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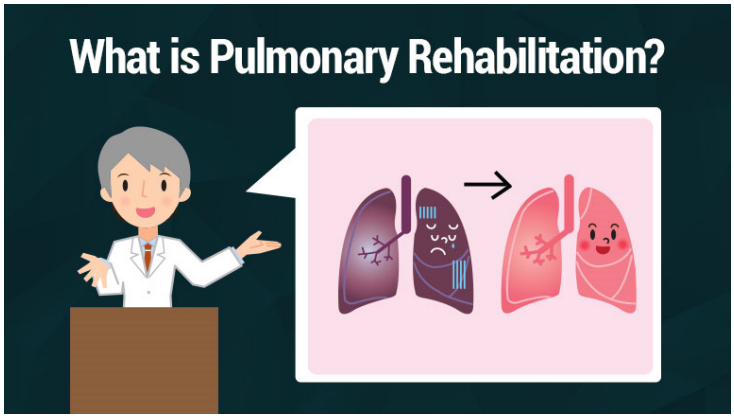
# PULMONARY REHABILITATION

**Your Pulmonary Rehab Starts Now!**
While you are waiting to start an outpatient pulmonary rehabilitation program, here is some information to help you get started from home. The goal during this interim phase is to provide you with some of the necessary information that will help you manage your current pulmonary condition. Please understand this information does not take the place of instructions or recommendations given to you by your physician. We encourage you to check with your physician if you have any questions before starting this type of program.

**Pulmonary Rehabilitation**
The American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) states that pulmonary rehabilitation is a program that provides individualized, supervised care for people with pulmonary problems and illnesses such as:

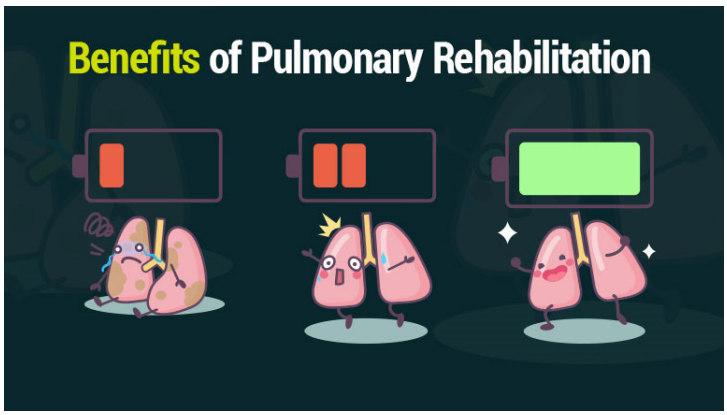
- COPD
- Emphysema
- Chronic Bronchitis
- Bronchiectasis
- Sarcoidosis
- Pulmonary Hypertension
- Pulmonary Fibrosis
- Interstitial Lung Disease
- Lung cancer and lung cancer surgery
- Lung volume reduction
- Lung transplant




Source: The Lung Institute

A pulmonary rehabilitation program includes exercise and education relative to your lung condition. Pulmonary Rehabilitation helps you:

- Improve your quality of life and independence
- Increase your exercise capacity
- Increase muscle strength and flexibility
- Manage stress and stressful situations
- Cope with your symptoms
- Improved breathing and/or less effort to breathe




**As AACVPR says, "Pulmonary Rehabilitation allows you to make the most of the limited lung function you have."**

Pulmonary rehab consists of supervised exercise and education. Education focuses on understanding and managing your lung condition as well as focusing on behavior changes that will

promote a healthier lifestyle. The goals of pulmonary rehab are to improve your cardiovascular endurance, muscular strength, and flexibility, so that you are better able to carry out activities of daily living.

Educational topics focus on:
- Understanding medications
- Breathing techniques and retraining methods
- Exercise principles and prescription
- Conservation of energy
- Use of oxygen and equipment
- Healthy nutrition
- Travel considerations
- Emergency preparedness
- Setting up a safe home environment
- Infection control and self-management
- Stress management
- Smoking cessation

**Pulmonary disease is not a stigma. You are not alone!**
Depression, anxiety, social isolation, cognitive impairment, insomnia, and poor regulation of health behaviors are just a few of the common psychosocial emotions and mood changes that occur with chronic lung disease. Have an open conversation with your pulmonologist or primary care physician if you feel impacted by the psychosocial aspect of your recovery process.

**Smoking Cessation**
Smoking cessation is an important element in both primary and secondary prevention of pulmonary disease. Pulmonary Rehabilitation supports smoking cessation through individual counseling and ongoing follow-up. Please visit the American Lung Association website for more information on their Freedom from Smoking Program and local Nicotine Anonymous meetings.

**Starting on the Right Foot**
It is important to make sure you are wearing the proper clothing and supportive shoes when you exercise. As fundamental as it sounds, the right attire will make you feel more comfortable and help avoid minor injury, which could sidetrack your recovery. Here are some things to consider:
- Clothing - Loose fitting, comfortable clothing is best. Wearing different layers of clothing is recommended since you can take a layer off when you get too warm or place a layer on to keep warm.
- Socks - There are many types and brands of socks that wick away moisture and prevent blisters. Just make sure they fit properly and are not loose.
- Shoes - Wear walking or running shoes with good arch support. Quality shoes are a good investment when beginning an exercise program.

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## Suggested Home Exercise Program

Exercise is a pivotal part of pulmonary rehabilitation. Cardiovascular, or aerobic, exercise is the main way to increase the strength and health of your heart and lungs. Examples of cardiovascular exercise are walking, dancing, jogging, cycling, stair climbing, hiking, and rowing.

| | |
|---|---|
| **Type of Activity** | Walking on a level surface, using a treadmill, or using a stationary bike. |
| **How Often?** | Most days of the week (5-6 days) preferably every day. |
| **How Long?** | Gradually increase your exercise until you reach 30 minutes of continuous exercise, but not more than 60 minutes each day.<br><br>Here is a sample walking program while at home (it also applies to any other form of cardiovascular exercise):<br><br>**1st week:** Walk 5-10 minutes 3-4 times a day.<br>**2nd week:** Walk 10-15 minutes 3 times a day.<br>**3rd week:** Walk 15-20 minutes 2 times a day.<br>**4th week:** Walk 20-30 minutes once a day.<br>**5th week:** Walk 30-40 minutes once a day.<br>**6th week:** Continue walking 30-40 minutes once a day while increasing your pace or building your duration up to 60 minutes. |
| **How hard?** | Monitor how you feel. Learn how to check your heart rate. (See instructions below) |

During this interim time, avoid any strenuous exercise or activity, including any heavy lifting. If you were lifting weights prior to your heart event, please consult with your physician before resuming.

## How Your Body Responds to Exercise

When you exercise, you may notice that you are breathing faster and that your heart rate increases. You can also expect to sweat and to have some muscle fatigue. It is also important to know what is not normal.

If you notice any of the following symptoms, **STOP** exercising and call your physician:

- Severe chest pain, pressure, or tightness (i.e., angina)
- Excessive shortness of breath or inability to talk
- Excessive sweating
- Blurred vision
- Dizziness, lightheadedness
- Nausea
- Cramping in your arms or legs
- New weakness on one side of your body, either arm or leg, or both
- Extreme fatigue


**If you feel it is an emergency, call 911. Err on the side of caution.**

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## Knowing How to Monitor Your Effort or Intensity

At this stage in your recovery process, exercising almost every day is the most important factor. The intensity or effort of the exercise should be “comfortable”.

There are many ways to measure the intensity of your exercise. Here are some easy ways:

1. **Rating of Perceived Exertion (RPE)**
   When you are exercising at home or when you are in rehab, rate your perceived exertion. This rate should reflect how you feel when you are exercising by taking in
   to account all the feelings of the activity including your effort.

   In most cases, you should aim for “fairly light” to “somewhat hard” (or 11-13 on the RPE Scale) during exercise.

   If your rating of perceived exertion gets higher on the scale, you need to either slow down or take a rest, so you can stay within the range of “fairly light” to “somewhat hard.”

| Rating of Perceived Exertion Scale | |
|---|---|
| **6** | |
| **7** | Very, very light |
| **8** | |
| **9** | Very light |
| **10** | |
| **11** | **Fairly light** |
| **12** | |
| **13** | **Somewhat hard** |
| **14** | |
| **15** | Hard |
| **16** | |
| **17** | Very hard |
| **18** | |
| **19** | Very, very hard |
| **20** | |

2. **Use of a Pulse Oximeter**
   During exercise, maintain oxygen level greater or equal to 90%. If below 90%, use breathing techniques like pursed lip breathing until it is 90% or greater. If it stays below 90%, stop exercise for the day. Continue breathing techniques and notify physician if O2 level stays below 90%.

3. **Dyspnea Scale**
   When you are exercising at home or when you are in rehab, describe your s
   hortness of breath, or dyspnea, if any. If your rating on the scale is greater or equal to “4,” stop exercise, rest, and begin breathing retraining or pursed lip breathing. Resume exercise if your breathing gets better. If it does not, then stop exercise for the day and use inhaler or other medications that are indicated for you.

| Dyspnea Scale | |
|---|---|
| **0** | None |
| **1** | Very Slight |
| **2** | Slight |
| **3** | Moderate |
| **4** | Somewhat Severe |
| **5** | Severe |

4. **The Talk Test**
   Choose a level of exertion that allows you to talk while you exercise. You should be able to talk in short sentences, but will likely not be able to sing.

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## Healthy Nutrition

A healthy diet emphasizes whole, plant-based foods such as vegetables, fruits, beans, legumes, and whole grains. It does include some fish, poultry, and low-fat/nonfat dairy products for lean protein sources. Following these guidelines will help control blood sugar, lower blood pressure, reduce the risk of some cancers, and control weight.

**Vegetables and Fruits**: A diet rich in vegetables and fruits provides many vitamins, minerals, and fiber, which helps decrease the risk a heart attack and stroke, protect against cancer, lowers blood pressure and maintains a healthy body weight.

- Eat vegetables and fruits at every meal.
- Try new kinds to increase variety in the diet.
- The more colorful selection of vegetables and fruits, the better for your health.
- Choose fresh or frozen vegetables without added sauces, fats, or salt.

**Whole Grains (Complex Carbohydrates)**: Foods made with whole grains provide fiber, vitamins, and minerals and are better for blood sugar control and a healthy digestive system.

- Choose "**whole grains**" such as whole wheat, oats, barley, rye, corn, bulgur, brown basmati rice, and wheat berries daily.
- Read the ingredients and labels for "**made with whole grains**"
- Buy whole grain cereals like Old Fashioned Oats, Wheatena, Kashi, Total, Wheaties, Bran Flakes, Cheerios, Wheat Chex, and Shredded Wheat.
- Substitute whole wheat flour for white flour when baking breads, rolls, muffins, pancakes, waffles, and pizza dough.
- Limit or completely avoid **refined** carbohydrates, such as white bread or bagels, white rice, flour tortillas, sweetened cereals, pastries, candy, and soft drinks.

**Protein**: Emphasize vegetable sources of protein rather than animal sources for less saturated fat and cholesterol and more fiber in the diet.

- Eat nuts, soybeans, soymilk, legumes (beans), lentils, and tofu.
- Switch to natural style peanut butter (i.e., peanuts are the only ingredient). Stir in the oil on top and keep refrigerated.
- Choose skinless chicken and turkey, and fish for lean animal protein.
- Buy only low fat or nonfat dairy products like yogurt, cottage cheese, and nonfat or 1% milk for excellent, heart-healthy sources of protein.
- Eat less meat and dairy products. Buy extra lean meat and low fat (1%)/nonfat dairy products.

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**Fat**: Not all fats are bad for you. In fact, plant-based fats like nuts, seeds, avocados, olives, and flax contain fats that are good for your heart. These foods are high in calories, so if you need to lose weight, eat in moderate portions.

- Choose **unsaturated** fats like canola oil for baking and use olive oil for sautéing, to make your own salad dressings, and to drizzle on bread instead of using butter or margarine.
- Use avocados, olives, and toasted nuts to flavor salads, pasta, soups and casseroles.
- Increase intake of omega-3 fatty acids by eating walnuts, fish, flaxseeds, chia seeds, and soy products.
- Avoid **saturated** fats found in animal and dairy products. Eating foods high in saturated fat raises your cholesterol levels more than eating foods high in cholesterol!
- Avoid ***trans*-fatty acids** found in stick margarine and in products made with partially hydrogenated oils like shortening.
- Read the ingredient lists. Look for and avoid partially hydrogenated oils in commercially baked foods like chips, crackers, cookies, pastries, pies, donuts, and biscuits.
- Limit or completely avoid the intake of deep fried foods like fried fish/chicken, French fries, and donuts.

**Supplemental Nutrition:** Check with a dietitian or your physician to see if you should use a supplemental nutritional drink, such as Boost or Ensure, to help in your intake of calories if weight gain is applicable.

**Healthy Tip**
**Eat smaller meals (i.e., 4-6) throughout the day rather than 3 large meals.**

For more information on **UCLA Health's Pulmonary Rehabilitation Program**, please visit our website, **www.rehab.ucla.edu**, or contact **310-825-0014**.