

ABC's of COPD



The 1s, 2s, and 3s of COPD

Chronic Obstructive Pulmonary Disease



The mission of the COPD Foundation is to develop and support programs which improve the quality of life through research, education, early diagnosis, and enhanced therapy for persons whose lives are impacted by Chronic Obstructive Pulmonary Disease (COPD).

*The 1s, 2s, and 3s of COPD was created by
The COPD Foundation.*

Take Action Today. Breathe Better Tomorrow.

Questions about COPD can be directed to the
C.O.P.D. Information Line at 866-316-COPD (2673).

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What is COPD or Chronic Obstructive Pulmonary Disease?

COPD, or Chronic Obstructive Pulmonary Disease, is an umbrella term used to describe progressive lung diseases including emphysema, chronic bronchitis, refractory (non-reversible) asthma, and some forms of bronchiectasis. This disease is characterized by increasing breathlessness.

CHRONIC –

This means that the disease lasts a long time and is always present. While the symptoms may take years to develop and the severity may differ at times, there is still much you can do to slow the progress of the disease.

OBSTRUCTIVE –

The ability to move air flow in and out of your lungs is blocked or obstructed. This is caused by swelling and extra mucus in the tubes of the lungs (airways) which carry air in and out.

PULMONARY –

This means that the disease is located in your lungs.

DISEASE –

Your lungs have some damage. But even though a cure hasn't been found yet, your symptoms can be treated.



Smoking is the most common cause of COPD. But it can also be genetic.

Causes of COPD

Smoking is the most common cause of COPD. (About 80-90 percent of people with COPD smoked.) However, only one in five smokers will get significant COPD. Researchers are trying to find out why some smokers get COPD and others don't. (To learn more about research studies on COPD, see page 13 in this booklet.) It is very important to quit smoking if you haven't! Quitting smoking helps slow the disease. It makes treatment more effective.

COPD can also be caused by **breathing in lung irritants** like smoke in some workplaces, chemical fumes, and dust for many years. Individuals who have worked for many years around these irritants are at risk for developing mild COPD.

In some cases, **COPD can be genetic** (passed from your parents to you). A condition called Alpha-1 Antitrypsin (antee-trip-sin) Deficiency (dee-fi-shen-see), or Alpha-1, causes this hereditary type of COPD. Alpha-1 is diagnosed by a simple blood test or mouth swab test. It occurs when there is a severe lack of a protein in the blood called alpha-1 antitrypsin (AAT). The main function of this AAT protein is to protect the lungs from inflammation caused by infection and inhaled irritants. There may be as many as 100,000 people with Alpha-1 in the United States. Also, an estimated 20 million people may carry a copy of the defective gene which causes Alpha-1. This makes them "Alpha-1

*In a COPD Foundation survey, 81 percent of COPD patients described having six or more additional chronic diseases which are called **co-morbid conditions** (or **co-morbidities**). Some of the conditions they mentioned included weight loss, arthritic pain, cancer, cardiac problems, female and male osteoporosis, depression, hypertension, sleep apnea, and diabetes. Talk to your doctor about your other symptoms, even if you think they are not related to your COPD.*

Carriers." (For more information about the most common known genetic risk factor for COPD, visit the Alpha-1 Foundation website at www.alpha-1foundation.org or call 1-800-425-7421.)

Symptoms

Symptoms of COPD can be different for each person, but the common symptoms are:

- Shortness of breath*
- A cough that won't go away and may produce mucus**
- Feeling tired, especially when exercising or doing daily activities
- Tightness in the chest



** Shortness of breath is NOT necessarily a symptom of COPD. It can be seen in other medical conditions including certain heart problems. Being overweight or deconditioned can contribute to shortness of breath. Shortness of breath should be evaluated by your health care provider.*

***Not everyone who has COPD has a chronic cough. Not everyone with a cough has COPD or will develop it in the future. There are many possible causes of a cough, including post-nasal drainage from sinusitis, asthma, lung infections and medication side-effects.*

FACTS AND STATISTICS ABOUT COPD

- 12 million adults in the United States have a diagnosis of COPD. Another 12 million have undiagnosed COPD, meaning they do not know they have it and are not receiving treatment for it.
- COPD is the 3rd leading cause of death in the U.S.—this news came twelve years earlier than predicted. A person with COPD dies every 4 minutes.
- COPD is also one of the leading causes of disability in the U.S.
- COPD usually occurs in people who are at least 40 years of age.
- COPD is treatable. The symptoms usually improve with treatment.

Getting Tested

A simple breathing test called **spirometry** (spi-rom-e-tree) can tell if you have COPD. (It may also be called a lung function test or pulmonary function test.) Spirometry measures how much air your lungs can hold and how fast you can blow the air out of your lungs. Spirometry is also used to track how your COPD is progressing. After your diagnosis, your doctor will probably ask for a spirometry test every year. It does not cause pain and takes only a short time to complete. Spirometry is a very easy and sensitive test. It can even detect COPD before you have significant symptoms.

How Do I Get Tested and Find Out if I Have COPD?

There are several reasons for requesting a spirometry test from your primary care doctor. These are: you have symptoms of shortness of breath or difficulty breathing, you smoke or have ever smoked, or you have lived or worked in an environment of bad air quality. (A bad air quality environment might include construction work, mining, cleaning, etc.) If your primary care doctor doesn't offer spirometry in his/her office, you should ask for a referral to see a lung specialist. These doctors are called **pulmonologists** (pul-mun-na-low-jists).

What Happens During the Test?

Your height and weight will be measured. You will be asked a few questions about your symptoms and medicines. The answers to these questions will help explain your test results.

You will sit next to a spirometry machine or device. The trained medical technician will ask you to hold a tube, hose or small sensor. You will be shown how to: 1) take as deep a breath as you can, 2) blow out as hard and as fast as you can into the tube, and 3) continue to blow out for several seconds.

You will be asked to do this a few times to make sure that the spirometer is measuring your breathing correctly. If at any point you are not sure about how you should breathe into the tube, ask the technician to show you. You may also be asked to breathe in a medicine and then take the test again. This will show how well your lungs respond to the medicine.



Spirometry is an easy test that can detect COPD before you have significant symptoms.

Treatments for COPD

COPD can be treated. Current treatments for COPD cannot repair the damage to your lungs. However, some treatments may reduce your risk of exacerbations (flare-ups). This makes it easier for you to breathe and feel better.

MEDICINES

Taking medicines can improve your COPD symptoms. They must be taken as directed by your doctor. COPD medicines work in different ways. Using medicines from different groups may help:

- Relax the muscles around the lungs' breathing tubes
 - Reduce swelling in the breathing tubes
 - Reduce mucus production...
- ... All of which makes breathing easier.

Two of the most common types of daily COPD medicines are: **bronchodilators** and inhaled **corticosteroids**.

- **Bronchodilators** (bron-coe-die-lay-ters) help relax the muscles around the lungs' breathing tubes. This allows them to open up or expand. This can reduce coughing, improve shortness of breath and make breathing easier. Bronchodilators are usually breathed directly into the lungs with an inhaler (a device to breathe the medicine in).
- **Corticosteroids** (core-tee-coe-stare-roids) (or steroids) reduce swelling in the breathing tubes making breathing easier. They can be taken in pill form (prednisone) or with an inhaler. Inhaled corticosteroids are much less likely to cause side effects. (Note: these are not the same type of steroids that some athletes take to give them bigger muscles.) Oral/systemic steroids are only used in COPD for a short time during a flare-up.

Your doctor may also sometimes give you **antibiotics** (antee-by-ah-ticks). These are used to treat lung infections caused by bacteria, such as bronchitis and pneumonia. You should also get the flu shot each year to help prevent lung infections. These infections can make your COPD much worse. Also talk with your doctor about getting a pneumonia shot. This shot lasts for several years.



Treatments for COPD can improve your symptoms, and some may reduce your risk of flare-ups. This makes it easier for you to breathe and feel better.

- **Phosphodiesterase-4 inhibitors** (fos-foe-die-es-ter-ase in-hib-it-tors) (PDE4) are another type of medication that are prescribed for adults with severe COPD to decrease their number of flare-ups or the worsening of COPD symptoms (exacerbations). PDE4 inhibitors are taken as a once daily oral tablet.

Sometimes your doctor may prescribe a **rescue medicine**. Rescue medicines are used when you have an episode where you're so out of breath and your chest is so tight, that you need help quickly. The most common is **albuterol**. It is a short-acting bronchodilator that can provide relief in five minutes.

OXYGEN

Severe COPD will reduce your lungs' ability to put oxygen into your blood to be carried throughout your body. Your doctor can measure the oxygen in your blood by using a **pulse oximeter** (ox-im-eh-ter). This is a small device that fits snugly on your finger. It measures how many red blood cells are carrying oxygen. If the level of oxygen in your blood is too low, it can be confirmed by an **arterial blood gas test (ABG)**. If so, your doctor may prescribe **oxygen therapy** for you.

Shortness of breath does not necessarily mean you need to be on oxygen. Many patients who have severe shortness of breath do not have low oxygen levels in their blood. Also, many patients who have low oxygen levels do not always feel breathless. Oxygen is usually ordered if the oxygen in your body or blood is low during sleep, exercise, during a 6-minute walk test and/or while you are not active.



*COPD can
be treated.*

Oxygen is a medical treatment. It requires a doctor's prescription that will describe exactly how much oxygen you need for different activities such as exercise and sleep. It is very important that you use the amount of oxygen ordered for you for each activity. A respiratory therapist can help you learn exactly how to use your oxygen. (Your oxygen supply company may provide a respiratory therapist.) There are several types of oxygen systems. There are many factors that help you and your doctor decide which system is right for you. These include how much oxygen you need, when you need it, your daily activities, where you live, costs and insurance.

PULMONARY REHABILITATION

Pulmonary rehabilitation (pul-mun-nair-ree re-haa-bi-li-tay-shun) is a treatment program. It provides exercise training, education about COPD, tips on how to complete everyday activities without becoming so short of breath and advice on how to live better with your disease. Many different types of medical professionals work with you in the program. These include doctors, nurses, physical therapists, exercise specialists and dietitians. **Dietitians** (dye-ah-ti-shuns) are individuals who can teach you about healthy food choices. You will work with this team to create a special program for you. Pulmonary rehab programs are available in most communities and often paid for by insurance.

Flare-Ups

There will be some times when your COPD symptoms suddenly get worse. These flare-ups are called **exacerbations** (x-ass-er-bay-shuns). They are usually caused by an infection in your lungs. Flare-ups can also be caused by a change in the outside temperature or increased air pollution. A flare-up may have the following signs:

- Increased cough
- Increased shortness of breath
- Increased mucus production
- Wheezing*
- Shallow or rapid breathing

- Increased heart rate
- Increased body temperature
- Impaired mental status
- Extreme fatigue
- Change in mucus color

** Wheezing is often associated with asthma, but can occur in individuals with bronchitis during an exacerbation.*



It is important that you call your doctor at the earliest sign of a flare-up. He/she will help you make decisions on the best course of action for you. This may include different medicines from the ones you are regularly taking.

During a flare-up, your doctor may suggest that you use nebulized medicines. Many of the bronchodilators and corticosteroid medicines are prescribed for use in a **nebulizer**. This is a device that turns liquid medicine into vapor so you can inhale it. If your doctor prescribes these drugs, your home oxygen supplier or pharmacy should have an appropriate nebulizer for you to use. Most prescription plans cover nebulizers.

Another option your doctor may suggest is using a short oral/systemic course of steroids, and/or a course of antibiotics.

Note: Three medications have been approved for reducing COPD exacerbations (flare-ups). For more detailed information review chapter B3 in the Big Fat Reference Guide.



*Pulmonary rehab
will help you live
better with COPD.*

Changing How You Live

Living with COPD can be challenging. Once you know you have COPD and begin treatment, there are many things you should consider doing. These tips will not only help improve your breathing but may slow down your disease. They may also improve your life.

- **Stop Smoking!** If you know you have COPD and are still smoking, quitting is the most important thing you can do to keep your COPD from getting much worse. After you quit, your symptoms of cough, breathlessness and wheezing will probably improve.
- **Avoid cigarette smoke and other irritants in the air.** These may include dust, insect repellent, paint fumes and smoke. Make the air in your house as clean as possible by cleaning often and changing air filters frequently. Breathing in dust and other pollutants can further irritate your damaged lungs. Stay indoors or wear a mask on days when the air quality is rated as poor. (Your local news will give the air quality rating during the weather report.)
- **Wash your hands often.** Simple hygienic activities can help you stay healthy. Stay away from people who have a cold or flu.
- **Find out from your doctor if there is a pulmonary rehabilitation program near you.** If there isn't a pulmonary rehab program near you, you still need to begin an exercise program. An exercise program will make your lung muscles stronger, improve your tiredness and make your whole body healthier and stronger. Many people mistakenly believe that if they are short of breath, they should not exercise. *This is not true.* Exercise actually helps improve your breathing while also helping you to feel better. Your exercise program can be as simple as walking daily. You can start off slow by just walking around inside your house and then try walking some outdoors (when the air is clear). Try walking a little more each day.

- **Take your medicines daily.** Follow the schedule your doctor has given you and make sure you do not run out of them. Don't be afraid to talk to your doctor about how to use your medicines if you're not sure. Remember to continue taking your medicines, even if you feel better.
- **Learn breathing exercises.** Your doctor or respiratory therapist can help you learn how to breathe more efficiently. (For example: by using pursed lip breathing.) They can also help you learn positions and relaxation steps that will help you when you are feeling short of breath.
- **Learn how to clear your lungs with coughing.** Coughing helps to clean your lungs. Your doctor or respiratory therapist can teach you ways to cough that will clear your lungs of mucus with two or three coughs. Coughing to clean will help you in the mornings when there may be mucus that has settled in your lungs while you were sleeping.
- **Drink lots of water and fluids throughout the day.** This can help to thin out the mucus in your lungs allowing you to cough it up more easily.
- **Eat healthy foods and maintain a healthy weight.** If you are overweight, losing weight will help your breathing. If you are underweight, gaining weight will improve your strength and help your body recover from flare-ups quicker.
- **Get the flu shot each year.** And talk with your doctor about a pneumonia shot. Because your lungs are damaged permanently, you must take steps to prevent any lung infections which could cause your COPD to become much worse.



An exercise program will make your lung muscles stronger.

- **Following a flare-up, make sure you throw away any toothbrushes you used during the infection.** Also wash all the spacers, nebulizer tubing, masks or mouthpieces you used in hot soapy water. Rinse well and dry thoroughly.
- **Make life as simple as possible but keep doing all that you can do.** Consider getting products that may help make your daily living easier, such as a shower stool. If basic tasks take less energy, you'll be able to do more things you enjoy.
- **Schedule and keep appointments with your doctor.** You should probably see your doctor at least twice a year, even if you are feeling well. Between appointments, keep notes about how you feel during different activities. Make notes about side effects you think your medicines are causing and any other concerns you have about your disease. Take these notes with you to your appointment. Share them with your doctor.
- **Keep important numbers handy.** Make sure you always have a list of important phone numbers, including your doctor's, pulmonologist's, and friends' or family members'. Also keep a list of the medicines you're taking and any allergies you have.
- **Learn all you can about your disease!** Join a COPD support group. (See the **Support Organizations** section in this booklet.) Become an advocate for COPD awareness. These types of activities will let you share your story and listen to others, like yourself, about how they are living with the disease.



Make life as simple as possible but keep doing all that you can do.

About the COPD Foundation

What is the Foundation?

The COPD Foundation® is a not-for-profit organization that began in 2004. The COPD Foundation supports research and spreads awareness about COPD to improve the quality of life for all those living with COPD. Currently, COPD is the 3rd leading cause of death in the U.S. It is the only one still increasing in deaths.

The COPD Foundation has created several programs to help further research for new treatments, educate health care professionals about diagnosing and managing COPD, and **educate, empower and engage individuals** living with COPD.



How much do you know about your lung health? Take the WebMD Lung Health Check! Visit: www.copdfoundation.org or www.webmd.com/lung-disease-health-check

Developed in an educational collaboration between WebMD Editorial and the COPD Foundation.

What Programs or Services Does the Foundation Offer?

C.O.P.D. and Caregiver's Information Lines: 1-866-316-COPD (2673)

The "Call Our Patients Direct" (C.O.P.D.) Information Line is a toll-free hotline for anyone seeking information or support on COPD. The information line operates Monday through Friday from 9AM to 9PM Eastern Time. You can call toll-free at 1-866-316-COPD (2673) to speak to an individual with COPD or caregiver. They can assist you with almost any question you may have—from subscribing to the COPD Digest, to requesting a package of information, to finding out the next time there's a COPD event in your area, you name it!

Website: www.copdfoundation.org

The Foundation's new website features COPD facts, a section for diagnosed individuals and caregivers, clinical and research information for medical professionals, a calendar of events and access to all of the COPD Foundation's resources. Website visitors can sign up to receive updates from the Foundation and subscribe to the free *COPD Digest* as well.

A Free Quarterly Magazine: COPD Digest®

The *COPD Digest* strives to provide news and information on treatment and resources for COPD patients, health care providers, families and caregivers. It is the first, internationally-distributed free magazine about COPD. The *COPD Digest* is published quarterly. Each issue is available on the *COPD Digest* website at www.copddigest.org.

Educational Resources for Individuals with COPD

The COPD Foundation provides COPD education to thousands of individuals through a variety of methods, each year. The Foundation's collection of educational materials and programs include the **COPD Big Fat Reference Guide®** and other brochures and booklets covering related topics. The Foundation also distributes materials produced by the National Heart, Lung and Blood Institute's *Learn More Breathe Better®* Campaign.

Educational Resources for Health Care Professionals

In addition to the many physician resources on its website, the Foundation has hosted several workshops, meetings and educational courses for health care professionals across the nation. The Foundation also provides a COPD *Pocket Consultant* for health care professionals. This card serves as a handy and efficient guide for correctly diagnosing and managing COPD patients. The COPD **Pocket Consultant** is available free on the COPD Foundation website or through the C.O.P.D. Information Line.

Pulmonary Education Program

The COPD Foundation has established a Pulmonary Education Program (PEP), a program that will enable the Foundation to provide pulmonary rehabilitation centers educational materials for individuals with COPD.

Mobile Spirometry Unit

The Mobile Spirometry Unit (MSU) travels across the country offering free breathing tests to attendees of health fairs, senior expos and state and county fairs. Thousands of Americans across the U.S. have taken a spirometry test at an MSU booth. And thousands more have taken COPD educational materials. The MSU's events are constantly updated online at the COPD Foundation's calendar.



Sign up for the free COPD Digest at 1-866-316-COPD or on www.copdfoundation.org.

COPD Research Registry

The COPD Foundation's Research Registry is a confidential database of individuals diagnosed with COPD or at risk of developing COPD. The Registry was established in 2007 by the COPD Foundation to facilitate research initiatives and promote the development of improved treatments and a cure for COPD. For questions about the Registry, please visit the COPD Foundation's website www.copdfoundation.org. Or call the C.O.P.D. Information Line at 1-866-316-COPD (2673).

Bronchiectasis Research Consortium and Registry

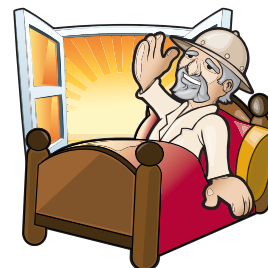
The Bronchiectasis Research Registry is a database of patients across the country living with Bronchiectasis. The goal of the Registry is to gather information to assist scientists in creating better research. The hope is that this research may lead to new treatments and a stop to the disease's progression. For more information, visit the Registry's website at www.csc.unc.edu/bron.



*Now it's your turn.
Become an advocate today!*

Operation 435

The COPD Foundation is organizing a campaign in which individuals in all 435 congressional districts sign up to write letters to their representatives. These letters ask for support on COPD-related public policy. To find out more about how you can become involved in Operation 435, visit: www.operation435.com, or call 1-866-316-COPD. Sign up and become an advocate today!



How Can I Get Involved and Help the COPD Foundation?

The COPD Foundation welcomes all types of support! If you would like to help out, there are several options for you. You can provide a financial gift by donating to the Foundation. Or you can provide the gift of your time and talents by becoming a Foundation volunteer and/or advocate!

Volunteer for Advocacy

Become an advocate for Operation 435 and other issues! Donate your time to start a letter-writing campaign, spread awareness about pulmonary rehab and support other COPD Foundation programs. These are just some of the ways you can help support the COPD Foundation further its cause. To become a COPD Foundation Advocate, call the C.O.P.D. Information Line at 1-866-316-COPD to find out more about how to become part of the call-to-action!

Become an Associate for the Information Line

The Information Line is staffed by individuals with COPD who handle requests from a wide range of callers. Callers include people with symptoms, newly diagnosed patients, seasoned patients, caregivers and concerned members of the public. The C.O.P.D. Information Line is looking for new Associates to join the C.O.P.D. Information Line community! If you are an individual diagnosed with COPD or caregiver interested in becoming an Associate, have a Windows PC with high-speed Internet connection and a telephone, call the C.O.P.D. Information Line at 1-866-316-COPD (2673) or email us at info@copdfoundation.org to apply. Get involved and make a difference in a fellow COPDer's life!

Make a Donation:

You can support the COPD Foundation by making a tax deductible donation. You can make your donation in memory or in honor of a loved one. You can donate in any of the ways listed below:

- **Donate Online** – Visit www.copdfoundation.org/help/donate.
- **Donate via Mail** – To donate via mail, print and complete the mail donation form on the Foundation website and send it along with your check or money order (no cash please) to:

**COPD Foundation
3300 Ponce de Leon Blvd.
Miami, FL 33134**

- **Donate via Phone** – To speak to a COPD Foundation Associate and make a credit card donation over the phone, call the COPD Foundation Information Line at: 1-866-316-COPD (2673).

Support Organizations and Resources

Below is a list of organizations and resources with more information about COPD. You can access more details about the resources listed in this section on the COPD Foundation website (www.copdfoundation.org) or by calling the C.O.P.D. Information Line at 1-866-316-COPD.

Alpha-1 Foundation

This organization helps promote awareness, detection, and research for Alpha-1 Antitrypsin Deficiency: the most common known genetic risk factor for COPD.

www.alpha-1foundation.org

1-800-425-7421

Better Breather's Clubs

These support groups are located across the nation, organized locally and meet regularly to provide tips, education and support to individuals living with COPD.

1-800-LUNGUSA

COPD-Alert

This organization provides advocacy for COPD patients along with online support and information.

www.copd-alert.com

COPD Council

This organization is supported by the COPD Foundation and has representation from most of the COPD patient advocacy organizations. Via its website, it provides listings of international, national, regional and local COPD support groups, along with an international calendar of COPD conferences and events.

www.copdcouncil.org

COPD Foundation

The Foundation has several programs that offer support and information for COPD patients and their families/caregivers, health care professionals and other members of the community. Programs include the *COPD Digest*, the C.O.P.D. Information Line, volunteer registries and publications. More details on the programs are in the **About the COPD Foundation** section on page 13 in this booklet.

www.copdfoundation.org

1-866-316-COPD (2673)

COPD-International

This organization provides online information and support including a 24-hour COPD chat room and message boards.

www.copd-international.com

COPD Support

This group provides online information and support by offering email-based moderated discussions and newsletters.

www.copd-support.com

Emphysema Foundation For Our Right To Survive (EFFORTS)

This is a membership organization for COPD patients and offers email-based discussions and other online resources.

www.emphysema.net

National Heart, Lung, and Blood Institute (NHLBI)

The NHLBI launched the **Learn More Breathe Better®** Campaign in 2007 to spread awareness of COPD. They offer various resources, including a free COPD advocacy Resource Kit on its website.

www.LearnAboutCOPD.org

National Lung Health Education Program (NLHEP)

This national COPD awareness initiative provides information to the public and health care professionals about early COPD diagnosis and treatment.

www.nlhep.org



US COPD Coalition (USCC)

The US COPD Coalition brings together health professional organizations, patient organizations and foundations, individuals and government agencies working to improve the lives of people with COPD.
www.uscopdcoalition.org

Glossary

Albuterol – (see Bronchodilator)

Anticholinergics – A type of medicine for COPD. A short-acting anticholinergic is inhaled using a nebulizer or inhaler. A long-acting anticholinergic provides long-term bronchodilation for the maintenance treatment of COPD. These medications are typically administered by an inhaler.

Beta2-agonists – A type of medicine for COPD. It may be given by inhaler or nebulizer. The most popular is albuterol which can be given by inhaler. It is also available as a generic solution for nebulizers.

Bronchiectasis – A disease characterized by thick-walled bronchi that are inflamed or abnormally expanded and chronically infected with bacteria. Symptoms may include cough and daily mucopurulent sputum production.

Bronchodilators – A medicine taken each day to open the airways by breathing it in from an inhaler or nebulizer. Anticholinergics, beta2-agonists and theophylline are all bronchodilators. Caffeine is a weak bronchodilator.

Cannula – Plastic tubing used to give oxygen through the nose.

Compressor – This is an air pump used to produce air pressure for a nebulizer. They usually plug into a wall for power but some can also plug into a vehicle (12 volt battery). Other more expensive ultrasonic models run on small batteries.

Corticosteroids – A type of medicine for COPD. There are several types which are inhaled. Some are combined with a long-acting bronchodilator. Prednisone is a corticosteroid pill which is both powerful and inexpensive. However, it may cause serious side-effects when taken for more than a couple of weeks per year.

Dietitian – A person who specializes in food plans and meal programs. They can teach people to develop healthy eating habits.

Dyspnea – Shortness of breath.

Exacerbations – Flare-ups or episodes when your COPD gets worse.

Hereditary – Information in your body that was passed onto you from your parents through genes. This information can also be passed from you to your children.

Hyperventilation – Rapid breathing caused by being nervous or panicked.

Hypoxia – Too little oxygen is in the body. This can be measured quickly and painlessly using an inexpensive pulse oximeter, which shines a red light through your finger. The blood oxygen level is measured more accurately in a hospital by drawing blood from an artery in your finger

Inhaler – A device that allows you to breathe in (inhale) medicine. There are more than a dozen different models. Each requires a different technique to get the medicine deep into your lungs.

Liquid Oxygen – A small amount of liquid oxygen is a very large amount of oxygen gas. The larger tanks can be used to fill easy-to-carry small tanks.

Nebulizer – A plastic device, powered by air pressure that changes liquid medicine into a vapor so that it can be breathed in. There are many different models. They must be replaced at least every month since they become contaminated with the bacteria that is exhaled into them.

Oxygen (or Oxygen Therapy) – The use of oxygen as medicine.

Oxygen Concentrator – A machine with a pump that takes oxygen from the air and pumps it through a long length of narrow plastic tubing into the nose. Most plug into the wall for power, and last for more than 20,000 hours. New and more expensive models are portable and run on rechargeable batteries.

Oxygen Gas (compressed) – Green metal cylinders filled with compressed oxygen gas. Large ones are four feet tall and very heavy. Smaller tanks are portable and placed on wheels but only last for an hour or two. Most people with COPD who require oxygen during the day or night are given oxygen concentrators but tanks are still used for back-up in case of a loss of electrical power.

Phosphodiesterase-4 (PDE4) Inhibitors – A type of medication used in adults with severe COPD to decrease their number of flare-ups or the worsening of COPD symptoms (exacerbations).

PDE4 Inhibitors are not bronchodilators and should not be used for treating sudden breathing problems. They should not be used in patients who have certain liver problems. A PDE4 Inhibitor is taken once daily as an oral tablet.

Pulmonary Rehabilitation (Rehab) – A treatment program that provides exercise training, tips on how to live better with COPD, and information about COPD.

Pulmonologist – A person who specializes in lung health.

Pulse Oximetry – This is an easy test that measures how much oxygen is in your blood. The device is placed on your finger or in your ear and shines a red light to measure how many red blood cells are carrying oxygen. The result is a percentage.



Spirometry – A test that shows how well your lungs are working. It's used to find out if you have COPD. People with COPD also take this test to check the progress of their disease and the effectiveness of their medicine.

Sputum – Mucus, usually that is loose in the lungs. It becomes thinner and easier to cough up if you drink lots of water every day. Stay well hydrated.

*If you enjoyed reading this guide and would like more information about managing COPD, call the C.O.P.D. Information Line to find out about the **COPD Big Fat Reference Guide® (BFRG)**! Or, visit www.bfrgcopd.org. The COPD BFRG is a complete guide with in-depth information about managing COPD. Topics covered in the guide include:*

- *Understanding lung disease*
- *Nutrition and fitness*
- *Treatments and therapies*
- *Talking with your health care provider*
- *And much more!*

*The BFRG will be provided online and on CD for free. Single-topic **Slim Skinny Reference Guides® (SSRG)** are a series of 10 topics covered in the BFRG. The SSRGs are available online and on CD for free. For more information on how to get a BFRG or SSRG call 1-866-316-COPD or visit www.copdfoundation.org.*



