

# Exercising with Chronic Obstructive Pulmonary Disease (COPD)



**COPD causes decreased airflow when you breathe. It comes in two forms. Chronic bronchitis is the narrowing of small airways. It results in airflow resistance and a chronic cough. Emphysema is the breakdown of lung tissue that trades oxygen and carbon dioxide between the lungs and the blood. COPD is the most common lung disease. It affects about 24 million Americans. It is also the fourth ranked cause of death. Unfortunately, COPD is often irreversible. That does not mean you can't delay its progress, though.**



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One of the main problems people with COPD experience during exercise is shortness of breath. They react by avoiding exercise, which reduces their fitness level. As a result, breathing becomes harder, and shortness of breath occurs at even lower levels of activity. Becoming more active can reverse this cycle. Exercise can help improve your muscles, heart, and circulation. This can lower the stress of exercise on your breathing. When you exercise regularly, you will have less shortness of breath, increased exercise capacity, and a better quality of life. Exercise also can help you stay active and delay the effects of COPD. The key is to choose activities that you enjoy. They will help you manage your COPD. Making exercise a normal part of your life also can have a major positive impact on your overall health.

COPD may make exercise more challenging for you. However, regular activity can improve your symptoms. Exercise also can make it easier to perform everyday tasks. There are other benefits, too. Exercise can reduce your risk of other diseases. It also can help you manage your weight, reduce anxiety and stress, sleep better, and feel more energized. The key is to find and follow a program that meets your individual needs and concerns.

Just starting out? Begin with aerobic exercise. However, if your COPD has kept you from normal activity, you may have a decrease in the size of your muscles. This is called muscle atrophy. It causes reduced strength, especially in the lower limbs. Atrophy can make people with COPD so weak they can't exercise long enough to improve their condition. If this is the case, then you may need to start with strength training. Later, you will want to do both types of exercise to improve your overall health and fitness.

## Getting Started

- Talk with your doctor before you start an exercise program. Ask about any changes to your medications or concerns in becoming more active.
- Take all medicines prescribed by your doctor.
- Set the right goals. Aim for increased fitness, less shortness of breath, more efficient breathing, and increased ease in your daily activities.
- Remember, exercise is just one component of your rehab program.
- Make a long-term commitment to your program for improved health. It might take up to 12 weeks to get useful results.
- At times, you might feel little or no change in the severity of your disease. Remember, the usual pattern for COPD is to get worse over time. No change, or maintaining the status quo, actually is an improvement.
- Adjust your workouts for variations in weather and changes in your symptoms.
- Consider air quality when choosing outdoor exercise. If the Air Quality Index (AQI) is in the moderate to unhealthy range (> 50), consider indoor exercise.
- Start slowly. Just 10 minutes of walking each day is enough.
- Take as many breaks as you need.
- Increase the intensity and duration of your workouts over time. Focus more on duration.
- Start by exercising on your own. Begin walking or another form of activity that you can integrate into your daily routine.

- Invite others to join you. Exercising together is more fun and increases the chance you will continue. Dogs also make great walking partners!
- Look for programs available in your community. Consider contacting an appropriately credentialed exercise professional\* to help you. All you really need, though, is a good pair of shoes to get started walking.

## Aerobic Exercise Programs

The American College of Sports Medicine and the Centers for Disease Control and Prevention recommend at least 150 minutes per week of moderate-intensity aerobic activity, 75 minutes of vigorous aerobic activity, or a combination of both for adults. They also suggest twice-a-week muscle strengthening. Follow the FITT principle to design and implement a safe, effective, and enjoyable program. F = frequency, I = intensity, T = time, and T = type (Pescatello et al., 2013).

- Frequency – Be active on most days of the week but at least three to four days. Work up to five days a week.
- Intensity – Exercise at a moderate level. Use the “talk test” to help you monitor. For example, even though you may notice a slight rise in your heart rate and breathing, you should be able to carry on a conversation while walking at a moderate pace. As you walk faster, you will begin to breathe faster and have difficulty talking. At that point, you’ve achieved moderate intensity or “somewhat hard.” Vigorous exercise causes a large rise in heart rate and breathing. At this intensity, it would become difficult to talk. Most people would rate this as “hard to very hard.”
- Time – Exercise 30–60 minutes per day. You can do it all at once or break it up into a few sessions of at least 10 minutes each.
- Type – Do rhythmic exercises using the large muscle groups. Try brisk walking, cycling, and swimming. Choose activities you enjoy and will do regularly in your new, more active lifestyle. Add variety depending on the day or the season to keep your program more enjoyable.

## Aerobic Exercise Cautions

- Improve your breathing by pursing your lips and engaging your diaphragm. These will slow your respiratory rate. If needed, use oxygen therapy during exercise. This will help you maintain adequate blood oxygen levels.
- Avoid extreme weather. Plan to exercise during mid- to late-morning. Remember, cold air can narrow airways in addition to your COPD.
- If you have been inactive for a long time, start with short sessions (10 to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Gradually build up to being active at least 30 minutes a day for most days of the week.

- Drink plenty of fluids before, during, and after exercise.
- Use the Ratings of Perceived Exertion scale rather than heart rate to measure intensity. Adjust your workouts based on your symptoms.

## Resistance Exercise Programs

Evidence suggests that moderate-intensity resistance training also improves your ability to function and promotes good health. Follow the FITT principal when creating a resistance exercise program, too.

- Frequency – Do resistance training at least two days per week. Plan a day of rest between sessions.
- Intensity – Exercise at a moderate level. If you can lift a weight 10 to 15 times, you’ve achieved moderate intensity. You get to high intensity when you can lift a weight only eight to ten times. Remember, you aren’t training to be a weight lifter. Your goal is to improve your strength and muscle endurance so your daily activities will be less stressful.
- Time – This will depend on the number of exercises you do.
- Type – Exercise all major muscle groups using either free weights or a machine. There is no difference between the two methods. Don’t belong to a gym or health club? No problem. You can do the same exercises at home using lighter weights, resistance bands, or your body weight as the resistance, like push-ups or sit-ups.

## Resistance Exercise Cautions

- Avoid holding your breath when lifting. This can cause large changes in blood pressure. That change may increase the risk of passing out or developing abnormal heart rhythms.
- If you have joint problems or other health problems, do only one set for all major muscle groups. Start with 10 to 15 repetitions. Build up to 15 to 20 repetitions before you add another set.

Design your exercise program for maximum benefit and minimum risk to your health and physical condition. Consider reaching out to an appropriately credentialed exercise professional\* to work with you and your doctor. Together, you can establish realistic goals and design a safe, effective, and enjoyable program.

For more information, visit [www.exercisemedicine.org](http://www.exercisemedicine.org) or e-mail [eim@acsm.org](mailto:eim@acsm.org).

\*A listing of exercise professionals can be found at [www.usreps.org](http://www.usreps.org) and EIM Credentialed professionals can be found through the ACSM ProFinder (<http://bit.ly/1Mq6ldN>).

## Referral Instructions