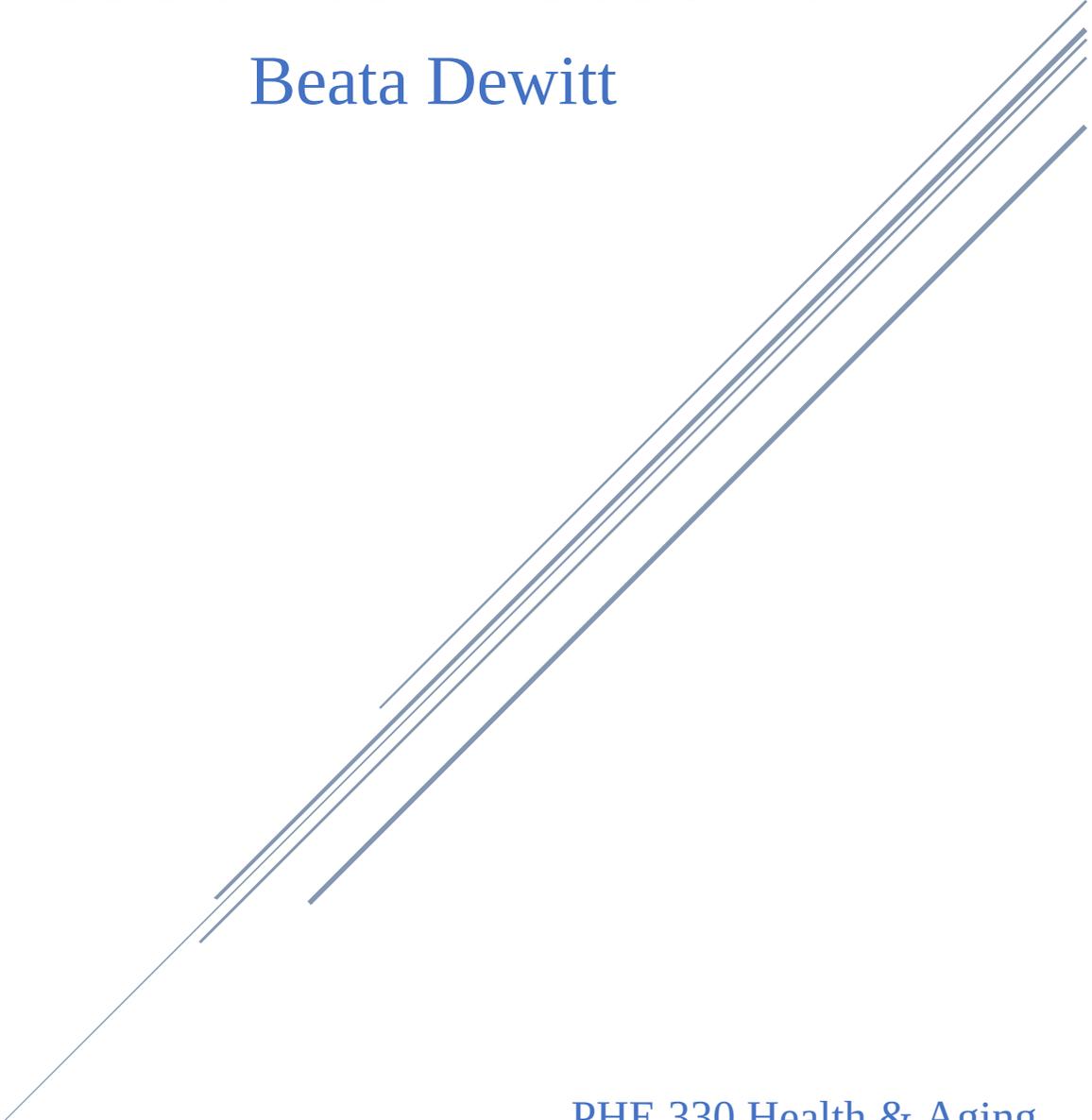


# Chronic Obstructive Pulmonary Disease Resource Notebook

Beata Dewitt



PHE 330 Health & Aging  
FALL 2020

## TABLE OF CONTEXT

	Page
What is Chronic Obstructive Pulmonary Disease?	2
<b><u>Informative Websites</u></b>	
Risk Factors	2
Conditions	3
Symptoms	3
Treatment	4
Prevention	4
<b><u>Resources</u></b>	
Organizations	5
Frequently Asked Questions	5
Social Support	6
Breathing Exercises	7
In-Home Care Providers	7
Summary of COPD Management	8
References	9

## What is Chronic Obstructive Pulmonary Disease?

Chronic Obstructive Pulmonary Disease also known as COPD is a chronic lung disease that blocks airflow from the lungs. Those who suffer with COPD may experience frequent coughs and wheezing as well as excess mucus. Having COPD can lead to more severe complications such as respiratory infections, lung diseases or lung cancer.

### Risk Factors

The screenshot shows a web browser window with the URL [cdc.gov/copd/basics-about.html](https://www.cdc.gov/copd/basics-about.html). The page content includes:

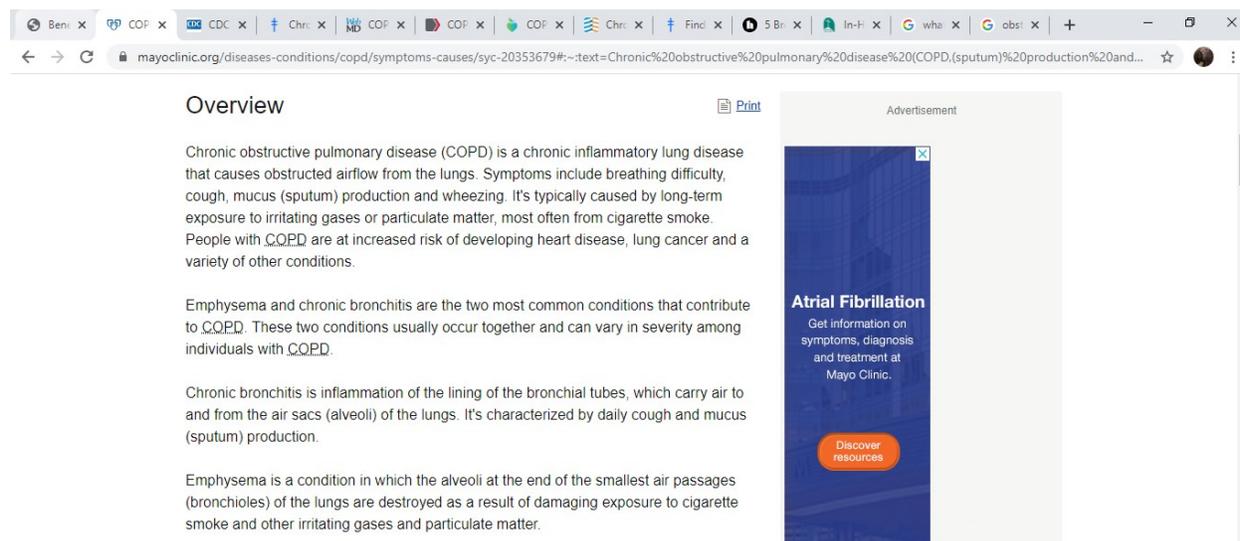
- Related Links:**
  - [Air Pollution & Respiratory Health](#)
  - [Air Quality, Fires, and Volcanic Eruptions](#)
  - [Asthma](#)
  - [Mold](#)
  - [National Center for Environmental Health \(NCEH\)](#)
  - [Smoking & Tobacco Use](#)
- Who has COPD?**

Chronic lower respiratory disease, primarily COPD, was the third leading cause of death in the United States in 2014.<sup>1</sup> Almost 15.7 million Americans (6.4%) reported that they have been diagnosed with COPD.<sup>2</sup> More than 50% of adults with low pulmonary function were not aware that they had COPD,<sup>3</sup> so the actual number may be higher. The following groups were more likely to report COPD in 2013.<sup>3</sup>

  - Women.
  - People aged 65 to 74 years and  $\geq 75$  years.
  - American Indians/Alaska Natives and multiracial non-Hispanics.
  - People who were unemployed, retired, or unable to work.
  - People with less than a high school education.
  - People who were divorced, widowed, or separated.
  - Current or former smokers.
  - People with a history of asthma.
- References:** (A box containing reference numbers 1, 2, and 3 is visible in the screenshot.)

An anatomical illustration of human lungs is shown on the right side of the page.

## Conditions



**Overview**

Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing. It's typically caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer and a variety of other conditions.

Emphysema and chronic bronchitis are the two most common conditions that contribute to COPD. These two conditions usually occur together and can vary in severity among individuals with COPD.

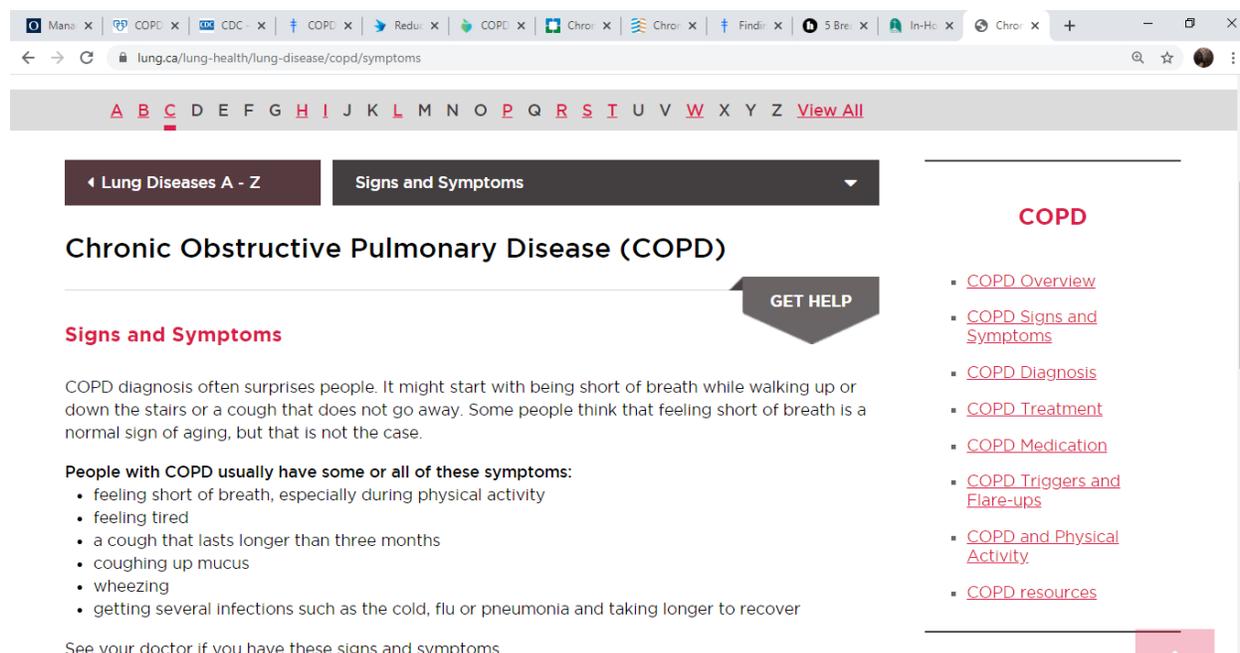
Chronic bronchitis is inflammation of the lining of the bronchial tubes, which carry air to and from the air sacs (alveoli) of the lungs. It's characterized by daily cough and mucus (sputum) production.

Emphysema is a condition in which the alveoli at the end of the smallest air passages (bronchioles) of the lungs are destroyed as a result of damaging exposure to cigarette smoke and other irritating gases and particulate matter.

**Advertisement**

**Atrial Fibrillation**  
Get information on symptoms, diagnosis and treatment at Mayo Clinic.  
Discover resources

## Symptoms



**Navigation:** A B C D E F G H I J K L M N O P Q R S T U V W X Y Z View All

**Signs and Symptoms**

**Chronic Obstructive Pulmonary Disease (COPD)**

**GET HELP**

**Signs and Symptoms**

COPD diagnosis often surprises people. It might start with being short of breath while walking up or down the stairs or a cough that does not go away. Some people think that feeling short of breath is a normal sign of aging, but that is not the case.

**People with COPD usually have some or all of these symptoms:**

- feeling short of breath, especially during physical activity
- feeling tired
- a cough that lasts longer than three months
- coughing up mucus
- wheezing
- getting several infections such as the cold, flu or pneumonia and taking longer to recover

See your doctor if you have these signs and symptoms.

**COPD**

- [COPD Overview](#)
- [COPD Signs and Symptoms](#)
- [COPD Diagnosis](#)
- [COPD Treatment](#)
- [COPD Medication](#)
- [COPD Triggers and Flare-ups](#)
- [COPD and Physical Activity](#)
- [COPD resources](#)

## Treatment

my.clevelandclinic.org/health/diseases/8709-chronic-obstructive-pulmonary-disease-copd/management-and-treatment

### How is chronic obstructive pulmonary disease (COPD) managed?

COPD treatment focuses on relieving symptoms, such as coughing and breathing problems, and avoiding respiratory infections. Your provider may recommend:

- **Bronchodilators:** These medicines relax airways. Delivered through a mist you inhale, [bronchodilators](#) help you breathe easier.
- **Anti-inflammatory medications:** Doctors commonly prescribe [steroids](#) to lower inflammation in the lungs. You inhale steroids in a mist form (nebulizer or inhaler) or take them by swallowing a pill.
- **Supplemental oxygen:** If you have low blood oxygen ([hypoxemia](#)), you may need a portable oxygen tank to improve your oxygen levels.
- **Antibiotics:** COPD makes you prone to lung infections, which can further damage your weakened lungs. Your doctor may prescribe [antibiotics](#) to stop a bacterial infection.
- **Vaccinations:** Respiratory infections are more dangerous when you have COPD. It's especially important to get shots to prevent [flu](#) and pneumonia.
- **Rehabilitation:** Rehabilitation programs focus on teaching effective breathing strategies to lessen shortness of breath and on conditioning. When maintained, fitness can increase the amount you can do with the lungs you have.
- **Anticholinergics** relax the muscle bands that tighten around the airways. This action opens the airways, letting more air in and out of the lungs to improve breathing. Anticholinergics also help clear mucus from the lungs. As the airways open, the mucus moves more freely and can therefore be [coughed out](#) more easily. Anticholinergics work differently and more slowly than fast-acting bronchodilators.

#### Related Institutes & Services

[Respiratory Institute](#)  
Explore lung, breathing and allergy disorders, treatments, tests and prevention services provided by the Cleveland Clinic Respiratory Institute.

#### More Heart Resources

[Find more Heart & Vascular Diseases & Conditions topics](#)

#### Related Health Information

[COPD Overview](#)  
[COPD Resources](#)  
[COPD Glossary of Terms](#)  
[How Your Lungs Work](#)  
[Preventing Respiratory Infection and Avoiding Irritants](#)  
[Understanding COPD](#)  
[When to Call the Doctor About Your COPD Symptoms](#)

## Prevention

Nearly all cases of COPD can be prevented. Practice these preventive measures to reduce your risk of developing COPD.

### Quit Smoking

Almost all COPD cases are caused by cigarette smoking. Never smoking, or quitting if you already smoke, are the single most important steps you can take to reduce your risk of developing COPD. This preventive measure is particularly important if you have family members who developed COPD at a young age (in their 30s or 40s).

### Manage Environmental Exposures

Try to avoid or limit exposure to:

- Secondhand smoke
- Dust
- Fumes
- Environmental smoke (such as smoke from burning wood, charcoal, crop residue)

Be aware of air pollution alerts. Avoid outdoor activities when air quality is particularly poor. Do not exercise in areas where levels of car exhaust are high.

### Avoid Close Contact With People Who Have Respiratory Infections

Repeated lower respiratory infections, [pneumonia](#), and [acute bronchitis](#) can produce scarring. This is particularly true in young children. Scarring contributes to the development of COPD. Whenever possible, try to avoid close contact with people who have contagious respiratory infections. Get a [pneumonia vaccination](#) if you are 65 years or older, or have risk factors for pneumonia. Make sure you get yearly [flu shots](#).

### Have a Blood Test to Determine Levels of Alpha-1-Antitrypsin

If someone in your family developed COPD but never smoked, or developed the disease at an early age, you may have a genetic defect that increases your risk of the disease. You should consider having a blood test to measure levels of alpha-1-antitrypsin. This is an important protein that helps protect the lungs from damage due to inflammation. Low levels of this protein increase your risk of developing COPD. You should discuss this with your doctor.

## Organizations

everydayhealth.com/copd/guide/resources/

MENU EVERYDAY HEALTH NEWSLETTERS SEARCH

### Organizations

[American College of Chest Physicians \(CHEST\)](#)

CHEST provides education resources related to [COPD](#), including information on symptoms, causes, risk factors, diagnosis, and treatment.

[American Lung Association](#)

The American Lung Association website offers information about lung health education and research, as well as programs and services for people living with conditions such as COPD.

[COPD Foundation](#)

A not-for-profit organization created in 2004, the COPD Foundation supports research, education, and advocacy programs. Its website offers an online community for patients and caregivers affected by COPD, as well as information on the disease and a calendar of relevant events.

[National Emphysema Foundation](#)

The NEF website provides regularly updated news and information on research and treatments related to [emphysema and COPD](#). Its archives include articles on prevention, living with COPD, and healthy habits.

FIND OUT ABOUT MAKING A CHANGE IN YOUR SCHIZOPHRENIA TREATMENT PLAN.

LEARN MORE

© Janssen Pharmaceuticals, Inc. 2020

Advertisement

MOST HELPFUL

[What Are Breathing Difficulties? Symptoms, Causes, Diagnosis, Treatment, and Prevention](#)

[A Guide to Living With COPD During the COVID-19 Pandemic: Help, Resources, and Making a Personal Checklist](#)

AD Tips + advice to help you

## Frequently Asked Questions

The screenshot shows a web browser window with the URL [foundation.chestnet.org/lung-health-a-z/chronic-obstructive-pulmonary-disease-copd/?Item=Resources](https://foundation.chestnet.org/lung-health-a-z/chronic-obstructive-pulmonary-disease-copd/?Item=Resources). The page title is "Frequently asked questions about COPD". The navigation bar includes "Lung Health A-Z", "News & Events", and "About Us". A "DONATE" button is visible in the top right. The main content area lists several questions with expandable answers:

- Do I have COPD?
- How severe is my COPD?  
Health care providers use breathing tests and the GOLD classification system to grade COPD severity. The scoring system can be helpful, but it's not always accurate. The more important question to ask yourself and to discuss with your provider is, "How does COPD keep me from doing what I want to do?"
- Am I up to date on my immunizations?
- What are the side effects of my medications?
- What should I do if my breathing gets worse?
- What should I do if I'm traveling? Do I need oxygen for an airplane flight?

## Social Support

The screenshot shows a web browser window with the URL [lung.org/lung-health-diseases/lung-disease-lookup/copd/living-with-copd/finding-support](https://lung.org/lung-health-diseases/lung-disease-lookup/copd/living-with-copd/finding-support). The page title is "Social Support". The left sidebar contains a menu with the following items:

- Learn About COPD
- COPD Causes and Risk Factors
- COPD Symptoms and Diagnosis
- Treating COPD
- Living with COPD
- COPD Population Screener
- Protecting Your Lungs
- COPD Management Tools
- Nutrition and COPD
- Physical Activity and COPD
- COPD and Emotional Health
- Intimacy During COPD Treatment
- Planning for the Future with COPD

The main content area includes the following text:

Some of the most common questions you may not have thought of before. Explore these resources to help you connect with the support you need.

### Social Support

Social support means you have friends, family and other people to turn to when times are hard. When you connect with others, problems seem more manageable and usually your overall quality of life improves. Whether you are having a good day or bad day, chances are someone else has been exactly where you are or wants to lend a helping hand.

- [Lung Helpline](#)  
Our Lung Helpline is open seven days a week and is staffed by experienced registered nurses, respiratory therapists and certified tobacco treatment specialists. We are here to provide you with the support you need and the answers you are looking for.
- [Living with COPD Community on Inspire](#)  
Connect with others, share experiences and learn from friends in this free online forum for people facing lung disease. Our Living with COPD virtual support group can help build your support network and give you a place to chat with peers about how COPD is affecting you.
- [Support Groups](#)  
If you feel alone and isolated, support groups can help. It feels good to talk with others who understand, which has a positive impact on your health. Explore the American Lung Association support groups such as the [Better Breathers Club](#) and other groups in your area.

## Breathing Exercises

healthline.com/health/copd/breathing-exercises#1-pursed-lip-breathing

SUBSCRIBE healthline Search Healthline



According to the Cleveland Clinic, pursed lip breathing has a range of benefits:

- It's been shown to reduce how hard you have to work to breathe.
- It helps release air trapped in the lungs.
- It promotes relaxation.
- It reduces shortness of breath.

Practicing this technique 4 to 5 times daily can help. Here's how to practice pursed lip breathing:

- While keeping your mouth closed, take a deep breath in through your nose, counting to 2. Follow this pattern by repeating in your head "Inhale, 1, 2." The breath doesn't have to be deep. A typical inhale will do.
- Put your lips together as if you're starting to whistle or blow out candles on a birthday cake. This is known as "pursing" your lips.
- While continuing to keep your lips pursed, slowly breathe out by counting to 4. Don't try to force the air out, but instead breathe out slowly through your mouth.

**Exercise tip:** Pursed lip breathing is best for performing strenuous activities, such as climbing stairs.

**Coordinated breathing**



ASK YOUR DOCTOR IF 3-IN-1 TRELEVOY IS RIGHT FOR YOU. Results may vary. TRELEVOY does not replace a rescue inhaler. [LEARN MORE](#)

**IMPORTANT SAFETY INFORMATION**  
Do not use TRELEVOY to relieve sudden breathing problems. Always have a rescue inhaler with you for fast-acting symptoms. Do not use TRELEVOY if you have a severe allergy to milk proteins or are allergic to any of the ingredients in...

## In-Home Care Providers

seniors can get all the help they need.

### In-home Care Providers Help Seniors with COPD

Living with COPD and going through the treatment can take a lot of time and energy from your aging parent. It's very important that they take the medication prescribed properly, and a [home care provider](#) can remind them when to do so. The [home care provider](#) can also accompany the aging adult to appointments with the doctor and with a respiratory therapist for their breathing treatments.

Another way that [home care providers](#) can assist your elderly parent with COPD is to encourage them to be active and get a little regular exercise in. While it's hard for many seniors to get up and going on their own, a home care provider gives that extra incentive to participate in some regular daily activity. When your aging parent is having a bad day, the home care provider will take care of the housework, meals, laundry and more. It will give you great peace of mind to know that a professional is looking out for your elderly mom or dad as they struggle with COPD.

A diagnosis of COPD doesn't have to slow your aging mom or dad down, especially when they follow the treatment as recommended by their doctor. With a [home care provider](#) at their side, they can enjoy a fine life as they age in place at home.

## “Management of chronic obstructive pulmonary disease: A review focusing on Exacerbations”

By Suzanne G Bollmeier, Pharm.D, & Aaron P Hartmann, Pharm.D

<https://academic.oup.com/ajhp/article/77/4/259/5700876>

Chronic Obstructive Pulmonary Disease is a chronic respiratory disease that affects 16 million adults in the United States. The incidence of COPD is high for those who are over the age of 40, and who may have a history of smoking or tobacco use. Due to airway obstruction and persistent respiratory symptoms, COPD Exacerbations are burdens to COPD patients as symptoms may become more severe. Studies suggest that COPD Exacerbations can cause lung function to decline as well as slow recovery. Exacerbations can be detrimental to someone's health status, as most COPD patients are hospitalized. Although there are treatments to treat symptoms for COPD, Exacerbations can increase the rate of hospital readmissions and mortality. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) works to find prevention

measures and management for Chronic Obstructive Pulmonary Disease. Management strategies for COPD include Pharmacotherapy, promotion of smoking cessation, pulmonary rehabilitation, and regular check-ups for disease progression. Bronchodilators are significant to COPD management as it's an initial therapy for all COPD cases in which patients can learn inhaler techniques. Studies show Inhaled treatments such as long-acting muscarinic antagonist (LAMA) and long-acting  $\beta$  2-agonist (LABA) can help improve lung function. Glycopyrronium and Indacaterol can help COPD patients as it can reduce Exacerbations by 31%.

## **References**

Basics about COPD (<https://www.cdc.gov/copd/basics-about.html> )

Bollmeier, S.G. & Hartmann, A.P. (2020). Management of chronic obstructive pulmonary disease: A review focusing on exacerbations. *American Journal of Health-System Pharmacy*, 11(4), 259-268.

Breathing Exercises with COPD

(<https://www.healthline.com/health/copd/breathing-exercises>)

Chronic Obstructive Pulmonary Disease ([https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679#:~:text=Chronic%20obstructive%20pulmonary%20disease%20\(COPD,\(sputum\)%20production%20and%20wheezing.](https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679#:~:text=Chronic%20obstructive%20pulmonary%20disease%20(COPD,(sputum)%20production%20and%20wheezing.))

Chronic Obstructive Pulmonary Disease (COPD): Management and Treatment (<https://my.clevelandclinic.org/health/diseases/8709-chronic-obstructive-pulmonary-disease-copd/management-and-treatment>)

Chronic Obstructive Pulmonary Disease (COPD) Resources

(<https://foundation.chestnet.org/lung-health-a-z/chronic-obstructive-pulmonary-disease-copd/?Item=Resources>)

COPD Resources (<https://www.everydayhealth.com/copd/guide/resources/>)

COPD Symptoms and Diagnosis (<https://www.lung.org/lung-health-diseases/lung-disease-lookup/copd/symptoms-diagnosis>)

Finding COPD Support (<https://www.lung.org/lung-health-diseases/lung-disease-lookup/copd/living-with-copd/finding-support>)

In-Home Care and Seniors with COPD (<https://www.solutionsforlivingathome.org/blog/home-care-and-seniors-copd#:~:text=Another%20way%20that%20home%20care,in%20some%20regular%20daily%20activity.>)

Reducing your Risk of Chronic Obstructive Pulmonary Disease (COPD)

(<https://www.winchesterhospital.org/health-library/article?id=19328>)