

Pulmonary Rehabilitation

If you have shortness of breath because of lung problems, you may have asked yourself:


- Can I exercise?
- How can I do more with less shortness of breath?
- Can I do anything to improve my quality of life?

Taking part in a Pulmonary Rehabilitation (PR) program can help decrease your shortness of breath and increase your stamina, ability to exercise, and independence. You may have heard that PR is the standard of care for people with COPD (chronic obstructive pulmonary disease). We now also know that people with other lung conditions can benefit as well. That includes people who have pulmonary hypertension, interstitial lung disease (pulmonary fibrosis), asthma, pre/post lung transplant, cystic fibrosis, or long COVID-19. PR is also recommended for people who have recently been hospitalized for a flare-up (exacerbation) of COPD.

What is Pulmonary Rehabilitation?

PR is a treatment program comprised of individualized exercise, education, and support that helps you manage your breathing problems, increase your stamina (energy), and decrease your breathlessness. A key goal of PR is to re-train your muscles and learn breathing methods so that you can safely and comfortably engage in activities that are most important to you.

Many people think that it is best to avoid physical activity and exercise if they feel breathless, but the opposite is true when exercise is part of PR! With inactivity, deconditioning or getting “out of shape” will set in, which will make it even harder to do things. PR is as important as any medicine prescribed for your lung disease.

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The exercise sessions—the cornerstone of PR—are overseen by PR staff who prepare an exercise program just for you. The exercises start at a level that you can handle (for example, some people start exercising while sitting and others with walking). In a supervised setting, you will be encouraged to exercise as much as is safely possible. A goal is for you to increase your exercise endurance over the course of the program. The amount of time you exercise, and the intensity of that exercise, will be gradually increased based on your ability. As your muscles get stronger, you will be able to exercise longer with less breathlessness and feel less tired.

The education part of the program teaches you to be in charge of your breathing instead of your breathing being in charge of you. You will learn how to pace your breathing with your activities, how to take your medicines, and how to communicate with your healthcare provider.

How much time does a Pulmonary Rehabilitation program take?

Most programs meet two or three times a week and programs can last 8 to 12 weeks or more. Because the program staff are constantly monitoring your progress and increasing your exercises, as you are able, attending every session is important and adds value.

How will I know if Pulmonary Rehabilitation is right for me?

Your healthcare provider will refer you to the PR team, who will determine if PR is right for you by:

- Evaluating your current state of health and lung function test results.
- Discussing your current activity level and your ability to do the things you want to do.
- Determining your willingness and ability to attend PR.

Even if you think you are too frail to exercise, it is best to keep your appointment with the PR team, who can hear your concerns and decide with you whether PR can help.

PR programs are limited in the number of people who can attend so that you get close supervision. You will be evaluated before you begin the program to make sure you can safely exercise in the program. Typically, you will be asked to complete a walking test to see how much you can exercise and examine how you walk and your balance. You may be asked to answer questionnaires before and at the end of the program. This evaluation may take place at the PR site or in a clinic. From the beginning, the staff will help create an exercise program that you can keep up on your own in your home environment after you complete PR.

Your PR team will include a number of healthcare professionals that may include a combination of pulmonary doctors, nurses, respiratory therapists, physical therapists, occupational therapists, exercise physiologists, psychologists, pharmacists, dieticians, social workers, or spiritual advisors, such as a chaplain. The team will work with you to put you in charge of your breathing.

What will I do in the exercise sessions?

Exercise sessions normally begin with warm-up exercises, followed by exercises for your arms and legs. Usually, you will do exercises to build both your strength and your endurance (stamina). To build your strength, generally weights, elastic bands, and/or lifting devices are used. For endurance, activities might include walking on a treadmill or in a corridor and/or using a stationary

bicycle. The amount of time you exercise depends on what you can handle. Your oxygen level and heart rate will be monitored, and you will use your breathlessness to guide the intensity of your exercise. After attending PR, people are frequently amazed at how much more they can do and how much less shortness of breath they experience.

What will I learn in Pulmonary Rehabilitation?

The education part of PR may happen in a classroom, online in a virtual group, or one-on-one with the professional staff during each exercise session. During group meetings, you will learn new ways to breathe during stressful times and while being active. You will practice these new breathing techniques during your exercise sessions. You will learn about your medications, what the medications do, and how to use respiratory medications such as inhalers to get the most benefit from them. During the program, you may be given an Action Plan that outlines what you should do when you are having a lung flare-up (exacerbation).

Some people with breathing problems need to use oxygen. During PR you will be tested at rest and with exercise to see if oxygen may help you. You will learn the reasons why some people with shortness of breath use oxygen and others do not need it. You will have the chance to ask questions about managing oxygen during daily life.

If you smoke, PR will provide support to help you to stop or guide you to a program that can help you to stop. You will also learn how and when to call your healthcare provider, including what key points to share and what questions to ask. Also, during the program, you can expect to meet others who also have breathing problems. You will have the time to share concerns and learn from others living with lung disease.

How can I find a Pulmonary Rehabilitation program and what will it cost?

Ask your healthcare provider for a referral to a qualified program. Programs are often offered in an outpatient department of a hospital, including Veterans Administration hospitals. Some programs are certified by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR). The American Thoracic Society (ATS) maintains a directory of programs at <https://www.livebetter.org>. Other national and local directories are available through the AACVPR Program Directory (aacvpr.org) and the COPD Foundation. The American Lung Association (ALA) can also help you find Better Breathers clubs and PR programs in your area.

Virtual PR programs have emerged to make it easier for patients who live far from medical centers to engage in PR. Some are offered by medical centers that also have an in-person program, others are stand-alone commercial entities. The delivery mode is quite varied and can use videoconferencing where you exercise in real-time with PR staff, telephone calls, and/or pre-recorded exercise videos that you watch on your own. It is not clear which patients are better candidates for in-person versus virtual PR programs. In the US, virtual PR programs are a newer entity, making their use, effectiveness, and safety by those with complex medical issues less well understood. Although the benefit is that you can participate from the comfort of your home, it is still unclear if there is a single best way for someone to undertake virtual PR. At this time, virtual PR is considered an alternative option and not a replacement for in-person, center-based PR. You should discuss your preferences with a healthcare provider trained in PR to decide which type would be safest for you. Whether you decide to attend an in-person or virtual program, you and your healthcare provider should know that PR is well defined and includes essential components. For more information, check out this paper: <https://www.atsjournals.org/doi/10.1513/AnnalsATS.202102-146ST>.

The cost to you and insurance coverage of PR can vary greatly depending on where you live and what program you choose. In the US, Medicare covers center-based PR for COPD, providing you meet certain requirements. Medicare often covers PR for other lung conditions, but this varies with different regions of the US. Currently, Medicare does not pay for virtual PR provided by hospital-based outpatient programs. The program coordinator can tell you if you qualify and what the cost to you will be.

What happens after I finish a Pulmonary Rehabilitation program?

It is extremely important that you continue to exercise after finishing your PR program or you will lose some or all the benefits you have gained. Before you “graduate,” the PR staff will work with you to design a long-term plan of exercise. Many sites offer “maintenance” PR so that you can continue to use their equipment and safely exercise with others who have breathing problems.

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Action Steps

- Talk to your healthcare provider about whether PR is an option for you.
- Think about your goals for PR and ask questions to get the most out of your time in the program.
- Let program staff know how it is going at home doing your exercises.
- Try to attend all the PR sessions, as that helps you improve over time.

Other Resources

American Thoracic Society

<https://site.thoracic.org/advocacy-patients/patient-resources>

AACVPR

<https://www.aacvpr.org/resources-for-patients>

COPD Foundation

<https://www.copdfoundation.org/Learn-More/Pulmonary-Rehabilitation/What-is-Pulmonary-Rehabilitation.aspx>

Livebetter

<https://www.livebetter.org/>