

EMPOWERMENT GUIDE FOR PATIENTS WITH COPD

Revised by experts,
patients & caregivers



1. Prevention

Primary prevention *

How can I take care of my lung health and avoid developing

COPD: Chronic Obstructive Pulmonary Disease (COPD) is an irreversible lung disease, which can be prevented by avoiding exposure to risk factors related to the quality of air we breathe:



Tobacco smoke



Poor air quality due to the combustion of biomass (wood, charcoal, other plant materials and manure) for cooking and heating indoors.



Poor air quality in outdoor spaces. Air pollution produced by uncontrolled human activity that favors the accumulation and concentration of gases such as carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), heavy metals, vapors, irritants, gases industrial and micro particles (around 2.5μ in diameter) that end up in the lung.



Occupational exposure to industrial chemicals and dusts such as fumes, irritants, and gases.

* Primary prevention: Interventions aimed at detecting and avoiding exposure to risk factors, to avoid the deterioration of health and the development of disease.

What can people with risk factors for COPD, who do not yet have the disease, do to avoid developing it?



Quit smoking & avoid exposure to smoke. We know how hard it is to quit smoking. But we are here to help! Please check on this links to find more information in your own language:

<https://smokefree.gov/>



Use masks to avoid indoor and outdoor exposures, especially in closed spaces, in work environments and during high pollution alerts.



Choose well ventilated spaces where air circulates and is continuously renewed



Secondary prevention **

COPD represents the 4th leading cause of death in the world. The mortality rate is higher than that of the general population, since COPD patients usually have other diseases that aggravate their health.

** Secondary prevention: Targeted interventions, in populations exposed to risk factors, for the identification, diagnosis and early treatment of the disease, avoiding its progression and the impact on their health and quality of life.

Tertiary Prevention ***

What can a patient with COPD do to prevent the progression of their disease and avoid complications, flares and mortality?

1. Do not smoke any type of tobacco derivatives, in any forms (cigarettes, cigars, pipe, water pipe, electronic, etc.). If you do smoke we understand how hard is to stop. Check the previous page for a link with resources to help you quit.
2. You can find more information about Smoking and COPD in this link: <https://gaapp.org/copd/copd-and-smoking/>
3. Avoid exposure to risk factors: tobacco, air pollution, industrial dusts, and chemicals.

Have a healthy diet. Low weight in COPD patients is associated with impaired lung status, lower exercise capacity, and higher mortality rates. A COPD patient with obesity adds other complications to his/her general health.
 - Consume foods rich in antioxidant substances, like fruits and vegetables,
 - Balance the consumption of animal proteins.
 - A fractional diet is also recommended: consume portions or small meals every 4-5h, instead of large meals that make it difficult to digest and increase the feeling of shortness of breath.
4. Staying active and performing supervised exercise routines, help to improve the quality of life, the ability to conduct activities of daily living and help to avoid the flares of COPD.
 - Resistance exercises will increase your strength and muscle tone.
 - Aerobic exercises (cardio) will improve your lung capacity and they will help to improve the use of oxygen.
 - Be sure to talk to your doctor before starting any routine. He or she can recommend exercises tailored to your needs, and other details such as the frequency and duration of the exercises.
 - The most important thing is to perform the exercises continuously. Choosing activities that you enjoy can be very helpful in doing this.
5. A key factor in controlling the disease is to adhere to your treatment, that is, follow all the indications and recommendations that your doctor has

given you. Only half of COPD patients comply correctly with the treatment to control their disease. It is necessary to:

- Know your disease, learn to identify early worsening symptoms agree with your doctor on a “personal action plan”.
- Receive proper training and supervision of the use of inhalers, and/or home oxygenation and portable support devices.

6.

Get vaccinated against Influenza and Pneumococcus (if you are older than 65 years) each year. Additionally, the Coronavirus vaccine is recommended.

7.

Comprehensive COPD care: Unfortunately, there is no cure for COPD. The treatments available are aimed to reduce the symptoms and prevent the disease from worsening.

Other support measures in addition to the use of medications are recognized as comprehensive care. Its purpose is to improve the quality of life of patients, and control their symptoms, including possible related psychological and social problems.

Comprehensive care most used:

- Pulmonary rehabilitation. It should be done from the early stages of the disease to try to stop its progression. It is especially important in trying to improve airflow through the airways, prevent other secondary medical complications, and relieve respiratory symptoms. It includes lung training exercises and sessions to better understand and manage your disease.
- In some cases the use of home ventilatory support devices, and other additional medications is required.

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2. Diagnosis

The most common symptoms may initially go unnoticed:

1. **Shortness of breath.** It is the most important, progressive, and clearly disabling symptom.
2. **Whistling, wheezing, and/or noises when breathing,** particularly during flares of COPD.
3. **Recurrent viral and/or bacterial respiratory infections.**
4. **Cough,** which is usually worse in the morning and is often accompanied by a small amount of sputum.
5. **Fatigue and apathy.**

How is COPD diagnosed?

Verifying: Exposure history + Symptoms + Spirometry

A significant number of smokers develop COPD throughout their lives, and most are undiagnosed, so it is very important to control their exposure to risk factors and, depending on their exposure, to keep a close watch on their lung function.

Early diagnosis and treatment of lung diseases:

It is one of the pillars of lung health. Early diagnosis and treatment **allows better control of the progression of the disease**. COPD symptoms can be mild at first and go unnoticed. It is estimated **more than half of the cases of COPD have not been diagnosed**, and those that have been detected are already in the intermediate or advanced stages. It is important if you are over 40 years of age, are or have been a smoker, and/or have been chronically exposed to environmental toxic products through inhalation, **that you go to your doctor for an examination and explore if it is necessary to perform a spirometry**: A diagnostic test, which measures the volume, quantity and velocity of the inspired and expired air, and through which the diagnosis of COPD is established.



Image credits: National Cancer Institute

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3. Maintenance

Primary and Secondary prevention

Smoking control

One of the interventions that has the greatest impact on the lung health for the prevention of COPD is smoking cessation.

Recommendations to quit smoking:



Learn to recognize all the harmful effects of tobacco. Regardless of whether you have them or not, you must quit smoking to avoid the onset of disease, its progression, complications and mortality.



Choose a day to quit smoking, we will call it “D-Day”.



- Tell your friends and family your decision
- Avoid people who smoke for a while
- Prefer outdoor environments
- Drink plenty of water
- Eat a balanced diet rich in fruits, vegetables and fiber
- Exercise regularly
- Tell your doctor
- Ask for help if you need it



Avoid all cigarettes, e-cigarettes, hookah, etc..



Remember that your main motivation is your lung health and your long-term quality of life.



Maintenance of lung health

Climate change, the quality of the air breathed and the COVID-19 pandemic have spotlighted the importance of lung health.

Recommendations to maintain healthy lungs:

1.

Breathe clean air.

2.

Adopt healthy lifestyle habits: a balanced diet, drink plenty of water and stay active.

3.

Visit your family doctor at least once a year.

4.

Detect lung issues and treat the disease early.

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4. Management of stable COPD

1. Goals

The goal is to reduce the symptoms, the frequency and severity of flares, improve exercise tolerance, and quality of life.

2. Treatment

The basis of the treatment of stable COPD is:

Inhaled bronchodilators. They are drugs that dilate the airways.



The short-acting (SABA and SAMA)* have an effect that lasts 6-8 hours. They are used on demand to quickly control symptoms regardless of the level of severity.

The long-acting (LABA and LAMA)** have a duration of effect of 12 to 24 hours, are used as maintenance and are the basis of inhaled treatment in COPD patients.

Your doctor may prescribe some **combination of bronchodilators in several inhalation devices or combined in a single device** to maximize their health benefit.

* SAMA: Short-acting anticholinergics, SABA: Short-acting beta adrenergic agents

** LAMA: Long-acting anticholinergics, LABA: Long-acting beta adrenergic agents



Inhaled corticosteroids (ICS). They are drugs with an anti-inflammatory effect. Although many adverse effects are attributed to them, when inhaled correctly, its effect is limited to the lung.

They are used in combination with long-acting bronchodilator therapy in selected groups of patients with moderate to severe COPD and in patients with frequent flares.

As with all inhaled medications, **emphasis should be placed on the inhalation technique and after its use, perform a mouth rinse to remove the remnants.**



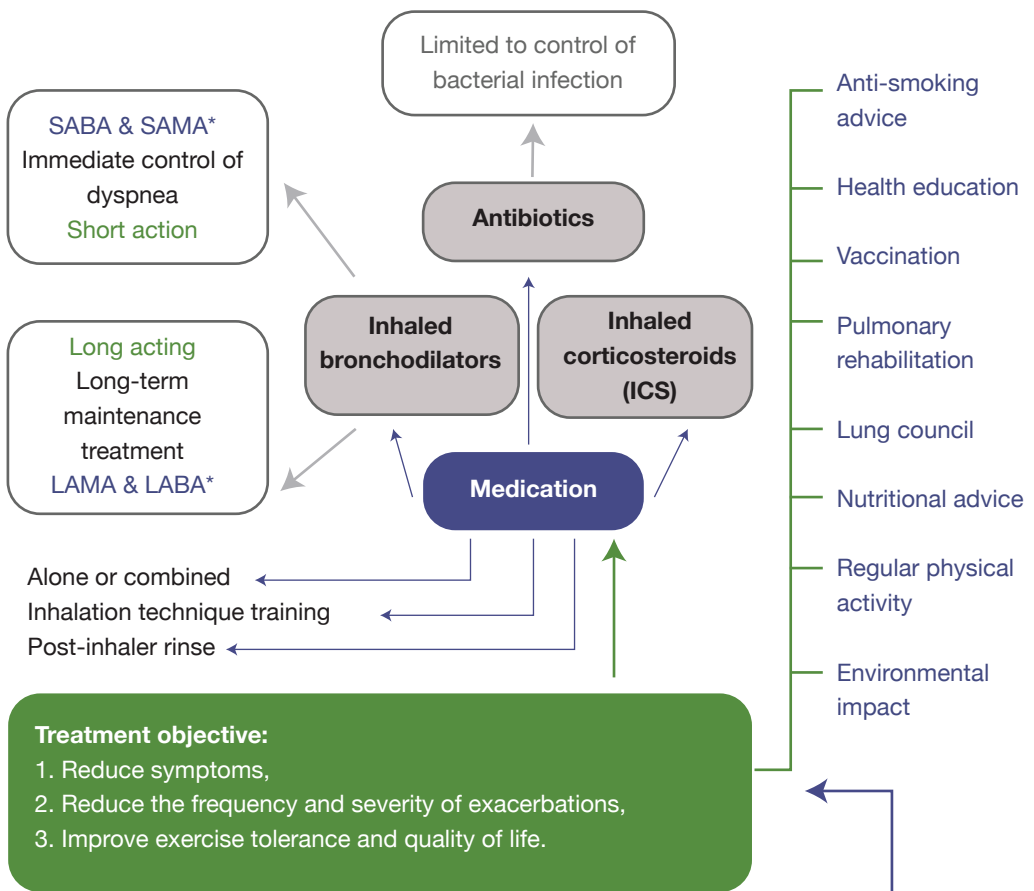
Antibiotics Useful during flares, their use is limited to the **control of bacterial superinfections.**

3. Non-drug treatment of stable COPD:

Health education is necessary to improve the knowledge a patient has of his disease, and increase **co-responsibility and empowerment** in coordination with the medical care team.

Pulmonary rehabilitation has proven to be an effective strategy to reduce respiratory distress, improve exercise tolerance and the quality of life in stable COPD patients. It also **reduces the risk of hospitalization** and visits to the emergency department.

The main objectives of the follow-up in stable COPD are to **monitor the symptoms, prevent flares, avoid the deterioration of lung function and guarantee the best possible quality of life.**



Management of non-exacerbated COPD

Objectives of monitoring:

1. Monitor the symptomatic evolution,
2. Prevent flares,
3. Avoid the deterioration of lung function and
4. Guarantee the best possible quality of life.



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5. Management of flares

1. Objectives of the treatment of flares

The goal of treating COPD flares is to minimize the negative impact on the disease and to prevent further episodes from occurring later. **Depending on its severity, it may require hospital admission or home management.**

2. Medication management of flares

The three most commonly used classes of medications in COPD flares are:



Nebulized short-acting bronchodilators (aerosols) or administered through an inhaled device with a spacer chamber, **for the treatment of the acute phase**, followed by long-acting bronchodilators for maintenance.



Oral or intravenous corticosteroids in the acute phase to improve dyspnea, oxygenation, shorten recovery time and length of hospitalization. The duration of oral or intravenous treatment is usually **not more than 5-7 days**. Inhaled corticosteroids combined with long-acting bronchodilators are usually continued for maintenance.



Antibiotics, if necessary, can reduce recovery time, risk of relapse, treatment failure, and length of hospitalization. The duration of treatment should be 5-7 days.

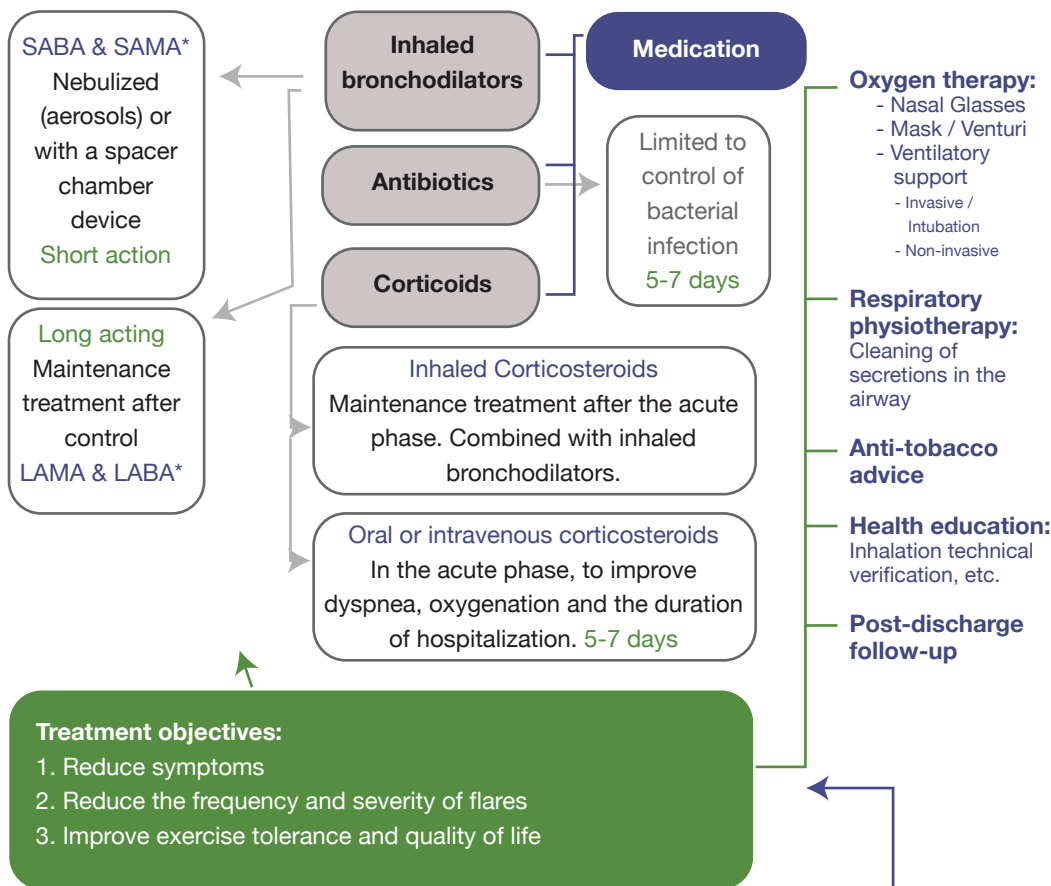
3. Non-drug treatment during flares

1. **Oxygen therapy** is administered in cases of respiratory failure. According to the initial evaluation and the blood oxygen levels, the need for additional measures such as non-invasive mechanical ventilation is determined to improve oxygen exchange, reduce respiratory effort and the need for intubation.
2. The **management of secretions**, with respiratory therapy, favors the cleaning of the airway and improves oxygenation.

4. Goals of follow-up at discharge

A follow-up close to discharge should be carried out, within a month, to guarantee the correct clinical evolution, the need for medication adjustment or the introduction of other additional measures. **It is advisable to follow all recommendations indicated by your healthcare professional.**





Management of exacerbated COPD

Objectives of monitoring:

1. Monitor the correct resolution of symptoms
2. Verify the response to treatment and the need for medication adjustment
3. Verify the need for additional measures
4. Health education and personalized action guide***
5. Prevent flares
6. Avoid the deterioration of lung function and
7. Guarantee the best possible quality of life

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6. Associated diseases and COVID-19

It is common for COPD to be accompanied by other **associated diseases** (comorbidities), which can have a significant impact on COPD.

Impact of comorbidities

1. Lung cancer is frequently seen in COPD patients, **complicating their short-term prognosis.**
2. Cardiovascular diseases are also **frequently associated and very important diseases in COPD**, with symptoms that can overlap.
3. Obesity, diabetes, osteoporosis, depression, anxiety, obstructive sleep apnea, and gastroesophageal reflux, among others, are comorbidities that **can affect the course of COPD** and the quality of life of patients.

Comorbidities should be treated together with COPD within a **personalized and coordinated strategy.**

COVID-19 & COPD

The vulnerability of the COPD patients to infection by COVID-19 or other microorganisms is associated with severe disease: **pneumonia, hospital admission, ventilatory support and worse long term outcomes.**

During the pandemic, home confinement, mobility restrictions, social distancing, mandatory masks, ventilation of enclosed spaces, personal hygiene measures, and strict limits on social gatherings **reduced exposure to COVID-19 and other respiratory infections.** Additionally, environmental pollution indicators were improved, as well as exposure to other triggers for flares of COPD.

On the other hand, the limitation of mobility and the fear of being infected, contributed to **reducing the daily physical activity of many patients.** Postponing periodic check-ups may result in worsening of lung disease.



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This guide has been created for COPD patients and caregivers, thanks to the collaborative work of:



GLOBAL ALLERGY & AIRWAYS
PATIENT PLATFORM



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