



VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Department of Veterans Affairs
Department of Defense

Patient Summary

I. What is Chronic Obstructive Pulmonary Disease?

Chronic obstructive pulmonary disease, or COPD, is a combination of ongoing conditions that affect your lungs and obstruct or block airflow from the lungs. These conditions can include chronic bronchitis and emphysema.

COPD can be prevented and treated. It can be recognized by its key characteristic: shortness of breath or difficulty breathing, especially when exhaling or breathing out. However, if you have COPD, you could have other symptoms such as chest pressure, chronic cough, mucus, and wheezing.

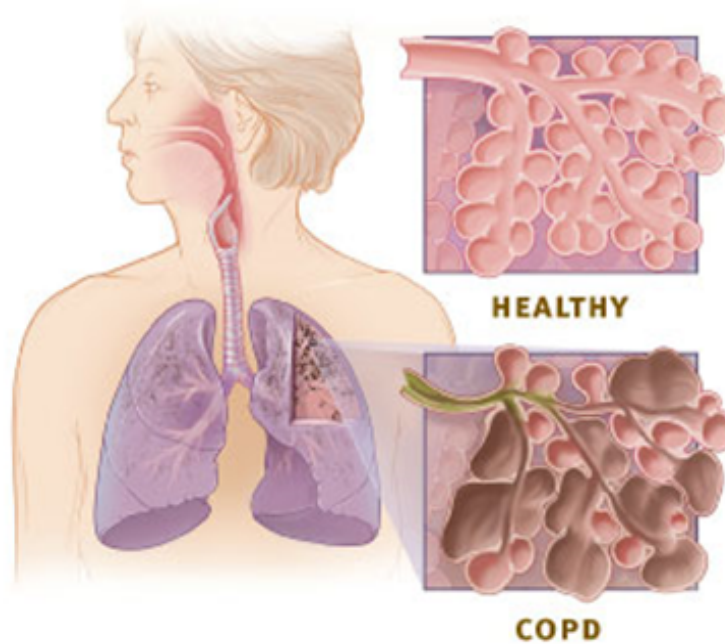
Did You Know?

- Veterans are at higher risk of COPD than those in the general U.S. population.[\(1\)](#)
- Some military duties or activities may increase risks for COPD.
- Military physical activity may uncover symptoms of COPD. Active duty military or Veterans may show signs of COPD earlier than their civilian counterparts.[\(2\)](#)

II. What Causes COPD?

People get COPD for different reasons. The most common cause is tobacco use – particularly cigarette smoking. However, long periods of exposure to substances that irritate the lungs can also cause COPD. The irritating substances could be gases, chemicals, or particles that are part of the work or home environment. This exposure can cause portions of the lungs to stop working as they should.

Figure 1: Images of healthy lungs and lungs affected by COPD (3)



III. How is COPD Diagnosed?

Your provider (which may be a doctor, physician assistant, or nurse practitioner) can explain the symptoms and tests that determine if you have COPD. If your provider suspects you may have COPD, he or she can arrange for a simple breathing test to determine whether you do or do not have the disease.

IV. What are the Goals of COPD Treatment?

The overall goal of treating your COPD is to control the symptoms and optimize your health for better quality of life and mental health. Well-treated COPD will allow you to be more physically active and may improve your sleep.

Goals of COPD Treatment
<ul style="list-style-type: none">• Prevent COPD from getting worse• Improve symptoms:<ul style="list-style-type: none">◆ Decrease shortness of breath◆ Help you to perform social activities, physical activities, and exercise◆ Improve your quality of life and your mental health• Treat and prevent:<ul style="list-style-type: none">◆ Exacerbations (when COPD symptoms suddenly worsen)◆ Complications

V. What are the Options for COPD Treatment?

There are many treatment options for COPD that can help you reach your goals. By talking with your provider, you can learn more about the available treatment options and how they can help you. Work with your provider to find treatments that improve your symptoms and your health. The following treatment options are things that your provider may ask you to do at home or to make a part of your normal routine.

VI. Medication

Your provider may prescribe medication that you breathe in or inhale straight to your lungs. The medication can help you keep your symptoms from worsening or help manage your COPD. With instructions and practice, the inhaled medication can be easy to use. Work with your provider to make sure that you are taking the inhaled medication correctly and as directed. There are many different types of inhaled medications. These medications work in different ways and affect different parts of the lungs to help improve your breathing. Do not be afraid to ask questions or ask for help.

Inhaled medications work for different lengths of time depending on the medication type (short-acting or long-acting).

- **Short-acting medications** work within a few minutes. Your provider will explain how to use these medications when you are experiencing symptoms that are worse than usual.
- **Long-acting medications** help control your COPD symptoms so they do not worsen. You should take long-acting medications even if you feel fine and your symptoms are no worse than usual.

More information on types of medications can be found in [Table 1](#).

Table 1: Types of Inhaled Medications Used to Treat COPD

Examples of the Medications	Types and Abbreviations	How It Works	How Long It Works
Ventolin Proventil ProAir Xopenex	Short-acting (SABA)	<ul style="list-style-type: none"> • RESCUE for sudden change of symptoms • Short-lasting treatment to relax and open small airways for fast relief 	Works in 1-5 minutes; lasts 3-6 hours
Foradil Serevent	Long-acting (LABA)	<ul style="list-style-type: none"> • MAINTENANCE – use even without change in symptoms • Long-lasting treatment to relax and open large airways (will not provide fast relief) 	Works in 20 minutes; lasts 12 hours
Atrovent	Short-acting (SAMA)	<ul style="list-style-type: none"> • MAINTENANCE – use even without change in symptoms • Short-lasting treatment to relax and open large airways (will not provide fast relief) 	Works in 15 minutes; lasts 6-8 hours
Spiriva	Long-acting (LAMA)	<ul style="list-style-type: none"> • MAINTENANCE – use even without change in symptoms • Long-lasting treatment to relax and open large airways (will not provide fast relief) 	Works in 20 minutes; lasts 24 hours
Qvar Flovent	Long-acting (ICS)	<ul style="list-style-type: none"> • MAINTENANCE – use even without change in symptoms • Long-lasting treatment to reduce and prevent airways swelling (will not provide fast relief); you may have less coughing or wheezing 	Works in few days or few weeks when taken regularly

These medications are inhaled by mouth. There are other medications to treat COPD, such as theophylline, roflumilast, and chronic macrolides. Your provider may prescribe one of these after consulting with a pulmonologist, a doctor who treats diseases of the lungs.

Some breathing medications are delivered with a device called a metered-dose inhaler. See [Figure 1](#) and [Figure 2](#) for step-by-step guides on how to use a metered dose inhaler.⁽⁴⁾ Other breathing medications may be delivered from devices called Diskus, Twisthaler, or Respimat. Your provider can show you how to use the devices and give you handouts with instructions.

Figure 1: Using Your Metered Dose Inhaler WITH a Mouthpiece Spacer/Chamber



 Using Your Metered Dose Inhaler WITH a mouthpiece spacer	
1.	Make sure that the metal canister of your MDI is inserted correctly into the plastic "boot" or holder (see drawing).
2.	Remove the cap from the mouthpiece of both the MDI and the spacer.
3.	Insert the MDI mouthpiece in the soft opening of the spacer. The MDI canister needs to be in an upright position.
4.	Shake the MDI with attached spacer several times.
5.	Breathe out, away from the spacer, to the end of your normal breath.
6.	Place the mouthpiece of the spacer into your mouth, past your teeth and above your tongue. Close your lips around the mouthpiece. If you are using a spacer with a mask, place the mask over your nose and mouth. Be sure the mask has a good seal against your cheeks and chin. There should be no space between the mask and your skin.
7.	Press down on the top of the metal canister once, to release the medicine into the spacer.
8.	Breathe in deeply and slowly through your mouth. If the spacer makes a "whistling" sound, you are breathing in too fast. You should NOT hear a whistle.
9.	Hold your breath for 5 to 10 seconds.
10.	Breathe out slowly.
11.	If you are instructed to take more than one puff (spray), wait about 15 to 30 seconds (or as directed by the package insert) before taking the next puff. Then repeat steps 4-10.
12.	Replace the cap on the mouthpiece of the MDI inhaler and spacer after you have finished.
13.	If you are inhaling a steroid, rinse your mouth out with water, swish, gargle and spit.

Figure 2: Using Your Metered Dose Inhaler WITHOUT a Spacer/Chamber

 Using Your Metered Dose Inhaler WITHOUT a Spacer/Chamber	
1.	Put the metal canister into the "boot" making certain it is seated correctly.
2.	Shake the inhaler several times. This mixes the propellant and medicine.
3.	Remove the cap off from the mouthpiece.
4.	Breathe out to the end of a normal breath.
5.	Hold the inhaler in its upright position (with the mouthpiece at the bottom).
6.	Put the mouthpiece in your mouth, past your teeth and above your tongue. Close your lips around the mouthpiece so that the medication does not go in your eyes (see second Figure).
7.	While breathing in slowly and deeply through your mouth, fully press down once on the top of the metal canister of your inhaler.
8.	Hold your breath for 5 to 10 seconds.
9.	Breathe out slowly.
10.	If you take more than one spray, wait 15 to 30 seconds (or as directed in the package insert) before taking the next puff. Then repeat steps 3-9.
11.	Replace the cap on the mouthpiece after you are finished.
12.	If you are inhaling a steroid, rinse your mouth out with water, swish, gargle and spit.



Ask your healthcare provider for help if you need to use a facemask spacer

VII. Other Treatment Options

Your provider may discuss other forms of treatment with you. These may include:

- Oxygen therapy
- Supported self-management (working with a case manager and/or a pulmonary rehabilitation program to help you manage your COPD and reduce symptoms)
- Telehealth monitoring
- Breathing retraining
- Nutrition education
- Surgery

VIII. What Should You Do If Your COPD Worsens?

A COPD exacerbation is a sudden worsening in your ability to breathe or more shortness of breath with increased cough and change in mucus or phlegm amount and/or color. If you think you are having a COPD exacerbation, you should get medical help right away from the clinic or emergency department. Your provider will work with you to establish an action plan before starting any stand-by medications.

IX. What Else Can You Do to Improve Your Health?

- **Quit smoking and avoid secondhand smoke.** Quitting smoking and avoiding any respiratory irritants like secondhand smoke can save your lung function and slow the progress of COPD more than any medical treatment available. This is the most important of all COPD treatments. Ask your provider about tools that can help you quit smoking. Resources are also available at <http://smokefree.gov/>.
- **Get vaccinated.** Illnesses such as a cold or the flu impact people with COPD more than others. Make sure to get the flu shot every year. The pneumonia vaccines are also important in reducing complications to COPD. Talk to your provider about the vaccines and when to get them.

X. Questions to Ask Your Provider

- How is my COPD diagnosis confirmed?
- How is my COPD progressing compared to an average COPD patient?
- Am I taking my medication the right way? (Take your inhalers to your appointments and have your provider, clinical pharmacist, or respiratory therapist show you how to use them.)
- Should I take any of my medications all the time?
- What medication should I take when my symptoms are worse than usual?
- When should I go to the emergency department?
- How much activity should I have in my everyday life?
- Are there any special exercises I should be doing?
- Should I change my diet?

XI. Frequently Asked Questions

- **If I quit smoking, will it really help my COPD?**

Yes, the single best thing you can do to prevent your COPD from getting worse is to stop smoking. Ask your provider how he or she can help you stop smoking. You should also avoid places where other people are smoking. This will help you avoid breathing in secondhand smoke.

- **Is it safe to be around my family and friends?**

Yes, you should stay active and do things with your family and friends. COPD is not contagious, and you may feel better after spending time with loved ones. However, you should avoid being around them when they are smoking. You should also avoid contact with anyone that has a cold, a cough, or the flu symptoms. People with COPD are more likely to have serious complications when they catch the cold or flu virus.

- **Is it safe for me to receive the flu vaccine and other vaccines that my provider recommends?**

Yes, it is safe for you to receive these vaccines. You can reduce risks for respiratory infections and COPD complications by getting the flu vaccine every year and other vaccines that your provider recommends.

- **My doctor said the breathing test showed that I only have small percent of lung function. What does that mean?**

The breathing test to confirm your diagnosis of COPD can also tell how much your exhaled airflow is limited.

- **I take all the medications – why do I still get short of breath doing any little thing?**

Getting short of breath depends on how severe your COPD is, if you have any heart condition, and how well your muscles work. If you are still short of breath while taking all your medications, talk with your provider. Undergoing physical rehabilitation or pulmonary rehabilitation will improve your ability to function. Ask your provider to see which program you need and can qualify for.

- **My walk test showed my oxygen was above 90% – why am I still short of breath?**

Although low oxygen can contribute to shortness of breath, problems with airways in COPD can also make you short of breath. When the airways are narrow, the lungs cannot ventilate or move air adequately. Ventilation is needed to be able to move oxygen in and move used air or carbon dioxide out. Lack of good lung ventilation in COPD makes you short of breath. Use of inhaled medication can improve ventilation and reduce your shortness of breath. Increase physical function from rehabilitation can also reduce your shortness of breath.

XII. You Can Find More Information on COPD and Living with COPD Here:

- National Heart Lung and Blood Institute: <http://www.nhlbi.nih.gov/health/health-topics/topics/copd/>; 301-592-8573 (dial 7-1-1 for access to free Telecommunications Relay Services [TRS])
- U.S. Centers for Disease Control and Prevention: <http://www.cdc.gov/copd/>; 800-CDC-INFO (800-232-4636); TTY: (888) 232-6348

XIII. References

1. Joseph Finkelstein EC. Association of veteran status with COPD prevalence stratified by gender. *American journal of respiratory and critical care medicine*. 2013;187.
2. Morris MJ, Lucero PF, Zanders TB, Zacher LL. Diagnosis and management of chronic lung disease in deployed military personnel. *Ther Adv Respir Dis*. 2013;7(4):235-45. Epub 2013/03/09. doi: 10.1177/1753465813481022. PubMed PMID: 23470637.
3. The University of Chicago. COPD [cited 2021 April 13]. Available from: <http://asthma.bsd.uchicago.edu/sample-page/chronic-obstructive-pulmonary-lung-disease-copd/>.
4. VA Palo Alto Health Care System, U.S. Department of Veterans Affairs. Inhalers and pulmonary medications - patient education [cited 2021 April 13]. Available from: https://www.paloalto.va.gov/services/pulmonary/res_inhalers.asp.