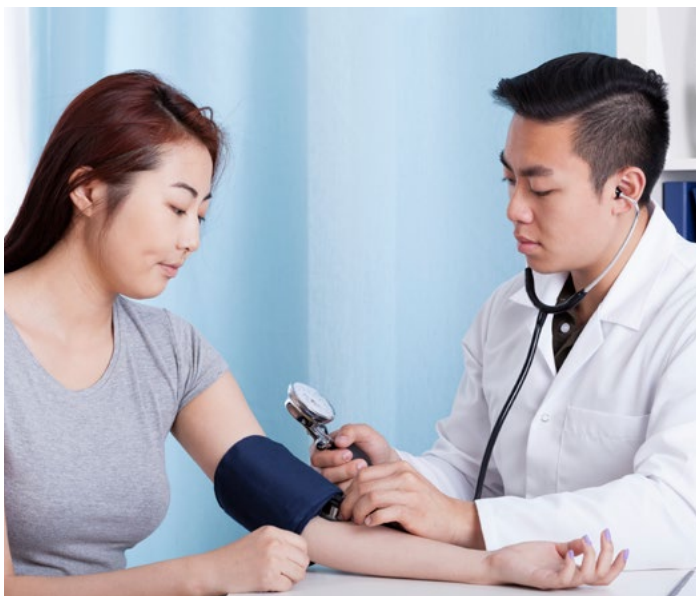


Exercising with High Blood Pressure



High blood pressure or hypertension (blood pressure greater than 140/90 over a period of time) affects nearly 78 million Americans. Although it's the leading cause of death worldwide (13 percent), about 30 percent of adults don't even know they have high blood pressure. Many of those who are aware aren't taking control of their disease. If left untreated, hypertension can increase your risk for heart attacks, strokes, and peripheral arterial disease (decreased blood flow usually to the legs and feet).



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Getting regular physical activity can help. Exercise can reduce the chance you will develop hypertension by 50 percent. It also lowers the risk of stroke by 27 percent. In some cases, exercise also can reduce the number of medicines you take to control your blood pressure.

How much exercise do you need? The most health benefit comes when inactive people become moderately active. That means working up to 150 minutes of brisk walking each week. Just making exercise a normal part of your life can have a major positive impact on your health.

Evidence suggests both aerobic and muscle-strengthening exercise programs help. So try to do both. If you are just starting out, do more aerobic exercise. Over time, add resistance workouts. Doing both types will bring even more benefits for your blood pressure and overall health and fitness.

Getting Started

- Talk with your doctor before you start an exercise program. Ask about any changes to your medications or any concerns in becoming more active.
- Take all medicines prescribed by your doctor.
- Consider other changes. Exercise and medication play major roles in reducing blood pressure. But the most successful programs also involve many other areas of life. Follow a healthy diet. Manage your weight, stress, and sleep. Stop smoking and other drug use. Limit alcohol intake.
- 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.
- Use a pedometer or other activity tracker to monitor your progress. Slowly work toward a goal, like maybe 10,000 steps per day.

Aerobic Exercise Programs

The Centers for Disease Control and Prevention, the U.S. Department of Health and Human Services, and the American College of Sports Medicine all 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 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

- If you have been inactive for a long time, start with short sessions (ten to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Gradually build up to being active 30 minutes a day for most days of the week.
- If you take a beta-blocker or any other medication that affects your heart rate, exercise at an intensity that you feel is "somewhat hard."
- Always cool down slowly. Some blood pressure medications may reduce your blood pressure too much if you stop exercising too quickly. These include alpha-blockers, calcium-channel blockers, and vasodilators.
- Be sure to drink plenty of fluids before, during, and after exercise, especially if you plan to exercise on a hot day or for a long time. Beta-blockers and diuretics may affect your body's ability to regulate its temperature in hot, humid conditions.
- If possible, measure your blood pressure before you exercise. Do not exercise if your resting systolic blood pressure (the top number) is greater than 200 or your diastolic blood pressure (the bottom number) is greater than 115. Contact your doctor to see if you need to modify your medication.

Resistance Exercise Programs

Research indicates that moderate-intensity resistance training also improves blood pressure. When you lift an object, your blood pressure rises based on how many muscles you use and how hard it is to lift it. For instance, lifting with your legs and back or lifting very heavy weights will increase your blood pressure more than lifting with your arms only or lifting light weights. As your strength increases, your blood pressure will be lower when lifting the same weight compared to when you started. 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 ten 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

- Do not continue to lift a weight when you feel exhausted. The intensity of the last few repetitions will be close to your maximum. Also, the rise in your blood pressure may be too great.
- 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.

Other Types of Exercise

Yoga and Tai-chi also can be good for you. These exercises improve strength and flexibility. They also can help you relax. Avoid fast-paced hot yoga, though. Hypertension makes it difficult for your body to regulate its temperature.

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.exerciseismedicine.org or e-mail eim@acsm.org.

Pescatello, L., Arena, R., Riebe, D., & Thompson, P. (2013). General Principles of Exercise Prescription. In ACSM's Guidelines for Exercise Testing and Prescription (9th ed., pp. 166-177). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

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

Referral Instructions