number
Respiratory Nurse		
Family Physician		
Respirologist		
Pharmacist		

I Feel Well

My Usual Symptoms

- I feel short of breath: No Yes, colour: _____
- I cough up sputum daily: No Yes
- I cough regularly: No Yes

My Actions

- I sleep and eat well, I do my usual activities and exercises

My Regular Treatment is:

Medication	Dose	Puff/pills	Frequency

2nd Edition 2006

Importance of using the proper inhalation technique

In order to work, COPD medication must be able to reach your lungs. This is why the proper use of your inhalation devices is essential to prevent and manage your symptoms (shortness of breath, wheezing, etc.).

Most patients have difficulties with using certain inhalation devices and keeping a good inhalation technique. Learning the right inhaler technique can be difficult, but you must persist.

If you use any of these inhalers incorrectly, the medicine may not get into your airways as it is supposed to, and the therapy could be less effective.

Handling these devices should become a second nature to you, like a reflex.



Ask your health professional, your doctor and/or your pharmacist to verify your inhalation technique at each visit.

Inhalation devices

The devices that deliver your inhaled medications are classified in three categories:

1. The metered-dose inhaler (MDI) and the valved holding chamber

With an **MDI** (also called inhaler or puffer), the medication is dispensed by pressing down on the canister, which releases a spray of medication at a set dose.

When using an MDI you need to coordinate your inhalation with the activation of the inhaler.

The use of a **valve holding chamber** is highly recommended since it:

- increases the amount of medication reaching your lungs, and
- diminishes the amount of medication remaining in your mouth and throat, which may reduce some of the drug side effects (bitter taste, hoarseness and thrush).

2. The dry powder inhalers (DPI)

These devices deliver medication as a powder to your lungs when you inhale; the coordination of your inhalation with the medication release is greatly simplified.

Some devices contain several doses of medication (multidose), while others have only one (unidose), meaning you must properly insert a new capsule inside the device for each dose required.

3. Soft Mist™ inhalers (SMI)

This is a new type of inhaler, which is propellant-free. It releases medication slowly and gently, making it easy to inhale it into your lungs. The medication is delivered as a soft mist, which is suspended in a cloud longer, which simplifies coordination of inhaler activation with inspiration.

Metered-dose inhaler

TECHNIQUE

1. Remove the cap.
2. Shake the inhaler 3-4 times from top-down (to mix the contents well).
3. Tilt your head slightly back and exhale normally.
4. Place the mouthpiece within your teeth and seal your lips around it.
5. Begin to breathe in slowly through your mouth. Press down once on the canister and continue breathing in slowly (only press once to release one dose of medication).
6. Continue to breathe in slowly and deeply until your lungs are full.
7. Hold your breath for 5-10 seconds, or as long as is comfortable, 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.
9. Replace the protective cap.



Maintenance and Cleaning

- Once a week, clean the cap and plastic container, without the canister, by soaking them in warm, soapy water, then rinsing and allowing to air-dry.
- Keep the inhaler away from sources of extreme heat and cold; warm it in your hands if it is cold.

Metered-dose inhaler with a valved holding chamber

TECHNIQUE

1. Remove the caps.
2. Shake the inhaler 3-4 times keeping it upright.
3. Connect the inhaler to the holding chamber.
4. Tilt your head slightly back and breathe out normally.
5. Place the holding chamber mouthpiece carefully between your teeth and seal your lips around it.
6. Press down on the canister once.
7. Breathe in slowly and deeply through your mouth.
8. **a. Single breath technique:** Try to hold your breath for 5-10 seconds or as long as is comfortable. Then breathe out 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 holding chamber, 3-4 times in a row.
9. If you need more than one dose, wait 1 minute between puffs and repeat steps 2-8. Replace the protective caps.



Maintenance and Cleaning

- Clean the valved holding chamber prior to the first use and once a week thereafter, as per the manufacturer's instructions, to avoid build up of medication residue or propulsion agent on the walls.
- Keep the holding chamber in a secure place to ensure that no foreign objects will fall into the chamber.

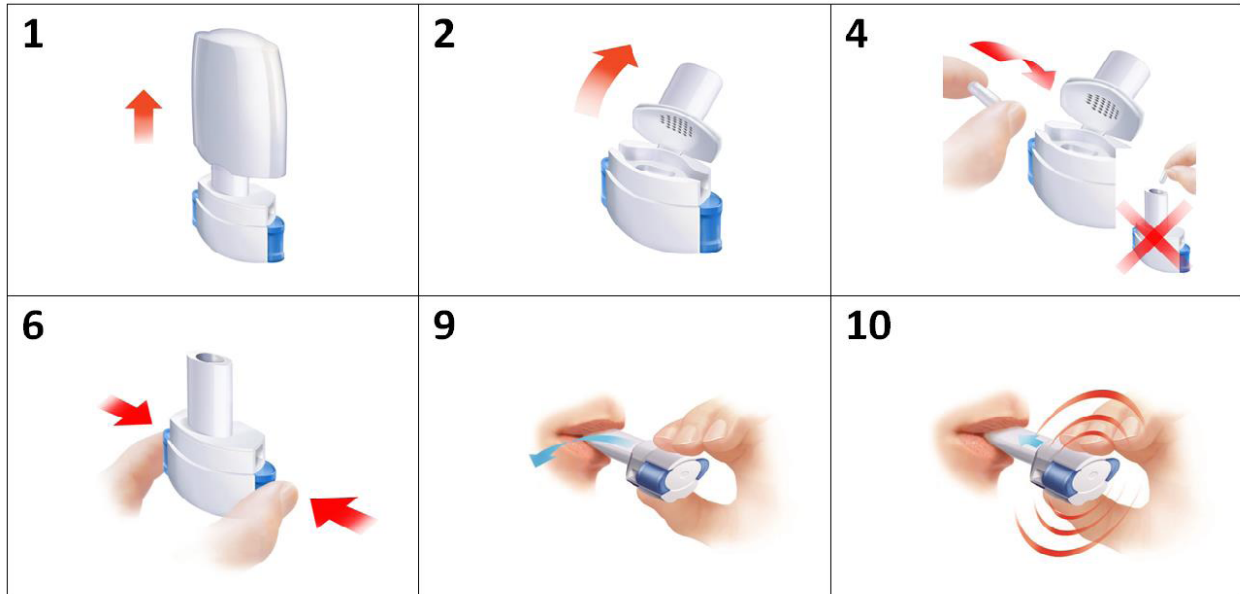
Breezhaler

TECHNIQUE

1. Pull off the cap.
2. **Open inhalation device:** Hold the base of the inhaler firmly and tilt the mouthpiece to open the inhalation device.
3. **Prepare the capsule.**
4. **Insert the capsule:** Place the capsule into the capsule chamber.
5. **Close the inhalation device.** You should hear a 'click' if it is closed properly.
6. **Pierce the capsule.** Do not press the piercing buttons more than once.
7. Release the buttons fully.
8. **Breathe out. Never blow into the mouthpiece.**
9. Hold the inhaler such that that buttons are place on the left and right.
10. Place the mouthpiece in your mouth and close your lips firmly around the mouthpiece. **Breathe in rapidly but steadily, as deeply as you can.**
11. **Note:** As you breathe in through the inhalation device, the capsule spins around in the chamber and you should hear a whirring noise.
12. **Hold your breath** for at least 5-10 seconds. Then breathe out.
13. **Remove the capsule:** Open the mouthpiece again, remove the empty capsule by tipping it out, and discard it. Close the inhalation device and replace the cap.
14. **Mark daily dose tracker:** Put a mark in today's box if it helps to remind you of when your next dose is due.

Breezhaler

TECHNIQUE - continued



Maintenance and Cleaning

- Never wash the inhaler with water. Always keep the inhaler and capsules in a dry place.
- Always use the new inhaler that comes with your new medication pack (use a new inhaler each month).
- Do not store the capsules in the inhaler. Capsules must only be removed from the blister pack immediately before use.

Diskus

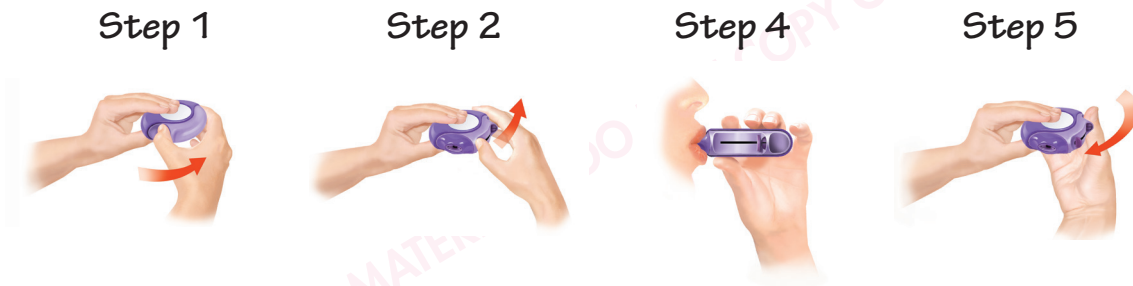
TECHNIQUE

1. **Open:** To open your inhaler hold the outer case in one hand and put the thumb of your other hand on the thumb grip. Push the thumb grip away from you, until you hear it click into place.
2. **Slide:** Hold your inhaler with the mouthpiece towards you. Slide the lever away until you hear another click. Your inhaler is now ready to use.
3. **Exhale:** Hold the inhaler away from your mouth. Breathe out as far as is comfortable. Remember – never exhale into your inhaler.
4. **Inhale:** Before you start to inhale the dose, read through this section carefully. Once you have fully exhaled, place the mouthpiece to your mouth and close your lips around it. Breathe in steadily and deeply through your mouth until a full breath is taken. Remove the inhaler from your mouth. Hold your breath for 5-10 seconds or as long as is comfortable. **Breathe out slowly.**
5. **Close:** To close your inhaler, place your thumb in the thumb grip, and slide it back until you hear a click. The lever is now automatically reset for your next use. The counter on the inhaler indicates how many doses are remaining.

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Diskus®

TECHNIQUE - continued



Maintenance and Cleaning

- The device has a dose counter which tells you the number of doses remaining. To show when the last five doses have been reached the numbers appear in red.
- Each dose is accurately measured and hygienically protected. The Diskus requires no maintenance, and no refilling.

Ellipta

TECHNIQUE

1. Prepare:

- a. When you take your inhaler out of its box it will be in the closed position.
- b. Keep the cover closed until you are ready to inhale a dose.
- c. When you are ready, slide the cover to the side until you hear one **'click'**.
- d. The dose counter will now count down by one number. You are now ready to inhale a dose.

2. Inhale:

- a. While holding the inhaler away from your mouth, breathe out as far as it is comfortable. **Remember – never exhale into your inhaler.**
- b. Put the mouthpiece between your lips, and close your lips firmly around it. Don't block the air vent with your fingers.
- c. Take one long, steady, deep breath in. Hold your breath for 5-10 seconds or as long as is comfortable.
- d. Remove the inhaler from your mouth. **Breathe out slowly.**

3. Close:

- a. Slide the cover upwards as far as it will go to cover the mouthpiece.

Ellipta

TECHNIQUE - continued

Step 1c



Step 2b



Maintenance and Cleaning

- A new inhaler shows exactly 30 doses. It counts down by 1 each time you open the cover. If you open and close the cover of your inhaler without inhaling the medicine, you will lose the dose.
- When fewer than 10 doses are left, half of the dose counter shows red, to remind you to refill your prescription. When the counter shows a full solid red background, the inhaler is empty.

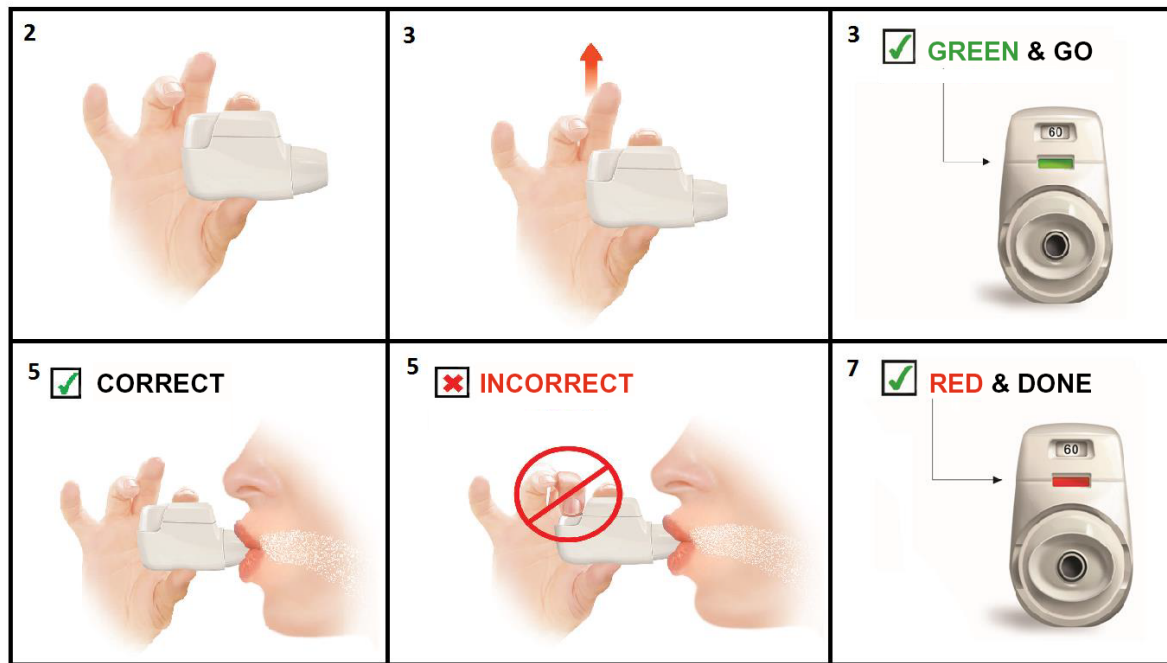
Genuair

TECHNIQUE

1. Remove the protective cap by **lightly squeezing the arrows** marked on each side and pulling outwards.
2. Hold the inhaler **horizontally** with the mouthpiece towards you and the colored button facing **straight up**.
3. **Press** the colored button all the way down and **release** it. The **green** control window confirms that your medicine is ready for inhalation.
4. Breathe out away from the inhaler.
5. Place your lips tightly around the mouthpiece and inhale **strongly** and **deeply** through your mouth. The inhaler signals that you inhaled correctly by emitting a **“click”** sound. Keep breathing in even after you have heard the **“click”** to be sure you get the full dose.
6. Remove the inhaler from your mouth and hold your breath for 5-10 seconds or as long as is comfortable, then breathe out slowly.
7. Make sure the control window has turned to **red**. This confirms that you have inhaled your full dose correctly. If the colored control window is still green, repeat inhaling strongly and deeply through the mouthpiece. If the window does not change to red, you may have forgotten to release the green button before inhaling, or may have not inhaled correctly. If that happens, try again.
8. Replace the protective cap by pressing it back onto the mouthpiece.

Genuair

TECHNIQUE -continued



Maintenance and Cleaning

- When a red striped band appears in the dose indicator this means you are nearing your last dose and you should obtain a new inhaler.
- When 0 (zero) appears in the middle of the dose indicator, you should continue using any doses remaining in the inhaler.
- When the last dose has been prepared for inhalation, the green button will not return to its full upper position, but will be locked in a middle position. Even though the green button is locked, your last dose may still be inhaled. After that, the inhaler cannot be used again and you should start using a new inhaler.
- You do not need to clean your inhaler. Never use water to clean the inhaler, as this may damage your medicine.

HandiHaler

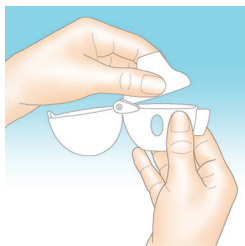
TECHNIQUE

1. To release the dust cap, press the green piercing button completely in and let go.
2. Open the dust cap completely by pulling it upwards, then open the mouthpiece by pulling it upwards.
3. **Immediately before use**, peel the aluminum back foil until one capsule is fully visible. Remove one capsule from the blister pack (do not expose more than one capsule at a time).
4. Place the capsule in the centre chamber.
5. Close the mouthpiece **firmly until you hear a click**, leaving the dust cap open.
6. **Hold the inhaler with the mouthpiece upwards and press the green button completely in only once, and release.**
7. Breathe out completely. **Do not breathe into the mouthpiece at any time.**
8. Hold the inhaler by the grey base. **Do not block the air intake vents.** Raise the inhaler to your mouth and close your lips tightly around the mouthpiece. Keep your head in an upright position and breathe in slowly and deeply but at a rate sufficient to hear or feel the capsule vibrate. Breathe in until your lungs are full; then hold your breath for 5-10 seconds or as long as is comfortable and at the same time take the inhaler out of your mouth. Resume normal breathing.
9. **To ensure complete inhalation of capsule contents, you must repeat steps 7 and 8 once again.**
10. Open the mouthpiece again. Tip out the used capsule and dispose. Do not touch the used capsules. If the dry powder gets in your hands, make sure you wash your hands thoroughly.
11. Close the mouthpiece and dust cap for storage of your device.

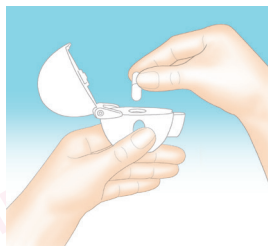
HandiHaler

TECHNIQUE - continued

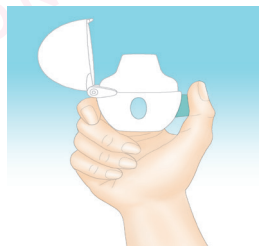
Step 2



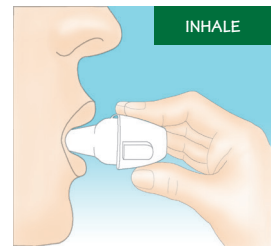
Step 3



Step 5



Step 7



Maintenance and Cleaning

- It is important to clean the inhaler once a month, as follows: Open the dust cap and mouthpiece; open the base by lifting the piercing button; rinse the complete inhaler with warm water to remove any powder; dry the inhaler thoroughly (it takes 24 hours to air dry).
- For additional information, please consult the Consumer Information page (part III of the Product Monograph).

Turbuhaler

TECHNIQUE

1. Unscrew and lift off the cover. You may hear a rattling sound. This is normal; it is the sound of the drying agent, not the medication.
2. Holding the inhaler upright, turn the colored grip as far as it will go in one direction (clockwise or counterclockwise, it does not matter which way you turn it first); then you must turn it back again as far as it will go in the opposite direction. Do not hold the mouthpiece when turning the grip. The click you hear is part of the loading process. The inhaler is now ready to use.
3. Breathe out, with your mouth away from the mouthpiece. Then, place the mouthpiece gently between your teeth.
4. Now close your lips over the mouthpiece. Inhale as deeply and strongly as you can. Remove the inhaler from your mouth and hold your breath for 5-10 seconds or as long as is comfortable. Repeat this process from step 1 if more than one dose has been prescribed. When you have taken the prescribed amount of maintenance doses, rinse your mouth with water, and do not swallow.

Step 2



Step 4



Maintenance and Cleaning

- Clean the outside of the mouthpiece once a week with a dry tissue. Never use water or any other fluid when cleaning the mouthpiece. If fluid enters the inhaler it may not work properly.
- Always replace the cover properly after use.

Respimat

TECHNIQUE

1. Hold your inhaler upright with the cap closed.
2. **Turn** the clear base until it clicks.
3. **Open** the plastic cap until it snaps fully open.
4. Breathe out slowly and holding the inhaler level, place the mouthpiece carefully between your teeth. Seal your lips around the mouthpiece without covering the air vents.
5. While taking in a slow, deep breath, **press** the dose release button and continue to breathe in slowly.
6. Remove the inhaler from your mouth and hold your breath for about 5-seconds or as long as is comfortable.
7. Replace the plastic cap.

Step 2



Step 3



Step 5



Respimat

TECHNIQUE -continued

Maintenance and Cleaning

- Important: Before taking the first dose, Respimat needs to be properly assembled and prepared. Ask your pharmacist for help or follow the instructions included with the inhaler package.
- To prepare the inhaler for first-time use, hold your inhaler upright with the cap closed. Turn the clear base - in the direction of the arrows of the label - until it clicks. Open the plastic cap until it snaps fully open. Point the inhaler towards the ground, press the dose release button and close the cap. Repeat these steps until a cloud is visible and then three more times to ensure the inhaler is prepared for first use.
- If the inhaler has not been used for more than 7 days, release one puff towards the ground. Discard the inhaler 3 months after the first use even if there is still medication left.
- When the pointer enters the red area of the scale, there is medication for 7 days left. This is when you need to get a new inhaler prescription. Once the dose indicator has reached the end of the red scale the inhaler is empty and locks automatically.

What to remember on inhalation devices

- Medications can help to relieve your symptoms and improve your quality of life.
- Become familiar with your medications, and take them exactly as prescribed.
- COPD medications have to get into your lungs to work. You must use the inhalation technique correctly.

Having the proper inhalation technique is important. Get your technique checked by your healthcare provider or your physician from time to time.

Check your confidence level in preventing and managing your symptoms

On a scale of 1 to 10, circle the number that best represents the confidence that you have in your ability to apply the strategies and techniques taught in this module.

1. To identify the factors that can make your symptoms worse?

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

2. To avoid or at least reduce your exposure to the factors that can make your symptoms worse?

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

3. To take your medications as prescribed (proper dose, right timing) to manage your symptoms?

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

4. To use the proper technique for each of your inhalers?

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

5. Do you think your medication is helping you to prevent and manage your symptoms?

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

Check your confidence level in preventing and managing your respiratory symptoms

If you feel confident to prevent and manage your respiratory symptoms, continue to apply the strategies suggested in this module and take your medication as prescribed with the proper technique.

If you don't feel confident that you can prevent or manage your symptoms, what are the reasons?

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

Do not hesitate to discuss with your physician or resource person about any doubts or questions that you may have regarding your medication and inhalation devices.

Remember that taking your medications properly can help you better manage your symptoms and live a fuller and more active life!

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Acknowledgements

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*J. Bourbeau, respirologist
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