

COPD

INSTRUCTIONS FOR USE

GOOD PRACTICES FOR PEOPLE WITH COPD
AND THEIR FAMILIES IN THE TIME OF
COVID-19



FONDAZIONE ISTUD

Sanità e Salute



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COPD instructions for use

Good practices for people with COPD and their families in the time of COVID-19

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Introduction

By Chiesi Italia and Fondazione ISTUD

Chronic Obstructive Pulmonary Disease (COPD) is a worldwide respiratory disease. It has significant health and socio-economic impact and represents the third leading cause of death after heart failure and stroke according to WHO (World Health Organization) data updated to 2016. Its prevalence is increasing and will continue to grow in the coming years, due to persistent airways exposure to environmental factors contributing to its development, such as tobacco smoke and other pollutants.

COPD is chronic and untreatable and causes a progressive decline in the patient's respiratory capacity up to respiratory failure; furthermore, it severely impacts the quality of life, due to the presence of symptoms accompanying the clinical course, such as respiratory difficulty, which becomes increasingly severe.

Although COPD still cannot be treated, taking care of people living with COPD is feasible: currently available therapies for COPD allow to slow down lung function decline, to reduce the impact of symptoms on daily activities, and to prevent acute phases of worsening known as exacerbations, associated with high mortality. Nonetheless, educating people living with COPD on the condition and proper behaviours to improve their health has a fundamental role and must go hand in hand with the awareness of the importance of correct medication intake.

At the beginning of 2020, the global scenario has profoundly changed, and the world has been committed to face the COVID-19 outbreak, with significant implications not only from a health, but also from a political, economic and social point of view. The health emergency and the recent social distancing and quarantine measures have drastically changed our habits and forced us to live with the risk of a potentially dangerous pathogen, especially for the most fragile population groups. In this context, the personal experience of the patient suffering from COPD is part of the context, who has to face at the same time the fear of contracting a serious respiratory disease and the difficulty of maintaining relationships in the presence of loved ones, with negative repercussions on the mood.

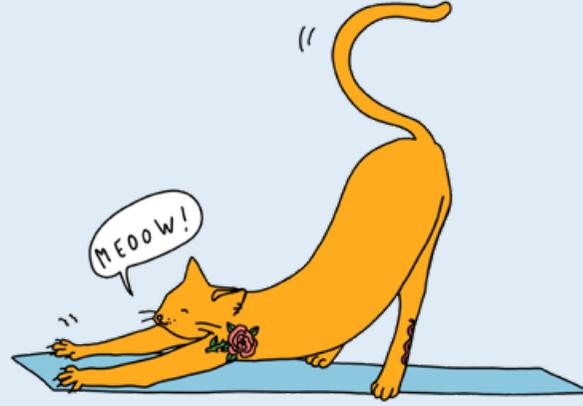
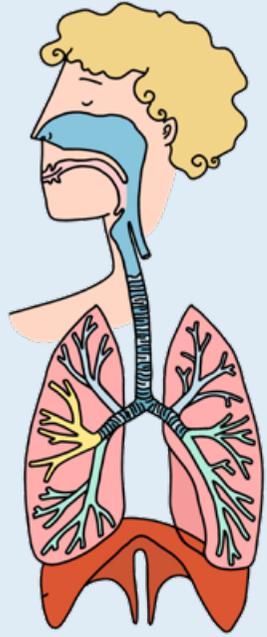
The handbook "**COPD: instructions for use**" has been purposely created for people living with COPD and their families to provide a set of good practices for the correct COPD management. It gives useful information to learn more on COVID-19 condition and how to cope more safely with this new "normality", protecting one's own health as

well as that of loved ones.

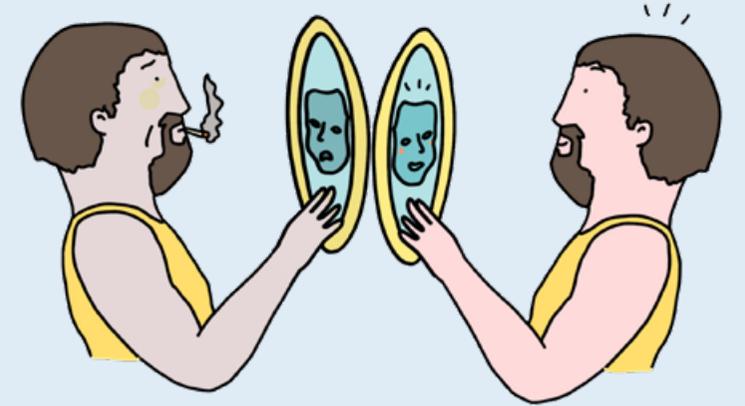
The handbook also deals with those often neglected psychological aspects that accompany the daily living with a chronic respiratory disease, embedding the problem in the broader context of the current pandemic, in which the fragile and most at risk subjects are forced to a more severe social distancing, far from their affections.

The project was carried out thanks to the collaboration between Fondazione ISTUD and Chiesi Italia – the Italian branch of Chiesi Group, a company engaged in scientific research, mainly in the respiratory area – and belongs to a path started with the FARO narrative medicine project, which focused on COPD patients to enhance their needs and listen to their stories to improve COPD knowledge from a physical, psychological and social point of view.

This initiative has also received the patronage of two important Patient Associations, FederASMA and Allergie Onlus and Associazione Italiana Pazienti BPCO Onlus, which have always been committed to supporting people suffering from chronic obstructive respiratory conditions such as asthma and COPD. We hope that this book, easy to consult and enriched with images inspired by everyday life seen with a witty and ironic eye, can help and support people living with COPD, so that they can face this situation with the useful tools at their disposal and – why not – even with an extra smile.



COPD



About COPD

COPD is an abbreviation for a disease called Chronic Obstructive Pulmonary Disease.

This disease affects the respiratory system and occurs in adulthood (very often after the age of 40). COPD mainly affects the bronchi and lungs, causing a significant reduction in airflow.

This disease leads to modifications of the bronchi (usually called "chronic bronchitis"), bronchioles (small airway disease), and pulmonary parenchyma (pulmonary emphysema).

COPD can affect the entire body and is usually present simultaneously with other diseases (comorbidity). The diagnosis of COPD is based on the presence of respiratory symptoms, and/or a history of exposure to risk factors, and on the results of a spirometry test, which measures the flow of air entering the lungs. We will discuss the diagnosis and risk factors in greater detail in the following paragraphs.

The four main symptoms of COPD that serve as warning signals of this disease are as follows:

PERSISTENT COUGH WITH PHLEGM PRODUCTION
DIFFICULTY BREATHING
WHEEZING
SENSE OF CONTRITION IN THE CHEST

Other symptoms include:

- pain while swallowing
- excessive production of mucus, with white or yellowish phlegm, and small blood loss
- shortness of breath, particularly during physical activity
- fever
- chills
- joint pain
- pharyngitis
- hoarseness
- weakness
- sleep disorders

TWO KEY CHARACTERISTICS OF THIS DISEASE ARE CHRONICITY AND PROGRESSION

CHRONICITY: means that it cannot be cured, but it can be managed by following the therapy prescribed by the doctor and adopting a healthy lifestyle.

PROGRESSION: means that as time goes by, COPD tends to become more serious but not in a linear fashion. For example, it can remain stable for long periods of time or there may be exacerbations, i.e., acute changes that differ from the normal daily variability, of the usual symptoms. This worsening of symptoms requires changes in therapy, so it is very important to monitor the course of COPD via periodic visits to a specialist.

RISK FACTORS

COPD is mainly caused by the **inhalation of harmful substances** that cause chronic inflammation of the bronchi and lungs.

The main risk factor is smoking, both active and passive, of **cigarettes, pipes, cigars,** and other types of tobacco.

Notably, not all smokers develop COPD, and not all COPD sufferers are or have been smokers. There are **other potential risk factors** including:

- air pollution
- domestic pollution
- long-term exposure to certain gases in the workplace
- heredity
- previous respiratory diseases such as asthma

DIAGNOSIS

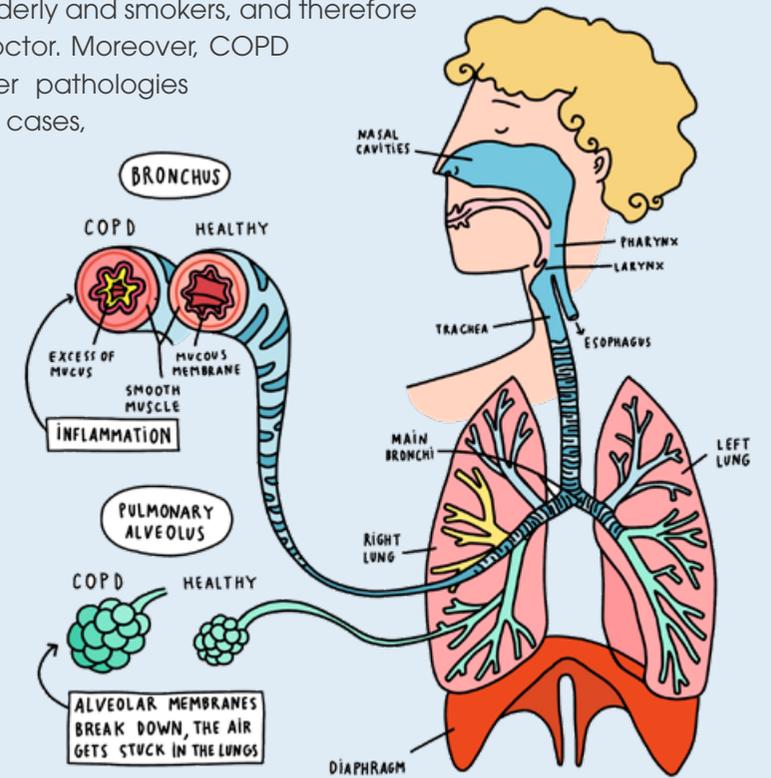
Diagnosis is based on the presence of symptoms and exposure (present or past) to risk factors; spirometry, which is also known as the respiratory function test, is the key test performed to understand the degree of airflow obstruction.

Spirometry is a simple instrumental examination used to ascertain (diagnose) and to follow (monitor) respiratory tract diseases over time and to evaluate the effectiveness of treatment. It measures the amount (volume) of air entering (inhalation) and leaving (exhalation) the lungs and the strength of the respiratory flow. It is performed using an instrument called a spirometer, which is a small computerized machine connected by a cable to a mouthpiece inserted between the teeth of the person under examination.

Other clinical examinations are also performed to assess the severity of COPD, and the patient's symptoms and lifestyle are evaluated.

COPD is very often underdiagnosed. In other words, it is non-diagnosed because many people underestimate the first symptoms, such as cough, which are considered "normal" by the elderly and smokers, and therefore do not report them to their doctor. Moreover, COPD can be combined with other pathologies already present, and in such cases, its symptoms are not distinct from the general malaise the person feels.

Some very useful advice for all smokers over 40 years of age is to perform a spirometry to determine whether they are at risk of developing COPD regardless of whether they have symptoms or have only mild symptoms.



TREATING COPD

Once the diagnosis has been made and the presence and type of concomitant pathologies have been assessed, **personalized therapy** that takes into account the person's lifestyle is provided **to alleviate the symptoms of COPD and avoid exacerbations**. The therapy includes both prescription medications and lifestyle modification recommendations; first, if the person smokes or is subject to other risk factors, an attempt is made to eliminate those risk factors.

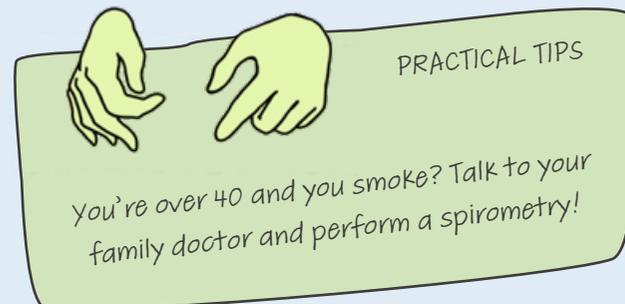
SMOKING CESSATION

The first step toward improving symptoms in smokers diagnosed with COPD is to **stop smoking**. Quitting smoking is often difficult, particularly because many people start smoking when they are young, and after many years, it has become an indispensable part of their daily routine. Smoking is also seen as an outlet, as a way to feel better, and as a way for young people to be part of the group, to socialize, and to feel more adult.

Quitting smoking begins with **willpower**.

One can also **ask for help from a family doctor or anti-smoking centers**, choose to be supported by a counselor or a psychologist, and use substitute treatments (patches, chewing gum, other nicotine products, drugs).

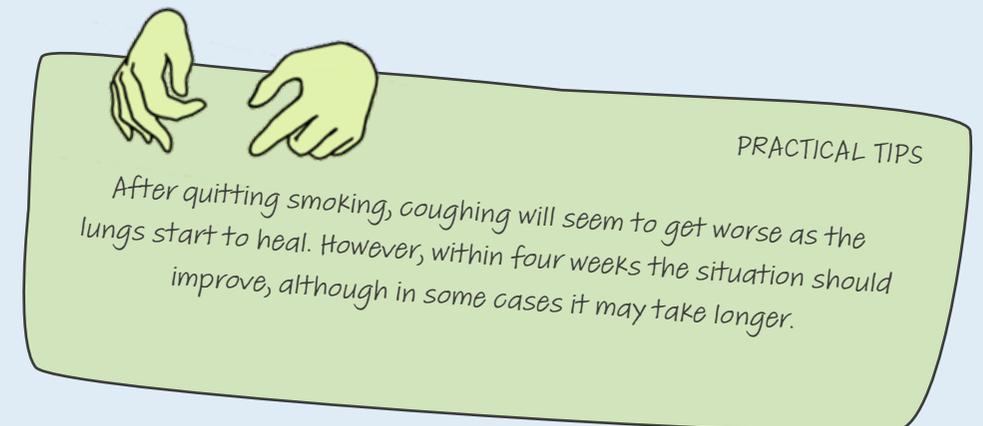
There are also books that can provide advice or virtuous stories. The electronic cigarette is often presented as a recommended tool to quit smoking, but its benefits have not yet been proven.



To take the first step toward smoking cessation, it is important to understand the **short- and long-term benefits** that this radical change can have on an individual, their health, and others.

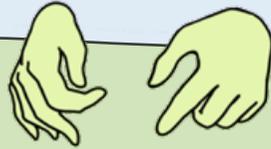
The immediate and long-term beneficial effects of smoking cessation in smokers are described below:

- After 24 hours the lungs begin to cleanse themselves of the mucus and deposits left by smoking
- After two days the body has freed itself from nicotine and starts to recover its sense of taste and smell
- After three days breathing improves and the subject becomes more energetic
- After 2 to 12 weeks blood circulation improves
- After 3 to 9 months the improvement in breathing becomes more marked; coughing and hissing are reduced
- After one year the cardiovascular risk is half that of those who continue to smoke



In addition to one's own health, there are **other reasons** that can help a person **decide to quit smoking**:

- protecting the health of people who are close to you (partners, children, grandchildren, friends)
- economic savings
- feeling psychologically free
- improving appearance
- being an example for others and in particular for young people



PRACTICAL TIPS

A useful tip for quitting smoking is to change one's routine. Start by defining what need the habit of smoking responds to and finding an activity that can replace it and that can make one feel equally gratified, obviously avoiding other harmful habits.

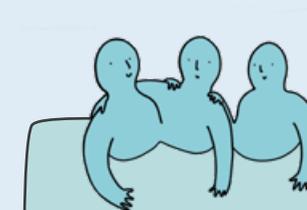


IN THE TIME OF COVID-19

Recent studies conducted in China on COVID-19 have reported a higher risk of disease among smokers. One-third more smokers who tested positive for COVID-19 had a more severe situation than non-smokers when hospitalized; moreover, smokers had more than double the risk of requiring intensive care and ventilation.

Q&A on Tobacco and COVID-19 written by the World Health Organization (WHO)

OPEN LINK



TIPS FOR THE FAMILY

If there are other smokers in the family, they must also quit smoking because second-hand smoke is harmful and can put the health of the person with COPD at risk. Furthermore, this behavior will not help the patient quit smoking. It can be very helpful to engage in a smoking cessation pathway together to support one another.

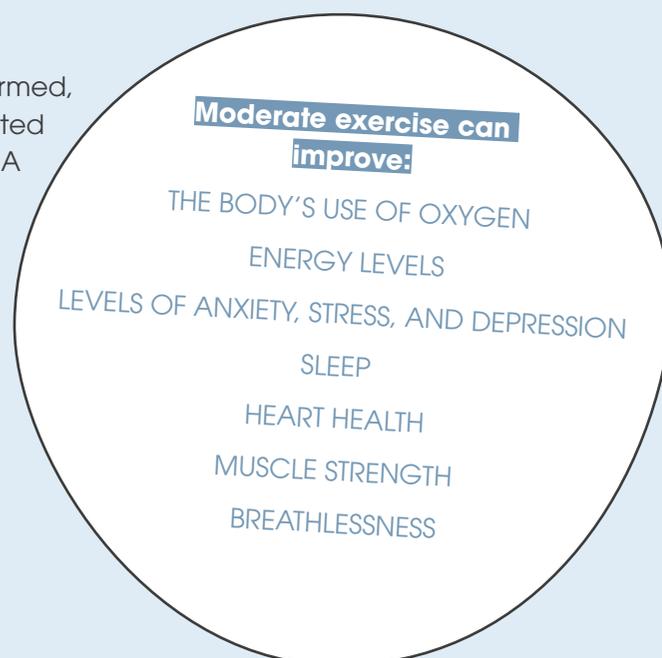
LIFESTYLE

To prevent COPD from progressing, adopting a **healthy lifestyle** is very important, particularly by performing **physical activity** and following a **healthy diet**.

PHYSICAL ACTIVITY AND BREATHING

Regular physical activity should be performed, in accordance with a doctor and calibrated to individual levels of physical fitness. A feeling of “breathlessness” may occur, but it will pass once the moment of effort is over.

It is important to create a sequence of exercises and start gradually to get the body used to exercise.



Several types of activities include:

Stretching muscles (stretching) is useful for relaxing and improving flexibility. It is also a good way to warm up before training and stretch the muscles after training. Practice stretching for 10-30 seconds while inhaling and exhaling slowly. Repeat this a few times.

Aerobic exercise is good for the heart and lungs and allows you to use oxygen more efficiently. Walking, cycling, and swimming are good examples of aerobic exercise.

Endurance training makes the muscles stronger, including those that help to breathe. This type of training usually involves weights or endurance bands, but it is not necessary to go to the gym to perform endurance training. A doctor or respiratory therapist can provide some exercises to perform at home.

Respiratory rehabilitation is a therapeutic process that uses different types of physical exercises with the aim of improving symptoms, quality of life, and physical and emotional participation in daily activities. It can be performed in the hospital and at home.

[Read an interview of a patient who performed pulmonary rehabilitation](#)

[See a movie on pulmonary rehabilitation](#)



Some tips for breathing during exercise:

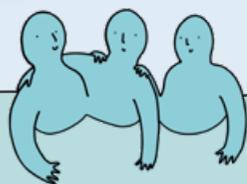
- Remember to breathe in before starting the exercise and breathe out during the most difficult part of the exercise.
- Take slow breaths and maintain a rhythm.
- Snap the lips together and exhale

When to avoid exercise:

- Fever or infection
- Nausea
- Chest pain
- Lack of breath

Is oxygen necessary during training?

If you usually use supplemental oxygen, you should train with it. The doctor can adjust the flow rate for physical activity, which will differ from the flow rate during rest.



TIPS FOR THE FAMILY

Exercising together is a great way to support the person with COPD. Weights and other simple tools can be used at home and you can exercise together while watching TV or listening to music. Even going out for a walk or bike ride together can encourage the person to move and make the activities more enjoyable.



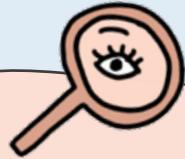
IN THE TIME OF COVID-19

During this emergency, outdoor activities are not recommended or are even forbidden, so it is advisable to create a "home gym" by finding tools that can be used for physical exercise. It may be useful to obtain a treadmill or exercise bike (which will be useful on days of bad weather or excessive heat) to perform aerobic exercises. For endurance training, small bottles of water can be used as weights (half a liter of water corresponds to half a kilo). It is always advisable to ask a doctor about the intensity and duration of the training and to progress gradually.

NUTRITION

In addition to physical activity, **paying attention to nutrition** is essential because food is the fuel the body needs to **perform all activities**, including breathing. The body uses food to produce energy as part of a process called metabolism. During metabolism, food and oxygen are transformed into energy and waste products.

Food provides the body with nutrients (carbohydrates, fats, and proteins) that affect the amount of energy available.



MORE INFO

It is important to keep body weight under control because being overweight or underweight can hinder the management of COPD. Being overweight makes breathing even more difficult because the body needs more oxygen and the heart and lungs must work harder. However, being underweight can also lead to problems, such as feeling weak and tired and increasing the chance of getting an infection.

AM I NORMAL WEIGHT, UNDERWEIGHT, OR OVERWEIGHT? A first indicator is the body mass index (BMI).

CALCULATE BMI

A person with COPD consumes more energy during breathing than the average person because breathing is more difficult for them. The muscles used for breathing may require **10 times more calories** than a person without COPD. A good diet can therefore provide enough energy to perform all activities, prevent weakening of the diaphragm and other lung muscles, and fight infection.

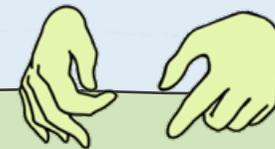
A general rule for nutrition that applies to all people is to **eat large amounts of fruits and vegetables** and to eliminate processed, fried, and unhealthy foods from the diet.

When feeling fit, doctors recommend three to four meals a day, but when not feeling fit and healthy, it is best to eat five to six smaller portions of lighter foods throughout the day.



THE IMPORTANCE OF WATER

Drinking plenty of water is important not only to **keep the body hydrated** but also to help keep the **mucus fluid** and therefore easier to excrete. A good amount of water is equal to 10 glasses (approximately 2 liters of water) per day that should be absorbed throughout the day.



PRACTICAL TIPS

Some strategies to help you ingest the correct amount of fluids are:

Every morning, fill a glass bottle with all the water you need to drink during the day. This will allow you to keep track of how much water is being consumed.

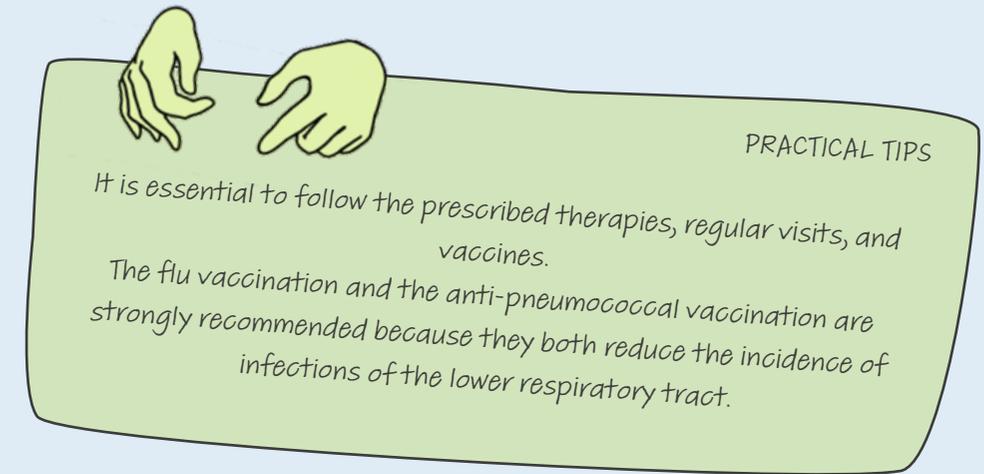
Schedule when to drink. For example, a scheme can be: two glasses upon waking up, one before breakfast, one after breakfast, one mid-morning, one before lunch, one after lunch, one mid-afternoon, one before dinner, and one after dinner.

Herbal teas and other non-alcoholic, sugar-, and caffeine-free liquids count towards the fluid target, so they can be valid substitutes for simple water.

MEDICAL THERAPY

A specialist can prescribe drug therapy with the aim of **reducing COPD symptoms, moderating the frequency and severity of exacerbations, and improving health and tolerance to exertion.**

The two types of drugs usually prescribed are **bronchodilators**, i.e., drugs that dilate the airways to allow better breathing; and **corticosteroids**, i.e., drugs that reduce pulmonary and respiratory inflammation.



Respiratory drugs are marketed in a few different forms, as described below.

Inhalation therapy the administration of a drug by inhalation is performed using special nebulizers that vaporize the active ingredient or reduce it into very small particles that are then dispersed in the gas or air pumped by a compressor. Since these drugs are taken directly into the airways, all side effects of systemic administration are avoided. Inhalation therapy devices make it easier to take the drug effectively, but they must be used properly, so it is very important to learn how best to use them. Different modes of drug inhalation are available, including nebulizers, pre-dosed sprays (MDI), and dry powder inhalers.

Oral therapy involves taking tablets, capsules, syrups, or suspensions.

Injection solutions require a high level of hygiene at the injection site and must be administered by a professional.



The importance of therapeutic adherence and proper lifestyle to manage COPD

Edited by Salvatore D'Antonio
President of the Italian Association of COPD Patients

To guarantee the effectiveness of treatment, all people must follow the instructions of doctors, both in terms of the tests to be performed, the lifestyle to be followed and, above all, the indications relating to the prescribed therapy. This simple recommendation applies particularly to the chronically ill, who sometimes underestimate the symptoms and signals of their body.

COPD is particularly affected by this problem, so researchers have performed studies to understand the reasons for these attitudes and to make appropriate corrections in the management of the disease by doctors and patients.

A recent survey conducted in several European countries highlighted a lack of attention, particularly in the early stages of the disease; this lack of awareness, together with incorrect communication with physicians, causes poor management of COPD. This survey highlighted the difficulty of recognizing oneself as ill, a lack of communication with the physician regarding the real state of health, problems in understanding the disease due to the use of medical terms, and the lack of consideration by general practitioners and specialists for symptoms such as weakness, fatigue, and breathlessness as conditions that cause disease progression.

The survey indicated that while general practitioners and specialists more frequently attach greater importance to breathlessness, coughing, and expectoration, patients instead place more relevance on a sense of weakness, fatigue, the impact of the disease on the performance of normal daily activities, work, and leisure time, and ultimately on the quality of life. Moreover, the more the symptoms of COPD worsen, the less doctors are able to perceive the real discomfort for the patient, resulting in a consequent worsening of the patient's state of health.

Because of the difficulties regarding communication and understanding between doctors and patients, we witness poor adherence to the prescribed therapy, so much so that it is often abandoned after a few months. This causes the disease to worsen and increases the need for hospitalization, leading both to the malaise of the person who must leave home and stay away from loved ones and to increased health system costs, which are estimated every year at almost 10 billion euros of a total respiratory disease expenditure of 14 billion euros. This represents approximately one point of the GDP.

The recent severe COVID-19 pandemic has further exacerbated the problem because false information has circulated about the reduced immune defense capacity in subjects on steroid therapy. This alarm, which may be scientifically proven in treatments with high doses of these drugs, is actually unjustified in the case of aerosol anti-inflammatory therapy in asthma or COPD, given the low dosages of steroid used. However, the therapeutic regimens for the treatment of COVID-19 involve the use of steroids, particularly methylprednisolone. It should also be reiterated that the contagion is not favored by respiratory diseases such as COPD or asthma; conversely, a low incidence of COVID-19 infection has been observed in asthmatic patients.

We must stress the importance of greater attention to communication, a more precise explanation of the reason for prescriptions and, above all, of the operation of the various devices that deliver medicines by inhalation, which unfortunately all too often are underestimated and not appreciated.

It is not uncommon for patients forget to include bronchodilators, steroids, or antimuscarinic dispensers, or to just remember them generically as "pumps", when listing the medications they are taking. It is important to explain to patients that the particularity of therapies for respiratory pathologies allows the drug to reach the diseased organ, obtaining the therapeutic result with considerably reduced doses of drug compared to those required for drugs administered by mouth. Finally, a specific and careful explanation of the functioning of the dispensing devices, which are designed to be increasingly simple to use and are often equipped with feedback systems to ensure the correct intake of the dose, is necessary. Sophisticated scientific research has developed excellent drugs that can help achieve the control of chronic diseases. Demonstrating the functioning



of the device every time and verifying its correct learning by using facsimiles, which are generally available to the prescribers, must become a habit to lead to greater control of the respiratory disease.

In fact, it has been determined that only half of the subjects suffering from chronic obstructive pathology utilize regular therapy for one year. There is even less adherence to therapy among children, adolescents, and the elderly: 70% of those under 14 after no longer take drugs after one year, 60% of adolescents “snub” the treatment, and over 60% of the elderly follow the therapy for no longer than two months.

An interesting study by Braido in 2013, which involved 2,000 people, evaluated the reasons for the poor results in the management of lung diseases. The authors concluded that in addition to the poor perception and awareness of the obstructive pathology, the main cause of poor management was the disorderly use of inhalers, which were used by only 60% of patients.

A subsequent examination of this criticality ascertained that it was limited to people who could not rely on the knowledge of the device; conversely, when a direct or indirect experience was reported, there was an attitude of openness. Moreover, the interviews indicated that the greatest factors to achieve good adherence to the therapy were as follows:

- The ease of use of the device
- Device safety and reliability
- The ergonomics and portability of the device
- Selectivity of action
- Confidence with the instrument
- Using the same dose of medication
- Customization of the device according to the patient’s characteristics

The cost of non-adherence has a significant negative impact on the burden of chronic diseases worldwide. In the general population of the USA, where “half of the patients do not follow the therapy”, the resulting costs of the disease exceed \$100 billion per year in avoidable hospitalizations. According to Cutler & Everett, NEJM 2010, mortality rates and hospitalizations are reduced in patients with greater adherence to therapy.

The Italian Association of COPD Patients distributed questionnaires through its quarterly magazine “Focus” and its online website to perform a survey on the issues related to the proper management of inhalation therapy in obstructive respiratory disease. They interviewed approximately 200 patients (64% in the north, 18% in the center, and 15% in the south). Of these patients, more than 60% had a severe-moderate pathology and were treated with dry powders and sprays in equal measure, which are generally prescribed by specialists. Interestingly, approximately 60% had used more than one drug, and for about three years, half of the respondents had not changed their prescriptive program, despite the possibility of using drug combinations administered via a single device. The survey also showed that a correct exposure of the pharmacological action and correct use of the devices determined good adherence to the therapeutic prescriptions with a consequent improvement of conditions and stabilization of the pathological picture.



IN THE TIME OF COVID-19

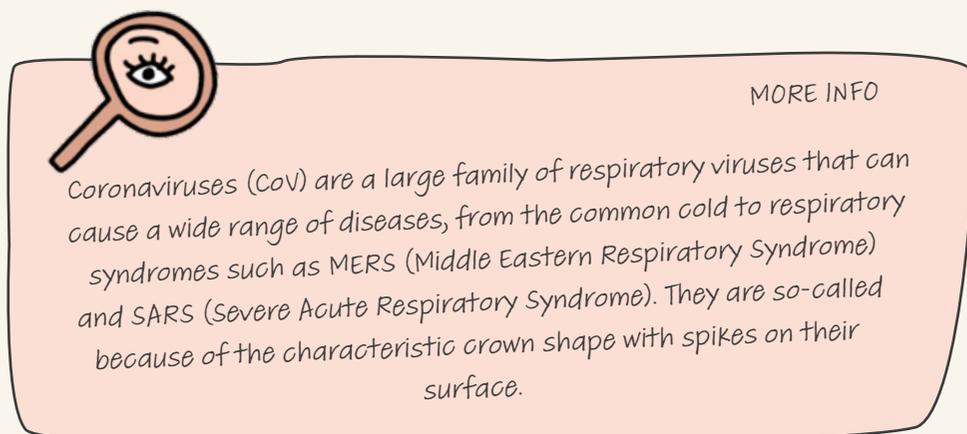


COVID-19 AND COPD

COVID-19 is the abbreviation of COronaVirus Disease, and 19 refers to 2019, the year in which it was identified.

The COVID-19 pandemic is the **worldwide epidemic** of the so-called “new coronavirus disease” caused by the SARS-CoV-2 virus, which began in Wuhan, China.

The disease was first identified by health authorities in the city of Wuhan, which is the capital of Hubei Province in China, around mid-December 2019. It was discovered in patients who had developed **pneumonia** without a clear cause and was immediately hypothesized to be a new coronavirus from an animal source (a zoonosis disease).



COVID-19 mainly **affects the lungs and respiratory airways**. The most common symptoms are:

- fever
- tiredness
- dry cough

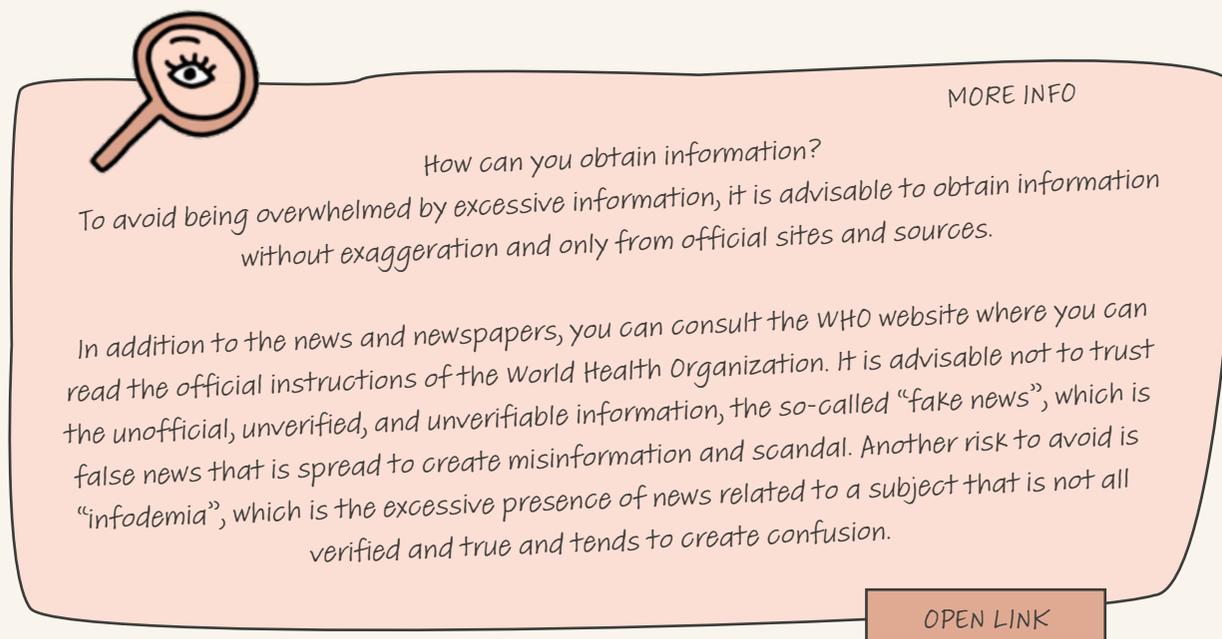
Some patients may have soreness and muscle pain, nasal congestion, runny nose, sore throat, or diarrhea. These symptoms are generally mild and start gradually.

Recently, loss/diminution of smell (anosmia/hyposmia) and in some cases loss of taste (ageusia) have also been reported as symptoms related to COVID-19 infection.

Transmission of human coronaviruses occurs from one infected person to another through:

- saliva, coughing, and sneezing
- direct personal contacts
- hands, e.g., touching with contaminated (not yet washed) mouth, nose, or eyes
- fecal contamination (rarely)

It is therefore clear **that transmission from a sick person to a healthy person occurs very easily**. Some data suggest that transmission may occur from asymptomatic people who have the virus in their bodies but who do not develop symptoms manifesting the disease. Since this is a new virus, scientists and doctors all over the world are studying it to reduce the risk of infection and identify additional and more appropriate therapies to treat people who become ill. Thus, the information we have is constantly becoming more up-to-date and the provisions that are made to protect health are constantly being updated.



The most effective behaviors to reduce the risk of being infected are:

- **wash your hands often** with soap and water ensure thorough cleaning for 40–60 seconds **following the WHO instructions given here:**
- **avoid close contact** with people suffering from acute respiratory infections
- **avoid hugs and handshakes**
- **maintain**, in social contacts, **an interpersonal distance of at least one meter**
- **practice respiratory hygiene** (sneeze and/or cough into a handkerchief and avoid hand contact with respiratory secretions)
- **avoid the promiscuous use of bottles and glasses**, particularly during sports activities
- **do not touch your eyes, nose, and mouth** with your hands
- **cover your mouth and nose if you sneeze or cough**
- **do not take antiviral drugs and antibiotics** unless prescribed by your doctor
- clean surfaces with **chlorine or alcohol-based disinfectants**
- **respiratory tract protection is strongly recommended** during all social contacts as an additional measure to other individual health and hygiene protection measures



WHEN AND HOW TO USE NON-MEDICAL FABRIC MASKS:

For people in the general public where **physical distancing** of at least 1 meter is not possible (such as on public transport, in shops, or in other confined or crowded environments), the WHO and governments are encouraging the use of non-medical fabric masks, which can act as a barrier to prevent the spread of the virus from the wearer to others.

Masks should be used as part of a comprehensive strategy of measures to suppress transmission and save lives; the use of a mask alone is not sufficient to provide an adequate level of protection against COVID-19. You should also maintain a minimum physical distance of at least 1 meter from others, frequently clean your hands, and avoid touching your face and mask.

SOME SUGGESTIONS FOR “LIVING WITH” COVID-19

During the period of a high number of COVID-19 cases, **behaviors should be adopted** to protect one’s health, e.g., walking outside and in uncrowded places and reducing the number of outings for commissions and purchases as much as possible.

The following useful advice should be noted:

Use home deliveries as much as possible. In addition to large chains, many shops also provide this type of service. When you receive goods from couriers or home deliveries, they should be left outside the door to reduce contact with the person making the delivery as much as possible.

Many services such as banking and postal services can be conducted online; if you are not familiar with these services, you can ask a trusted person for support.

Before going to shops or offices, plan ahead by booking and inquiring at the facilities where you want to go. If you have a lot of shopping, write a shopping list to avoid forgetting items.



When buying medicines, call the pharmacy and ask if they can make home deliveries or make sure they have the products you want before you go in person.

Call ahead before making an appointment with your family doctor or specialist.

If you have an appointment scheduled, it is best to **talk to your doctor to make sure you continue to receive the best care** and decide whether your appointment could be postponed.

Prioritize meeting with family and friends in open places and only allow people with masks to enter your home. Once they have left, do not touch anything, open the windows, put on gloves, and disinfect any surfaces touched. Then wash your hands.

If you take care of someone, **plan how to handle the situation if the person is not feeling well.**





Operational advice of the Italian Society of Pulmonology to COPD patients

Edited by Prof. Stefano Centanni and Dr. Matteo Davì

Introduction

The SARS-CoV-2 pandemic has undoubtedly caused not only a health emergency but also major and important indirect repercussions on the co-management of chronic diseases, first and foremost Chronic Obstructive Pulmonary Disease (COPD). The management of these patients today becomes a topical issue that must be addressed.

ADVICE FOR PATIENTS WITH COPD

Spirometry

It becomes of fundamental importance to understand that this respiratory functional examination, which is necessary to establish the ventilatory capacity, is a completely risk-free examination if performed in compliance with safety standards (indicated by the documents produced by the scientific associations).

Contact with the doctor

Due to the current health emergency, there are new types of doctor-patient relationships. In particular, the use of telephone/remote web consultations should be promoted for the evaluation of disease progression, related complications, and the need to redefine the conditions and habits of the patient's lifestyle. Therefore, we attempted to strongly recommend participation in programs aimed at eliminating "bad habits" and exposure to risk factors. We tried to re-evaluate the drug therapy in place and to use questionnaires (such as the mMRC or CAT (COPD Assessment Test)) to evaluate the control, frequency, severity, and possible causes of exacerbations.

For example, in Italy, the ICS/LABA/LAMA associations have been requested to extend the duration of therapy plans (PT) for at least 12 months to help patients avoid going to

the hospital for the renewal of the PT itself (to date they are extended until October).

Physical activity

There is a risk that COPD patients, due to the health emergency, have reduced their physical activity, which is already often strongly limited. This further weakens their musculoskeletal systems and is a real risk that worsens physical endurance and increases breathing difficulties. This creates a sort of vicious cycle that can lead to a non-reversible worsening of the state of health. On the internet is possible to find physical activity programs (e.g., explanatory videos with examples of specific exercises).

Lifestyle

The COVID-19 health emergency has had a significant impact on all aspects of people's lives. COPD patients are advised on practices aimed at improving emotional well-being, promoting proper sleep management, inviting the patient to lie down and get up at regular times and avoiding bedtime when not sleeping, and trying to spend at least 30 minutes a day outdoors and in the sun (always in line with the well-known behavioral rules to be adopted during the COVID emergency).

Return to daily life

COPD patients should not be more afraid of COVID-19 than other individuals, but they should be aware that their clinical lung condition is already more or less compromised primarily due to the damage caused by cigarette smoke over the years. Of course, a severe or very severe stage of COPD significantly limits the ability to support respiratory function during viral infection, while a mild or moderate stage is associated with a better response to appropriate ventilatory therapy. A gradual return to daily life is possible for everyone in compliance with the hygiene measures indicated by the Ministry of Health and by adopting the correct PPE, also bearing in mind that, based on the scientific knowledge available to date, COPD does not appear to be a particular risk factor for COVID-19 interstitial pneumonia. It is of course well understood that COPD is the third leading cause of death in the world today and that quitting smoking is always the best option.



THE WAY OF WELLBEING





How to deal with social isolation

Edited by Delia Duccoli

Human beings have lived for millions of years in tribes. We now live in big cities or small villages, and we look for the closeness of others in family ties, with friends, in squares, parties, fairs, concerts, rituals, and travels.

Over a few months, however, the coronavirus pandemic has forced us to change our habits, behaviors, and lifestyles, changing the parameters of our relationship and work life, and imposing situations of social isolation.

Some scholars of social psychology claim that the greatest social experiment in the history of humanity is underway. A social experiment is usually artificially provoked by placing people, without warning and without preparation, in unusual situations, and then observing their reactions and behaviors. These experiments generally involve a few dozen people. Today, however, this social experiment involves millions of people. It is estimated that more than two billion people in the world are forced into some form of lockdown; thus, a third of the world's population lives in a situation of social isolation. Among these, approximately one billion children are forced to remain locked in their homes and to maintain a distance from people, including other children or grandparents. This is completely unnatural for a social animal like man.

While trying to take measures to stem the health emergency, little is thought about the psychological impact this will have on people's minds and health.

However, research published in the prestigious scientific journal *The Lancet* shows that isolation can cause depression, anxiety, frustration, and many other consequences that can last for a long time, even after isolation and social distancing have ended.

Social isolation and COPD patients

We know that social isolation is not a new condition for COPD sufferers who are often forced to remain in the house due to breathing difficulties, to give up traveling, to stay close to others, to slow down when they walk, and to stay behind on walks.

During this unprecedented time of pandemic, isolation and social distancing will last for some time. It affects people of all ages and from all countries of the world. Perhaps from this experience today we can live through this isolation with a different perspective, not only of those who are forced to isolate themselves because of an illness and feel different and impaired compared to others, but from the perspective of those who have already experienced a different type of social isolation and can be of help, through their testimony, to others.

COPD patients can testify to a behavioral flexibility and adaptability that is difficult to imagine when not being forced by an external event, such as COPD or coronavirus, to experience new behaviors.

In this sense, the coronavirus can be considered an accelerator of behavioral change. It is up to us to experience this change as an exclusive form of the deprivation of something that we are entitled to as a right (freedom, movement, and contact with others) or to experience it as a stimulus from which to create new behaviors and achieve a better and more complete humanity.

Resources to help live with social isolation

No one can yet predict what will happen and particularly when this colossal isolation experiment will end. We do not know what will happen, but to mitigate the psychological impact, we can appeal to creative forces and draw inspiration from some narratives that enrich our experience and illuminate social isolation and lack of movement in a different light, composed of resources and possibilities to draw on.

Stories allow us to travel and take us to far places. We consider four stories that can guide us.



Learn from the intelligence of plants

Man places himself at the top of the scale of the living and hardly considers himself an animal who has many parts of the brain in common with reptiles or mammals. He certainly feels very distinct from plants. Plants are living organisms that, unlike animals, do not move from the place where they were born or where they were planted. Nevertheless, they move, perceive, and have their own form of intelligent life, if intelligence is defined as the ability to solve problems and develop adaptive strategies to survive.

Stefano Mancuso, a botanist from the International Laboratory of Plant Neurobiology in Florence, studies the behavior of plants and has created wonderful videos on plant intelligence. He explains why quarantine is making us live as if we were plants that, while standing still, still interact with the entire ecosystem.

The main difference between an animal and a plant, in fact, is movement: animals are “animated” and go in search of food to obtain energy; plants are still and look in the ground where they have the resources to grow. “The quarantine has transformed us into plants,” comments Mancuso, knowing that we are moving on the edge of paradox.

Like plants, he adds, we are now more attentive to the space we live in, our homes are more cared for, we have discovered corners we did not know were there, and we have rediscovered lost objects. Furthermore, we no longer waste food, or we waste much less than the 50% that statistics indicate.

As plants, we turn to capture the sun and the light, we sink our roots into the earth, and we communicate with one another through underground ways.



Like plants, we have multiplied the tools of communication: because we cannot move, we must be connected all the time, which is why we are always on social networks or video calls.

Mancuso, who obviously loves plants, does not hide the price we are paying for this transformation. “*We humans are social animals,*” he reiterates. “*We need others to feel good, we need to see them, to touch them, to listen to others to create new ideas. The creativity of our mind has a social origin*”.

However, we can learn a lot from the observation of and respect for plants.

What can we learn from plants?

- To stand still, to move to capture life energy, to go deep into the depths.
- To not run away from problems by going out and distracting ourselves.
- To improve our perception and sharpen our senses.
- To find new forms of communication and harmony with others.



Travel in your own room

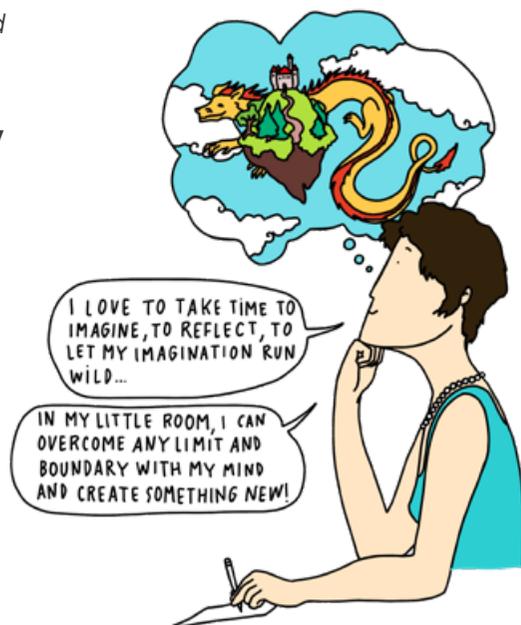
In Turin in 1790, a young Frenchman soldier in the Xavier De Maistre quarrels with an officer and is punished with 42 days of quarantine and isolation in his room. He does not know how to pass the time and decides to write a book, one chapter a day, for 42 chapters in total. The book goes on to be a great success and is called "A Journey Around My Room".

For Xavier, the world becomes his room. He discovers a series of objects abandoned to their fate and letters and paintings that did not tell him anything as long as they were immersed in everyday life but are now rediscovered. He also discovers himself, that he has a soul and a body, and he discovers small gestures, such as the occupation of removing dust from a photograph.

At the end of the period, he concludes by writing "they have forbidden me to go through a city, but they have left me the whole world," and he starts to go out again, bringing with him some nostalgia for that period spent in the company of himself. "I must leave you enchanted country of my fantasy, my room".

What can we learn from the book "A Journey Around My Room"?

- To rediscover the history of the objects in our house
- To rediscover films, photographs, videos, and books that have never been read or forgotten
- To appreciate the days of forced quiet and the gestures of everyday life
- The care in doing things and describing the details



From my window

"I never saw a moor,
I never saw the sea;
Yet know I how the heather looks,
And what a wave must be"

Emily Dickinson



Emily Dickinson was born on December 10, 1830, in Amherst, Massachusetts. At the age of 23, she retired to live on the upper floor of her father's house, where she was born and never left until her death at the age of 55. That room became the center of her universe and she never left, not even to go to her parents' funerals.

Emily Dickinson gives us, discovered after her death, 1789 poems, which are some of the most beautiful poems that have ever been written. Thus, without ever traveling, she leads an existence that is certainly not boring, but full of encounters, reflections, sensations, and discoveries: "I have never seen the sea, but I know what the wave looks like" she writes.

Emily used solitude to dig inside herself, to feel, to get in touch, and to listen to her own emotions, sensations, and nature.

What can we learn from Emily Dickinson?

- The enormous power of introspection, of turning the attention within us
- To not be afraid of loneliness but to use it as a companion
- To not be afraid of the limits, of what we lose and cannot have
- To use our imagination to travel



Building a new identity

On June 15, 1767, 12 years after a quarrel with his parents about not wanting to eat a plate of snails, Cosimo Piovasco di Rondò climbed a tree and decided that he would stay there all his life.

He lived a life far from monotonous and certainly not as a hermit since he would meet all the typical characters of his time, but he always kept a distance from the others and spoke from a tree. This is the story that Italo Calvino tells us in *"The Baron in the trees"*.

Living in a tree was not an escape but a rule that Cosimo imposed on himself to differentiate himself from the other members of his family and to build his own identity.

"To be with others truly, the only way was to be separated from others."

What can we learn from the Rampant Baron?

- To build our own identity distinct from the collective models
- To entertain oneself with one's thoughts
- To give us a rule of life that is not the result of impositions but of self-discipline
- To trust ourselves and our resources

Letting ourselves be inspired by stories that perhaps we have not dwelt on enough in the past because we are busy running and doing things can allow us, despite the tragedy of the experience we are living through together, to produce a refinement of the senses and reflective abilities that will help us grasp fundamental aspects of our life that in the daily normality pass unnoticed.

And, perhaps, the sacrifice of our full sociality and our freedom of movement will seem lighter.

ACTIVITIES TO INCREASE PERSONAL WELL-BEING

The coronavirus emergency has required a large part of the population **to stay at home to protect their own health and that of others**; the home has thus become the place where most time is spent. Visits by friends and relatives have been banned, and thus windows and technological devices (phones, mobile phones, PCs, and tablets) have become the only tools to communicate with the outside world.

In this situation, as is already known to those who have COPD, the risk of feeling lonely and bored is very high, so it is useful to find activities that can fill the days and at the same time make one feel good both physically and psychologically.

Each person can think about their hobbies, i.e., **activities that they like to spend time** on and cultivate, or they can think about something that they want to learn but never had the time or energy to do so. Now is the opportunity to dedicate time to yourself and your passions!

Below are some suggestions and links to sites that may be useful at such times.

Garden therapy/horticultural therapy

At home, whether on the balcony or in the garden, taking care of plants can be an activity with many advantages, as recognized by the American Horticultural Therapy Association. In fact, it improves one's self-esteem, fights depression, improves motor skills, increases the ability to solve problems, stimulates the ability to care for a living being, and gives the satisfaction of seeing branches grow, new leaves being born, flowers blooming, and tasting a fruit or vegetable grown with one's own hands.

[Find out more and to receive some advice about plants that can be grown in an apartment](#)

Drawing

Spending time drawing and coloring generates well-being and helps to relax and enjoy oneself. Choosing colors and concentrating on the drawing you are creating or coloring helps free your mind from thoughts and worries. Some figures that are particularly useful for generating well-being are **mandalas** (a word derived from Sanskrit meaning "circle", "center") or drawings with a circular structure in which all points converge toward the center; the regularity and symmetry of the image generate harmony and order within those who draw, color, or contemplate them.



Other activities that can help to relax include:

- reading
- decoupage (decorative art that uses paper cuttings to decorate objects)
- knitting and sewing
- the arrangement of small furniture and objects
- recovering old and ruined objects and giving them a new life.

ART AND CULTURE

Art can provide many cues for spending time in a relaxing and constructive way. You can choose to deepen your knowledge of the history of art and architecture, their protagonists, and their works. In addition to dedicated books, there are numerous online resources that allow you to travel while sitting comfortably on the sofa.

The [Google art&culture](#) website contains numerous multimedia contents of ancient and modern art and culture, including virtual tours of museums, works of art, concerts, activities, and insights.

Virtual tours are available on numerous museum websites, such as:

- [Uffizi in Florence](#)
- [Louvre in Paris](#)
- [British Museum of London](#)
- [Guggenheim Museum in New York](#)



RELAXATION TECHNIQUES

Meditation and prayer are extraordinary sources of strength and hope and help with the removal of fear and stress. We propose here an exercise that involves concentrating on your own body.

Body scan o scansione del corpo

Guided meditation with a body scan is a powerful tool to deepen body awareness. This type of meditation focuses attention on the physical sensations you feel in the present moment. The practice helps to improve awareness of the entire body by focusing attention on every part of it.

Meditation works on different aspects of mindfulness, such as attention, awareness, letting go, leaning on unpleasant sensations, appreciation, and venting. By consciously choosing to focus the mind on a specific area of the body, you train the ability to pay attention. Bringing attention to our body balances the tendency to "live in our head". In this way, the body perceives rather than thinks, allowing bodily sensations to be perceived more strongly, and allowing them to fall into a more complete sensory palette.

Living through the body allows us to tune into a way of perceiving that is more in touch with the world around us, rather than living through the mind, which causes us to always be distracted by a thousand complex thoughts and concepts.





Five key points that emerged from the testimonies of COPD patients during the COVID-19 period

Edited by Filomena Bugliaro - Federasma and Allergie network activities and projects coordinator

Insulation and protection

For people with COPD, and for many others with a serious chronic illness, isolation measures are primarily experienced as a positive protective measure for their health. During the period that imposed more restrictive measures, many witnesses described this isolation as **an opportunity to communicate the limitations that COPD imposes on people's lives**, particularly for those living with a condition more serious than the disease.

"... complain that with the mask you can't breathe well; they experience what it means when I say that I feel hungry for air."

"they don't understand you, they don't understand what COPD is, they have no idea what air hunger is, it's one thing to explain and another to live it."

"...COVID has made known this pathology that few people know..."

The dimension of loneliness and the habit of remaining with oneself, in many cases, has activated a resilience that has allowed us to exist in this emergency with positivity and determination. Sometimes, however, this situation has generated fear and apprehension in people, due above all to trying to understand how to avoid possible exposure to contagion.

"Every time you cough, you're afraid."

When contact with the outside world could not be avoided, adapting to the new rules has led to some difficulties, first in finding, and then in learning how to use personal protective equipment (masks, gloves). Even **if masks impose additional breathing fatigue**, people with COPD adapted to these rules, which provided safety for themselves and for others.

"I always limit my expenses to shopping only. I prefer to get off early in the morning and make a few very quick stops to get rid of the mask that makes me breathe even worse."

Respiratory health protection includes not just masks and gloves:

- Learning how to correctly wash hands, which seems trivial but requires a specific technique
- Getting an annual flu vaccination, according to doctor's recommendations
- Learning and regularly performing physical exercises useful for respiratory health, which can also be performed at home
- Learning simple exercises that can be performed at home and including them in the daily routine has been very useful during this period and will continue to be useful.

[Video: Testimonials from people with COPD](#)

These are all elements to which we have paid attention during the "COVID-19" period and which we should continue to utilize, not only during this period but also in the future.

Finding information

For people with COPD, receiving secure information is a key aspect of increasing knowledge and awareness and achieving a better ability to manage health. In the very early lockdown phase, the primary need was to receive clear and unambiguous information while there were conflicting opinions about the virus, safety devices, increased exposure to the virus, and more serious consequences.

"... I still do not understand what I have to do: mask yes, mask no... And above all, which



are the safest? Everyone says everything and the opposite of everything.”

“...I’m disoriented. I hear that we must avoid contact to avoid the virus but nobody can tell me if it is true that there are no problems for those who have a respiratory disease. Who should we believe?”

Finding authoritative references was the first step in understanding and organizing one’s lifestyle. Even during this emergency, we were faced with the spread of unfounded news (fake news).

Learning how to distinguish and disseminate safe sources of information was the first commitment of our federation:

- to disseminate validated news,
- to disclose the routes to be observed in case of doubt
- to indicate the institutional information references activated at both national and regional levels and freephone and emergency/utility numbers.

Using Communication Channels

Social communication tools are among the most widespread channels for identifying and sharing information and sharing. People with COPD have learned to use these tools even in “normal” times, and during this period of isolation, the role of social channels has become fundamental, representing even more of a connection with the outside world. The greatest benefit of social communication tools is their ability to access and share information quickly, dialogue with other patients, and overcome isolation.

Websites, Facebook, and dedicated telephone numbers are many of the tools that patient associations have activated to respond to this situation, which has required adaptation, promptness of intervention, and reception.

The Internet and social communication tools have demonstrated their values, but it is very

important that actions are implemented to enable them to:

- Learn how to identify independent and serious sources of information
- Trust that every doubt or point of view is accepted without prejudice but in an open confrontation that always leads to the correctness of the information and the necessary dialogue with the doctor regarding one’s own health
- Provide listening, welcoming, correct information, and support

Listening and welcoming

Listening to and accepting without prejudice the fears that a person with COPD has, with respect to his or her illness, means finding a ground where one can begin to weave an open dialogue that will lead to awareness and being able to respond to those false beliefs or difficulties that the patient has difficulty confiding in the doctor. This can result in a focus on therapies, scheduled check-ups and, above all, healthier lifestyles.

The main mandate of our Patients’ Association network is precisely to give space to dialogue between peers by listening to people and inviting them to express all their fears, doubts, and difficulties. This channel of welcome can allow for subsequent advice and interventions.

Fear of taking too many drugs, difficulty in quitting smoking or encouraging one’s family members to not smoke at home, frustration at the difficulty of using a device, a sense of surrender in the face of the difficulty of starting physical activity, depression, and anxiety about the future are aspects that can only find an answer through peer welcome.

“They don’t understand me, I stop talking about it because then I feel humiliated...”

“...and yet I’ve been passed off as exaggerated.”

During COVID-19, some people experienced situations of discomfort and difficulty. These included patient’s resistance to going to the hospital for check-ups, even when these were limited to the maximum and, for the most part, the centers had set up safe access routes;



or difficulties linked to the family context, such as the difficulty of spending entire days in a home together with family smokers who, likely due to the anxiety generated by the general situation, did not think this was the best time to quit smoking and continued to smoke despite the obvious enormous damage and risks of serious health impairment.

To respond to these difficulties, in addition to a toll-free number, a free Listening Desk was created by the doctors and psychotherapists of the SIMP (Italian Society of Psychosomatic Medicine). The SIMP has made available doctors and psychotherapists who can provide assistance and then direct people to a scientific protocol that was developed for doctors

in the Wuhan region during the first months of the health emergency and has now been translated and adapted to our Italian reality and made available to all citizens, doctors, and health workers.

Important issues to pay attention to:

- **Psychological discomfort** is very frequent in patients with COPD who see a daily impairment of their lives. Providing psychological support, listening, and promoting healthier lifestyles into the recovery phase and also into future programs of psychological support will be a possible positive outcome from the COVID-19 emergency.
- **Physical activity** must be offered with greater strength, frequency, and personalized programs.
- Many COPD patients **continue to smoke** despite the disease, and a smoking addiction cannot be broken merely by a doctor's recommendation not to smoke; serious and integrated programs are necessary. Psychological support networks provided by ASLs and hospitals already exist, as do smoking deterrence networks.
- **Respiratory rehabilitation**, which is still not very accessible, must become an essential measure for the correct management of COPD patients with specific and qualified, easily accessible care programs.

Protection

Respiratory diseases affect millions of people around the world, resulting in a very high social and economic burden. In Italy, the numbers of COPD patients are constantly increasing. This disease is still underestimated and not well understood.

The progressive decrease in pulmonary function that manifests itself primarily through the symptom of dyspnea inevitably reduces the quality of life, becoming a progressively disabling condition that affects the performance of habitual daily physical activities (walking, climbing stairs, and even dressing or washing). These conditions also affect psychological well-being. Shortness of breath, characterized by a sense of constriction in the chest, often leads to a sedentariness that triggers a mechanism of progressive aggravation of pulmonary function.

It is important that people with COPD can share their stories and receive the support of patient associations and institutions.

FederAsma e Allergie Onlus – Federazione Italiana Pazienti (Italian Patients' Federation) is a voluntary association that for over 25 years has brought together, as a second level federation, the Italian Associations of patients who support the fight against respiratory, allergic, and atopic diseases.

DIARY

Below you can find a diary template that can be completed daily to keep track of your activities, your moods, your thoughts and desires. It may be useful to fill out for yourself or to show to your doctor.

Date _____

Last night I slept ____hours. How?_____

When I woke up, I felt:

I performed the following activities today:

My meals:

I drank (___ glasses) of water

Physical activity today:

walking _____minutes dancing yoga altro _____

I followed my therapy plan:

Yes No

If not, why?_____

A thought / a beautiful thing from today_____

I wish to write

GLOSSARY

Ageusia: loss of sense of taste, can have several causes such as upper respiratory tract infections, head trauma, medication intake, or diseases associated with loss of smell. It is not always a total loss; a reduction in the sense of taste is hypogeusia whereas alterations in taste are called dysgeusia.

Anosmia: loss of the sense of smell, can be partial or total; in this context we refer to hyposmia.

Bronchiectasis: chronic lung disease, potentially progressive, characterized by permanent and irreversible dilations of the bronchial wall that are bag-shaped or cylindrical.

Bronchitis: inflammation of the mucous membrane lining the bronchi, which are the tree structures that direct air to the lungs. Bronchitis can be acute and is usually caused by a viral infection. If it is repetitively present, it is defined as chronic, in which case the damage to the airways is often definitive and hardly reversible.

Bronchiolitis: an inflammation of the small airways, i.e., the smallest air passages in the lungs.

Comorbidity: the presence of several different pathologies in the same individual at the same time.

COPD - Chronic Obstructive Pulmonary Disease is a chronic pathological condition of the respiratory system that is characterized by persistent and partially reversible obstruction of the airflow, to which the remodeling of bronchi (chronic bronchitis), bronchioles (small airway disease), and pulmonary parenchyma (pulmonary emphysema) contribute in variable ways. When reading documents or sites in English, the abbreviation used is COPD, which means Chronic Obstructive Pulmonary Disease. This term can be translated into Italian as chronic lung obstruction disease.

Chronic disease: Chronic diseases are diseases that present constant symptoms over time and for which therapies may be useful to keep symptoms under control but are almost never resolute.

Dyspnea: breathing difficulty that may be temporary or chronic. It manifests itself in the form of difficult breathing, comparable to the feeling of not being able to breathe or as wheezing. It can occur gradually or suddenly. Dyspnea can be linked to different types

of respiratory diseases but also to other conditions such as stress or anxiety.
Pulmonary emphysema: pulmonary disease characterized by the progressive destruction, dilation, and loss of elasticity of the alveoli, which are the bag-shaped structures at the end of the smaller branches of the bronchi that represent the site where gaseous exchange between the blood and the air we breathe occurs.

Epidemia: from the Greek epidemos, meaning over a population; a disease is defined as an epidemic when it spreads throughout a specific population in a limited time frame.

Fake news: English term meaning "false news", used to designate information that is partly or completely untrue, intentionally or unintentionally disseminated through the web, the media, or digital communication technologies, and characterized by an apparent plausibility. It is fed by a distorted system of public opinion expectations and an amplification of the prejudices that underlie it, which facilitates its sharing and dissemination even in the absence of verification of sources.

Infodemia: the circulation of an excessive amount of information, sometimes not accurately assessed, which makes it difficult to orient oneself on a given subject due to the difficulty of identifying reliable sources.

Pandemos: From the Greek pandemos, i.e., a disease that affects the entire population that is not immune to a pathogen. According to the WHO, we can speak of a pandemic when three conditions occur: the appearance of a new pathogen, the ability of that agent to affect humans, and the effectiveness of that agent in spreading by contagion.

Reaffirmations: acute changes, different from the normal daily variability, of the usual symptoms.

Spirometry: an instrumental examination that assesses how well the respiratory system works; it measures how much air the lungs contain and how this air moves through the bronchi.

Zoonoses: diseases that are transmitted from animals to humans. Rarely are animals a direct source of infection; germs are usually transmitted to humans by contaminated water and food.

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