



**Full Re-Hospitalization  
Intervention Patient  
Education Manual  
Presented by PEL/VIP, LTD**



**Pneumonia Education  
Booklet  
Presented by PEL/VIP, LTD**

# Understanding Pneumonia



## Common Causes of Pneumonia

Germes called bacteria or viruses usually cause pneumonia. Pneumonia usually starts when you breathe certain germs into your lungs. You may be more likely to acquire Pneumonia after having a cold or the flu. Illnesses make it hard for your lungs to fight infection, so it is easier to catch pneumonia. Having a long-term disease like asthma, Coronary heart disease, cancer, or diabetes can make you more likely to get pneumonia.



## What Pneumonia does...

Pneumonia causes inflammation in the air sacs of the lungs. The air sacs become filled with fluid so oxygen can't reach your blood. Lack of oxygen makes you short of breath.

Signs and symptoms of pneumonia can be very different, depending on any other

conditions you may have. Often, people acquire pneumonia after they have had the flu or an upper respiratory tract infection such as a cold. Most people experience a few, but not all, of the following symptoms of pneumonia:

- ☐ Fever
- ☐ Chills
- ☐ New/increased cough or mucus production (pay attention to green, yellow, or bloody mucus)
- ☐ Shortness of Breath
- ☐ Chest pain that occurs as you breathe or cough
- ☐ Loss of appetite
- ☐ Exhaustion

If you suddenly feel worse after a cold or the flu and have Pneumonia symptoms, do not hesitate to seek medical care right away!



## How is Pneumonia Diagnosed and What is the Treatment?

Your doctor will ask you about your symptoms and perform a physical exam. Your doctor may order a chest X-ray and a blood test. Your doctor may also test mucus from your lungs to find out what germ is causing your pneumonia.

Finding the exact germ can help your doctor choose the best medicine to use for your treatment.

There are a few different ways to treat pneumonia:

- ☐ Your doctor may give you antibiotics
- ☐ Be sure to get lots of rest
- ☐ Be sure to drink lots of fluids (if not on fluid restriction)

Also, **DO NOT SMOKE!** If your cough keeps you awake at night, talk to your doctor about using cough medicine. Drinking fluids, especially water, keeps you from becoming dehydrated. It also helps loosen mucus in your lungs.



## **Pneumonia Prevention**

The germs that cause pneumonia may be contagious and could be spread through coughing and sneezing. Here are some good habits to help you prevent pneumonia.



## **Wash Your Hands**

- ☐ Wash your hands often with warm soapy water
- ☐ Lather AND scrub your hands for AT LEAST 20 seconds
- ☐ Wash between your fingers and under your nails
- ☐ Rinse your hands for 10 seconds or more
- ☐ Use alcohol based gel for handwashing when soap and water are not available



## **Maintain Good Oral Hygiene**

- ☐ Proper oral care is important for reducing and eliminating the bacteria in the mouth
- ☐ Perform oral care twice a day
- ☐ Use non-alcohol mouthwashes as they are less drying to mouth tissues
- ☐ Use toothpaste, floss, interdental cleaners, and/or waterpiks
- ☐ Use tap water or saline when toothpaste is not available or appropriate
- ☐ Brush the teeth and tongue

- ☐ Clean the gums, regardless of the presence or absence of teeth
- ☐ Remove dentures at bedtime, clean, and soak in denture-cleaning solution
- ☐ Avoid products with glycerin and hydrogen peroxide



## Deep Breathing

- ☐ Controlled coughing helps to get rid of excess mucus
  - After taking a few deep breaths, breathe in slowly through the nose and cough twice with one breath. The first cough will help to loosen the mucous in your lungs. The second will help to bring it up and out
- ☐ HUFF-cough technique
  - The HUFF-cough technique combines breathing and coughing. Sit in a chair and take three to five deep slow breaths to prepare. Next, inhale normally, open your mouth and tighten the muscles of your torso from chest to abdomen. Rapidly force air from the lungs, pushing out a whispered "huff" sound. Doing this may cause you to cough. If mucus is loosened, spit it out and continue.
- ☐ Incentive Spirometry helps to expand your lungs and keep them active.
  - **Breathe in slowly** and as deeply as possible
  - Hold your breath as long as possible. Then exhale slowly.
  - Rest for a few seconds and repeat at least 10 times every hour.



## Other Tips to Help with Pneumonia Prevention

- ☐ Cough or sneeze into a tissue
- ☐ Stay away from people who have the flu or colds, or in general are sick.
- ☐ Get routine vaccines and flu shots
- ☐ Eat healthy
- ☐ Sleep/rest



## **After Leaving the Facility**

Once you are home, you should call your doctor if you have one or more of these symptoms.

- ☐ Shortness of breath that is worse or shortness of breath at rest.
- ☐ Feeling tired all the time, which keeps you from your normal activities.
- ☐ Dry or wet hacking cough and/or production of green/yellow/bloody mucus
- ☐ Harder to breathe while lying down or unable to rest.
- ☐ Feeling dizzy or lightheaded.
- ☐ Fever
- ☐ Chills
- ☐ Loss of Appetite
- ☐ Confusion

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Pneumonia Symptom Management

Primary Care Physician \_\_\_\_\_ Phone # \_\_\_\_\_

Pulmonologist \_\_\_\_\_ Phone # \_\_\_\_\_

If you have several symptoms in a category, follow the steps in the "What to do" box.

Green Zone – All Clear	Yellow Zone – Caution	Red Zone - Danger
<ul style="list-style-type: none"> <li>No shortness of breath</li> <li>No chest pain</li> <li>No fever above 100</li> <li>Normal appetite</li> <li>Drinking fluids</li> </ul>	<ul style="list-style-type: none"> <li>Increased shortness of breath</li> <li>Fever over 101</li> <li>Increased coughing with or without sputum</li> <li>Change in sputum color if productive</li> <li>Inability or desire to eat/drink liquids</li> <li>Feeling tired or weak, activity level decreases</li> <li>Diarrhea</li> <li>Chills</li> </ul>	<ul style="list-style-type: none"> <li>Having difficulty breathing (without any relief from change in position)</li> <li>Chest pain</li> <li>Nausea and vomiting</li> <li>Coughing up blood</li> <li>Confusion</li> </ul> <p><b>**Symptoms may be worse with existing lung disease**</b></p>
What to do	What to do	What to do
<ul style="list-style-type: none"> <li>Maintain proper oral care</li> <li>Practice hand washing often</li> <li>Take deep breaths throughout the day</li> <li>Maintain regular daily activities</li> <li>Stay hydrated</li> </ul>	<ul style="list-style-type: none"> <li>Your symptoms indicate your doctor needs to review your condition. Your doctor may adjust your medications</li> <li>Call your doctor and request an appointment as soon as possible within the next 2 days</li> </ul>	<ul style="list-style-type: none"> <li>Your symptoms indicate you need attention right away</li> <li>Call your doctor now and request to be seen within 4 hours or go to the emergency room</li> </ul>
Notes _____ _____ _____ _____ _____ _____ _____	Recommendations from your Doctor	



# CHF Education Booklet

## Presented by PEL/VIP, LTD



# Understanding Heart Failure



## Common Causes of Heart Failure

Your heart's pumping power is weaker than normal. It fails to deliver the amount of blood needed to meet your body's demands.

- ☐ Lack of Oxygen Reaching the Heart Muscle
- ☐ Leaky Valves
- ☐ Damaged Heart Muscle
- ☐ Damaged Ventricles
- ☐ Irregular Heart Beat



## What Heart Failure Does To Your Body

Since the heart is not pumping enough blood to your organs and muscles, your body cannot do as much and you may have some uncomfortable signs and symptoms.

- ☐ Fatigue
- ☐ Increase in cough
- ☐ Difficulty breathing during daily activity or when lying flat
- ☐ Needing extra pillows to sleep comfortably at night
- ☐ Swelling in your feet, ankles, legs, fingers, or abdomen
- ☐ Weight gain, 3 to 5 pounds, over 24 hours
- ☐ More urination at night and less during the day
- ☐ **Tell Your Doctor At Once If You Have Any Of These Symptoms**



## What Treatment Can Do For Your Heart Failure

While heart failure can't be cured, it can be treated so that you may still lead a satisfying life. Heart failure medications may help you feel better.

Your treatment may...

- ☐ Reduce fatigue, shortness of breath, and swelling
- ☐ Maintain and restore your energy
- ☐ Reduce further damage or progression of heart failure
- ☐ Help you continue to enjoy life

## What Can You Do At Home To Avoid Problems With Fluid Overload?



### Weigh Yourself Every Day

1. To monitor your weight, you should weigh yourself every morning, on the same scale, wearing the same amount of clothing.

\*Remember that scales weigh differently.

2. Weigh yourself first thing in the morning and after you've gone to the bathroom.

3. Write down your weight every day.

\*The best way to watch for fluid buildup is to weigh yourself daily. You may gain fluid without noticing swelling.



### Maintain a Low Sodium Diet

Make changes slowly.

Keep a list of low-salt (sodium) foods.

When preparing a meal, no more than 600 mg of salt per meal.

**Check with your doctor before using a salt substitute.**

1. Stop adding salt to food.

Take the salt-shaker off of the table. This can cut salt down

Don't add salt when cooking. 30% or 1/3 teaspoon.

2. Pick foods naturally low in salt:

\*Fresh fruits and vegetables

\*Fresh meat, poultry, fish

\*Canned fruits, plain frozen vegetables, canned veggies that state "No Salt Added"

\*Dried beans, peas, rice

3. Learn to read Food Labels.

\*It is hard to know what to eat. The only way to know for sure is to read the food label and ingredient list.



## **Limit Fluid Intake**

1. Eat allowed fruits and vegetables ice cold between meals.
2. Try lemon wedges, sour hard candies, or chewing gum to stimulate saliva and moisten a dry mouth.
3. Rinse your mouth with mouthwash.
4. Chew on ice cubes.
5. Use small cups and glasses for beverages.
6. Remember that 2 cups of retained fluid is equal to 1 lb of fluid weight gain.
7. Freeze allowed beverages in ice cube trays.
8. Drink in sips instead of gulps.
9. Measure fluid allotment for the day and store it in a container in the refrigerator.
10. Keep home well humidified.



## **How to Help Reduce Your Overall Risk of a Heart Attack**

To help reduce your overall risk of having a heart attack you must do things that keep your blood vessels healthy – not clogged, narrowed, or damaged.

- ☐ Don't smoke.
- ☐ Control your blood pressure.
- ☐ Maintain your cholesterol at healthy levels.
- ☐ Eat sensibly, and watch your weight.
- ☐ Exercise regularly (check with your physician before you begin an exercise program)
- ☐ Maintain emotional stability
- ☐ Take prescribed medications

## **Energy Conservation Tips**

### **Tasks**

- ☐ Alternate difficult tasks and easy tasks throughout the day and/or week.
- ☐ Allow ample time to complete each task so you do not have to hurry.
- ☐ Keep tasks simple.
- ☐ Eliminate unnecessary work.
- ☐ Assemble equipment/materials first.
- ☐ Sit whenever possible, using both arms close to the body with slow, smooth motions.
- ☐ Work in a well-ventilated room.

### **Activities of Daily Living**

- ☐ Sit to dress and undress.
- ☐ Consider sitting to shave, brush teeth, and comb hair.
- ☐ Long-handled reachers are helpful for pulling on socks and shoes. An Occupational Therapist can provide instruction on proper use of long-handled reachers.
- ☐ Sit on a bench to bathe.
- ☐ Use warm, not hot water.
- ☐ Dry off by wrapping yourself in a terry cloth robe.

### **Cooking**

- ☐ Use lightweight, nonstick pots and pans to cook.
- ☐ Air dry dishes or use a dishwasher.
- ☐ Slide pots from sink to range.
- ☐ Select equipment that can be used for more than one job (i.e., Pyrex bowls for storage, serving, mixing, or baking).

### **Shopping**

- ☐ Ask that grocery bags be packed so they are light and easy to carry.

### **Physical Activity**

- ☐ Take 30-minute rest periods after meals and throughout the day.
- ☐ Maintain a good posture.
- ☐ A moderate, steady pace is most productive.
- ☐ During hot, humid weather, a slower pace may be necessary.
- ☐ Avoid unnecessary bending, stretching, reaching, and walking. (Keeping things at waist level will prevent excessive bending or reaching.)

### **Carrying/Lifting**

- ☐ Use a cart or table on wheels to transport items rather than carry heavy items.



### **After Leaving the Facility**

Once you are home, you should call your doctor if you have one or more of these symptoms.

1. Weight gain of 2-3 pounds in 1 day or 5 pounds in 5 days.
2. Shortness of breath that is worse or shortness of breath at rest.
3. Swelling in legs, feet, hands, or abdomen.
4. Feeling tired all the time, which keeps you from your normal activities.
5. Bloating or full feeling in your stomach.
6. Dry or wet hacking cough.
7. Harder to breathe while lying down or unable to rest. You may notice you need to prop up on more pillows for comfort.
8. Feeling dizzy or lightheaded.



### **When To Call 911**

1. Chest discomfort or pain that lasts more than 15 minutes and is not any better after resting!
2. Unable to catch your breath!
3. Fainting or passing out!
4. Fast or irregular heartbeat!
5. Coughing up pink or white foamy sputum!

Note:

---

---

---

---

---

---

## **Hand Washing Education**

**Step One** - Wet your hands using warm or lukewarm running water. Cold water is not as effective and hot water should be avoided because it is drying to the skin. The soap does not need to be antibacterial to be effective.

**Step Two** - Apply soap to wet hands and rub hands together to make a lather. If you have dirt under your nails, use this opportunity to clean under them. Rub your palms together and intertwine your fingers to make sure you get between them. Don't forget the back of your hands!

**Step Three** - Keep rubbing your hands together! For a proper hand washing this step should take no less than 20 seconds. Not sure when you're done? Try singing your ABC's twice, and you should be fine.

**Step Four** - Rinse your hands well. Ideally, start by rinsing your wrists and letting the water run off of your finger tips. Then rinse the rest of your hands as necessary.

**Step Five** - Dry your hands well, using a clean paper towel or allowing your hands to air dry. Nurses and doctors are trained to turn the faucet off with a paper towel. Why? Because you turned it on with dirty hands, so you may not want to touch it with your freshly cleaned hands.



# **All About Pulmonary Fibrosis**

Pulmonary Fibrosis (PF) is a disease in which lung tissue becomes scarred, thickened and stiff. The scarring of lung tissue is called fibrosis. The scar tissue in the lungs limits the transfer of Oxygen from air to blood. This leads to difficulty of breathing.

## **How does Pulmonary Fibrosis affect the lungs?**

The air sacs and blood vessels in the lungs work to deliver Oxygen to the organs and tissues. In people with PF, the tissue inside and between the air sacs becomes scarred and stiff. The scarring and stiffness make it hard for Oxygen to pass through the walls of the air sacs into the bloodstream. As a result, the brain, heart and other vital organs may not get the right amount of Oxygen that they need to work properly.

## **What causes Pulmonary Fibrosis?**

PF can be the result of exposure to dusts, gases, fumes or vapors. For some with PF, the cause is not known. Smoking or being around people who smoke, increases the risk.

Some of the known causes of PF include:

- **Job-related and environmental factors**

Exposure to toxins and pollutants over the long term can damage the lungs in some people.

- **Radiation Treatments**

Radiation treatment for lung or breast cancer may also damage the lungs in some people.

- **Certain Medications**

Some chemotherapy medicines to treat cancer, some heart medicines, and some antibiotics are known to cause lung damage.

- **Certain Medical Conditions**

Lung tissue can also be damaged by conditions such as Tuberculosis, Pneumonia, Lupus, Sarcoidosis, Rheumatoid arthritis and Scleroderma



- **Genetics**

Genes can play a role in the development of PF.

When there is no known cause for PF, the disease is called Idiopathic Pulmonary Fibrosis, or IPF.

## **Interstitial Pulmonary Fibrosis**

In IPF, lung tissue becomes scarred. The scarring typically starts at the edges of the lungs and progresses towards the center of the lungs, making it more and more difficult for a person to breathe. It is reported to be the most common type of PF. Genetics may play a role since IPF may occur in several members of a family.

## **Symptoms of PF**

- Shortness of Breath (Dyspnea)
- Dry Cough
- Fatigue
- Unexplained Weight Loss
- Aching muscles and joints
- Digital Clubbing (widening and rounding of the tips of the fingers or toes)

## **Treatments**

There is no cure for Pulmonary Fibrosis. Current treatments are aimed at preventing more lung scarring, relieving symptoms and helping you to stay active and healthy.

- Medications
- Oxygen
- Pulmonary Rehabilitation
- Surgery-Lung Transplant

# **MODIFIED BORG SCALE** **RATE OF PERCEIVED DYSPNEA** **(RPD)**

*Dyspnea means... How short of breath do you feel?*

This RPD Scale allows you to rate your shortness of breath feeling on a scale between 0-10. It lets us to have an idea of how short of breath you are feeling during a specific activity or exercise. It also helps you to be aware of *how you are feeling* during activities.

This Scale can help you to monitor your exercise and activity levels!

RATING	PERCEIVED DYSPNEA (HOW SHORT OF BREATH DO I FEEL?)
0	Nothing at All
0.5	Very, Very slight
1	Very mild shortness of breath
2	Mild shortness of breath
3	Moderate shortness of breath
4	Somewhat severe shortness of breath
5	Strong or hard breathing
6	
7	Severe shortness of breath or very hard breathing
8	
9	Extremely severe shortness of breath
10	Shortness of breath so severe you need to stop

PEL/VIP MODIFIED BORG RPD SCALE POSTER

# **BORG SCALE** **RATE OF PERCEIVED** **EXERTION(RPE)**

When rating your exertion, think about how hard and strenuous the exercise or activity is for you. Don't center on just one part of the body...focus on your *total* feeling of exertion.

This Scale can help you to monitor your exercise and activity levels!

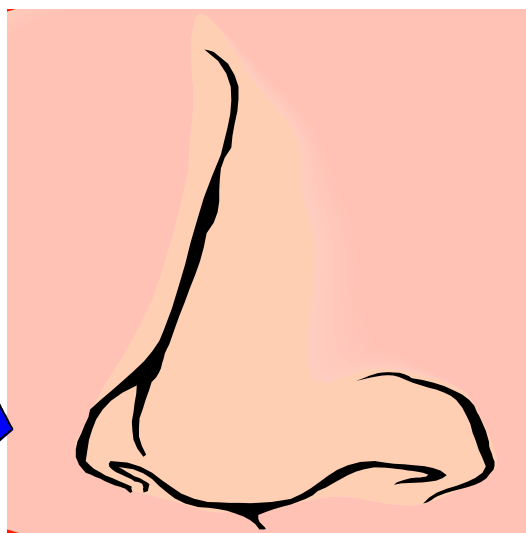
RATING	EXERTIONAL FEELING	WHAT AM I FEELING?
6	No exertion at all	I am at rest
7	Extremely light	
8		
9	Very Light	I feel like I do when I am walking easily at a slow comfortable pace
10		
11	Light	
12		
13	Somewhat hard	Quite an effort. I feel tired but I can continue
14		
15	Hard	Heavy
16		
17	Very hard	Very strenuous and I am very fatigued
18		
19	Extremely hard	I cannot continue long at this pace
20	Maximal Exertion	STOP!!!

PEL/VIP BORG RPE SCALE POSTER

## Pursed Lip Breathing

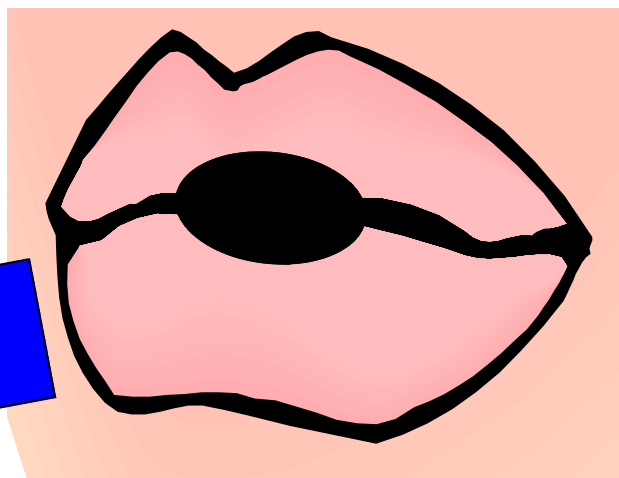
1 - 2

**INHALE**



1 - 2 - 3 - 4

**EXHALE**



To do pursed lip breathing:

1. Relax your neck and shoulder muscles.
2. Breathe in for two seconds through your nose, keeping your mouth closed.
3. Breathe out for four seconds through pursed lips. If this too long for you, simply breathe out twice as long as you breathe in.

## Congestive Heart Failure Symptom Management

Primary Care Physician \_\_\_\_\_ Phone # \_\_\_\_\_

Cardiologist \_\_\_\_\_ Phone # \_\_\_\_\_

*If you have several symptoms in a category, follow the steps in the "What to do" box.*

Green Zone – All Clear	Yellow Zone – Caution	Red Zone - Danger
<ul style="list-style-type: none"> <li>• No shortness of breath</li> <li>• No cough</li> <li>• No weight gain</li> <li>• No change in energy</li> <li>• No change in alertness</li> <li>• No change in appetite</li> <li>• No change in heart rate</li> <li>• No change in urination</li> </ul>	<ul style="list-style-type: none"> <li>• Short of breath with exertion, lying flat or when trying to sleep</li> <li>• Dry cough</li> <li>• Weight gain of 2 lbs in one day</li> <li>• More tired, less energy</li> <li>• Trouble concentrating</li> <li>• Decrease or change in appetite</li> <li>• Racing or irregular heart beat</li> <li>• Increased urination</li> <li>• Tight shoes, swelling in legs</li> </ul>	<ul style="list-style-type: none"> <li>• Short of breath when sitting still</li> <li>• Wet cough, wheezing</li> <li>• Sudden weight gain or loss (more than 5 lbs in one day)</li> <li>• Extreme fatigue and no energy</li> <li>• Mental confusion, trouble concentrating</li> <li>• Loss of appetite, feel full or sick to one's stomach</li> <li>• Frequent urination, especially at night</li> <li>• Unable to wear shoes</li> <li>• CHEST PAIN</li> </ul>
What to do	What to do	What to do
<ul style="list-style-type: none"> <li>• Your symptoms are under control</li> <li>• Keep taking medications as ordered</li> <li>• Continue daily weights</li> <li>• Follow a low salt diet</li> <li>• Keep all appointments with doctor</li> <li>• Call your doctor if you note any changes</li> </ul>	<ul style="list-style-type: none"> <li>• Your symptoms indicate your doctor needs to review your condition. Your doctor may adjust your medications</li> <li>• Call your doctor and request an appointment as soon as possible – within next 2 days</li> </ul>	<ul style="list-style-type: none"> <li>• Your symptoms indicate you need attention right away</li> <li>• Call your doctor now and request to be seen within 4 hours or go to emergency room</li> </ul>
Dry Weight _____	Recommendations from your Doctor	



Chronic Lung Disease  
Education Booklet  
Presented by PEL/VIP, LTD

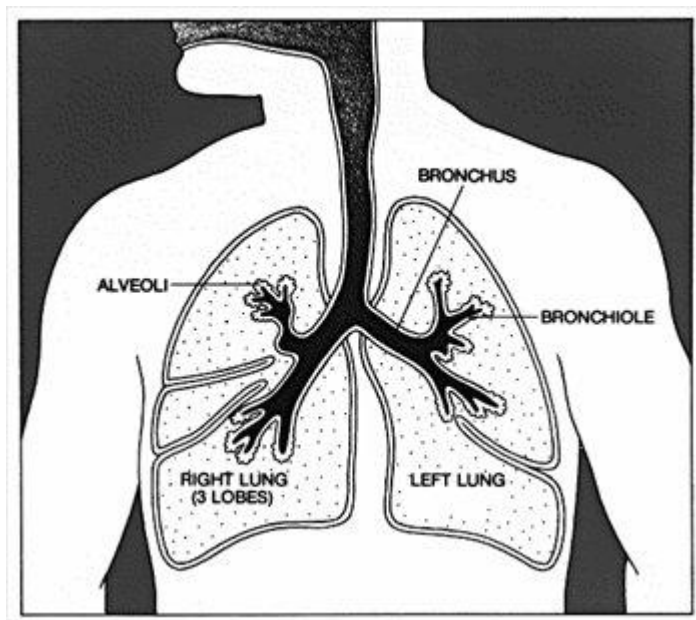


Chronic Lung Disease can make day to day living difficult. Chronic Lung Disease is the third leading cause of death in the US. It causes serious long-term disability and early death. More than 11 million people are known to have Chronic Lung Disease and up to 24 million may have the disease due to some not even knowing it. Many conditions are considered to be chronic lung disease, such as Emphysema, Asthma, Chronic Bronchitis and Restrictive lung disease. There are many things you can do to help make living with Chronic Lung Disease easier. Education and prevention can help make a big difference with quality of life. COPD is a term which is commonly used which stands for Chronic Obstructive Pulmonary Disease. If you have been diagnosed with Emphysema, Asthma, or Chronic Bronchitis then you have COPD.

### **COPD and Causes of Chronic Lung Disease**

Your lungs are made up of airways (Bronchus and Bronchiole) that travel down to the bottom of your lungs. Tissue that makes up the lung is elastic and can stretch. When you take a breath, air travels down to the bottom of your lungs and into little air sacs called alveoli. Oxygen passes through the blood vessels in the alveoli and travels to the body. Carbon dioxide is picked

up in the alveoli and exhaled out of the lungs. This is how gas exchange occurs.



COPD (chronic obstructive pulmonary disease) is an obstructive lung disease that makes it difficult to breathe. COPD is a disease that involves inflammation of the airways as well as destruction of the tissue of the lung where oxygen is exchanged.

Obstruction in COPD means that the flow of air in and out of the lungs is less than it should be. When there is obstruction, less oxygen gets into the body tissues, and it becomes harder to get rid of the waste gas known as carbon dioxide. As the disease progresses, it becomes more difficult to remain active and perform daily activities due to shortness of breath.

COPD is a general term for a few different diseases

- Chronic Bronchitis- Mucus is produced more than normal. Extra mucus leads to blocking the airways. Inflammation in the airway is usually present as well. Excess mucus and inflammation makes it harder for air to pass through.



- Emphysema- Lung tissue and airways tend to lose elasticity. The airways have a risk of collapsing when you breathe out-the result is trapped air. Trapped air makes breathing more difficult.
- Asthma- Airways become narrowed and inflamed. Muscles that surround the airways will tighten up making it harder to breathe.

**What condition(s) were you diagnosed with?**

---



---



---



---



---

Chronic lung disease is caused by many different factors.

**COPD:**

- Smoking is the major cause of COPD. The chemicals in cigarette smoke can weaken the lungs' defense against infections, narrow air passages, cause swelling in airways and destroy air sacs (alveoli). About 80-90% of all COPD is caused by cigarette smoking.
- Air pollution as well as dusts and fumes can also cause COPD. Sometimes people are exposed to these while they are at work or even where they live.
- A small amount of people do have a rare genetic disposition to COPD which is diagnosed through a simple blood test.



## **Diagnosis of Chronic Lung Disease**

In order to confirm a diagnosis of chronic lung disease, your doctor may need to perform a few tests. You will have a physical exam and your doctor will ask about your symptoms. From there, your doctor will provide you with a treatment plan.

If you are at risk for COPD or have symptoms of COPD, there will be a few tests that your doctor may want you to perform.

- Spirometry is a test to measure how well your lungs work. When performing the test, you will blow air into a mouthpiece and tubing attached to a small machine. This test measures how much air your lungs can hold.
- Pulse Oximetry is a test that is easy and painless. This test shows how much oxygen is in your blood. This is called your oxygen saturation. This test is usually performed while you are resting, during and after exercise.
- Chest x-ray This test will take a picture of your lungs and show the size and shape

of them. This test can detect if there are problems in the lungs.



# **Chronic Lung Disease and Your Body**

## **Exercise and Helpful Breathing Techniques**

Exercise is an important part of a healthy lifestyle. Many people with Chronic lung disease are afraid to exercise due to becoming short of breath. Exercise has many benefits whether or not you have lung disease. Exercise can help improve:

- Anxiety and depression
- Muscle Strength
- Cardiovascular health
- Your energy level

Your doctor or Physical therapist will have a specific exercise plan for you which may include stretching, endurance and strengthening exercises. Always speak with your doctor before starting any exercise plan.

Many chronic lung patients benefit from Pulmonary Rehabilitation. Pulmonary Rehabilitation is a great way to stay active and learn how to exercise with COPD. Pulmonary rehabilitation consists of exercise as well as education classes that teach all about your lungs and your disease. You may also learn how to exercise and become more active with less shortness of breath. Classes take place in a group setting. Group settings give you the chance to meet others with your condition while both giving and receiving support.

Self monitoring is necessary during exercise. Monitoring shortness of breath and heart rate can help you track your progress. Use the **RPE scale** below to describe your breathing when at rest or with exertion.

## RPE scale

**6                      No exertion at all**

Borg-RPE-skalan®

© Gunnar Borg, 1970, 1985, 1994, 1998

**7**

**8                      Extremely light**

**9**

**10**

**11                    Light**

**12**

**13                    Somewhat hard**

**14**

**15                    Hard      (heavy)**

**16**

**17                    Very hard**

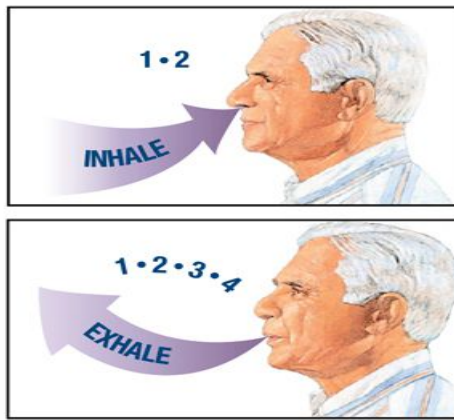
**18**

**19                    Extremely hard**

**20                    Maximum exertion**

During exercise, you may notice some shortness of breath. There are different techniques you can use to help manage your shortness of breath. One technique is called **Pursed Lip Breathing**. Pursed Lip Breathing or PLB is a simple way to control your shortness of breath. PLB does the following:

- Slows down your work of breathing
- Keeps your airways open longer so your lungs can get rid of more air
- Increases the amount of time you can be active
- Improves the exchange of oxygen and carbon dioxide



### **How to perform PLB:**

1. Breathe in through your nose (as if you are smelling something) for about 2 seconds.
2. Purse your lips like you're getting ready to blow out candles on a birthday cake.
3. Breathe out slowly through pursed lips until your lungs are empty.
4. Repeat as many times as needed.

**Diaphragmatic breathing** is another breathing technique used to help with your breathing. People with chronic lung disease don't use their diaphragm when breathing. Instead they tend to use neck, back and shoulder muscles to help them breathe.

Diaphragmatic breathing works best when you are rested and relaxed. Position yourself either sitting back or lying down.

1. Relax your shoulders
2. Place one hand on your chest and the other on your belly
3. Inhale through your nose for about two seconds.
4. As you breathe in, your belly should move outward. Your belly should move more than your chest.
5. As you breathe out slowly through pursed-lips, gently press on your belly. This will push up on your diaphragm to help exhale your air out.
6. Repeat as many times as needed

Learning how to check your heart rate during exercise is a very important tool. Checking your heart rate is simple:

1. Press two fingers on the inside of your wrist. (Be sure not to use your thumb)
2. Count the number of beats you feel for 10 seconds. Multiply that number by 6. That number is your heart rate (how many times your heart

beats per minute.) A medical professional will tell you what our rate should be when you exercise. This number is called your target heart rate.

What number do you come up with when checking your heart rate?

---

What is your target heart rate? \_\_\_\_\_

**Tips to stay safe during exercise:**

- Hydrate yourself with water before, during and after exercise.
- If you have a rescue inhaler, have it available. Don't hesitate to use it if you need it.
- Monitoring your shortness of breath is important. If you do become short of breath, that's okay-just be sure you can talk and control your breathing. Slow down if your shortness of breath increases. You may need to stop and rest if you do not get any relief from slowing your pace.

## **Stress Management**

Managing your stress can help with your wellbeing. People diagnosed with chronic lung disease are likely to suffer from depression, anxiety and stress. Being anxious or stressed can make your symptoms worse. Caring for your emotional health is just as important as your physical health.

Here are some ways you can help manage your stress:

- Note what people/places/situations stress you out. Knowing these triggers ahead of time can help you manage stress better.
- Don't spend time with people who increase your stress.
- If crowded places are stressful, plan your visits during off hours.
- Practice breathing techniques such as pursed lip breathing or diaphragmatic breathing when stress increases.
- Always follow your treatment plan and use resources such as a therapist or your physician if you need to talk things out. Talking to a clergy member may help as well.
- Make an effort to be social-isolation can increase depression and anxiety.

## **Energy Conservation**

Staying active and continuing your routine is very important. Managing your breathing during day to day activities can help you by saving energy and preventing fatigue.

Please consider the following key points:

1. Positive attitude
  - be patient and tolerant towards yourself and others.
  - Try to have a sense of humor- it helps you to cope
2. Prioritize your daily activities
  - List the things you have to do and also the activities you love to do.
  - Do not feel like you have to do everything. Eliminate activities that are not necessary to perform.
3. Plan your schedule
  - Know your limits when active
  - Plan your schedules ahead of time-make sure they are realistic
  - Determine which time of the day you have your most energy and schedule the activities that require the most energy for that time.
  - Alternate days when performing your most difficult activities.
  - Vacuum one day and grocery shop the next.

#### 4. Pace yourself

- Slow down when you eat, talk, and walk. Failure to do so could result in shortness of breath.
- Include breaks in your schedule. This will give you needed time to relax.
- Divide your tasks into steps
- Make sure you get enough sleep- take naps if you need to.

#### 5. Pursed Lip Breathing

- Use pursed lip breathing when performing activities
- Always exhale when performing an exerting maneuver. For example: When lifting a gallon of milk, inhale before lifting the gallon and exhale when lifting up the gallon of milk.

**List what methods you currently use to manage stress?**

---

---

---

**What steps will you take to help conserve your energy?**

---

---

---



## **Treatment of Chronic Lung Disease**

There is a wide variety of medications available to treat chronic lung disease. Each person is different and their medication regimens may vary. What works for one person does not always work for the other. Your doctor and supportive health care team will determine which medications will work best for you, based on your symptoms and your needs. When you taking the right medications, you should experience the following: **Easier breathing, more energy to do daily activities, and experience less symptoms/exacerbations.**

It's always best to take your medication when prescribed and be sure to order your refills early enough so that you do not run out of medication. The following types of medications are the most commonly prescribed for patients with chronic lung disease:

**Bronchodilators-** These medications work to open your airways. Airways are partially made up of smooth muscle and bronchodilators work to relax smooth muscle, therefore relaxing your airways. There are different categories of bronchodilators:

Fast-acting beta-2 agonists (INHALED)	Albuterol, ProAir, Proventil HFA, Ventolin HFA, Xopenex HFA, terbutaline	*Relaxes and opens airways *Prevents exercise induced wheezing *Helps to stop attacks
Long-acting beta-2 agonists (INHALED)	Foradil, Serevent, Brovana, Perforamist	*Relaxes and opens airways *Prevents exercise induced wheezing *Slower acting but works longer in duration than a fast acting beta-2 agonist
Anticholinergics (INHALED)	Atrovent, Spiriva	*Relaxes and opens airways *Slower acting than fast acting beta-2 agonist
Methylxanthines (SWALLOWED)	Theophylline	*long acting *stimulates the diaphragm and breathing *useful during sleep if symptoms occur

**Anti-inflammatories-** Anti-inflammatory medicines help by reducing the swelling and mucus production inside the airways. When inflammation is reduced, it is easier to breathe. Some other names for these medicines are called steroids or corticosteroids.

Corticosteroids may come in pill form and usually are used for short periods of time. These can be used in special circumstances such as when your

symptoms are getting worse. These medications can have serious side effects, such as weight gain, diabetes, osteoporosis, cataracts and an increased risk of infection. It is important to talk to your doctor about potential side effects from medications.

Corticosteroids	(INHALED) QVAR, Pulmicort, Aerospan HFA, Flovent HFA	*Reduces inflammation and swelling in the airways *Reduces mucus production *Decreases sensitivity of airways to allergens and irritants
	(SWALLOWED) Medrol, Prednisone	*Reduces inflammation and swelling in the airways *Reduces mucus production *Decreases sensitivity of airways to allergens and irritants

Combination Medications- Combination medications contain two different types of medication in the same inhaler or nebulizer solution. Only a few types of combination medications are currently available.

-Advair, Symbicort, Anoro Ellipta, Breo Ellipta, Stiolto Respimat, Dulera, Combivent Respimat, Duoneb

The most common combination medications contain a combination of the following:

- short-acting beta-agonist and short-acting anticholinergic
- long-acting beta-agonist and inhaled corticosteroid

**List the current medications that you take for your chronic lung disease.**

---



---



---



---

## Nutrition

Nutrition is an important part of your treatment. Maintaining a healthy weight and a healthy diet can effect the way you feel and breathe everyday. Shortness of breath during meals can limit the amount of food and nutrition that goes into your body. Your doctor or dietician can help to plan a healthy and balanced meal plan for you.

A balanced meal will help with your overall wellness. Eat the following to fulfill your balanced diet:

1. **Protein-** protein is found in meat, fish, poultry, dairy and soy products. Protein helps build muscle mass and protects the body by helping it to fight infection.
2. **Dairy-** Milk, cheese, and yogurt are some examples of dairy foods. These contain Calcium which promotes strong bones.
3. **Fruits and Vegetables-** these are filled with vitamins, minerals and fiber to help your body heal and fight infection.
4. **Breads/Starches-** These contain carbohydrates (carbs) which helps to give you energy. Some carbs are high in fiber which helps to improve the function of the digestive system.
5. **Fluids-** Fluids help to keep you hydrated and thin mucus. 6-8 glasses (8 ounces) of water a day is recommended. Your doctor may have a different recommendation for you. Always follow your doctor's orders. Try and avoid caffeinated drinks and alcohol.
6. **Vitamins-** Vitamins and supplement drinks may help if you are not eating enough vitamins and minerals. Your doctor or dietician will guide you as to what vitamins and supplements you should take.

People with COPD may experience difficulty eating due to shortness of breath. When you eat and fill up your stomach, your stomach can push up on your diaphragm. Your diaphragm is the muscle you use to breathe which is located above your stomach. Having a full stomach makes it harder for the diaphragm to move down during breathing. The following tips may help you breathe easier:

- Chew slowly with your mouth closed. Closing your mouth will help you avoid swallowing air.
- Eat small meals throughout the day. When you eat small meals your stomach will not fill as much. This means your lungs have more space to expand.

- Be wary of foods that can cause gas. Gas can make the stomach swell and press up on the diaphragm. Foods have different effects on different people so be sure to note which foods may cause you gas.



## **Prevention**

Prevention is helpful when you have chronic lung disease. Infection such as a cold or flu can be serious. There are preventive tips you can learn to help you stay out of the emergency room or the hospital. The following tips will help:

- Wash Your Hands- Washing your hands regularly will help keep germs from spreading.
  - Always use warm water and plenty of soap when washing.
  - Be sure to clean the entire hand, between your fingers and under your nails.
  - Wash your hands for at least 15 to 20 seconds. Rinse your hands entirely with your fingers pointing down.
  - Dry hands with a paper towel. Use the paper towel to turn off the faucet.
- Use hand sanitizer or wipes if you are not able to wash your hands. Hand sanitizer is ideal to use when you are out in public.
- Always keep your mouth clean. Brushing your teeth and cleaning your dentures is helpful to decrease infections.
  - Brush your teeth twice a day and floss once a day.

- Visiting your dentist regularly is helpful and highly recommended.
- Be sure to clean your tongue as well when brushing.
- Do not use any products with glycerin or hydrogen peroxide
- Get vaccines as recommended by your doctor. These may include the Flu and Pneumonia shot.

If you happen to think you caught an infection, there will be signs and symptoms to watch for. Signs and symptoms to look for:

- Increased shortness of breath
- Wheezing or coughing
- Chest tightness that is not going away
- Increased mucus production and/or change in mucus color.
- Mucus that is bloody or has an odor.
- Sore throat
- Lack of energy-feeling more tired
- Muscle aches and pains
- Headaches

If you suddenly feel worse do not hesitate to seek medical care. An infection may quickly worsen if not treated.

**What signs and symptoms have you experienced in the past?**

---



---



---

## **Oxygen Therapy**

Oxygen use with chronic lung disease is fairly common. When you have low amounts of oxygen in your blood, supplemental oxygen may be needed.

There are many devices used to deliver oxygen to the lungs. The most common way to deliver oxygen to the lungs is by nasal cannula.

Oxygen is stored in different ways. One way to store oxygen is by an **oxygen tank**. Oxygen tanks are compressed (under pressure). Oxygen tanks are good for traveling, whether it's near or far. Tanks will only deliver oxygen for a set amount of time so it is always important to check the tank to make sure it is not empty.

Another way to receive oxygen is through an **oxygen concentrator**. An oxygen concentrator is a machine that gathers oxygen from the air we breathe and accumulates it into a compartment inside of the machine. From there it is delivered to the patient. There are many types of oxygen concentrators on the market today.

**Liquid oxygen** is oxygen that is kept at a very cold temperature and warms to a gas as it is delivered to the patient. Liquid oxygen can come in big metal tanks or smaller portable units. As with oxygen tanks, liquid oxygen only delivers oxygen for a set amount of time so it is always important to check the tank to make sure it is not empty.

All of the noted delivery systems above are mostly used in the home setting.

*\*No matter what device you use, it's always important to remember that oxygen is a drug and you will always need a prescription from the doctor to use it.*

## Safety

Using oxygen is helpful for your breathing. Using oxygen safely and correctly is very important. Oxygen is safe to use but is combustible and non-flammable. Combustible means that oxygen can make fire burn faster and make it more intense in temperature. Be sure to follow all of the following safety rules:

- Be sure to stay away from open flames. This includes cooking with gas.
- Oxygen should be stored or placed AT LEAST 5 feet from flames and other sources of heat.
- Always turn off oxygen when not in use
- Do not use any oil or petroleum based products such as petroleum jelly or oil based hand lotions. ONLY use water based products.
- Keep oxygen out of direct sunlight
- Never smoke with oxygen around. Smoking visitors should smoke outside of the house
- Be sure to speak with your home oxygen company to review all safety information

Be sure to always store your oxygen tanks/equipment safely. Oxygen tanks should always be upright and secured. Tanks will have a cart or other device for storage.

CORRECT

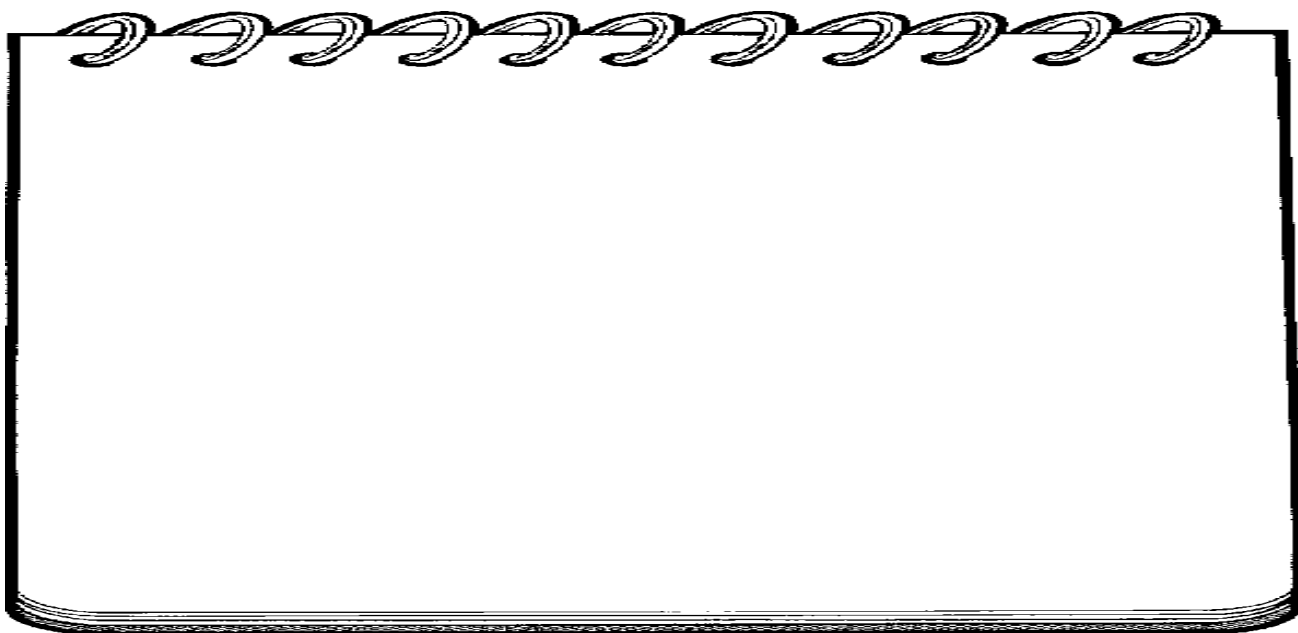


INCORRECT



## Smoking and How to Quit

Smoking is difficult to quit but can be done. Common knowledge is that smoking is bad for you and can damage your health in many ways. There are positive improvements that take place with your health the moment you quit. There are ways to help you stay on track and be successful. First, you need to list the reasons why you want to quit. List as many of them as you can think of:



There are certain triggers that may set you back and may give you the urge to want to smoke. Identifying which triggers may affect you is worth noting. Common triggers may include:

Stress	Work breaks
Watching TV	
Going to a bar	Being around active smokers
Drinking Alcohol	
Drinking coffee	Loneliness
Driving	
Depression	Finishing a meal



Which triggers listed above do you most identify with?

---

---

---

---

Keeping track of your triggers, what time a day that they occur and how you are feeling when they occur will help you to recognize any patterns. Knowing this will help to guide you in finding ways to deal with the triggers you experience.



## **Planning to Quit**

Planning to quit can be overwhelming. By developing a plan to quit, the act of quitting may not be so overwhelming. Here are some tips to help you plan.

- Pick the date and mark it on your calendar.
- Tell friends and family about your Quit Day.
- Get rid of all the cigarettes and ashtrays in your home, car, and at work.
- Stock up on oral substitutes – sugarless gum, carrot sticks, hard candy, cinnamon sticks, coffee stirrers, straws, and/or toothpicks.
- Decide on a plan. Will you use Nicotine replacement therapy or other medicines? Will you attend a stop-smoking class? If so, sign up now.
- Practice saying, “No thank you, I don’t smoke.”
- Build your support team! This could be a group program or a friend or family member who has successfully quit and is willing to help

you. Ask family and friends who still smoke not to smoke around you, and not to leave cigarettes out where you can see them.

- Think about your past attempts to quit. Try to figure out what worked and what didn't.

List the family/friends in your life that would be a positive, strong source for support?

---

---

---

---

## How to Combat Withdrawal

Quitting smoking is not easy and you may hit some bumps along the way. There may be symptoms of withdrawal that make quitting more difficult. Here are some tips on preparing for withdrawal:

- Nicotine replacement can help lessen your withdrawal symptoms. Always talk to your doctor first!
- Keep yourself busy with different tasks.
- Eat healthy snacks when you are feeling withdrawal symptoms
- Lean on your support systems
- Find alternative stress relief
- Have a withdrawal action plan

What activities do you think may help combat your withdrawal symptoms?

---

---

---

---

## **When to Call the Doctor**

Once you are home, you should call your doctor if you have one or more of these symptoms:

- Shortness of breath that is worse or shortness of breath at rest.
- Feeling tired all the time, which keeps you from your normal activities.
- Dry or wet hacking cough and/or production of green/yellow/bloody mucus
- Harder to breathe while lying down or unable to rest.
- Lips and/or fingertips turn blue
- Medication side effects
- Coughing becomes more severe
- Feeling dizzy or lightheaded.
- Fever
- Chills
- Loss of Appetite
- Confusion

**Doctor's Name:** \_\_\_\_\_

**Doctor's Phone Number:** \_\_\_\_\_

## **Review/Teach back**

1. List 2 causes of Chronic Lung disease.

---

---

---

2. What are some medications that you use for your Chronic Lung disease?

---

---

---

3. Which symptoms should you report to the doctor immediately?

---

---

---

4. List a few triggers that people have when they are trying to quit smoking.

---

---

---

5. What prevention tools do you use to help with your COPD diagnosis?

---

---

---

6. Which food groups are an important part of a balanced diet?

---

---

[illegible]

## **Contact Information**

Please take a few minutes and write down important contact information in the spaces below. Sharing this information with family members and friends may be beneficial.

Facility Name \_\_\_\_\_

Facility Phone Number \_\_\_\_\_

Facility Contact Name \_\_\_\_\_

### **Physician (s)**

<b>Primary Care Physician</b>	<b>Specialist For:</b>
<b>Name</b>	<b>Name</b>
<b>Address</b>	<b>Address</b>
<b>City/State</b>	<b>City/State</b>
<b>Phone</b>	<b>Phone</b>
<b>Name</b>	<b>Name</b>
<b>Address</b>	<b>Address</b>
<b>City/State</b>	<b>City/State</b>
<b>Phone</b>	<b>Phone</b>
<b>Specialist For:</b>	<b>Specialist For:</b>
<b>Name</b>	<b>Name</b>
<b>Address</b>	<b>Address</b>
<b>City/State</b>	<b>City/State</b>
<b>Phone</b>	<b>Phone</b>
<b>Name</b>	<b>Name</b>
<b>Address</b>	<b>Address</b>
<b>City/State</b>	<b>City/State</b>
<b>Phone</b>	<b>Phone</b>

**Other Important Phone Numbers**  
**Emergency Services (ambulance, fire)**  
**\*911\***

**Pharmacy Name** \_\_\_\_\_

**Pharmacy Phone** \_\_\_\_\_

**Other Physicians, Nurses, Healthcare Providers**

\_\_\_\_\_

\_\_\_\_\_

## **Sources**

American Lung Association- <http://www.lung.org/lung-disease/copd/?referrer=http://www.lung.org/lung-disease/copd/treating-copd/manage-medications.html?referrer=https://search.yahoo.com/>

Borg PhD MD, Gunnar- The Borg RPE Scale. Stockholm, Sweeden. Borg-RPE-skalan® © Gunnar Borg, 1970, 1985, 1994, 1998

## COPD Symptom Management

Primary Care Physician \_\_\_\_\_ Phone # \_\_\_\_\_

Pulmonologist \_\_\_\_\_ Phone # \_\_\_\_\_

*If you have several symptoms in a category, follow the steps in the "What to do" box.*

Green Zone – All Clear	Yellow Zone – Caution	Red Zone - Danger
<ul style="list-style-type: none"><li>• Your symptoms are controlled</li><li>• You can maintain your usual activity and exercise level.</li><li>• You have the usual amounts of cough and phlegm or mucus</li><li>• You sleep well at night</li><li>• Your appetite is good</li></ul>	<ul style="list-style-type: none"><li>• Increased shortness of breath and/or wheezing</li><li>• Decrease in energy</li><li>• Increase in the amount of mucus production</li><li>• Change in mucus color</li><li>• Development of new cough or increase in coughing</li><li>• Waking up at night from symptoms</li><li>• Finding that fast acting med treatment is not working or you need treatments sooner than scheduled</li><li>• Decrease in appetite</li><li>• You develop a fever</li></ul>	<ul style="list-style-type: none"><li>• Severe shortness of breath</li><li>• High fever above 101 degrees</li><li>• Inability to perform daily activities</li><li>• Confusion, feeling very drowsy</li><li>• Tightness/pain in chest</li><li>• Respirations &gt; 30</li><li>• Heart rate &gt; 130</li><li>• Coughing up blood</li></ul>
What to do	What to do	What to do
<ul style="list-style-type: none"><li>• Keep taking medications as ordered</li><li>• Avoid cigarette smoke and any other inhaled irritants</li><li>• Begin smoking cessation program if necessary</li><li>• Practice pursed-lipped coordinated breathing exercises</li><li>• Maintain proper oral care daily</li></ul>	<ul style="list-style-type: none"><li>• Call your primary care provider IMMEDIATELY</li><li>• Tell them you have COPD and your symptoms are becoming unmanageable</li></ul>	<ul style="list-style-type: none"><li>• Your symptoms indicate you need attention right away</li><li>• Call your doctor now and request to be seen within 4 hours or go to the emergency room</li></ul>
Notes _____ _____ _____ _____ _____	Recommendations from your Doctor	