Understanding Chronic Obstructive Pulmonary Disease
Normally, air comes in through your nose and mouth and goes through your windpipe (trachea) and large tubes (bronchi) to your lungs. The bronchi divide into smaller tubes (bronchioles), which end in small air sacs called alveoli. This is where oxygen is exchanged with carbon dioxide. When you exhale, the carbon dioxide leaves your body.

**COPD**

Chronic obstructive pulmonary disease, or COPD, is a condition that affects the lungs and makes it difficult to breathe. The airflow in and out of the lungs is limited by inflammation, mucus and damage to the air sacs. The oxygen exchange is not as good as it should be. Chronic bronchitis and emphysema are common types of COPD.

**Diagnosis**

Usually, those with COPD will begin to notice symptoms of shortness of breath when they reach their mid-40s. Early signs of COPD (chronic cough and increased mucus production) may be present, but may not be bad enough to cause concern.

The sooner you know you have COPD, the sooner you and your doctor can take steps to improve your lung health and prevent further damage to the airway. Some measures such as smoking cessation and avoiding respiratory irritants can help you stop the damage to your lungs.

**Spirometry**

Spirometry is a type of lung function test. Spirometry measures air flow in and out of your lungs and is required to confirm a diagnosis of COPD. Spirometry, also called a pulmonary function tests or PFT, is the first and most commonly used lung function test.

This test measures every aspect of breathing, including:

- how much air your lungs hold
- how quickly you can move air in and out of your lungs
- how well your lungs exchange oxygen and carbon dioxide

Spirometry can diagnose lung diseases, measure the severity of lung problems and help to determine effectiveness of treatment. Spirometry identifies the type of lung disorder - obstructive versus restrictive.

For this test, you breathe into a mouthpiece attached to a recording device (spirometer). You will have clips on your nose to help you breathe only through your mouth. You will breathe normally part of the time. Other times, you will be asked to breathe in very deeply and then to breathe out forcibly. Medicine, such as albuterol, may be given to you and the test may be performed again to determine any changes.

To get accurate results, you must be able to create a good seal around the mouthpiece. Do not smoke before the test. Do not eat a large meal four to six hours before the test. You will receive
specific directions from your doctor on how to prepare for the test.

Normal values are based on your age, height, ethnicity and sex, so they will be different for everyone. The term “predicted value” refers to the value that you specifically are expected to achieve. Results are given in percentages. Generally, any measure above 80 percent is considered normal.

Obstructive lung disorders, such as COPD, asthma, or infections, can make the lungs hold too much air and take longer to breathe out.

Lungs that are scarred and smaller will have too little air and be poor at transferring oxygen, which results in different conditions.

Other tests that are performed to determine lung function are residual volume, gas diffusion, body plethysmography, inhalation challenge, and exercise stress tests. Your doctor will determine if others are needed.

**Chronic Bronchitis**

Chronic bronchitis is a condition that occurs when repeated lung inflammation damages the lungs. Chronic inflammation in the lungs causes scarring of the airways and excessive production of mucus that result in a chronic cough. Some call it a smoker's cough.

As the lining of the airways becomes thick and narrow (due to the scarring), less air is moved in and out of the lungs. Air becomes trapped in the lungs, which limits the amount of new air that you are able to take in with each breath.

If the inflammation continues and the cough becomes more regular (a daily event rather than just periods of coughing), people suffering from chronic bronchitis will eventually find themselves short of breath with the easiest task. Chronic bronchitis can exist alone, before, or during emphysema symptoms.

**Emphysema**

Emphysema develops when many of the small air sacs called alveoli in the lungs become over-inflated and lose their ability to empty out all of the air. Air becomes trapped, and the alveoli become stretched out.

This damage can cause the alveoli to come apart (rupture), and form one large air space instead of many small ones. When the healthy air sacs are destroyed, it becomes difficult for the lung to work properly.

The result is that there are fewer alveoli to deliver oxygen to the bloodstream. The damage is ongoing and, when the lung tissue does not repair itself, the damage is permanent. The whole body suffers when the lung cannot deliver oxygen and remove the carbon dioxide waste.

After a while, the increased pressure of the trapped air shortens and flattens the diaphragm muscle used to breathe properly. This change in the shape of the diaphragm makes it much more difficult for the diaphragm to move air in and out of the lungs. The diaphragm muscle becomes weak and worn-out.

Sometimes the trapped air causes the chest to becomes larger (barrel chest), and the muscles in between the ribs become stretched out.

The change in the muscles used for breathing can make it much harder to breathe. Normally, the muscles of breathing require a low level of oxygen at rest (1 to 3 percent) but when you have COPD, the needed oxygen increases to as high as 25 percent.

**Symptoms**

COPD is an ongoing illness that can cause serious long-lasting problems. The symptoms of COPD often begin slowly. Some of these symptoms include:

- **coughing** – may be productive or unproductive, and gradually becomes daily, or chronic, when it lasts longer than three months
- **shortness of breath** – initially occurs with exercise and progresses so that it occurs with usual daily activity
- **wheezing** - loud and labored breathing

These symptoms are due to narrowing of the airways caused by inflammation. The reduced airflow hurts the lung’s ability to deliver oxygen to the body and to remove carbon dioxide waste.

COPD sufferers become short of breath because of the increased effort needed to breathe. When you have COPD, it becomes ‘work’ to move the air in and out of your lungs.

Once COPD symptoms are identified, spirometry is needed to confirm the diagnosis to help rule out other conditions. The results of this test give two important numbers that measure airway obstruction.
FVC: Forced Vital Capacity: the total volume of air you can forcefully blow out. It is an assessment of the size of your lungs, how well your lungs expand and contract, and how well the air passages open and close. Patients with COPD usually have a normal or only slightly decreased FVC.

FEV1: Forced Expiratory Volume: is the volume of air that you can blow out in the first second of exhalation.

In healthy patients, the FEV1/FVC is usually around 70 to 80 percent. In patients with COPD, the FEV1/FVC is as low as 20 to 30 percent.

Spirometry may be used to monitor the progression of the disease and the effectiveness of your medicines.

Once COPD is diagnosed, the severity will be assessed. There are four severity stages ranging from mild to very severe. Most people seek treatment when shortness of breath occurs with activity. This is usually a stage two severity. Your doctor will develop a treatment plan with you to assess and manage your symptoms, reduce risk factors and control flare-ups (exacerbations).

If you smoke, quitting smoking is the single most important thing you can do to stop lung damage. Reduce your risk factors by limiting exposure to odors, fumes and chemicals.

Talk to your doctor about medications available to help open your airways and prevent swelling. He or she will recommend the best medicine for you based on the severity of your symptoms and other health factors.

Consider a pulmonary rehabilitation program that provides information about COPD, exercises to improve breathing and tips to manage your disease. Support and counseling also are provided.

If your COPD is severe, oxygen therapy may be needed. Some people use oxygen only during sleep and others use it 24 hours a day.

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**Treatment**

The goal of treatment is to:

- relieve symptoms
- prevent disease progression
- improve exercise tolerance
- prevent and treat complications and flare-ups
- improve health status and reduce mortality
Symptoms Management
An important part of managing lung disease is recognizing changes in your symptoms. Monitoring and documenting these changes will help your doctor to adjust your treatment plan appropriately. It also helps your doctor to make decisions about whether treatment is needed in the office, emergency room, or at home. Keep a journal or symptom diary to monitor how you feel each day.

Exposure to Triggers
A trigger is anything that causes worsening of your symptoms. Recognize and avoid your triggers to make living with COPD easier.

Common indoor triggers:
Pet dander and feathers - keep pets off your bed and out of the bedroom. Vacuum often and have pets groomed regularly.

Dust mites - keep the humidity level in your home at 50 percent or lower. Wash bedding weekly in water that is at least 130 degrees.

Tobacco Use
A major preventable cause of premature death and disease worldwide is tobacco use.

Nearly every organ in the body is affected by cigarette smoking. The significance of smoking or not smoking is important, not only to your general health, but also to the health of those who live and work alongside you.

Each cigarette you smoke causes damage. In addition to damaging your lungs, cigarettes affect blood vessels and all other body cells. Even occasional smoking is harmful. Smoking causes cancer, heart disease, stroke and lung diseases.

The majority of smokers want to quit. Quitting smoking is the best step you can take to decrease your risk of tobacco-related diseases. You can get support in many ways:

- Tell your family, friends, and co-workers that you are going to quit, and ask for their help and support.
- Talk to your health care provider about options available to help.
- Consider individual, group or telephone counseling; counseling doubles your chances of success.
- Call your local health department for information about programs in your area; many are free.
- Learn about medications that can help you stop smoking. There are many prescription and over-the-counter medicines. Ask your health care provider for advice about which medicines may be right for you.

Studies have shown that people are more successful with help and support. More than half of all adult smokers have quit. Immediate and long-term benefits begin as soon as you quit smoking.
What is a Flare-up?
A flare-up, or exacerbation, occurs when symptoms are worse than the normal day-to-day variations. The most common cause of exacerbation seems to be respiratory infection. Flare-ups often necessitate adjustments in your treatment plan.

Sometimes changes are noticed by others, so it is important that those close to you are able to recognize changes in your daily health status.

Call your doctor if you notice:
- an increase or decrease in the amount, thickness or color of your mucus
- more coughing than normal (more often, more severe or both)
- increased shortness of breath or wheezing
- fever or chills
- swelling in ankles, legs or around eyes
- unexplained decrease or increase in weight, especially if it occurs quickly (such as overnight)
- heart palpitations or faster pulse
- more fatigue than usual
- forgetfulness, confusion, slurred speech, irritability, trouble thinking or vision changes
- morning headaches

Ignoring symptoms does not make them go away or get better. Contact your health care provider for advice.

Take steps to prevent respiratory infection by:
- washing hands frequently, using hand sanitizer between washings
- avoiding crowded places, especially during cold and flu season
- getting a yearly flu vaccine and inquiring about a pneumonia vaccine
- keeping your breathing equipment clean, and not sharing it with anyone else

Controlling Your Breathing
The action of pumping air in and out of the lungs is handled by muscles surrounding the lungs. The largest muscle that does most of the work is the diaphragm. Other muscles located in the abdomen, neck, shoulders and in spaces between the ribs also help with breathing. People with lung disease may have enlarged lungs because air gets trapped inside. The diaphragm may become flat and weak.

It is important to learn how to control your breathing. The following techniques can help. Ask your doctor which method is right for you. Demonstrate your technique during your next office visit. Pursed lip breathing and diaphragmatic breathing can help strengthen your breathing muscles.

Pursed lip breathing
When you have COPD, it’s difficult to breathe out. Stale air gets trapped in the lungs. Chest tightness and shortness of breath can develop. It’s easy to panic when you feel short of breath, and breathing out slowly through pursed lips will help. Learn to do this during rest. Practice every day to make it a habit so it will be easy to do during times of increased shortness of breath. Pursed lip breathing helps you use less energy to breathe. It can also help you relax. Here’s how to do it:

1. Lean forward to shift your weight, and then breathe in slowly through your nose for a count of two.
2. Purse your lips as if you were going to whistle or blow out a candle.
3. Breathe out gently and slowly for four counts through pursed lips. Do not force the air out; let it escape naturally.
4. Keep doing this until you are breathing slowly and steadily.

Diaphragmatic breathing
1. Sit in a chair with your back and shoulders straight, or lie on your back with your head and knees supported by pillows.
2. Place one hand on your upper chest so you can feel the movement of your chest.

3. Place your other hand on the center of your stomach so you can feel the movement of your diaphragm.

4. Inhale slowly through your nose and mouth. Let your stomach muscles relax and move forward.

5. Tighten and pull your stomach muscles in as you exhale slowly through pursed lips. The hand on your stomach should feel the most movement. Practice every day. Rest as needed between breaths.

Controlled Coughing
Increased mucus makes breathing difficult and increases the risk of developing a respiratory infection. You can’t stop mucus production, but there are ways to help get rid of it. Coughing is nature’s way of clearing the lungs, so controlled coughing can help.

Drink plenty of water and non-caffeinated beverages. This will help thin your mucus. For most people this means six to eight cups of fluids per day. If you have other medical conditions such as heart or kidney disease or prostate trouble, talk to your doctor about the right amount of fluids you should drink daily.

It may take up to four days of increased fluids to notice a thinning of your mucus. The best time to clear mucus from your lungs is when you get up in the morning, before dinner or one hour before bedtime.

Practice controlled coughing
Have a box of tissues by your chair.

1. Sit upright and lean your head slightly forward.
2. Take a deep slow breath through your nose and hold for 2 seconds.
3. Cough once to loosen mucus and then a second time to cough out the mucus. Try not to inhale between coughs.
4. Wait a few seconds, and then gently inhale through your nose. Breathing too deeply may force the mucus back into your lungs; relax.

Medications
Managing your medicines
When you have more than one health problem, you may need more than one type of medicine. Managing your medicines can be one of the more difficult parts of your care.

It is a good idea to:
- Ask your doctor or pharmacist to review all of your medicines.
- Take your medicine as prescribed.
- Try to have all your prescriptions filled at the same pharmacy.
- Organize your medicines; keep them out of the reach of small children.
- Learn how to recognize side effects and how to manage them.
- Talk to your doctor or pharmacist if you are having trouble affording your medicines.

The goal of COPD treatment is to keep your airways open and clear. This can reduce symptoms, prevent complications and improve your health status.
Always talk to your doctor or pharmacist about questions you have regarding any medicines. Carry an updated list of all medicines you take, including prescriptions, over-the-counter drugs, herbs, vitamins and supplements. This list will be helpful if you have shortness of breath and trouble speaking. Take all of your medicines with you to your doctor visit and review them together.

*Remember - take your medicines as prescribed and do not start or stop any treatment without first talking to your doctor.

Here is a review of some common medicines used to treat COPD:

**Bronchodilators**
Medications that help open the airways, called bronchodilators, are the most common treatment for COPD. Bronchodilators help to keep airways open, and can decrease secretions. Bronchodilators include:
- Short-acting beta agonists, sometimes called rescue inhalers. These can quickly relieve shortness of breath and can be used as needed. Examples of short-acting beta agonists include: albuterol (Proair, Proventil, Ventolin), levalbuterol (Xopenex) and pirbuterol (Maxair).
- Short-acting anticholinergics to improve lung function and symptoms. If symptoms are mild and infrequent, short-acting anticholinergic medication may be recommended as needed. If symptoms are more severe, it may be recommended for use on a regular basis. Ipratropium Bromide (Atrovent) is the short-acting anticholinergic available currently.
- Long-acting beta agonists may be recommended if your symptoms are not adequately controlled with other treatments. Examples of long-acting beta agonists include: salmeterol (Serevent), formoterol (Foradil, Perforomist) and arformoterol (Brovana).
- Long-acting anticholinergics—tiotropium (Spiriva), improve lung function while decreasing shortness of breath and flares of COPD symptoms. This type of medication may be recommended if your symptoms are not adequately controlled with other treatments, such as the short-acting bronchodilators.

Possible side effects:
- irregular heartbeat
- nervousness, restlessness, trembling
- trouble sleeping
- nausea/vomiting/stomach upset/bad taste in mouth
- headache

**Glucocorticoids (steroids)**
Inhaled steroids can reduce airway inflammation and are used to treat people whose COPD symptoms flare up or worsen. These medicines must be used every day for best results. They may be used for a short time during a flare-up or infection, or they may be recommended for long-term treatment. If using a bronchodilator, use the bronchodilator first, and then the inhaled steroid. Wait one minute between puffs and then rinse your mouth with water. Spit the water out; do not swallow it.

Inhaled steroids do not cause the same side effects as oral steroids. The medicine goes directly to your lungs and very little is absorbed by your body.

Possible side effects:
- sore throat or mouth
- hoarseness or voice changes

Examples of inhaled steroids: Alvesco, Asmanex, Flovent, Pulmicort, QVAR

Oral steroids (pill form) are sometimes used for short-term treatment (e.g., for flare-ups of COPD), but are not generally used long-term because of the risk of side effects. Side effects only occur with high doses or after many years of treatment. Side effects during short term use will stop when the medicine is stopped. Do not drink alcohol when taking oral steroids. Never stop oral steroids without talking to your doctor. Inform any health care provider that you are using an oral steroid prior to vaccinations, surgery (including dental care) or starting a new medicine. If using oral steroids long term, consider wearing a medic alert ID indicating this.

Possible side effects:
- weight gain
- easy bruising
- stomach upset /nausea
- stomach pain or burning
- black or bloody stools
- fatigue or unusual weakness
- frequent urination or increased thirst
- increases in blood sugar
- decreased or blurred vision
- swelling of legs
- mood changes

Examples of more common oral steroids include prednisone, dexamethasone, and methylprednisolone.
Combination products
Many products offer the convenience of combining two medications into one inhaler:
- Combivent (albuterol/ipratropium) contains two short-acting bronchodilators. This is a rescue inhaler, so always bring it with you when you leave your home.
- Advair, Dulera, Symbicort are combination inhalers that contain both a long-acting bronchodilator and an inhaled steroid. These products are used as maintenance therapy to reduce the symptoms and frequency of flare-ups.

Antibiotics
COPD can weaken your normal lung function to the point where even a mild infection can become serious. Call your doctor for any signs of respiratory infection such as fever or changes in cough mucus. Antibiotics can help people who have a bacterial respiratory infection and worsening COPD symptoms. Most respiratory infections, however, are caused by viruses, which will not improve with antibiotic treatment.

Oxygen
Some people are prescribed oxygen to assist with breathing. Oxygen is a drug, so follow the directions prescribed by your doctor. Don’t change the flow or amount unless directed by your doctor. The company that delivers your supply will review safety measures. Do not smoke or let others smoke near you while you are using oxygen. Plan ahead when ordering oxygen to avoid running out during holidays.

Using Your Inhaler or Nebulizer
Medications for COPD are most commonly given in an inhaled form using a metered dose inhaler (MDI), dry powder inhaler (DPI), or nebulizer. Each type of device has different directions for proper use. If you do not use the inhaler correctly, little or no medicine reaches the lungs. Have your physician or pharmacist watch you use your inhalers to make sure that you are using the proper technique.

Metered dose inhalers consist of a pressurized canister of medication and a mouthpiece. Pressing down on the inhaler releases a mist of medicine into your lungs. Some people will use a spacer or holding chamber to make it easier to get the right amount of medicine to the lungs. Inhalers should be cleaned on a regular basis to prevent medication buildup and blockage. Follow the manufacturer’s instructions for the proper cleaning method.

To use a dry powder inhaler, close your mouth tightly around the mouthpiece of the inhaler, breathe in quickly, steadily and as deeply as possible. Never breathe into or exhale into the disk, as it will cause the dose to be altered or lost. Do not wash a dry powder inhaler with water or put it under water. If the mouthpiece gets dirty, wipe it with a dry cloth.

The amount of puffs varies for each inhaler. Some inhalers include a counter that keeps track of the number of doses remaining, but others do not. It’s important to keep track of how much medicine you’ve used so you can plan ahead and replace your inhaler before you run out of medicine. Divide the number of puffs in a canister by the number of puffs you use per day. For example, if you take four puffs each day from a 200-puff canister, you will need to have a new canister every 50 days. Mark the replacement date on the inhaler.

Special note on medicines:
Unless specifically prescribed by your doctor do not use:
- antihistamines or cough medicines
- diuretics or “water pills”
- tranquilizers or sedatives
- narcotics
Food and Nutrition

You may be surprised to know that the food you eat affects your breathing. Food provides your body with energy. Choosing nutritious foods will help you maintain a healthy weight, fight infection and feel better.

Timing of meals

- Several small meals a day is usually preferred over two or three larger meals. A full stomach can prevent your diaphragm from moving normally, making it more difficult for your lungs to fill completely.
- Limit foods that produce gas. Eat in a slow, relaxed manner to prevent discomfort that can result from swallowing air.

Choose food with care

The major food sources are carbohydrates, protein and fat. Metabolizing each uses different amounts of oxygen and produces different amounts of carbon dioxide. Calorie intake also is important. When you have COPD, breathing can use up to 10 times as many calories as a healthy person. You may lose weight without trying and supplements may be suggested. Being overweight may cause your heart and lungs to work harder and movement of your diaphragm to be limited. If your doctor suggests weight loss, a gradual loss of one-half to one pound per week is recommended.

Consider speaking with a dietician for personal and specific guidance.

General guidelines

- Eat plenty of vegetables, fruits and whole grains.
- Limit high-carbohydrate foods and drinks. These usually include sweets and white foods such as white breads, pasta and potatoes (whole grain bread, high-fiber wheat pastas and brown rice are better choices). High-carbohydrate foods produce more carbon dioxide and can cause your lungs to work harder, increasing shortness of breath.
- Talk to your doctor or dietician about fats in foods. Fat provides a good amount of energy with the least amount of carbon dioxide. Your cholesterol level and weight will impact recommendations. It’s always better to avoid saturated and trans fat foods; read the labels.
- Drink six to eight glasses of liquid each day unless your doctor gives you other directions. Avoid caffeine products, which can cause the body to lose fluid, resulting in thickened mucus.
- Calcium-rich foods (e.g., milk, cheese, yogurt) are important for strong bones, especially if you are taking an oral steroid. Talk to your doctor, however, before taking calcium supplements in tablet form. Milk can coat your throat, so rinsing your mouth with water after drinking milk will help.
- Sodium causes your body to hold fluid. Most people with COPD are asked to limit sodium.
- Protein is important for muscle strength. Two or three servings per day are recommended. Consider eggs, milk, meat, fish and nuts.
Exercise and activity
Keep your body active to help you breathe better. Exercise is recommended for most people. Inactivity weakens muscles, and weak muscles affect your breathing. Participate and join with family and friends to do things you enjoy. Support from others is important. Strength in mind and body impacts health. Always talk to your doctor before starting any new exercise program.

Walking
Begin slowly, even if it’s just a few steps a day. Practice pursed lip breathing. Stop when you are tired. Walk every day, first in your home and then outdoors as weather permits. Try to increase the time or distance each day.

Exercise
Choose something you really enjoy to increase your success. Do not be afraid to try swimming or light weight lifting if that’s what you like. Wait one or two hours after eating before exercising. Include time to warm up and cool down. Stop exercising immediately if you have chest pain, rapid heartbeat or dizziness. Contact your doctor if the symptoms continue. If breathing does not return to normal after three minutes, it may mean that you are working too hard.

Intimacy
Relationships are affected in many ways when dealing with a chronic health condition. Talk with your partner and share any concerns you have. Intimacy does not have to stop because of lung disease. Your breathing may be easier during sex if you wait two-to-three hours after a meal and use your bronchodilator 10 to 20 minutes before. Avoid positions that cause you to support yourself on your arms or stomach.

Travel
Be aware of variations in climate when you travel. Avoid high altitudes and regions with extreme hot or cold temperatures. Temperature and humidity extremes can cause difficult breathing. Know where area hospitals, oxygen supply companies and doctors are located. Take extra medication. If you use oxygen and travel by plane, call the airline ahead to make arrangements. You must provide your own oxygen and use a travel concentrator approved by the airline.
Emotions and Mood
Dealing with medicines and treatments every day and coping with flare-ups can cause anxiety. It’s normal for people with chronic illness to worry a bit more than others. Talk to someone about how you’re feeling. The more you learn to recognize changes in your emotions, the better you’ll be able to address them.

How can you help yourself?
Shortness of breath can cause anxiety, which in turn causes muscles to tense. Airways tighten and shortness of breath becomes more pronounced. When you notice increased shortness of breath or increased anxiety, begin pursed lip or diaphragmatic breathing. Learn some relaxation techniques; find a quiet, peaceful area, or listen to some soft music.

Watch for symptoms of depression. Feeling sad, angry or guilty from time to time is common. Changes in eating or sleeping habits may occur. You may notice a loss of interest in things you normally enjoy doing. If you have these feelings every day or almost every day for two or more weeks, contact your doctor. Talk about options available to help you feel better.

Acceptance and adjustment to changes in lifestyle will take time and practice. Some people find support groups helpful. Inquire about local resources.

Try to focus on the good things in your life. It takes courage to remain positive when dealing with a chronic health condition. Accept the love and support of family and friends. Follow the medical advice of your health care team. Build a support network that will help you take control of your condition.

Energy-Saving Ideas
Pace yourself to avoid fatigue and maintain your activities of daily living. Each day will be different, and some will be better than others. Find the right balance between work and rest to help conserve energy and cope with your COPD on a daily basis.

Tips to conserve energy:
▶ Walk and move slowly.
▶ Wait about one hour after eating to do your activities - digestion uses energy and oxygen.
▶ Spread your tasks out. Don’t try to do everything at once. Take frequent breaks to rest, and stop when you are tired.
▶ Plan ahead so that the items you use most often are within easy reach.
▶ Use pursed lip breathing, and exhale during the difficult part of a task.
Suggestions to Help with Daily Activities

Bathing and dressing
- Avoid hot water, as steam can make breathing difficult; use an exhaust fan.
- Install hand rails; use a shower bench and try using a hand-held shower head.
- Use a terry cloth towel and blot dry; this requires less energy than normal drying.
- Sit to brush your teeth, shave, apply makeup and style hair; avoid aerosols and spray products.
- Wear comfortable clothing and avoid belts, bras and girdles; avoid clothing that restricts chest and stomach movement; men should consider wearing suspenders.
- Sit to dress; limit bending over; bring feet up to put on socks and wear slip-on shoes; put underwear inside pants and put both of them on at the same time.

Preparing meals
- Smaller, more frequent meals are preferable; large amounts of food at one time takes more space and leaves less room for your lungs to expand.
- Sit for as many activities as you can.
- Use appliances that help you conserve your energy, such as a microwave oven, Crock Pot, electric can opener or blender whenever possible.
- Light weight nonstick pans are easier to use; line pans with foil for quick clean up.
- Always use an exhaust fan to control odors and consider a portable fan if you are bothered by heat.
- Use convenience foods wisely; read labels, as many packaged foods are high in salt and sugar.

Household chores
- Decide which tasks need to be done; ask for and accept help when needed.
- Purchase pick-up tongs; they are great for hard-to-reach places.
- If you must vacuum, use a machine with disposable bags and remove them carefully; dust particles are major irritants to your lungs.
- Sweeping and dusting are best done by someone else; wear a dust mask and use a damp cloth or mop if you are doing the work yourself.
- Use a small cart to move your supplies from one room to the next; try to avoid unnecessary travel back and forth between rooms.

Health Care Provider Communication

To achieve the best possible level of health care, work together with your health care providers. Take an active part in your care. Communication is key. Asking the right questions and understanding the answers will help to improve health. Taking along a family member, friend or caregiver can help.

1. Prepare for appointments. Write down questions before seeing the doctor. Highlight the top three. Know what medicines, vitamins, and nutritional supplements you take. Include over-the-counter products.
2. Be on time to your appointment.
3. Be detailed but to the point when describing your problems or concerns.
4. If you do not understand what you are told, ask the doctor to explain again using different words.
5. Make informed decisions. Ask for reading material or where to find more information.

It is important to have confidence and trust in your doctor or health care provider. Clear communication is vital to improved health.