

Your professional health care staff

Nurse: _____


Team Leader: _____

Home Health Aide: _____

Therapist: _____

Social Worker: _____


Important Phone Numbers *(Patient to complete)*


 Ambulance/Police/Fire
911 or _____


 Hospital


 Doctor


 Doctor


 Non-Emergency Transportation


 Pharmacy

 Poison Control
911 or _____

 HME (Oxygen)

 Electric Company

 Phone Company

 Water Company

 Family



COPD Patient Education Guide

Understanding COPD

This booklet is designed to help you, your family and caregiver understand your lung condition, **C**hronic **O**bstructive **P**ulmonary **D**isease (COPD).

It is important that you, your family/caregivers and your health care providers (doctors, nurses, pharmacist and other health care professionals) work as a team and be involved in managing your condition. The more you know about your disease, the more you can be involved in your care and treatment.

Since COPD is a chronic condition, it can't be cured. However, COPD can be managed and treated. By working with your health care team and following a few simple guidelines, you may live longer and improve your quality of life. You can make the best choices and set your goals so that your life remains interesting and enjoyable.

When you are able to recognize the common early symptoms of your condition, you can keep your doctors and nurses updated on your condition, receive appropriate and timely treatment and help prevent serious complications.

Keep this booklet as a resource for yourself, your family and caregivers. It contains various forms that can be used to write down your vital signs, medicines, treatments and other important information.

As your home health nurse/therapist instructs you in the information contained in this booklet, please ask questions during their visits. You may also call our office if something is unclear or if you have questions and/or concerns.

We look forward to being a member of your health care team!

Your Professional Home Care Staff

PATIENT IN-HOME RECORD

PATIENT NAME: _____ PATIENT ID: _____ MONTH/YR: _____

DATE/TIME	TEMP	B/P	PULSE	RESP.	WEIGHT	BM	PROCEDURE/ LAB	DR. APPT	INITIALS

COMMENTS: _____

SIGNATURE	TITLE	INITIAL	SIGNATURE	TITLE	INITIAL	SIGNATURE	TITLE	INITIAL

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Chronic Obstructive Pulmonary Disease (COPD) Patient Education Guide

	Page
I. Understanding COPD	
II. The Disease Process	1
<ul style="list-style-type: none"> • Causes of COPD • How Healthy Lungs Work 	<ul style="list-style-type: none"> • What is Chronic Bronchitis? • What is Emphysema?
III. Managing COPD	3
<ul style="list-style-type: none"> • Smoking/Stop Smoking • Medications 	<ul style="list-style-type: none"> • Diet/Nutrition • Fluid Intake
IV. Respiratory Therapy	12
<ul style="list-style-type: none"> • Breathing Devices • Oxygen Equipment/Safety • Postural Drainage • Controlling Your Cough 	<ul style="list-style-type: none"> • Pursed-Lip Breathing • Deep Breathing • Relaxation Breathing • Chest Muscles Exercise
V. Lifestyle Changes	24
<ul style="list-style-type: none"> • Ways to Save Energy 	<ul style="list-style-type: none"> • Rest
VI. Indoor/Outdoor Pollution	29
VII. Infection Control	31
VIII. Monitoring Your Progress	33
IX. Medical Intervention/Follow-up	34

Rev. 11/01

Purpose: This booklet is for informational purposes only and is not designed to replace your physician's advice or treatments. The information contained in this booklet may change, as practice guidelines change.

Disclaimer: We have attempted to make the information contained in this booklet as accurate as possible; however, MedForms makes no guarantees as to its accuracy and assumes no liability for the use of its forms and publications.

Research Resources: Department of Health and Human Services; National Institutes of Health; American Lung Association

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Editor: Connie King-Sauer, RN, Medical Forms Management, Inc.

SECTION II. The Disease Process

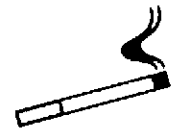
So, you have **Chronic Obstructive Pulmonary Disease (COPD)**. You are not alone. 10-20% of adults in America (over 16 million people) have COPD. This disease is estimated to cost the nation almost \$32 billion a year. It is the second leading cause of disability among Americans and the fourth leading cause of death.

COPD includes (*but is not limited to*) chronic bronchitis and emphysema. Air flow is obstructed with both of these diseases and usually a person with COPD will have both conditions.

Living with COPD is hard work. However, there are ways you can improve your breathing and feel better. With proper medication, rehab and the right attitude, most patients can regain some lost function and enjoy a happier, more productive life.

Surgery or drugs won't cure COPD. Since you are not going to find a magic medicine or a quick fix from an operation, your improvement will have to come from learning as much as possible about your disease and from doing the work required. It is also important to remember there are no two COPD patients that are alike.

CAUSES OF COPD

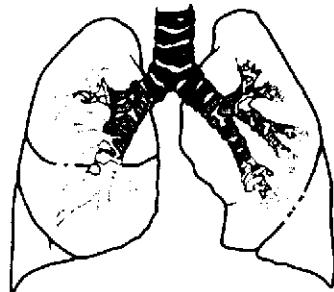


Smoking is the most common cause of COPD. Smokers make up between 80-90% of all COPD cases. Smokers are 10 times more likely to develop COPD than non-smokers.

Other causes include:

- frequent lung infections; and
- exposure to certain industrial pollutants.

HOW HEALTHY LUNGS WORK



When you breathe in, the lungs bring fresh cool air that is rich in oxygen to your bloodstream. When you breathe out, you remove water and warm air that is high in a waste product known as carbon dioxide. As you breathe in, your chest and lungs expand and you suck air in. As you breathe out, your lungs return to a smaller size. This pushes the stale air out of your lungs.

PATIENT/CAREGIVER EDUCATION/TEACHING CHECKLIST

PATIENT NAME: _____ PATIENT ID: _____

Check what was taught and who received instruction patient or caregiver (CG). If both patient and caregiver received instruction, check both areas. Record date instruction was provided.. Write initials of staff member providing instruction.

	PATIENT	CAREGIVER	DATE	INITIALS
1. Causes of COPD				
2. How healthy lungs work				
3. What is chronic bronchitis				
4. What is emphysema				
5. Smoking/Stop Smoking				
6. Medications				
7. Oxygen therapy				
8. Diet/Nutrition				
9. Fluids				
10. Breathing devices				
11. Postural drainage				
12. Controlling cough				
13. Breathing exercises				
14. Lifestyle changes				
15. Indoor/outdoor pollution				
16. Infection control				
17. Monitoring your progress				
18. Medical intervention/followup				
19. Other:				

Item Number	Comments

SIGNATURE TITLE INITIAL

SIGNATURE TITLE INITIAL

SIGNATURE TITLE INITIAL

SECTION III. Managing COPD

Managing COPD will reduce symptoms and improve how you feel. It is very important to follow the instructions given to you by your doctor and other members of your health care team.

EFFECTS OF SMOKING

Smoking causes the following to occur:

- The lining of the lungs' airways become dry and sore.
- You breathe in nicotine, tar and poisonous gases (like carbon dioxide).
- Nicotine makes the blood vessels smaller, which reduces the flow of oxygen.
- Cigarette smoke changes the enzyme balance of the lungs, leading to destruction of lung tissue that occurs in emphysema.
- The tiny little hair-like cleaners (*cilia*) in your airways that help clean out dirt and mucus become paralyzed from the gases. This makes more mucus and the airways become clogged.
- Lung infections occur more often since old mucus is a perfect place for bacteria, etc., to grow.
- You feel tired and short of breath since your blood is robbed of oxygen by the carbon monoxide (a poisonous gas).
- As the air sacs stretch and break, you get less and less oxygen into your bloodstream and your condition keeps getting worse.



STOP SMOKING



If you have been smoking for years you may think you will never be able to quit. This will have to be your decision. You may ask yourself, "Why stop now...the damage is already done?" Keep in mind, the minute you quit smoking, your body goes to work to repair the damage to your airways. If you want healthier lungs, **YOU MUST QUIT SMOKING.**

Quitting smoking is a process. Sometimes it takes several attempts to quit before you are successful. (Most smokers try at least three times.) Don't give up! Practice makes perfect! There are numerous "aids" available on the market today to help you stop smoking; however, you have to be committed to quitting smoking.

Smokers report they smoke for stimulation, handling the cigarette, relaxation, help for tension, craving and habit.

COPD Care Plan

START DATE	MEDICATION NAME	DOSAGE	ROUTE	FREQUENCY	DISC. DATE

RESPIRATORY THERAPY:

Inhalation Therapy: No Yes: Frequency _____ Medication/Solution _____

Additional Instructions: _____

Oxygen Therapy: No Yes: Tank Concentrator Liquid By: Mask Cannula Trach Collar
 Continuous Intermittent: Hours/day/night: _____ Liters/minute: _____

CPAP Ventilator: Continuous Night BiPAP Mechanical Hours/day/night: _____

RESPIRATORY EXERCISES:

Postural Drainage: No Yes: Frequency _____ Additional Instructions: _____

Pursed Lip Breathing Deep Breathing Relaxation Breathing Chest Muscle Exercises
 Instructions: _____

ACTIVITY RESTRICTIONS: No Yes: (If yes, list restrictions) _____





DIETARY RESTRICTIONS: No Yes: (If yes, list restrictions) _____

FLUID RESTRICTIONS: No Yes: (If yes, list restrictions) _____

NEXT DOCTOR'S APPOINTMENT: _____; _____; _____; _____; _____

BLOOD WORK: No Yes: (If yes, date to be drawn) _____; _____; _____

ADDITIONAL INFORMATION/INSTRUCTIONS: _____

- Be sure and keep your doctor appointments. The home health nurse/therapist is assigned to work with your doctor, not replace him/her. Your doctor is the only one who can make changes in your medication (*including oxygen*) and order tests that may be needed. Make the most of the appointments by asking questions, raising concerns and sharing your observations and feelings with your doctor. 
- It's a good idea to keep a notebook or use this booklet to record changes you have noticed such as swelling, weight gain or shortness of breath. Let the doctor know when they occurred, what you did about them and whether it worked or not. 
- Prepare a list of questions in advance so you don't forget to ask them. Write down the doctor's response to your questions.
- Don't withhold information that you think would be minor. It may be very important to your treatment and condition.
- Make sure the doctor knows all the medications (*prescribed and over the counter*) you are taking. 
- Don't leave the doctor's office until you understand all of the doctor's instructions. Don't hesitate to call the doctor later if something comes to mind that you forgot to ask or report. 

We are a health care team and by working together, we are better able to control your COPD so you can have a better quality life.

You will need to find substitutes for cigarettes if you use them for relaxation, stimulation or simply something to do with your hands and find new ways to cope with tension, craving, and habit.


You must do the following:

- Make up your mind to quit for you!
- Change your smoking pattern (*change brands, where and when you smoke and how much you smoke*).
- Keep a written record of when, why and where you smoke a week before quitting and start thinking of substitutes.
- Be positive and tell yourself that you can do this!
- Pick a day to quit and stick to it.
- Avoid friends and/or family members who smoke.
- Use coping techniques such as exercise, deep breathing, etc.

You may need a nicotine replacement if you:

- Smoke more than a pack a day;
- Smoke higher nicotine cigarettes;
- Smoke within 30 minutes of arising;
- Smoke at least every two hours while awake;
- Have withdrawal symptoms when smoking is delayed; and/or
- Smoke when you have a medical problem that is made worse by continued smoking.

MEDICATIONS

 Several kinds of medicine are available to help you control COPD and to live more comfortably with COPD. You, your doctor, pharmacist, home care nurse and other health care team members will work together to find the right medication and dosage for you. Remember, there are no two people with COPD that are the same. Therefore, it might take time and trying several medications in order to find what works best for you. The guidelines below will assist you in working with your health care team:

- Any medication may cause an unplanned result, so report all side effects to your health care provider. They will know what to do about the side effects.
- Always take your medicines at the correct time.
- Take the amount of medicine prescribed by your doctor.
- Do not stop a medication without first discussing it with your doctor.
- Do not reduce the medication dose unless ordered to do so by your doctor.

- Tell your doctor and other health care providers about all other medicines that you are taking (*even non-prescription medicines such as aspirin, antacids, cold medicines and herbal remedies*).
- If the doctor orders a new medicine, ask your doctor or pharmacist if this will affect the other medicines you may be taking.
- Use a chart or container system (egg carton or med-planner) to help you remember what kind, how much and when to take medicine.
- Take your medicines with you whenever you go to the doctor, hospital or emergency room so they will know what you are taking.

It is not uncommon for patients to have trouble paying for their medicines. Don't hesitate to let your doctor, home health nurse and/or social worker know if this is a problem for you. Sometimes financial assistance can be obtained through social services agencies or through different programs provided by drug companies. The home health nurse or social worker can help you apply for any available assistance.



The cost of your medicine can vary greatly from one pharmacy to another. Compare the different prices among pharmacies (*or mail-order prescription services*). Also, a generic form of your medicine may be available that could decrease the cost. Ask your pharmacist if an acceptable generic form of your medicine is available.

The following medications are frequently ordered in the treatment of COPD:

BRONCHODILATORS:

Bronchodilators open the airways and let air move in and out. They come in several forms, including pills, liquids and sprays. Sometimes they may make you feel nervous, jittery, unable to sleep or may upset your stomach. Let your doctor or home care nurse know if you experience any of these side effects.

ANTIBIOTICS:

Antibiotics are used to treat infections. There are several kinds of antibiotics on the market. Some are taken by mouth while others must be injected with a needle. Your doctor will select the antibiotic that is right to treat your infection and will order the antibiotic for a certain number of days. It is important to follow the doctor's orders and continue taking your medication even if you are feeling better. Let your doctor or home care nurse know if you develop side effects from the antibiotic, such as an upset stomach, rash, etc.

SECTION IX. Medical Intervention/Follow-up



The home health agency has an on-call licensed nurse available seven days a week, 24 hours a day to provide necessary care. If you have a change in condition, please contact the office during regular office hours, if possible, so we can determine if a visit needs to be made. We will then communicate with your physician, if necessary. We do not provide emergency care, do not carry medications with us and cannot give anything unless ordered by the physician. Your home medical equipment provider also has qualified personnel available to meet your needs after hours.

Even though a sudden change in your symptoms is not expected, if you are tired and short of breath, certain activities may become harder. Notify your doctor and or the home health nurse if any of the following happens:

- Increasing shortness of breath after using measures to relieve it, especially if accompanied by a very fast heartbeat or fever;
- Wheezing at night;
- Chest pain (*usually requires assessment by your doctor*);
- Continuing cough;
- Change in the color of your sputum;
- Bluish color under your fingernails and toenails; and/or
- Faster heartbeat.

As with any relationship, it is important to be open, honest and communicate with your doctor and home health nurse/therapist.

They will rely on you to follow their recommendations about your medication, diet, exercise and lifestyle. They will also depend on you to report back on the progress you make, as well as any problems you encounter. They will depend on you and/or your family/caregiver for information about your symptoms and any changes in your condition. Your input will affect decisions regarding your treatment.

SECTION VIII. Monitoring Your Progress

Managing COPD requires keeping track of symptoms and monitoring how well you follow the instructions of your doctor and other members of your health care team. **YOU** are an important part of the team and are responsible for reporting changes in your health to your doctor and home health nurse.

YOUR RESPONSIBILITIES

As a member of your health care team, you should:

- Monitor your general health and report any changes in how you feel to your doctor or home health care nurse/therapist.
- Report any changes in your symptoms.
- Take your medications as prescribed and report any side effects.
- Follow your guidelines for activities and exercise, and report when you are not able to do an exercise or activity easily.
- Follow your prescribed diet.
- Avoid contact with things that may irritate your lungs.
- Clean the air conditioning/heating filters frequently to remove pollutants.
- Be aware of signs of infection such as:
 - fever/chills;
 - chest tightness;
 - increased shortness of breath; and
 - change in the color or amount of mucus.
- Prevent infection - avoid crowds during flu and cold season. Avoid close contact with others who are sick and keep your respiratory equipment clean.

FAMILY/CAREGIVER RESPONSIBILITIES

Your family and/or caregiver are also part of your health care team. Don't hesitate to ask them to help monitor your condition. They should know what new symptoms or changes in symptoms to report to your doctor or home health care nurse/therapist.

When you or your family/caregiver call the health care provider's office, make sure to say you are being treated for COPD; describe your symptoms; tell your health care provider what has already been done to bring relief or comfort; and give the names and amounts of medicines you take.

Your pharmacist should provide you with specific instructions with your medicine, (*for example, take the medicine on an empty stomach or do not drink milk with the medicine, etc.*). Do not take an antibiotic that is left over from another illness or that was ordered for someone other than yourself.

DIURETICS:

Sometimes you can control a fluid problem by simply cutting down on salt. However, you may have to take a diuretic (*water pill*) to get rid of extra fluid in your body. Diuretics make you urinate more often. Keep in mind that urinating more often is not considered a side effect of taking diuretics. Frequent urination is the desired result of the diuretic. **DO NOT** skip doses of diuretics.

When some diuretics are taken regularly, the body may lose too much potassium or other imbalances within the body can occur. It is important that you have blood tests on a regular basis to monitor these levels.

Let your doctor or home care nurse know if you have any of the following symptoms:

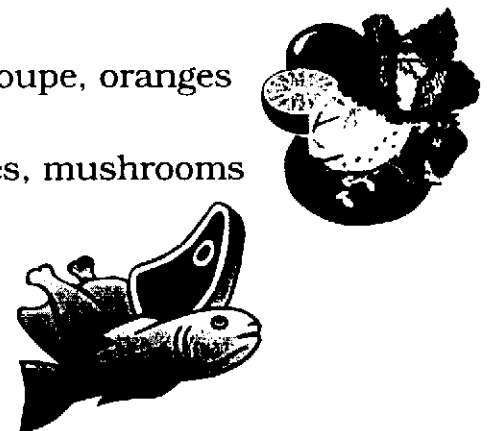
- leg (*muscle*) cramps;
- weakness;
- dizziness or lightheadedness;
- urinary incontinence (*accidental leakage of urine*);
- gout (*a type of arthritis*); and/or
- skin rash.

POTASSIUM SUPPLEMENT:

In order to replace the potassium you lose when taking diuretics, your doctor may order a potassium supplement and/or instruct you to eat more foods high in potassium content.

Foods high in potassium include:

- bananas, strawberries, watermelon, cantaloupe, oranges
- raisins, prunes, apricots, dates
- fresh beets, greens, spinach, peas, tomatoes, mushrooms
- Irish potatoes, dried beans and peas
- fresh turkey, fish and beef
- fresh orange and grapefruit juice
- canned grapefruit, prune, apricot juice
- milk



SEDATIVES/TRANQUILIZERS:

While sedatives and tranquilizers may help you relax and sleep better, they can also cause the rate of your breathing to slow too much. Make sure your doctor is aware of any sedative or tranquilizers you may be taking.

VACCINES:

Getting the flu or pneumonia can be very dangerous for a person with COPD. There are vaccines available that are effective against fighting off these types of infections. Talk with your doctor or home care nurse about these vaccines. Keep your vaccinations up to date.

STEROIDS:

Steroids can decrease swelling in the airways and ease breathing. They may make you feel like you have more energy. Steroids slow down the work of your adrenal glands; therefore, it is important to gradually stop taking them so your adrenal glands have a chance to catch up again. Don't suddenly stop taking steroids!

If you use steroids for a long period of time, you can have some unwanted side effects, such as fullness in the face (*commonly called a moon face*), weakened bones and skin and stomach ulcers. You may also increase your risk of infection. Report any side effects to your doctor or home care nurse.

OXYGEN:



Oxygen is a medication and must be ordered by your physician. The prescription will specify how much oxygen you need per minute (*flow rate*) and when you need to use the oxygen. Some people use oxygen while sleeping, others may use oxygen only when exercising and others may use oxygen continuously. In order for your doctor to determine what your oxygen needs are, a blood test will be performed.

The additional amount of oxygen is delivered to your lungs to help prevent the weakness, shortness of breath, dizziness and anxiety, which occurs when your body does not receive enough oxygen.

Some insurance companies may pay for oxygen. However, payment will be based on lab results, diagnosis and other information. (See additional information on oxygen in Respiratory Therapy Section.)

DANGER SIGNS OF INFECTION

- You have fever or chills.
- You are more short of breath or wheezing more than usual.
- Your cough is worse than usual.
- You have more mucus, or it's thicker than usual or its color changes.
- You notice swelling in your ankles or around your eyes.
- You gain a few pounds overnight.
- You lose your appetite, feel dizzy, sleepy, or have headaches.

WHAT SHOULD I DO IF I HAVE AN INFECTION?

- Take the medicine your doctor orders exactly as directed. Don't stop taking the medicine before your doctor says so, even if you feel better.
- Carefully follow your doctor's directions for clearing your lungs of mucus.
- Immediately call your doctor or home care professional if your condition gets worse.
- If a serious medical problem develops, you should **always** notify your physician, call 911 or go to the nearest emergency room, immediately.

CARE & CLEANING OF RESPIRATORY EQUIPMENT

Properly cleaning your respiratory equipment will reduce the risk of infection, as well as maintain efficient working order of the equipment. Cleaning procedures should be performed daily using the following procedure (unless otherwise instructed by your home care nurse/therapist/home medical equipment supplier staff).

Vinegar & Water Cleaning Procedure:

- Take apart all washable parts of equipment;
- Wash well in warm soapy water with a non-oil based liquid detergent (*Joy, Ivory Liquid, etc.*);
- Rinse well under tap water;
- Disinfect by soaking in a vinegar/water solution (1 part white vinegar to 3 parts water) for at least 30 minutes. In order to kill bacteria, make sure all parts are completely submerged in the vinegar/water solution while soaking.
- Again, rinse thoroughly with hot tap water, being careful not to touch the sink with your equipment.
- Shake out excess water; and
- Allow to air dry by placing all equipment on clean paper towels. Cover the equipment with paper towels.

Now you are ready to reassemble and use your equipment.

SECTION VII. Infection Control

Preventing infections can help you stay as healthy as possible.

Washing your hands is the single most important step in controlling the spread of infection.

HANDWASHING

Wash your hands before and after giving any care to yourself (or the patient), even if you are wearing gloves; before handling or eating foods; after using the toilet or changing a diaper; handling soiled linens; touching pets; or when coughing, sneezing or blowing your nose. Handwashing needs to be done frequently and correctly:

- remove jewelry;
- use warm water and soap (Liquid antibacterial soap is best);
- hold your hands down so water flows away from your arms;
- scrub for 15-30 seconds, making sure you clean under your nails and between your fingers;
- dry your hands with a clean paper towel (or clean cloth towel);
- use a new paper towel to turn off the faucet; and
- apply hand lotion after final washing to help prevent and soothe dry skin.



OTHER PREVENTIVE MEASURES

You can also prevent infection by:

- treating all body substances (blood, stool, vomit) as potentially infectious;
- using proper housekeeping measures;
- wearing protective equipment when necessary (gloves, mask, etc.);
- providing good ventilation to prevent spread of germs through the air;
- using liquid antibacterial soap and changing towels and washcloths daily or if soiled or by using paper towels;
- keeping bathroom and kitchen cooking areas clean;
- keeping influenza (flu) and pneumonia vaccinations up to date;
- keeping your body healthy with daily exercise, a variety of foods, and enough sleep so that you can fight off the germs that cause infections;
- keeping your lungs as clear of mucus as you can. Drink enough fluids, and follow your physical therapy program carefully. Infections grow easily in mucus;
- avoiding crowds and people with colds. Handle colds carefully and watch for danger signs; and
- cleaning all respiratory equipment as directed and change disposables at recommended intervals.

DIET/NUTRITION

When you have COPD, it is very important to remember your eating habits may affect the way you breathe. Poor nutrition is common among persons with chronic lung disease, since shortness of breath and fatigue can interfere with your ability to eat a balanced diet.

A proper diet will not cure your disease, but it will make you feel better. You can have a better quality of life when you plan healthier and easier meals. A poor diet makes it hard to build new immune factors to fight infections and repair damaged tissues.

THE FOUR BASIC FOOD GROUPS:

As a rule, we don't eat enough fruits and vegetables. You need to make sure you add enough foods from the four basic food groups to put your body in better condition and make breathing easier.



Good nutrition means eating a variety of foods from each food group every day since there is no single food that will supply all the nutrients your body needs. The four main groups are listed below:

1. **Fruits and vegetables** (such as oranges, apples, bananas, carrots, and spinach); You should have at least 4 servings a day.
2. **Whole grains, cereals, and bread** (such as wheat, rice, oats, bran, and barley); You should have at least 4 servings a day.
3. **Dairy products** (such as whole or skim milk, cream, and yogurt); You should have at least 2 servings a day.
4. **Meats, fish, poultry, eggs, dried beans, and nuts**; You should have at least 2 servings a day.

SOURCES OF THE FOUR MAIN FOOD GROUPS:

The main nutrients in food are carbohydrates, proteins, fats, vitamins and minerals.

- Carbohydrates give you energy. Sources of carbohydrates are dried beans, peas, and lentils; whole grain breads, cereals, and crackers; and fruits and vegetables.
- Protein is needed for growth and is a good back up supply of energy. Protein sources are lean meats and low fat dairy products.
- Fat is a nutrient that serves multiple purposes in the diet. It has high fuel value and acts as a carrier of essential fatty acids and vitamins. Fat is found in many foods such as red meat, dairy products (whole

milk, cream, cheese, and ice cream), egg yolks, butter, salad dressings, vegetable oils and many desserts. You need some fat in your diet; however, too much fat isn't good for anyone.

- Foods high in fiber are healthy and may lower blood sugar and blood fat levels. Fiber comes from plants and include bran cereals, cooked beans and peas, whole grain bread, fruits and vegetables.

EATING HINTS:

Eating can be hard work when you are short of breath. You may find the following suggestions helpful:

- Choose foods that are easy to prepare so you don't waste your energy preparing the meal.
- Try to rest before eating so you can enjoy your meal.
- Eat slowly and chew your food well.
- Try eating six small meals a day instead of three big meals. This will decrease the amount of oxygen it takes for you to chew and digest each meal. You don't have to cook six meals a day. You can eat salads, fruits, milk, desserts, etc., between your regular cooked meals.
- If you are underweight, you will have less energy stores to pull from. It is important to eat a healthy variety of foods to help your body function at its best.
- Extra body fat may interfere with breathing. It also increases the amount of oxygen you need. Your doctor may order a weight reducing diet. Your doctor, home care nurse or dietician can provide you with additional information.
- Bloating of the abdomen may make it harder for you to breathe. If you have a tendency to bloat you may want to avoid gas-forming foods such as peas, beans (*not green beans*), onions, turnips, corn, cucumbers, cabbage, broccoli, brussels sprouts, cauliflower, melons and raw apples.
- Limit your intake of caffeinated drinks since caffeine may interfere with some of your medicines and may also make you feel nervous.
- Sometimes it is helpful to take the medication that opens your air passages (*bronchodilators*) and helps to clear the mucus from your lungs about an hour before meals.
- When you are less active, your muscles can become weaker and smaller. Extra protein can help rebuild muscles. Good sources of protein are milk products and meats. The vitamins and minerals found in fruits, vegetables and grains are also important for muscle building.
- Your doctor may want you to eat more high potassium foods if you are on diuretics (*water pills*). Foods high in potassium include: bananas, oranges, fresh pineapple, dried fruit, potatoes, beef and milk.

WEATHER



Cold air can put a strain on your lungs. In order to warm the air you breathe, do the following:

- Breathe through your nose; and
- Cover your nose and mouth with a cold-weather mask (*can purchase at drug store*) or a warm scarf or even your hand.

Damp weather makes some people feel worse. Moving to a warmer climate may make you feel better but won't cure your disease. Make sure any move is worth the trouble and expense before you make it. If you currently live in an area that is 3,500 feet above sea level, moving to a lower altitude may make your breathing easier.

Any weather that causes air pollution to increase will be bad for you. Be aware of air pollution alerts when they are issued and follow these guidelines:

- Stage I Alert - conditions could worsen and be a hazard to your health;
- Stage II Alert - stay inside as much as possible; and
- Stage III Alert - it is not safe for you to go outside at all.

SECTION VI. Indoor and Outdoor Pollution

COPD makes you more sensitive to indoor irritants. In order to decrease your exposure to irritants or rid them from your home:



- Do not allow smoking in your home. Post no-smoking signs in areas where guests and family members can readily see them. Don't hesitate to ask someone to go outside to smoke.
- Install exhaust fans in the kitchen, bathroom and work areas to get rid of fumes. Clean the fans regularly. Open a window if necessary.
- Have gas heater, stoves, etc., inspected on a regular basis.
- Make sure your furniture and carpet are free of gas odors such as formaldehyde.
- Clean dust and other indoor irritants from appliances (dryer filters, water pans under refrigerator, refrigerator coils, furnaces and ducts).
- Clean or replace air conditioner and furnace filters as often as needed.
- Use roll-on deodorant, non aerosol pump sprays and a solid type air freshener.
- Avoid using dusting powder.
- Use a damp mop instead of a broom for sweeping floors.
- Use a damp cloth for dusting instead of a feather duster.
- Use baking soda and vinegar as household cleaners.
- Have a professional exterminator indoors or have others use pesticides indoors while you leave the home.
- To increase circulation within your home, use ceiling fans; open doors of all rooms; open a window for a few minutes several times a day during winter months and leave a window slightly open during the summer.
- If you need more humidity than cooking and running water provides, have a central heat humidifier installed. Try not to use room humidifiers.
- Don't use a fireplace as the main source of heat. Only burn firewood and make sure the chimney is cleaned periodically.



- Avoid houseplants since they are a major source of mold. Try to keep trees or bushes away from the window where you sleep or sit since they encourage mold growth and dampness.
- Mold and mildew will grow in areas where moisture accumulates (bathroom, basements, garages, etc.). Waterproof areas, replace grout, etc.

- Alcohol is high in calories, has no food value and can slow your breathing. Never use alcohol with sedatives or tranquilizers.
- If you are on oxygen, use it with and after meals. Eating and digestion require energy and increases the oxygen needs of your body.
- Make your meals attractive and enjoyable. Try to eat in a relaxed environment.

LIMITING SALT IN YOUR DIET:



Salt (*sodium*) may cause your body to hold too much water and make it harder for you to breathe. It is important, however, to decrease salt without sacrificing the enjoyment you get from eating.

Your doctor will specify how much salt you may have on a daily basis. Since making the changes in your diet can be confusing and complicated, your home health nurse or dietician can provide you with specific dietary instructions and counseling.

They can suggest ways to prepare foods and ways to modify your favorite recipes to lower the salt content in your diet. Your current likes and dislikes, as well as foods that you can afford, should be considered when planning your diet.

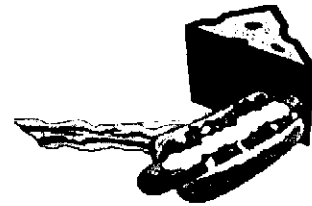
Low sodium foods include fresh fruits and vegetables (*except celery*), most hot cereals, puffed rice or wheat cereal, rice, pasta (*noodles, spaghetti, macaroni*), and special low salt and/or salt free foods.

TIPS ON CUTTING DOWN ON SALT:

Since you have probably been eating more salt than what you can now have, it is important to start making diet changes now. Many foods have "hidden" salt. There are numerous forms of sodium, so be alert for anything that has the word sodium with it, for example, sodium hydroxide. The following list will assist you in decreasing your intake of table salt (*sodium*):

- Remove the salt shaker from the stove and cook without salt. This can reduce your salt intake by about 30%.
- Remove the salt shaker from your eating table. This can reduce your salt intake by up to 30% more.
- Salt substitutes can be used, but since these contain extra potassium, check with your doctor first on which ones, if any, are appropriate for you.
- Avoid salty seasonings such as bouillon cubes, meat tenderizer, soy sauce, steak sauce, chili sauce, Worcestershire sauce, seasoned salts, etc.
- Use low salt seasonings such as vinegar, herbs and lemon juice.

- Use fresh vegetables and fruits or low-sodium canned and processed foods instead of regular canned fruits and vegetables.
- Use plain or brown rice instead of chicken/meat-flavored rice that comes in a packet and has a flavor packet.
- Avoid high-sodium foods such as:
 - buttermilk;
 - canned soups/dry soup mixtures;
 - canned meats and fish (buy water packed tuna or salmon instead);
 - ham, bacon, or sausage;
 - processed meats (deli meats, hot dogs);
 - salted nuts or peanut butter;
 - instant cooked cereals;
 - salted margarine or butter;
 - prepared cornbread, pancake, muffin mixes, etc.;
 - prepackaged frozen dinners with over 400 milligrams of sodium per serving;
 - snack foods like potato chips, pretzels, olives, pickles;
 - cheese (except low sodium or cottage cheese);
 - salad dressings, and;
 - preseasoned mixes for tacos, chili, sauces, gravies, etc.
- Avoid fast foods since most are very high in sodium.
- Avoid headache or heartburn medications that contain sodium (*sodium carbonate or sodium bicarbonate*).



FLUID INTAKE



Studies have found the general public to be dehydrated. We simply don't drink enough fluids. It is important for you to drink adequate fluids every day. Drinking plenty of fluids keeps your mucus thin, makes it easier to cough up and makes it easier to breathe. A well hydrated person can better fight off infection.

Talk to your doctor or home care nurse/therapist to determine how much fluid you should have every day. While many doctors recommend 8 cups (*that is 64 ounces*) of caffeine-free liquids a day, you will need to determine if you should limit your fluid intake to 8 cups a day or if you should have more or less fluids than 8 cups. If you are taking oral medication, take your medicine with a full glass of water, unless your fluids are restricted. Adding lemon or orange flavor to water may improve its taste.

Sometimes a diuretic can cause a dry mouth and patients will tend to drink more liquids. You do not need to replace the fluid that diuretics get rid of. Oxygen use can be very drying to the mucus membranes.

There are so many emotional problems you will have to overcome on a daily basis. You will need help and encouragement from caregivers, family and friends.

You need to keep stress under control in your life. Emotional stress and anxiety makes the heart and lungs work harder, increases shortness of breath and interferes with daily functioning.

Studies have shown that depression is quite common because of the limitations caused by COPD. If you find yourself severely depressed, you have a reason to feel that way, but... DO SOMETHING ABOUT IT TO MAKE IT BETTER! Make your home care staff and doctor aware of your feelings. Psychological counseling can help you and your family cope with this chronic illness. There are medications (*for example, anti-depressants*) available that can help you.

The following can help to reduce stress in your life:

- Talk with others about your concerns and stresses, and ask them for their support.
- Plan activities with friends that are relaxing, such as playing cards, watching movies or just relaxing.
- Sit quietly for 15-20 minutes each day. Take deep breaths and think about a peaceful scene. Consider music therapy or meditation.
- You don't have to solve all of life's problems, so learn to accept the things you cannot change.
- If you feel angry, count to 10 before answering or responding.
- Since smoking, drinking, overeating or drugs make your condition worse, don't use them as a way to cope.
- Look for the good in any situation.
- Exercise regularly within your guidelines.
- Avoid things that you know will upset you.
- If you have a problem, try to plan a productive solution to the problem.
- Don't be afraid to say NO!
- If possible, join a support group.
- If you can't cope on your own, seek help.



Any exercise is better than none at all. Start slowly and you may need to use oxygen while exercising. Low-impact exercises that place minimum stress on joints are going to be easier for you to perform. When you exercise, remember the following:

- Include plenty of stretching in your warm up period.
- Set goals that you can achieve over a period of time.
- Alternate your exercise activities so you don't become bored.
- Choose fun activities that fit your lifestyle.
- Exercise with someone else to keep you motivated.
- Include cool-down activities such as stretching or walking at a slower pace.
- Set a pace that is comfortable for you.
- If you don't feel well while exercising, stop immediately.
- Reward yourself when you reach a goal.

SEXUAL HEALTH



Don't be afraid to discuss private aspects of your life with your health care team. Most people with COPD can continue sexual relations, but that may be another area where you will need to make some changes.

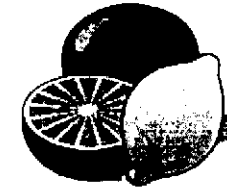
- Spend more time hugging, kissing, holding and touching.
- You need to have relaxed surroundings and allow plenty of time. Select your best time of the day or evening. This is usually about an hour after taking lung-clearing treatments.
- Wait a few hours after eating a heavy meal or alcohol.
- Breathe deeply with your diaphragm. If you get short of breathe, try pursed-lip breathing to help prevent breathlessness during sexual relations.
- Choose a position that requires the least effort, such as side-by-side.
- If you start feeling tired or uncomfortable, stop and rest.

MANAGING YOUR EMOTIONS



It is not unusual for persons with COPD to at one time or another experience fear, anxiety, depression, anger, resentment, frustration, and loss of self-esteem. There should be no shame attached to your rational fear and apprehension.

If you experience a dry mouth, you might find it helpful to suck on a small amount of sugar-free candy, chew gum or use a saliva substitute.



If you must limit your fluid intake, keep a record of all the water, ice, coffee, milk, soup, tea, juice and soft drinks you take in. Some foods, such as yogurt, gelatin, ice cream and pudding also are counted as fluid intake.

Check the size of your glasses and bowls by filling each with water, then pouring the water into a measuring cup. Remember that one (1) cup equals eight (8) ounces (or 240 cc). You can record your liquid intake on a sheet of paper to keep up with it on a daily basis.

SECTION IV. Respiratory Therapy Exercises and Equipment

**IT IS DANGEROUS TO USE ANY MEDICINES, SPRAYS OR DEVICES
UNLESS ORDERED BY YOUR DOCTOR!**

It may be necessary for you to do breathing exercises, take breathing treatments and/or use oxygen at home. Your doctor will order the type of exercises, therapy, equipment, medication(s) and frequency of breathing treatments, as well as the amount of oxygen. Your home care nurse and/or respiratory therapist will instruct you in the use, care and cleaning of the equipment.

There are several types of breathing devices used to treat COPD. They are used to help put medicines, oxygen and moist air deep into your lungs and to help clear mucus out of your airways. Commonly used devices include metered dose inhalers (MDI), nebulizers and intermittent positive pressure breathing (IPPB) machines.

A mechanical ventilator, when necessary, may also be used cost-effectively in the home. The ventilator is a life support system designed to replace or support normal lung breathing function. This device is used to (1) sustain and extend life; (2) enhance the quality of life; (3) reduce morbidity; and (4) improve or sustain the physical and psychological functions of the individual.

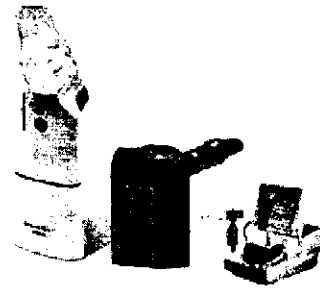
METERED DOSE INHALERS (MDI)

- Wash hands.
- Select a location where you can take your medication comfortably while sitting upright.
- Clear nasal passages and throat.
- Breathe out, expelling as much air from lungs as possible.
- Place mouthpiece well into mouth as dose from inhaler is released, and inhale deeply.
- Hold your breath for several seconds (*10 seconds is recommended*) so the medication settles and you don't breathe it out.
- Remove mouthpiece from your mouth and exhale slowly.
- Stop to cough up mucus.
- If more than one inhalation is ordered, wait at least two (2) minutes before repeating the procedure.



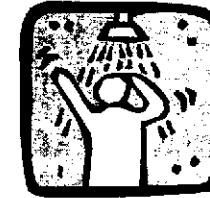
NEBULIZER

The nebulizer is a device that turns liquid medication into a fine mist which you can breathe into your lungs. Here are some steps to follow when using a handheld nebulizer:



- Wash hands.
- Select a location where you can take your treatment comfortably while sitting upright and place machine on a level, non-carpet surface.
- Assemble your device for use:
 - Attach nebulizer to compressor.
 - Plug compressor power cord into a grounded electrical outlet.
 - Open nebulizer cup and pour medication and diluent into it.
 - Close nebulizer cup and keep cup upright.
 - Turn on compressor; a fine mist should be visible.
- Empty your lungs by breathing out slowly through pursed lips.
- Put the end of the nebulizer into your mouth, just past your front teeth. Close lips tightly over it to keep it firmly in position.
- Take a slow deep breath, pause, and then exhale slowly and completely through the mouthpiece.
- Repeat until all the medication is gone.
- Feel free to stop treatment to cough. Note thickness and color of sputum if produced.

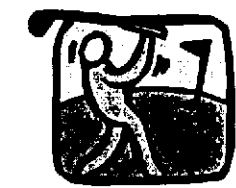
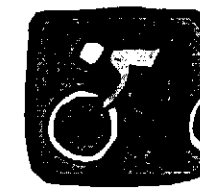
BATHING/GROOMING/DRESSING



Bathing and grooming requires a great amount of energy and can be very difficult at times. The following "hints" may be helpful to you:

- Use a bath stool if you find a shower or bathtub too demanding.
- Attach a hand-held sprayer to the shower head or tub faucet.
- If you have difficulty drying all over, a nice, long, terrycloth robe will help absorb the moisture.
- Leave the bathroom door open or turn on the exhaust fan if the excess humidity bothers you.
- A basin sponge bath may be less taxing on you.
- If on oxygen, you may want to remove the cannula or mask to wash your face or to shave.
- Keep hairstyles basic to avoid tiresome hair setting or having to hold a blow-dryer for a long time.
- Use unscented (*if available*) liquid or gel hair products, roll-on or solid deodorants. Avoid aerosols and sprays!
- Avoid wearing tight garments that will restrict chest and abdominal expansion (*for example, belts, bras, girdles*).
- Slacks and socks may be easier to put on than pantyhose.
- Suspenders are more comfortable than a belt.
- Place your underwear inside your pants and put them on together.
- Slip-on shoes are easier to put on than tie shoes. A long shoe horn will make it easier to put on shoes.
- Avoid tight scarves, turtle neck tops/shirts or neckties.
- Cotton clothing is more comfortable than clothing made from synthetics.
- A shawl can be used instead of a sweater.

EXERCISE



Your doctor should advise you about the kind and amount of exercise for you. Make sure you keep your exercise program within your doctor's guidelines.

- Sit instead of standing for activities.
- Have chairs throughout the house to sit on when you get tired.
- Use a small utility cart to carry items from one place to another.
- Change your position often to relieve muscle strain.
- Move slowly and take your time getting things done.
- Wear loose clothing and slip-on shoes to save energy when dressing.
- Work at a comfortable height.
- Roll, push or pull an object instead of lifting it when you can.
- Use pick-up tongs for retrieving things from hard to reach places or for picking up small objects without bending.
- Eat small frequent meals.
- Avoid individuals with colds or infections.
- Avoid stressful people and stressful situations when possible.

REST AND RELAX



Tension and stress can make your shortness of breath worse. You need to relax both mentally and physically. It is important for you to sit down and put your feet up for a few minutes every couple of hours during the day, especially after meals.

Sometimes it may be hard to sleep well at night due to coughing, shortness of breath or having to get up frequently to urinate. Daytime rest can make it much easier to cope with the tired feeling from interrupted night time sleep. To help sleep at night:

- It may be helpful to go to bed at night in stages. For instance, you may want to put on your night clothes, then relax by reading or watching TV for awhile.
- Have a light, needed medications, phone and emergency numbers close to your bed for easy access, if needed.
- Electric blankets are more comfortable than using multiple blankets and makes bed-making easier.
- To improve your night time sleep, you may have to use more than one pillow to prop your head up in bed.
- Generally, if you take your diuretic in the morning, you won't have to get up to urinate as much at night.

- Turn off the compressor and disconnect tubing from the nebulizer.
- Rinse the nebulizer thoroughly under running water and allow to air dry. Non-disposable nebulizers are dishwasher safe.

Tell your home care nurse/therapist or doctor if you think you need to take your nebulizer treatments more frequently than currently ordered. You will also need to do the following:

- Keep all of your equipment together in a convenient place where it can be left from treatment to treatment.
- Keep equipment close to the kitchen or bathroom, if possible, so it will be easy to clean after use.
- Be sure there are no bubbles in the eye dropper or syringe used for measuring medication.
- Store small pieces of equipment in a storage box.
- All equipment will need to be cleaned after use as directed by your home care nurse or therapist. *(Also refer to the infection control section in this booklet.)*

Safety Guides:

- If you feel "light-headed" or dizzy while taking your treatment, stop the treatment and relax. You probably have been over-breathing. If there is any part of this procedure you do not understand, contact your home care nurse/therapist and they will assist you with further instructions.

Cleaning:

- Follow respiratory cleaning instructions daily.

Troubleshooting:

- If no mist, longer lasting treatments, or leaky nebulizer cup, then replace disposable nebulizer.
- Remember to clean or replace filters per manufacturer's recommendations.

OXYGEN THERAPY

Use of oxygen will help minimize the feeling of breathlessness during exercise or physical exertion. There are three common ways of providing oxygen therapy:

Compressed Gas - Oxygen is stored under pressure in a cylinder equipped with a regulator that controls the flow rate. Large tanks can be provided for stationary use and small cylinders are available that can be carried with you.

Liquid Oxygen - Oxygen is stored as a very cold liquid in a container very similar to a thermos. When released, the liquid converts to a gas and you breathe it in just like the compressed gas.

This storage method takes up less space than the compressed gas cylinder and you can transfer the liquid to a small, portable container at home. Liquid oxygen is more expensive than the compressed gas.

Oxygen Concentrator - This is an electrically powered device that separates the oxygen out of the air, concentrates it and stores it. This system has a number of advantages because it doesn't have to be resupplied and it is not as costly as liquid oxygen.

OXYGEN DELIVERY - Three common means of oxygen delivery are as follows:

- **Nasal cannula** - a two-pronged device connected to tubing carrying the oxygen is inserted in the nostrils. The tubing can rest on the ears or be attached to the frame of eyeglasses.
- **Mask** - generally used by those who need a high flow of oxygen. Some people who use a nasal cannula during the day prefer a mask at night or when their noses are irritated or clogged by a cold.
- **Transtracheal oxygen therapy** - requires the permanent insertion of a catheter in the trachea or windpipe. The tubing and transtracheal catheter are held in place by a necklace.

OXYGEN SAFETY - Oxygen does not explode. Oxygen does not burn by itself, but it is one of the three ingredients necessary for a fire to occur. The others are a combustible or flammable material and a source of ignition. Keep the following principles and precautions in mind at all times:


- Oxygen is a drug and is only effective and safe for use in a prescribed amount. **NEVER ALTER THE OXYGEN LITER FLOW FROM WHAT YOUR PHYSICIAN PRESCRIBES.**
- Oxygen is supplemental and not considered to be life supporting.
- Only use water-based lubricants on your lips or nostrils. Never use petroleum based products like petroleum jelly.
- Avoid using oily lotions, face creams or hair dressings while using oxygen.
- Do **not** use aerosol sprays in the vicinity of oxygen equipment.
- Place some gauze behind the oxygen tubing if it irritates your cheeks or ears.
- Oxygen is non-flammable, but does greatly accelerate combustion. Substances that do not normally burn or that burn slowly, can ignite explosively in the presence of oxygen. Keep all sparks or flame sources at least 8 ft. away from the area where oxygen is being used.

SECTION V. Lifestyle Changes

The severity of your COPD will determine how it affects your daily activities. What once was easy to do may now be very difficult. What you can do may change from one hour of the day to another, so you have to learn to pace yourself. Learn to trust your own feelings and go with them. When you feel tired, stop what you are doing or slow down.

You can slow the progression of COPD, eliminate symptoms and improve your everyday life when you follow recommendations about your diet, medications and other habits. What the future holds is basically determined by how you choose to live your life. As you learn to live with COPD, you may discover new pleasures and satisfactions.

Lifestyle changes include the following:

-  Stop smoking!
- Lose weight (if indicated).
- Avoid alcohol or limit yourself to one drink 2 or 3 times a week.
- Eat a low-sodium diet.
- Exercise (on your own or in a structured rehab program); Avoid exercise that is not within your exercise guidelines.
- Reduce stress!
- Reduce exposure to air pollution (indoor - cigarette smoke, dust, household chemicals; outside - dust, fumes, vapors, etc.).
- Stay updated on pollution reports if you leave the home.
- Keep track of your symptoms and report changes to your doctor and/or home health nurse/therapist.
- Avoid coming in contact with people who have colds.
- Get a flu and pneumonia shot.
- See the doctor on a regular basis.

WAYS TO SAVE ENERGY

Remember, energy is like money in the bank – spend it wisely!

Since you may tire easily or become short of breath, it is important to conserve your energy. You can do this by pacing your activities and by planning ahead. Here are some guidelines to follow in order to conserve energy:

- Don't try to fit everything into one day.
- Include "fatigue time" (rest period) in your daily schedule.

RELAXATION BREATHING

Sometimes it is hard to relax since it is hard to breathe. If you are upset or your muscles are tight, practice the following relaxation breathing exercise.

- Sit upright in a chair and let your arms hang loosely at your sides.
- Breathe deeply, slowly and evenly.
- Clench your fists, shrug your shoulders and tighten your arms. Count to two (2) and don't hold your breath.
- Let your shoulders fall down, open your hands and let your arms hang loosely. Count to four (4) and keep breathing deeply.
- Tighten your legs and feet. Count to two (2).
- Completely relax and let all your muscles go loose from your tongue to your toes. Count to four (4).

Practice relaxation exercises for at least twice a day for five minutes. Also do this exercise any time you feel yourself getting tense or breathing hard.

CHEST MUSCLES EXERCISE

If you are able to use all of your chest muscles, deep breathing will be easier for you. It would not be unusual if the muscles around your lower rib cage are very tight. The following exercise will help get those muscles looser and make it easier for you to breathe. **However, check with your doctor or home care nurse or therapist before making this exercise a part of your daily program:**

- Place your hands on both sides of your lower chest.
- Breathe in slowly through your nose, keeping your shoulders and chest relaxed. Your lower chest should move your hands out.
- Breathe out through pursed-lips. Your hands should move in.

You will need to practice this exercise several times a day for a few minutes at a time.

- Post no-smoking signs in areas where guests and family members can readily see them.
- Do **not** permit the use of open flames or burning tobacco (*smoking*) in the room where oxygen is being used or stored.
- Caution should be used with electrical devices and toys that produce sparks. Do **not** use any household electrical equipment in an oxygen enriched atmosphere. (Examples: electric razors, heaters and blankets). **KEEP THESE ITEMS AT LEAST 5 FEET FROM YOUR OXYGEN.**
- All combustible materials should be removed from the site.
- Never permit oil, grease or any other readily combustible substance to come in contact with oxygen cylinders or valves.
- Never place blankets or clothing over an oxygen concentrator. Do not allow oxygen tubing to be covered by any objects.
- Store oxygen cylinders in a cart or flat on the floor. Avoid closets, under bed or trunk of car. Do **not** prop cylinders. Always secure tank to avoid tipping, falling or striking one another.
- Keep cylinders protected from excessive temperature by storing them away from radiators, heat ducts, steam pipes or other sources of heat.
- To use while bathing, keep the concentrator in another room, at least seven feet away from the bath. Dry off before handling.
- You should advise your electric power company that you are on oxygen in order to get priority service in case of a power failure.
- Don't leave oxygen on when equipment is not in use.
- Don't abuse or handle oxygen containers roughly.
- Don't store oxygen in a confined area, (e.g. a closet).
- Don't allow untrained persons to use or adjust equipment.
- Don't attempt to fix or repair oxygen equipment.
- Don't touch frosted fittings or piping on liquid systems with bare hands.
- Don't open cylinder valves quickly.
- Don't transport oxygen in an enclosed area or the trunk of your car. Place oxygen in the back seat of your car and secure it properly.
- Secure cylinders either by a chain, cord or stand.
- Open your window approximately 1 inch when transporting any oxygen equipment.
- Contact your home medical equipment supplier if you are planning on traveling or transporting your unit.
- Make sure you order more oxygen from your dealer in a timely manner.

OXYGEN CYLINDERS

Regulator:

A regulator functions in two ways. First, it displays the amount of oxygen inside the tank on a dial. Secondly, it reduces the pressure of oxygen as it passes through the regulator.

Flowmeter:

It acts as a gauge by which the flow of oxygen to you is regulated.

Equipment Use:

- Be sure that oxygen cylinder is secure on cart, away from heat, direct sunlight, open flames, smoking or combustible materials.
- Turn cylinder handwheel or wrench key counterclockwise (left) to open cylinder valve.
- Observe pressure on regulator dial. Consult tank chart to estimate how long oxygen will last at the liter usage you set.
- Screw on nipple adapter tightly to the regulator outlet.
- Connect oxygen tubing securely to the nipple adapter.
- Set flow on the flow meter to prescribed liter flow.
- Adjust the oxygen delivery device on your nose (nasal cannula, mask, etc.) to breathe comfortably.

Safety Guides:

- Turn cylinder handwheel dial or wrench key clockwise (right) until flow meter and pressure drops to zero and cylinder valve is off.
- Clean the oxygen delivery equipment (i.e., nasal cannula, mask, etc.) at the end of each week, or sooner if dirty or contaminated with secretions.
- Replace cannula every 2 weeks.
- Be sure that oxygen cylinder is secure on cart or stand, in a ventilated area away from heat, direct sunlight, combustible materials or smoking, open flames or electrical sparks.
- Use care if oxygen cylinder is moved.
- Avoid dropping.
- Avoid bumping the regulator.

Troubleshooting: No flow of oxygen:

- Check that cylinder handwheel or key is opened fully.
- Check that pressure is observed on regulator dial.
- Check that flow meter is on and adjusted to proper flow setting.
- Check that nipple adapter is tightly screwed to regulator.
- Check that oxygen tubing is securely attached to nipple adaptor.
- Check that oxygen tubing is not crimped or pinched off by heavy object, between furniture, under wheel, etc.

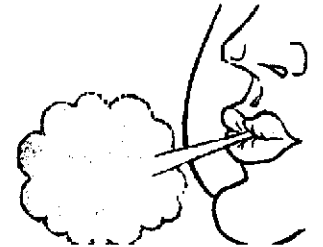
PURSED-LIP BREATHING

Sometimes you may feel like you can't get your breath. This may occur since stale air is trapped in your lungs from clogged, narrow airways and/or damaged air sacs deep in your lungs.

Whenever you do anything that makes you short of breath or if you have a breathless spell during the night:

- Relax!
- Breathe in slowly.
- Purse your lips in a whistling position and blow out slowly, taking twice as long to blow out as you did breathing in.
- **Relax!**
- Continue using pursed-lip breathing until you are no longer breathless (*rest for a few breaths if you feel dizzy*).

When you breathe out slowly through pursed lips, you keep up the air pressure in your airways. That helps them stay open so that you can breathe out more stale air.



Practice pursed-lip breathing several times (at least three times) a day. Make it a habit!

DEEP BREATHING

Learning to breathe fresh air deep into your lungs is one of the most important ways you can help yourself. You can use your abdominal muscles to assist you in breathing instead of depending so much on your chest muscles. Your home care nurse or therapist can help you with this exercise. Follow the steps below:

- Relax and let your shoulders and neck droop;
- Rest both hands on your abdomen;
- Breathe in through your nose and let your abdomen come out as far as it will (pushing your hands out) and keeping your upper chest relaxed; Use your hands to feel your lower rib cage moving as you breathe deeply;
- Breathe out slowly through pursed lips.

Practice this type breathing several times every day (*while lying down and sitting; during normal activities such as eating, bathing, talking, etc.*) and whenever you are short of breath. It gets easier the more you do it. The muscles used for this exercise should become stronger as your breathing becomes easier and deeper.

Clearing the mucus from your airways every day makes breathing easier for you, helps to prevent infections (*infections grow easily in mucus*) and will help you stay out of the hospital. Postural drainage uses the effects of gravity and external manipulation (*percussion/vibration*). It may be used with aerosol treatments and other respiratory care procedures.

With postural drainage, you are tilting your lungs to move the mucus you can't get rid of in your usual positions. The mucus will move into your upper airways and you can cough it up.

Clapping (*percussion*) or vibrating your chest may also help to loosen mucus so that it will drain. Your home care nurse or therapist may do this for you or may teach your caregiver how to perform these procedures.

If postural drainage is part of your treatment plan, you will generally clear your lungs twice a day. The best times are before breakfast (*to get rid of the mucus that has collected during the night*) and in the evening about an hour before bedtime (*will help you sleep better*).

Your doctor, home care nurse or therapist will tell you if you should be doing postural drainage and show you positions that will help drain mucus from your lungs.

CONTROLLING YOUR COUGH



Coughing spells can make you feel tired, short of breath and frightened. However, coughing can actually be useful and it can be controlled. If you can bring up mucus when you cough, that will help to clear your airways. The best position for coughing is usually to sit with your head in a slightly forward position and your feet on the floor. Every time you feel a cough coming on, do the following:

- Breathe in deeply;
- Hold your breath for a few seconds;
- Cough twice (*first to loosen mucus and second to bring it up*);
- Breathe in by sniffing gently; and
- Use a tissue or paper towel to get rid of the mucus.

Always check with your doctor before taking any cough medicine. It is important that you use your cough to clear your airways of mucus, not to stop coughing.

If these steps do not correct the oxygen flow problem, contact your home medical equipment supplier.

OXYGEN CONCENTRATORS

Extra tubing will let the user to move around the home with minimal difficulty. You must have a cylinder of oxygen as a backup in the event of a power failure. Notify your home care nurse/therapist of any changes in the physician's prescription for your oxygen.

Equipment Use:

- Be sure unit is secure, away from heat, direct sunlight, open flames, smoking or combustible materials.
- Plug in power cord to properly grounded 115 volt household outlet.
- Screw on nipple adapter or optional humidifier (water bottle) tightly to concentrator oxygen outlet.
- Connect oxygen tubing securely to nipple adapter or humidifier. Turn power switch on.
- Set flow control to the prescribed liter flow.
- Attach the oxygen delivery device to the patient (*nasal cannula, mask, etc.*).
- When oxygen is not in use - turn power switch off.

Daily:

- Check water level in humidifier, if needed, discard old water and fill with fresh water (*distilled or boiled tap water*).
- Clean humidifier using respiratory cleaning instructions.

At Least Weekly:

- Check external air filters for dust and lint. If dirty, clean in warm soapy water, rinse, shake dry and replace.
- Wipe off all surfaces of the machine with a clean damp cloth.

Every 2 Weeks:

- Change nasal cannula.

At Least Monthly:

- Replace humidifier bottle and oxygen tubing.

Call your home medical equipment supplier if more supplies are needed.

LIQUID OXYGEN

Patient Instructions:

Your liquid oxygen system consists of two units, a stationary base unit and a portable unit. The stationary unit will be delivered full of liquid oxygen. It will be refilled periodically depending upon the usage rate.

Warning: Never depress the plastic tip of the filling connector on the stationary unit. Doing so will allow cold gaseous liquid oxygen to escape.

Use of the Stationary Unit:

- Fill the humidifier (if applicable) with distilled water to the level indicated on the humidifier instructions.
- Attach the humidifier to the humidifier adapter.
- Attach the oxygen tube to the humidifier outlet.
- Adjust the cannula or other breathing device to the face to receive oxygen comfortably.
- Turn the flow control to the rate prescribed. **NOTE:** Oxygen will **not** flow if the knob is between settings.
- Check the humidifier to ensure that there is a steady flow of bubbles. This indicates that oxygen is flowing.
- The contents indicator will show how much liquid is remaining. It should be checked periodically to ensure that the supply is adequate.
- Moisture will condense on the internal operating parts of the unit. A drain is provided to which a moisture collection container can be attached.

The Portable Unit Is Filled From The Stationary Unit As Follows:

CAUTION: The fill connectors must be clean and dry in order to avoid malfunction due to freezing. Do not leave the system unattended during the filling operation.

- Check the contents indicator on the stationary unit to be sure that there is an ample supply of liquid oxygen for filling purposes. Do not attempt to fill the portable if the stationary unit contents indicator is near the empty area.
- Connect portable to stationary unit with both hands as demonstrated by your home medical equipment supplier therapist or technician.
- Maintain pressure on portable unit with one hand, taking care to assure proper engagement of fill connectors.
- While holding the unit in the fill position, move the vent valve lever straight up to the open position (90 degrees from normal off position). This will result in a loud hissing noise. Note the time at the start of the fill.

NOTE: One hand should maintain a slight pressure on the unit during filling to assure stability and proper filling position. Approximately 20-30 seconds into the filling procedure, it is advisable to close and reopen the vent valve one or more times. This will break up any ice

that may begin to form around the valve stem and serve to avoid any problems with the vent valve freezing open.

- When there is a noticeable change in the sound of venting gas, followed by the emission of a dense, white vapor around the cover of the portable unit/stationary unit, close the vent valve. Fill time may vary according to the temperature of the container being filled. Maximum fill time is approximately 1 1/2 minutes.

NOTE: If for any reason the vent valve fails to close and the hissing continues, remove the portable unit by depressing the portable release button on the stationary unit. The portable unit will stop venting in a few minutes. Allow the unit to warm until the vent valve can be closed. A period of 2-3 hours at no flow may be required to allow the portable unit to restore adequate pressure for accurate oxygen flow.

- Disengage the portable unit from the stationary unit as demonstrated by your home medical equipment supplier therapist or technician. Always hold the portable unit with one hand when attempting to disengage it. Should the units not disengage easily, they may have become frozen. Do not use force. Simply allow a few moments for the frozen parts to warm and disengage when the ice has melted.

WARNING: Should liquid oxygen leakage occur when the portable unit is disengaged, proceed to re-engage and disengage the unit. This will help dislodge any ice or other obstruction. If liquid leakage is still present, engage the unit again and notify your home medical equipment supplier.

- Check the liquid oxygen contents indicator. The amount of liquid contained in the portable unit is measured by an internal scale which is built into the side of the unit. The scale is actuated by simply lifting the portable unit by the strap nearest the indicator. The liquid content is indicated on the color-coded gauge. The plastic connector in the carrying strap must be disengaged when checking liquid oxygen contents.
- Adjust the cannula to the face to receive oxygen comfortably after connecting to portable unit.
- Set the Continuous/Demand Flow Switch for the desired oxygen delivery mode-continuous oxygen flow or flow only during the inspiratory part of each breath (if applicable).
- Turn the portable unit flow control to the prescribed rate.

POSTURAL DRAINAGE

Postural drainage therapy (also called chest physiotherapy) consists of postural drainage, positioning, turning, and may include chest percussion and/or vibration.