A Patient’s Guide to Chronic Obstructive Pulmonary Disease (COPD)
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What is COPD?

Chronic Obstructive Pulmonary Disease (COPD) affects the airways in the lungs, the lung tissue, or both. This disease slowly advances over time and can affect your way of life.

COPD cannot be cured. However, treatment can help improve your symptoms, prevent worsening of your disease, and help you enjoy your life.

Facts About COPD

- COPD affects 5 percent of the adult population.
- COPD is the third leading cause of death in the United States.
- The leading cause of COPD is long-term cigarette smoking.
- It takes years for COPD symptoms to develop. Many people do not seek medical help until symptoms of COPD begin to keep them from normal activities.
- Most people begin feeling symptoms between 50 and 70 years of age.

Two diseases make up COPD; they are emphysema [em-fuh-zee-muh] and chronic bronchitis [bron-ky-tis].

How the Lungs Work

When lungs are healthy, people breathe in fresh air, which contains oxygen. The oxygen is used by the body and then we breathe out stale air containing carbon dioxide. Carbon dioxide is what is left after the body uses the oxygen.
Oxygen Travel in the Body

Air flows freely into the nose and mouth, and then into the windpipe (trachea).

Air travels through the large airways (bronchial tubes), into the small airways (bronchioles), then into air sacs (alveoli) deep in the lungs.

The oxygen within the air sacs of the lungs is picked up by blood vessels. The blood carries the oxygen to all the parts of your body.

As the oxygen moves from the air sacs to the blood vessels, carbon dioxide moves from the blood vessels to the air sacs and is blown out of the lungs.

Healthy lungs allow for air to move freely in and out; most of the time we are not even aware of our breathing.

Lungs with Chronic Bronchitis

Chronic bronchitis affects the large airways (bronchial tubes). The bronchial tubes become swollen and inflamed, and create large amounts of mucus. This swollen tissue and mucus can make the airways smaller, making it difficult to breathe. It can also be very hard to cough up the mucus and can lead to infections in the airways.
Lungs with Emphysema

Emphysema affects the small airways (bronchioles) and the air sacs. The airways and air sacs become damaged and lose their elasticity. They become worn out and do not return to their normal size. This causes stale air to become trapped inside the air sacs, making it more challenging for fresh air to come in and stale air to go out. As a result, the blood vessels around the air sacs also become damaged. Fresh air is prevented from reaching the blood stream.

Causes of COPD

The most common cause of COPD is cigarette smoking. Other causes of COPD are environmental or genetic. Environmental causes include:

- Dust and chemicals (may be work-related)
- Indoor air pollution
- Secondhand smoke

Frequent childhood respiratory infections may lead to breathing problems in adults.

COPD Symptoms and Diagnosis

Symptoms of COPD include:

- Shortness of breath with activity
- Frequent cough
- Cough with mucus (phlegm)
- Becoming tired easily
- Limiting your activities because you get short of breath or tired more easily

Patients may also have asthma-like symptoms, such as wheezing.
Tell your doctor about any breathing difficulties you are having, as well as how your symptoms are affecting your activities of daily living. This helps your doctor to diagnose your COPD.

A variety of medical tests are used to confirm you have COPD. These tests will help your doctor decide the best treatment for you. Examples of common tests include:

- **Pulmonary Function Test** (also called Lung Function Test or Spirometry [spy-rom-uh-tree]). This test measures the amount of air in your lungs (lung volume) and how well you are able to move the air in and out.
- **Chest X-Ray.** The X-ray will show your lungs, heart and blood vessels.
- **Computerized Tomography (CT) Scan.** Similar to the chest X-ray, a CT scan of your chest may provide the doctor with more advanced pictures of your lungs than a chest X-ray.
- **Arterial Blood Gas (ABG) Test.** This blood test measures how much oxygen and carbon dioxide is in your blood. The ABG will help the doctor understand how well you are getting oxygen to your body, and if you need more oxygen.
- **Oximetry [ok-sim-i-tree].** This test measures the oxygen saturation in the blood. This test gives less information than the ABG, but can be very useful in monitoring your oxygen levels and determining if you need oxygen. If you are using oxygen, the oximetry test can determine if your oxygen prescription needs to be increased.
- **Electrocardiogram (ECG, EKG).** Shortness of breath may be caused by heart problems. The EKG may help to determine if there are any heart problems.
- **Sputum Examination.** If you are coughing up mucus (phlegm), your doctor may want to have it tested. Testing sputum can help determine if there is an infection that your doctor will want to treat.

In many cases, patients do not realize they have this progressive disease. A patient may not see a doctor until symptoms have started to affect his or her way of life.
COPD Stages

Your COPD diagnosis is categorized by stages based on your symptoms and test results.

Stage 1

• You may get short of breath when moving quickly or walking up slight inclines.
• Generally you have no cough or mucus at this stage.
• Most people do not realize they have a lung problem at this stage.
• You have about 80 percent or more of normal lung function.

Stage 2

• You may walk slower than other people your age on a flat surface.
• You may become short of breath walking on flat surface.
• You may need to stop and catch your breath when using your energy.
• You may or may not have a cough or sputum at this stage.

Stage 3

• You have to stop to catch your breath after only a few minutes of walking on a level surface.
• Exercise or exertion is very difficult at this point.
• You become tired easily and your quality of life starts to suffer.
• You have about 30 to 50 percent of normal lung function.

Stage 4

• This is the most severe stage of COPD. Shortness of breath and fatigue result in significant loss of quality of life.
• You are too breathless to leave the house.
• You may become breathless doing everyday activities.
• Trouble breathing may become life-threatening during flare-ups. You may have as many as 2 to 3 hospitalizations in a one-year period.
• You have less than 30 percent of normal lung function.

COPD patients can also have “flare-ups.” This happens when day-to-day symptoms of COPD become worse.

• Many people first seek medical attention at this stage because of symptoms.
• You have about 50 to 80 percent of normal lung function.
Living Well With COPD

Living with COPD does not mean living a limited life. There is no cure for COPD and lung damage cannot be repaired, but symptoms can be controlled. Despite being diagnosed with COPD, your quality of life can be improved, and the length of your life can be extended. With help from your health care team, your COPD can be managed and you can live a full life.

The following pages focus on information that will help you live well through managing your COPD.

Get Routine Checkups

Because COPD is a chronic condition that keeps getting worse, it is important to schedule regular checkups with your doctor. Your doctor may repeat some tests. This will help to determine if your treatment needs to change. Checkups may include the following tests:

- Spirometry
- Arterial Blood Gases
- Oximetry
- Chest X-ray
- EKGs

Avoid Triggers

COPD can be challenging to manage. Avoiding the things that cause your COPD symptoms to get worse, known as triggers, can help. Triggers include cigarette smoke, dirt, dust, and other irritants.

Helpful ways to avoid triggers include:

- Get your flu and pneumonia vaccines.
- Keep your house clean and free of dust.
- Avoid fumes, smoke, and strong odors.
- Stay indoors when air pollution levels are high.
- Protect your nose and mouth during cold and windy weather.
- Avoid dampness because it can promote mold growth.

Flu and Pneumonia

The flu is a very serious illness, especially if you have COPD. The flu can increase your chances of getting pneumonia. To avoid getting the flu, talk to your doctor about getting the flu shot. The flu shot is given every year. You may also talk to your doctor about getting a pneumonia vaccine. The pneumonia vaccine is given every 5 to 7 years.

Do your best to avoid the flu by staying away from people with colds and the flu. You should also wash your hands frequently and use alcohol-based sanitizer gel for your hands when needed.
Quit Smoking

If you are still smoking, quitting is the best thing you can do to help improve your life with COPD. Smoking impacts health in many ways including:

- Each year 443,000 Americans lose their lives to smoking-related illnesses. This represents 1 in 5 deaths, making smoking the leading preventable cause of death in the United States.
- Chemicals and particles from cigarette smoke irritate airways and damage lung tissue. The longer you smoke, the more damage you cause. Increased lung damage causes increased symptoms of COPD and increased health issues.

What will happen when you quit smoking?

- Your health will start to improve on the same day you smoke your last cigarette.
- Within eight hours, the level of oxygen in your blood will go up.
- Within 2 weeks to 3 months, blood and oxygen will move through your body better and your lung function will get better.
- Within 1 to 9 months, coughing, fatigue and shortness of breath decreases. It will be easier to clear mucus from your airways.

You don’t have to quit alone. You may be more successful in quitting if you ask for help from others. Talk to your doctor about options that may be helpful.

Options include:

- Nicotine replacement products
- Oral medications

For more information contact:

- St. Peter’s Health Partners Smoking Cessation program, “The Butt Stops Here:”
  St. Mary’s Hospital
  1300 Massachusetts Ave., Troy
  (518) 268-5727
  Class meets on Tuesday evenings.

- St. Peter’s Cancer Care Center
  317 South Manning Blvd., Albany
  (518) 525-1827
  Class meets on Monday evenings.

- New York State Smokers’ Quit Line
  1-866-697-8487 or visit
  www.nysmokefree.com
COPD Medications

Understanding your medicines and how to take them is a very important step toward living better with COPD. There are a number of different medications. Some medications may be taken as a pill, and others may include using an inhaler or nebulizer. If the cost of medications is a concern for you, tell your doctor.

Medications must be taken correctly in order for them to help you. Your health care provider will help you to be sure you are taking them correctly. If you are having problems, tell your doctor. He or she will be able to make sure you have the medications that will work the best for you.

COPD medications work to open the airways in one of two ways:

- Relaxing tight muscles around the airway. Medicines used for this purpose are anticholinergics and Beta2-agonist (bronchodilators).
- Decreasing swelling in the airways. Medicines used for this purpose are corticosteroids.

These medications are available in different forms. They can be provided to you as a:

- Metered-dose inhaler
- Dry powder inhaler
- Liquid in a nebulizer

The most commonly used medications are generally in one of two groups: maintenance medications or rescue medications.

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<thead>
<tr>
<th>Maintenance Medications</th>
<th>Known as long-acting medications</th>
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<tr>
<td><strong>What they do</strong></td>
<td>• Help to prevent you from having a flare-up</td>
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<td></td>
<td>• Control symptoms</td>
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<td><strong>How to take them</strong></td>
<td>• It is very important to take maintenance medications every day, even if you do not have any symptoms.</td>
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<td></td>
<td>• These medicines are not for quick relief, and will not help if you are having a flare-up.</td>
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<tr>
<td><strong>Side Effects</strong></td>
<td>These medications can cause:</td>
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<td>(Side effects from these medications are generally mild, but you should always let your doctor know if you are having side effects.)</td>
<td>• Dizziness</td>
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<td>• Headache</td>
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<td>• Drowsiness</td>
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<td>• Dry mouth</td>
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<td>• Shaking</td>
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<td>• Nervousness</td>
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<td>• Fast heartbeat</td>
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<td>• Increased blood pressure</td>
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<td>• Upset stomach</td>
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<td><strong>Rescue Medications</strong></td>
<td><strong>Known as short-acting medications</strong></td>
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| **What they do** | • Help you when you are having a flare-up of symptoms  
• Usually work in 5 to 15 minutes, and last 4 to 8 hours (how quick and how long the medications lasts depends on the prescription) |
| **How to take them** | • These medicines are to be taken when you have increased symptoms or flare-ups. They are taken along with your maintenance medications.  
• Do not take more medication than prescribed. If you are having increased symptoms and your rescue medications are not helping relieve symptoms you need to call your doctor. |
| **Side Effects** | These medications can cause:  
(Side effects from these medications are generally mild, but you should always let you doctor know if you are having side effects.)  
• Shaking  
• Nervousness  
• Fast heartbeat  
• Increased blood pressure  
• Dry mouth  
| | • Dizziness  
• Drowsiness  
• Headache  
• Upset stomach |

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<th><strong>Steroids</strong></th>
<th>Help to reduce inflammation and swelling of the airways</th>
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<tr>
<td><strong>What they do</strong></td>
<td>Help to reduce inflammation and swelling of the airways</td>
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</table>
| **How to take them** | • Take as an inhaled medication or in pill form.  
• If you are on a high dose, these medications need to be decreased slowly. Never stop these medications quickly.  
• If you are taking an inhaled steroid, be sure to rinse your mouth and spit after use to prevent yeast infection.  
• These medications are not rescue medications and are not used for sudden breathing problems. |
### Side Effects
(Let your doctor know if you are having side effects.)

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<td>• Dizziness</td>
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<td>• Headache</td>
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<td>• Decreased appetite</td>
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<td>• Stomach problems</td>
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<td>• Mood changes</td>
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<td>• Weight gain</td>
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### Other Medications
- **Oxygen Therapy.** Oxygen is needed to help your body function in the right way. A patient with lung disease may need more oxygen than what is provided in the environment. You may need extra oxygen following an infection, a flare-up, or if your disease gets worse. Oxygen therapy may be needed long term or short term such as only with exercise.
- **Expectorants.** These medications help to keep mucus thin and easier to clear from the airways.
- **Steroids.** These medications help to reduce inflammation and swelling of the airways.
- **Antibiotic.** Used to treat infections.
Medication Devices

Inhalers

A common way of taking COPD medication includes inhalers. The inhaler gives a measured dose of medication that you breathe into your lungs. There are a number of different inhalers and all types do not work the same way. The most commonly prescribed devices are the Metered Dose Inhaler (MDI) and the Dry Powder Inhaler (DPI).

If you are not sure how to use your inhaler, ask your health care provider to show you how to use and care for the type of inhaler you have.

Tips for Taking Inhaled Medications

- When you are finished taking your maintenance medications, rinse your mouth and spit to prevent yeast infections.
- If you are using a short-acting inhaler and a maintenance inhaler, always use the short-acting inhaler first.
- Check the dose counter before taking your inhaler to be sure there is a dose available. Also check the expiration date.
- Review the patient information page in the medication insert for instructions and pictures on how to take your inhaler.
- Ask your pharmacist to show you how to take your inhalers when picking them up.
- Take your MDI with a spacer, if available to you.

Nebulizers

A nebulizer is a machine that changes liquid medication into a mist that can be inhaled (breathed into your lungs). It may be used in addition to or instead of an inhaler. If a nebulizer is prescribed to you, your health care provider can show you how to use it.
Pulmonary Rehabilitation

Pulmonary rehabilitation may help you lessen the effects of COPD. This type of rehabilitation helps your body learn what it takes to have more energy and feel less short of breath.

Pulmonary rehabilitation can provide you with:

- Safe and monitored exercise training
- Healthy eating tips
- Energy saving tips
- Tips for controlling stress
- Breathing and coughing tips
- Education on improving function
- Help to quit smoking
- General COPD education and ways to cope
- Emotional support

You may greatly benefit from pulmonary rehabilitation. It is important to discuss this type of program with your doctor.

Pulmonary Rehabilitation Programs

St. Peter’s Health Partners has three outpatient pulmonary rehabilitation programs in the Capital Region. Call one of our three locations for more information:

- St. Mary’s Hospital, located in Troy.
  Call (518) 268-5558.
- St. Peter’s Hospital, located in Albany.
  Call (518) 525-5916.
- Sunnyview Rehabilitation Hospital, located in Schenectady.
  Call (518) 386-3688.
Guide to Managing Your COPD Daily

Easy steps to help manage your COPD each day will help you live your life to its fullest.

Every day:
- Take daily medicines/inhalers.
- Use oxygen as prescribed.
- At all times avoid cigarette smoke and other inhaled irritants.
- Continue regular exercise.
- Eat a healthy diet.
- Drink plenty of fluids, especially water.
- Get plenty of rest.
- Reduce stress.

The goals of COPD treatment include:
- Relieving your symptoms
- Slowing the progress of the disease
- Improving your exercise tolerance (your ability to stay active)
- Preventing and treating complications
- Improving your overall health
- Sleeping well at night
- Having an appetite that is good or normal for you

CAUTION! Call your doctor if you have:
- More shortness of breath than usual
- More coughing than usual
- Increased or thicker phlegm/mucus
- A change in color of phlegm/mucus
- The feeling of a “chest cold”
- To use your quick relieve inhaler/nebulizer more often
- Less energy for daily activities
- Trouble walking or weakness
- Lost the ability to do any activities because of breathing problems
- To increase the number of pillows needed to sleep or need to sleep in a chair
- A temperature above 101°F (38.3°C)
Call your doctor if your rescue medicine is not helping your breathing.

Important Phone Numbers:

Doctor:

Specialist:

Other:

EMERGENCY! Call 911 and have someone take you to the Emergency Department (ED) if you:

- Have severe shortness of breath/wheezing/chest tightness at rest or after taking medications/treatments
- Have a fever with shaking chills
- Are feeling increased confusion or are very drowsy
- Have headaches with irritability
- Have chest pains
- Are coughing up blood
- Have blue lips or fingernails
Journal

Keeping a journal will help you keep track of flare-ups, ED visits, and hospital stays. This important information will help your doctor understand how well you are managing your COPD or if changes in your medications are needed. Be sure to include:

- the date and year of any COPD flare up
- the date and year of any urgent doctor office visit, ED visit or hospital stay

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Notes

Use this section to keep notes and a list of questions you have for your doctor at your next checkup.