Pulmonary Rehab Program at Springfield Hospital

Individuals that live with chronic lung disease such as COPD (Emphysema, Chronic Bronchitis) and restrictive disease (Pulmonary Fibrosis) are often unable to fully participate in their own lives and the lives of their family and friends. Treatment can be confusing and frustrating for patients—and those who care for them at home.

Springfield Hospital's Pulmonary Rehabilitation Program offers a comprehensive outpatient program to serve the needs of chronic lung disease patients in our region. Our goal is to improve the comfort, function, and understanding for our patients who struggle with these challenging diseases. The patient's quality of life and functional ability can be improved by attending a pulmonary rehabilitation program. But the family can also receive training, education, and support in caring for their loved ones by the rehabilitation staff and guest speakers.

Pulmonary Rehabilitation is located at Springfield Hospital on level B, sharing space with cardiac rehab.

"Tomorrow's goals can only be attained by what we have accomplished today."

Program Overview

The Pulmonary Rehabilitation Program at Springfield Hospital is designed for patients with Chronic Respiratory Disease (COPD, Emphysema, Asthma, Chronic Bronchitis, Interstitial disease, Pulmonary Fibrosis and other conditions). The program combines education and group support with therapeutic exercise into a comprehensive 8-week program. Our goal is to help patient's understand and cope with the disease and function more comfortably and independently at home.

Pre-admission Evaluation

Upon your doctor's referral the program coordinator, a respiratory therapist will evaluate you. Once all pre-rehab diagnostic testing is completed, an occupational or physical therapist and the medical director of the program will evaluate you. These health care professionals will evaluate your current level of functioning and design an individualized exercise program to meet your needs. Your pre-program evaluation may include full pulmonary function studies, laboratory tests, and chest x-rays. The rehab team is available to answer any questions or concerns you may have before initiating your program.

Program Summary - 8 week Program

During the first session, you will begin with an orientation to your program. This includes a demonstration of stretches, aerobic machines, lower extremity and upper extremity exercise. Thereafter, a progressive exercise program will occur at each session. Your exercise program is based on your initial evaluation by the respiratory therapist, occupational or physical therapist, and medical director.

Some activities will take place individually and others in a group format with your other class mem-

bers, all dealing with similar breathing problems. You will come to the program three days each week on Monday, Wednesday, and Friday from 9:30 a.m. - 12:00 noon. Your exercise session will be followed by either an education or training session designed to help you achieve your goals and address your problems. The rehab staff will also give you a home exercise program to initiate at least 1-2 additional times per week once you are stronger and feel comfortable with exercise. Your rehab exercise program will begin at a level based on your ability. It will start slowly and progress toward your goal each week. It will consist of aerobic conditioning activities such as walking on a treadmill, exercise bicycle, Nustep or upper arm ergometer, followed by other exercises to improve your strength and endurance. Attention will be given to both upper and lower body muscle groups.

Educational lectures and activities will cover a wide range of topics designed to help you fully understand your disease and give you the information you need to improve function and feel better. During each session, you will have the opportunity to share your questions and concerns with others dealing with similar challenges, as well as the staff. Your progress will be continually monitored and adjustments made to your program based on your reaction to the exercise at each session.

Our goal is to provide you with the skills and knowledge you will need to live better with chronic lung disease.

Financial Information:

Pulmonary rehabilitation services are reimbursable through most major insurance companies. Prior approval may be required in some instances and the rehab coordinator will contact your insurance company to assure your coverage before your rehab program begins. We also offer a financial assistance program at Springfield Hospital.

For More Information

Please call Mary Anne Riley, RRT, Pulmonary Rehabilitation Coordinator at:
802-885-7421 on Monday, Wednesday and Friday

Multidisciplinary Pulmonary Rehab Staff

The Pulmonary Rehabilitation Program uses a multidisciplinary team to best meet your needs.

Barbara Dalton, MD: Program Medical Director.
Dr. Dalton interviews each patient before they begin rehab, and meets weekly with the rehab coordinator to update their progress and make further recommendations. She also provides education during the 8-week program.

Mary Anne Riley, RRT/L: Program Coordinator
Licensed and registered Respiratory Therapist and rehab coordinator at Springfield Hospital and Cheshire Medical Center. She interviews each patient before they begin rehab and is present at each session for exercise and to provide education.

Victoria Palma, OTR: Program Occupational Therapist
Licensed Occupational Therapist at Springfield Hospital. Provides education, functional assessment and exercise conditioning for the Pulmonary Rehab program. She adjusts the exercise prescription as needed for each patient's response to exercise.

Denise Best, PTA: Program Physical Therapy Assistant
Licensed physical therapy assistant at the outpatient rehab department. Provides education, functional assessment and exercise conditioning for the pulmonary rehab program.

Jan Pelton, RRT/L Respiratory Therapist
Registered respiratory therapist for inpatients at Springfield Hospital and staff member of pulmonary rehab. Provides respiratory assessment and education throughout the rehab program.

Celia Taylor, RRT/L Respiratory Therapist
Registered respiratory therapist for inpatients at Springfield Hospital and staff member of pulmonary rehab. Provides respiratory assessment and education.

Lori Gurney, PHD. Program Psychologist
Psychological counseling for anxiety and depression. Provides education to help PR participants identify and control symptoms of anxiety and/or depression

Samantha Tyrrell, RPH: Pharmacist
Registered Pharmacist for inpatient clients at Springfield Hospital. Provides education on respiratory medications for PR participants. Answers questions on current medications and provides handouts for all participants.

Linda Wilcox, LICSW: Program Social Worker
Social worker at Springfield Hospital. Provides education on Advance Directives with assistance in filling out forms upon request.

Barbara Bye, RD: Dietician
Dietician at Springfield hospital. Provides education on nutrition and offers suggestions to improve overall diet.

It's Your Program — Made Just For You!

The Pulmonary Rehabilitation Program is individualized for each participant. The team will discuss your needs after evaluations are completed and determine an initial plan of care and exercise prescription for you to start your program.

When you participate in your initial evaluation with the program coordinator, a workbook will be given to you along with questionnaires, the rehab phone number, and dates for your rehab program.

Education Sessions

Approximately one hour each, and include discussion, videos, and written handouts. There is, of course, question and answer time. We encourage you to ask questions! We can help you better that way!

The education sessions include:

- Respiratory Physiology
- Disease management
- Breathing Retraining
- Exercise
- Energy Conservation
- Respiratory medications
- Managing Secretions
- Oxygen Use
- Relaxation
- Inhaler Use
- Avoiding Irritants
- Anxiety and Depression
- Warning Signs

Things You Need To Know

- Sessions last approximately 1 1/2 hours each and include warm-up, stretching, aerobic conditioning, strengthening, and cool down. During each session you will work at your own speed and tolerance at workloads prescribed by the Pulmonary Rehabilitation Team. Your endurance will improve as you become conditioned in a safe and supervised environment.
- An occupational therapist monitors your tolerance to exercise and makes adjustments as necessary while the respiratory therapist monitors your oxygen level, vital signs, and assures that your breathing is under control!
- We expect you to notify us of any troubling signs or questions you have, so we can adjust your exercise appropriately.
- The rehab staff will help you monitor your heart rate and "Rate of Perceived Dyspnea" during your exercise session to help you develop self-management techniques for use at home and after your program.

Treatment Plan and Program Evaluations

- The medical director and rehab coordinator are in close contact throughout your program, and will ensure a safe and positive experience for you. Please feel free to ask questions at anytime. We encourage your family to attend these sessions if they want to be involved.
- We encourage you to voice your opinion of the Pulmonary Rehabilitation Program at any time. We find the participants have the best ideas and make the program better for the next participant.
- Your regular physician will receive several progress reports on you as well as a discharge summary. If the Medical Director feels a change is needed in your regular medications, she will contact your physician personally for you.

What You'll Learn...

Cycle of Debilitation From Respiratory Disease:

- You first feel short of breath from moderate exertion.
- You then avoid such activities to control shortness of breath. But lack of activity causes muscles to weaken and weak muscles use more oxygen than strong ones.
- You soon feel short of breath from mild exercise, such as walking, and may make the mistake of further avoiding exercise
- As the body further weakens, you can become short of breath when bathing, dressing, and even at rest.

Break this downward cycle!!! Exercise and stay active!!!

How To Monitor Your Pulse:

During your program, the staff will train you to take your own pulse. Checking your pulse during exercise helps you know if you are working within your "target heart rate range" and is one measure used to determine how hard you are working.

If you're not used to checking your pulse, practice taking your pulse at rest first, when you first wake up. If you are unable to find your pulse, let the rehab staff know, and we will practice the techniques with you or make other suggestions.

To check your pulse, you may choose either the "carotid" pulse or the "radial pulse."

To use the radial pulse:

1. Place palm up.
2. Use index and middle fingers.
3. Locate the long bone on the thumb side.
4. Slide index and middle finger into groove pressing lightly.
5. Count the number of beats. They correspond to the beats of the heart.

To use the carotid pulse:

1. Place fingertips gently on one side of your neck below the jawbone and halfway between your main neck muscles and windpipe.

2. Count the number of beats. They correspond exactly to the beats of the heart. Do not count pulse in both sides of the neck at once because you may cut off circulation.

*For either pulse: count your heart beat for 15 seconds, then multiply the number by 4. This gives you the pulse for one minute.

Rating of Perceived Dyspnea (RPD)

The RPD scale is a self-assessment scale used by you to determine how short of breath you are when you are exercising. This scale can be used with any activity and can help you determine if you should rest, or continue with that activity.

During your program, you will be shown the RPD scale to assess how short of breath you are with each exercise. Your goal is to use this scale to help understand when you should continue, do more, or stop and rest during exercise, activities, or even when taking a shower!

Rating of Perceived Dyspnea Scale

0	Nothing at all
0.5	Very, very slight
1	Very slight
2	Slight
3	Moderate
4	Somewhat severe
5	Severe
6	
7	Very severe
8	
9	
10	Very, very severe

Home Exercise Program

Your home exercise program is an important aspect of the Pulmonary Rehabilitation Program. These exercises are completed in addition to the exercise during our regular exercise program at the hospital. Establishing an exercise routine at home will help you maintain your health after graduating from the program.

The following is a guide for home exercises. Your specific home exercise routine will be discussed with you during the program and may differ from this guide.

Each person should work within his/her target heart rate range (if you can take your pulse), or use the RPD scale.

Frequency:
Week 2: Theraband given to each patient with cues to use at home 2 times a week.
Week 3 - 4: Theraband 3 times a week + 1 additional day of exercise.
Week 5 - 6: Theraband or LE exercise on non-rehab days + 2 additional days of exercise.
Week 7-8: Theraband or LE exercise + 3 additional days of exercise.
Graduation: Continue with home exercise per your discharge prescription and attend the maintenance program!

Duration:
5 - 40 minutes of continuous exercise as tolerated by you.
Decrease intensity if needed for tough breathing days.
Plus: 5 - 10 minutes of warm-up/cool-down before and after exercise - plus your stretches!
Mode:
Choose what you like! (walk, bike, swim, treadmill)

Don't forget that after graduation from the rehab program, you will be able to exercise on Monday, Wednesday and Friday at the hospital as part of the maintenance program!!!!

Walking Guidelines For Home Exercise Program:
Walking is a very important part of your exercise program. Why is walking helpful?
- By daily progressive walking, you use many of the muscles in your body, including your heart, which is also a muscle.
- With this gradual exercise, the muscle fibers grow shorter, becoming more efficient and needing less oxygen.
- Walking increases circulation and helps blood return to the heart and lungs, to pick up more oxygen.
- Walking uses your whole body and helps to improve your overall conditioning and endurance level. This allows you to better tolerate other daily and recreational activities.

Important Considerations While Walking:
- Walk as often as possible while maintaining a controlled breathing pattern and using proper posture. Allow your arms to swing freely at your sides.
- Start small (5 - 10 minutes) and increase your time and distance gradually. Walk at pace that keeps you within your target heart rate range and/or at a perceived breathing level as suggested by staff.
- Walk outside daily, preferably when the air is less polluted and crisp.
- If the weather is bad, walk around your home, or in a mall or store.
- Start walking on level ground and, as you become conditioned, walk up grades.

Relaxation Techniques And General Guidelines

1 For maximum benefit, the technique should be performed twice a day for 10 - 20 minutes. Even 5 minutes twice a day would be beneficial.
2 It should not be practiced on a full stomach.
3 It should be performed in a quiet, comfortable spot of your choosing, free from interruptions or outside stimulation.

4 Check the time with a watch or clock - do not use an alarm.
5 When your time is up, sit quietly a little longer, first with eyes closed, then with eyes open.
6 If your mind wanders, turn your attention back to your breathing and keep repeating the chosen word or phrase, or listen to the music or audio tape you are playing in the background.
7 Don't worry if you're relaxing deeply enough or getting the right response. If you're doing it, the response will occur and the physiological changes will take place.
8 Afterwards you should feel relaxed and calm. This effect should continue for several hours.

There are many techniques for relaxation, and no one method is better than another. In fact, it may be more effective for you to combine pieces of several different methods. The most basic is deep breathing.

Deep Breathing
The most basic. Sit or stand in place, hands resting on lap, arm rest, or side. You can also place your hands on your stomach to feel the expansion and contraction of your lungs and diaphragm. Inhale slowly and deeply through your nose, letting your stomach expand as much as possible. Exhale slowly through pursed lips, which allows you to control how fast you exhale as it keeps your airways open longer. Feel the rhythm of it, in and out, emptying out, clearing, and cleaning.

Autogenics
Concentrate on a mental suggestion such as "my left arm feels heavy and warm." Concentrate intently on this suggestion; try to actually feel your arm getting heavier and warmer. Convince yourself it is true. Then repeat the same process focusing on your right arm, right leg, etc. You can do this from head to toe, focusing on one limb at a time.

Clearing the Mind
Allow yourself to mentally focus on a single, peaceful word, thought, or image. Reduce distractions. Focus only on that thought; repeat it over and over to yourself. Listen to the rhythm of it.

Progressive Muscle Relaxation
This is a three-step technique. First, tense a muscle or muscle group (fits are easy to start with), and notice how it feels. Then, release the tension, and let it flow right out, paying attention to that feeling. Next, concentrate on the difference between those two sensations. This also works well head to toe or vice-versa, for total body relaxation.

Visualization
This is a "mental vacation." Allow your imagination to run free! Think of your most favorite place to be, and put yourself there in your mind. Try to imagine all of the details. Tune in all your senses. Are you lying on the beach? How does the sun feel on your skin? Do you hear waves? Seagulls? What does the air smell like? Do you see sailboats?

Living With COPD

Your Nutritional Status
COPD, or chronic obstructive pulmonary disease, is the second leading cause of disability among Americans. A person's nutritional status can influence the degree of severity of COPD, and COPD can create circumstances that make consuming an adequate diet difficult.

General Body Types Associated with COPD
Overweight-peripheral edema is common - (water retention in feet and legs) poor skin tone resulting from a lack of oxygen being distributed to the body tissues.

Underweight - prone to weight loss, poor appetite is common - muscle wasting may be apparent. Chest, arms and legs look bony.

Maintaining or achieving a desirable body weight is essential. Being overweight increases the workload on your heart and lungs to supply oxygen to all areas of your body. Secondly, excess fat in your abdominal area crowds the diaphragm, making it difficult to fully expand the lungs. By losing weight through proper diet and exercise, your body's muscle mass is increased. This makes breathing easier and you will feel healthier and more energetic.

On the other hand, being underweight is a problem as well. Weight loss is a consequence of a combination of increased calorie needs and inadequate diet. As a result of poor diet, the body's muscle mass, including the respiratory muscles, becomes depleted, making breathing more difficult. The increased work of breathing creates a higher calorie need and a cycle of weight loss and muscle wasting is perpetuated.

Nutrition

The Impact of Nutrition on Immunity
A diet deficient in calories, protein, vitamins, and minerals has a negative effect on immune function. The body's cells that fight infection are made of proteins. Poor diet makes it difficult for the body to build new immune factors to fight infections and to repair damaged tissues. Decreased appetite and increased caloric needs may then start another debilitating cycle. For this reason and the ones above, as a COPD patient, you must achieve a balance of good nutrition and exercise to stay as healthy as possible.

Nutrition Needs
- Fluid - Hydrating fluids mean caffeine-free products. Fluid keeps mucus thin and keeps your body hydrated. Also, oxygen use can be drying to the mucus membranes. Some medications can add to this drying effect. Your need depends on your nutritional status and should be determined by a dietitian during your rehab program.

- Calcium - Calcium is especially important for women and for individuals who are on steroid medication. Calcium strengthens bones and helps regulate blood pressure. Calcium is mostly obtained from dairy products and supplements.

- Adequate calories - Calories are important, even if you are trying to lose weight. See a dietitian for assessment.

- Potassium - Potassium needs and levels should be determined by lab tests and discussed with your physician. Important for blood pressure control, muscle contraction, and nerve impulse transmission. Potassium is susceptible to depletion as a result of certain diuretic medications. It is found in fruits, vegetables, dairy, and meat.

- Caffeine - Limit beverages containing caffeine. It causes your body to lose water and it increases the diuretic effect of some medications such as Theophylline.

Tips For A Healthy Diet

1. Eat foods from each of the basic food groups: fruit and vegetables, dairy products, cereal and grains, and proteins.
2. Limit your salt intake. Too much sodium can cause you to retain fluids that may interfere with breathing.
3. Try eating 6 small meals instead of 3 large ones.
4. Limit your intake of caffeinated drinks. Caffeine may interfere with some of your medications and may also make you feel nervous.
5. Avoid foods that produce gas or make you feel bloated. The best process to use in eliminating foods from your diet is trial and error.
6. Keep fruit juice and water readily available in the refrigerator.
7. Try to eat your main meal early. This way, you will have lots of energy to carry you throughout the day.
8. Choose foods that are easy to prepare. Buy pre-washed, pre-cut fruits and vegetables.
9. Choose softer foods that are easier to chew if you become short of breath while eating.
10. Avoid foods that supply little or no nutritional value. Example; coffee, tea, and soda.

Activities Of Daily Living

By using pacing, energy conservation techniques, and pursed lip breathing, you will be able to complete more of your daily routine with less fatigue.

Pacing

Any activity that you do can be broken up into sections. Do one small part to the activity or task, take a short break, focus on your breathing, and then do the next section. It may take a few minutes longer to get the job done, but you will not be so fatigued at the end, and you will not need to spend so much time recovering from the strain.

If an activity or task makes you very tired or causes you to become short of breath that lasts more than 1 - 2 minutes, then it was either too much for you or you neglected to pace it out properly.

If you lose your relaxed, controlled breathing pattern, then you are probably working too fast, and must slow down. You can use the breathing pattern to slow yourself by taking extra breaths between movements.

Consider learning a new method for getting the job done. Sit whenever possible, use long-handled equipment, power tools, and labor-saving devices as much as possible. Alternate heavy jobs with light ones.

** The key to successful activity pacing is to learn your limitations for an activity and try to work within them.**

General Considerations

Think about when is the best time of day for you. Is morning difficult until you have your medications and a slow start? Do you feel like you have more energy in the later afternoon or early evening? Perhaps you are a night owl, and prefer to sleep until 11 am. Does the freshness of early morning give you a good start?

Do your most energy-consuming activities at YOUR best time of day! Use slow, flowing movements. Rushing will only increase your discomfort.

Organize your activities and try to do them the same way each time. A routine of the same methods make you more proficient and you will save time and energy.

Set up your work, play, and living areas for convenience and less energy expenditure. Eliminate unnecessary details of work. Make work easier with correct heights and reaching distances. Wait until an hour or so after eating to tackle a task. Digestion draws blood, with its oxygen, away from muscles, leaving them less capable of coping with extra demands.

Don't permit yourself to be over-burdened either by possessions or old habits. You will be amazed when you learn how many energy wasters you can eliminate with no noticeable loss.

Remember that your capabilities and limitations will fluctuate from day to day, even from hour to hour. The important thing is to listen to what your body is telling you, and trust your own feelings

Medications and You

Knowing which medication NOT TO TAKE is often as important as knowing which TO TAKE when you have chronic lung disease.

There are many different medications on the market today that help you breathe easier. Your doctor may already prescribe some of these for you. If so, the list of medications included may help you understand why you are taking them, how they work, and any possible side effects.

You should always tell your doctor if you are taking other medications, especially those listed below that should only be used under the direction of your doctor. This is particularly true of narcotics, sleeping pills, and tranquilizers.

Over the counter cold and sinus medications:
Before you take over-the counter medications, you should discuss potential problems with your pharmacist and/or doctor. Read the labels carefully. Products containing cough suppressants can be counterproductive to a respiratory patient since they prevent coughing which clears the lungs!

Asthma:
Individuals with Asthma or asthma symptoms from flu or pneumonia might find that aspirin causes shortness of breath and wheezing. If this occurs, discuss a substitute with your doctor.

Flu and Pneumonia Vaccines:
Anyone with COPD is considered high risk. Discuss these immunizations with your doctor.

Flu Vaccine: Given yearly.

Pneumonia Vaccine: Given every 5 - 10 years, depending on your age and symptoms.

General Medication Guidelines
- Take medications as prescribed.
- Take "PRN" medications only when needed.
- Missed doses - never double dose.
- Storage: original container, away from heat, light, moisture, and children.
- Don't use over the counter medications without consulting your pharmacist and/or doctor.
- Keep a written record of medications you're taking, including herbal, vitamins, and over the counter.
- Don't take medication prescribed for someone else!
- Notify your doctor if medications are not working, or you develop questionable side effects.
- Always ask questions if something seems wrong to you.

** If taking a variety of inhaled mediations, always take the quick-acting one before the slow-acting one. Albuterol is the "true rescue drug," with onset of action 1-5 minutes after inhalation. A good rule of thumb is to take the bronchodilators first and the steroids last. Remember to rinse your mouth out after the steroids. **

Pulmonary Medications:

1. Theophylline - Theo-Dur, Slo-Bid, Theo-24
How they work - Bronchodilator that opens narrowed airways to allow better airflow.
How to take them - by mouth in a pill, capsule or liquid form.
Side effects - Upset stomach, nausea, vomiting. Nervousness, restlessness, hyperactivity.
* Take with food if upset stomach is a problem. Blood levels are needed periodically*

2. Inhaled Bronchodilators - Albuterol, Proventil, Ventolin, Foradil, Serevent.
How they work - Bronchodilators that open narrowed airways to allow better airflow. Specific time to bronchodilatation depends on the specific drug chosen. (physician to discuss with you when he prescribes the drug)
How to take them - Inhaled directly into the airways by use of a metered dose inhaler, nebulizer or diskus.
Spacer is always used with inhaler to enhance medicine deposition in the airways and to decrease side effects.
Possible Side effects - Increase heart rate, nervousness, restlessness, dryness of mouth and throat.

3. Anticholinergics - Atrovent inhaler or Spiriva handihaler.
How they work - Dilates the airways by prevention of airway contraction and maintenance of open airways.
How to take them- Atrovent is inhaled directly into the airways by use of a metered dose inhaler with spacer or nebulizer. Spiriva is used with handihaler device.
Spacer is always used with Atrovent to enhance medicine deposition in the airways to decrease side effects.
Possible side effects - Cough, hoarseness, sore mouth and/or throat, decreased with use of spacer.

4. Oral Steroids - Prednisone
How they work - Steroids help to reduce inflammation of airways.
How to take them - May be taken in a pill or liquid form. DON'T STOP ABRUPTLY.
Possible side effects - Cough, hoarseness, sore mouth and/or throat, stomach upset. (long-term side effects if taken over a prolonged period of time)

5. Inhaled Steroids - Azmacort, AeroBid, Pulmicort, and Flovent.
How they work - Helps to reduce inflammation of airways. They work slowly: preventative or maintenance drug.
How to take them - Inhaled directly into the airways via metered dose inhaler with spacer or appropriate delivery devices.
Possible side effects - Cough, hoarseness, sore mouth and/or throat, lessened or prevented by use of proper delivery device.

6. Other Inflammatory Medication - Intal (Cromolyn), Tilade.
How they work- Used to prevent asthmatic attacks in certain individuals.
How to take them- Inhaled directly into the airways via metered dose inhaler
(Intal Spinhaler, roto caps). May also be nebulized.

Side effects- Dry throat, bad taste, cough, or nausea. Nasal congestion, or dizziness.

7. Combination Medications- Combines medications from different drug classes.
Combivent- Atrovent and Albuterol- metered dose inhaler or nebulizer (Duoneb)
Advair- Serevent and Flovent- diskus.

8. Leukotriene Modifiers - Accolate, Singulair, Zyflo.
How they work- A new class of Asthma medicines that work by preventing swelling in the airways. It also prevents constriction in the airways.
How to take them- They can be taken in pill or liquid form. Accolate should be taken on an empty stomach.
Possible side effects- Headache, dizziness and nausea.

Correct Use Of Metered Dose Inhalers:
Use of Metered Dose Inhaler, (MDI), is an easy and convenient way for someone with lung disease to take his or her medications. By inhaling the medicine directly into your lungs, you decrease the side effects on the rest of your body. Anything inhaled into your lungs will "go to work" quicker than if it is taken in "pill" form.

There are several important points to learn in order to use your inhaler correctly:

1. The use of a spacer device attached to a MDI is the best way to use your inhaled medication. A spacer or holding chamber is a device that attaches to the MDI. It holds the medication in chamber for approximately 10 - 15 seconds; long enough for you to inhale it in a slow, deep breath.

2. The spacer increases the amount of medication that goes directly into your lungs. Even with correct technique and inhalation, you CANNOT get as much medication into your lungs without the spacer! So, please use your spacer!

3. A spacer comes in many forms, but their goal is the same-to allow you to get your medicine into your lungs where it can help your breathing! Ask your pharmacist or doctor for help in purchasing a spacer, and make sure you are given instructions on proper use of your device!

4. When using a spacer with your MDI, you will probably not taste or feel the medicine going into your throat and lungs. That is a good thing - anything you taste will stay on your tongue to be exhaled out into the air or swallowed - not inhaled into your lungs! This is especially helpful with steroid inhalers because the spacer will help prevent yeast infections in your mouth.

How To Use Your Spacer:
1. Attach the inhaler to the spacer, as shown in the direction or explained to you by the doctor or your rehab staff.
2. Shake well. Exhale.
3. Press down on the MDI. This will put one puff into the holding chamber.
4. Inhale SLOWLY and DEEPLY.
5. Hold your breath for 5-10 seconds. (the longer the better).

6. Exhale peacefully.
7. Wait a full minute before your next puff. Repeat steps 2 - 6.

How To Know How Much Medicine is Left In Your Inhaler:

1. The best way for you to know how much medicine is in your inhaler is to COUNT your puffs! This is not as difficult or time consuming as you may think!

2. If you are using your MDI on a regular schedule, it is easier than you might think to keep track of your puffs. Each canister states how many actuations (puffs) there are in that particular MDI. Example: Atrovent has 200 actuations per inhaler. If you are taking 2 puffs 4 times a day (8 puffs), you divide 200 by 8, which equals 25. This means your inhaler will last 25 days - go to your calendar and mark that date - or put a piece of tape on your inhaler with that date. NO GUESS WORK!!!!!!

3. If you have an Albuterol inhaler or any other one that your take "as needed" just put a piece of tape around it and mark it every time you use a puff. This is the best way to ensure you are getting medicine - not just propellant!

4. The method of checking your inhaler in a bowl of water is inaccurate. Unless the canister is full, it is all guesswork. Remember, the propellant and drug are both in your MDI. They both have weight. That is one reason this method is inaccurate.

Cleaning Your Spacer:

1. Each day you should remove the mouthpiece from your spacer and rinse it in warm running water. If your mouthpiece is attached, just run it under the water with the spacer.
2. Once a week, wash your spacer in warm water with dishwashing liquid in it. Rinse well and air dry.
3. Every two weeks, soak your spacer in a solution of three parts water and one part vinegar. Follow this with a good rinsing and let air-dry.
4. Use of inhaled medications can help you control the symptoms of your lung disease. But, if you don't use them correctly, with a spacer, you decrease that control by decreasing the amount of medicine you can get to your lungs!

Using a spacer with your MDI will help you maintain a better lifestyle and control!!

Local Community Resources

American Lung Association of Vermont
43 Farrell Street
South Burlington, Vermont
Information: 1-800-586-4872

Springfield Hospital's Better Breather's Support Group
25 Ridgewood Road
Springfield, Vermont 05156
3rd Wednesday of the month.
3:30-4:40 pm in Level B Conference Room
For information call Mary Anne Riley, RRT 802-885-7421
American Cancer Society
121 Connor Way Suite 240
Williston, Vermont 05495
800-562-2623

Transportation

RSVP
Main Street
Springfield, Vermont
Information 802-885-2083

Connecticut River Transit
300 Clinton Street
Springfield, Vermont 05156
Information 802-885-5165

Community Cares Network
Chester, Vermont 05143
802-875-6341

Home Health Care & Community Services
800-541-4145
Provide: Nurse visits - Occupational Therapy
Physical Therapy - Home Health Aides
Meals on Wheels - Homemaking
Social Worker - Speech and Language Therapy

Lifeline
Information 800-LIFELINE or www.lifelinesytems.com

Senior Center
139 Main Street
Springfield, Vermont 05156
Information 802-885-3933

Advanced Directives
Springfield Hospital
Social Services Department
802-885-7585

Council On Aging
56 Main Street
Springfield, Vermont 05156
802-885-2655

Reading For Pulmonary Rehabilitation

Living Well with Chronic Asthma, Bronchitis, and Emphysema
by Myra and Berton Shayevitiz, MD. Published: Consumer Reports Books, 1991.
Amazon.com

The Chronic Bronchitis and Emphysema Handbook
by Dr.'s Francois and Shelia Haas. Published by: Wiley Science Editions, 1990.
Amazon.Com

To Air is Human
by Prichett & Hull Associates. Published by: Prichett & Hull, 1999
Amazon.Com

Living Well with Chronic Lung Disease
By Krames. Consultant Lana Hilling, RCP and published by Krames and AACVPR, 2005

Chronic Lung Disease Resource Directory:

ALA Call Center
Offers smoking cessation advice via phone
1-800-548-8252

Vermont Quitline
Offers smoking cessation counseling and gives out the telephone number of a tobacco cessation coordinator at your nearest hospital.
1-877-937-7848

COPD Foundation
1-866-316-2673 or www.COPDfoundation.org

Mayo Clinic
Medical information on many diseases, management and healthy living.
www.mayohealth.org

COPD Lung Profiler
Helps COPD patients and doctors make informed decisions based on medical literature
1-800-548-8252 or www.lungusa.org

National Lung Health Education Program (NLHEP)
For the prevention of lung disease. This site is headed by Dr. Thomas Petty
www.nlhep.org

National Emphysema Foundation (NE0)
Working to improve the quality of life for those with Emphysema, Asthma and related diseases.
1-203-854-9191 or www.emphysemafoundation.org

National Jewish Medical and Research Center
Extensive amount of lung related information.
1-800-222-5864 or www.njc.org/index.html

COPD-Support.com
The web home for COPD online mailing list
www.COPD-Support.com

Centers for Disease Control and Prevention (CDC)
The main federal agency for protecting the health and welfare of all
1-800-311-3435 or www.cdc.gov

National Heart, Lung and Blood Institute
Part of government's program.
1-301-592-8573 or www.nhlbi.nih.gov/index.htm

Traveling with COPD:
Tips for flying, cruises, trains and bus
1-800-778-7953 or www.access-able.com/tips/oxy.html

Sleep Net
Large volume of information on sleep apnea and other sleep related disorders.
1-202-347-3471 or www.sleepfoundation.org

Helping Patients
Interactive web site that helps patients find medication assistance programs.
1-800-762-4636 or www.helpingpatients.org

Coalition for Pulmonary Fibrosis
Organization dedicated to advocating on behalf of those affected by Idiopathic Pulmonary Fibrosis.
1-888-222-8541 or www.coalitionforpf.org