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For patients with Peripheral Artery Disease | Critical Limb Ischemia

EXERCISE CAN HELP …

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PAD and CLI. Exercise makes it better.

Peripheral arterial disease (PAD) affects 8 to 12 million people in the United States. An estimated 5 percent of U.S. adults over age 50 have PAD. Among adults age 65 and older, 12 to 20 percent may have PAD. For the millions of people with peripheral artery disease (PAD), simple activities such as climbing a flight of stairs or a trip to the mailbox can bring on debilitating leg pain.

PAD means there is restricted blood flow to your peripheral arteries (arms, legs and feet). This is the same underlying process that is responsible for coronary artery disease, angina, and heart attacks. In fact, PAD raises your risk for heart disease and stroke. Often caused by atherosclerosis, or hardening (narrowing) of the arteries, PAD is worsened by things like smoking, poor diet, lack of exercise, age, genetics, diabetes, high blood pressure and high cholesterol. PAD doesn't always show symptoms, especially in the early stages. It's possible that you may have it right now without even knowing it.

If untreated, PAD can reach the level of Critical Limb Ischemia (CLI). CLI is a severe blockage in the arteries of the legs or feet that significantly reduces blood flow. At this stage, limbs may develop painful sores, ulcers and/or gangrene (dead tissue) because they do not have enough oxygen. The pain (claudication) may be severe, can last for hours, and typically occurs at night during rest times. If this condition is left untreated, patients may face the risk of amputation.

Lifestyle changes make a difference.

Unfortunately, PAD cannot be cured. Medical treatment and a healthy lifestyle can help improve blood flow and help keep the disease from getting worse. Taking action against PAD and CLI while these conditions are still manageable may help reduce leg pain and the risk of serious complications, including the risk of amputation, heart attack, stroke, and cardiovascular disease.

PAD treatment often includes making long-lasting lifestyle changes. If you have PAD, or are aiming to lower your risk, your health care provider may prescribe one or more of the following:

- **Quit smoking.** Don't smoke, and if you do, quit. Consult with your health care provider to develop an effective cessation plan and stick to it.
- **Lower your numbers.** Work with your health care provider to correct any high blood pressure, cholesterol, and blood glucose levels.
- **Follow a healthy eating plan.** Choose foods that are low in saturated fat, trans fat, and cholesterol. Be sure to include whole grains, vegetables, and fruits.
- **Get moving.** Make a commitment to be more physically active. Aim for 30 minutes of moderate-intensity activity on most, preferably all, days of the week (suggested steps following)
- **Aim for a healthy weight.** If you are overweight or obese, work with your health care provider to develop a supervised weight loss plan.

- **Medication.** In addition to lifestyle changes, your health care provider may prescribe one or more medications. These medications are used to lower high blood pressure and cholesterol levels and treat diabetes, prevent the formation of blood clots that could cause a heart attack or stroke; and help reduce leg pain while walking or climbing stairs.

The exercise RX.

The first inkling that you have PAD is often a painful cramp in the calf or thigh that occurs repeatedly when you walk, but disappears when you're at rest. This symptom is known as *intermittent claudication*. People with PAD often curtail their activity to avoid further pain. However, **inactivity only worsens the condition, creating a downward spiral.**

There is a significant body of **clinical research showing that exercise can be highly effective in increasing leg circulation and reducing the pain that accompanies activity.** The Society for Vascular Surgery and the American College of Cardiology recommend an exercise program in addition to lifestyle changes to prevent or slow the progression of PAD/CLI.

Supervised exercise is one of the most effective treatments for increasing exercise tolerance in patients with PAD. Walking is beneficial and frequently prescribed, but other forms aerobic exercise such as cycling or arm cranking and some resistance training, may also be incorporated.

Unfortunately, supervised exercise programs are rarely offered outside research medical centers and are often not covered by insurance and outside the reach for most people with PAD.

A home-based walking program is a highly effective way to increase exercise tolerance and improve daily activity and quality of life.

Ready.

Before you start a program – supervised or unsupervised - consult with your health care provider about what kind of exercise is appropriate for you. Because of increased cardiovascular risk, it's important that your doctor assess your condition and monitor your progress while you engage in an exercise program.

Your doctor may initially evaluate you with a simple test called an ankle-brachial index (ABI). The ABI can be performed yearly if necessary to see if the disease is getting worse. The ABI compares blood pressure in the ankle with blood pressure in the arm to see how well blood is flowing. A normal ABI is 1.0 or greater (with a range of 0.90 to 1.30). The test takes about 10–15 minutes to measure both arms and both ankles.

Get set.

If exercising at home, The Society of Vascular Surgeons recommends walking with a goal of 30 - 60 minutes 3 - 5 times per week, for at least 12 weeks to start.

Go!

Once you're medically cleared, the key to getting the most out of your walking program is to follow these steps:

Step 1

Warm up. Stretch your calf and thigh muscles in each leg for 10 to 15 seconds.

Step 2

Start walking. Walk at a fast enough pace for about 5 minutes, even though it may cause some mild pain.

Step 3

Stop and rest. After 5 minutes of mild or moderate pain, stop and rest until the pain goes away.

Step 4

Repeat the walk-and-stop routine several times. During the first two months of your walking program, build up slowly to walking a total of 35 minutes each session, not counting the rest breaks. Keep adding a few minutes until you're at the goal of walking 50 minutes.

Step 5

Cool down. Finish by walking slowly for 5 minutes. Then, stretch your calf and thigh muscles again.

Step 6

Stick with it. Aim to eventually do 50 minutes of walking, at least 3 to 5 times a week. As that becomes easier, challenge yourself to work harder. You could try walking up hills or stairs, or add an incline to your routine.

Keep in mind: PAD took years to develop in your legs, and it will take a few months to improve your walking. Be patient with yourself!

Stay the course.

PAD is a lifelong disease. In that sense, caring for your limbs never ends. So the key is managing it, rather than thinking it will go away. The basic rule is: keep your limbs healthy by making good lifestyle choices, following your doctor's advice, and taking your prescribed medications. Not only will you have healthier limbs and reduce your risk for further disease, you'll likely feel better.

If you have any questions about your exercise program, please contact us!

PHONE 816.842.5555

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