

Claudication

The Vascular Group, PLLC

Claudication

In normal circulation blood that has a fresh supply of oxygen from the heart travels to other parts of the body through the arteries. It is returned to the heart and lungs from the extremities by traveling through the veins. Disease in these vessels can disrupt this flow. People who have peripheral arterial disease (PAD) commonly suffer from atherosclerosis (hardening of the arteries). In atherosclerosis excess cholesterol, fat and calcium are deposited on the wall of the blood vessels, causing the arteries to become narrowed.

What is Claudication?

This is a cramping muscle pain that is brought on by exercise and relieved by brief periods of rest. This happens when the muscle's requirements for oxygen and nutrients exceed what the circulatory system is capable of delivering. The cramping is generally located in the calf, thigh or buttocks and varies from a slight ache to severe cramp like pain. With claudication you don't have good days and bad days. Every time you walk the same distance you are able to reproduce the pain in the muscle group.

The pain is due to poor blood supply to the muscles of the affected extremity because of atherosclerosis. The location of muscle pain indicates the level of arterial disease. Pain in legs brought on by exercise is a common complaint and not always due to vascular disease. People with neurospinal compression or musculoskeletal disease may also present with pain while walking.

What is Rest Pain?

Rest pain is advanced arterial disease that results in pain across the toes that wake you up from sleep. This generally occurs at night and interferes with your normal sleep pattern. Relief is obtained when the foot is placed in the dependent position such as walking or hanging the leg over the side of the bed. This requires immediate attention.

RISK FACTORS FOR ATHEROSCLEROSIS

- Smoking
- Hypertension, high blood pressure
- Family history of atherosclerosis
- Elevated cholesterol
- Heart disease
- Diabetes
- Age 65 years and older
- Appears more frequently in men than in women
- Obesity

It is important to try to eliminate the risk factors for atherosclerosis that are under your control. Avoiding the things that lead to atherosclerosis can slow the progression of the disease. You should discuss these risk factors with your primary care provider.

TREATMENT FOR CLAUDICATION

Your physician will discuss the best treatment for you. The following are some of the treatments that may be discussed.

Smoking Cessation

Nicotine causes the arteries to constrict, or narrow, preventing blood from reaching the organs and extremities. Smoking also inhibits the oxygen in your blood and can cause the blood to clot more easily. Many people think that smoking one or two cigarettes a day is okay. They are wrong. Tobacco in any form is harmful and should be avoided. This includes pipes, cigars, cigarettes and chewing tobacco. You will usually notice an improvement in your walking when you stop smoking. There are many support groups available to help with smoking cessation. Please ask us for more information if you need it.

Hypertension (High Blood Pressure)

Uncontrolled hypertension increases the workload of the heart. Thereby causing stress to your arteries. Your blood pressure should be monitored periodically since hypertension is often without symptoms.

Cholesterol Monitoring – Cholesterol is a soft, waxy substance that can build up in your artery walls. This restricts blood flow through the arteries. Cholesterol comes from food.

A total cholesterol level less than 200 is considered desirable. Borderline is 200-239 and high is 240 or greater.

Bad cholesterol (LDL) refers to (low-density lipoprotein) and has a lot to do with your family history. Everyone's bad cholesterol comes from two sources: the cholesterol that is absorbed from food and the cholesterol your body produces naturally, based on heredity. The average person should try to maintain an LDL below 130 mg/dl. If you have heart disease or diabetes, your goal should be less than 100 mg/dl.

Good cholesterol (HDL) refers to high-density lipoprotein cholesterol because it helps eliminate the bad cholesterol from the body. The **higher** your HDL cholesterol level the more good lipoproteins you have to remove stuck cholesterol from your blood vessels. Low is less than 40, high is 60 or greater.

Diet

It is important to avoid foods containing fat, cholesterol and salt. Choose lean meat, fish, poultry and dry beans as protein sources. Moderate your use of eggs and red meats. Limit your intake of butter, cream, hydrogenated margarine, shortenings, coconut oil and foods made from such products. Trim off excess fat from meat. Broil, bake or boil rather than fry. Read labels carefully.

Learn to enjoy the natural flavors of foods. Cook with only small amount of salt. Add little or no salt to food at the table. Limit salty foods such as potato chips, pretzels, salted nuts and popcorn, condiments, cheese, pickled foods or cured meats. Again, read labels carefully. Your medical doctor may prescribe medication to lower your cholesterol.

Diabetes

People who have diabetes are at an increased risk for developing atherosclerosis. This is because diabetes accelerates atherosclerosis. Management of diabetes is essential in helping to defeat this process.

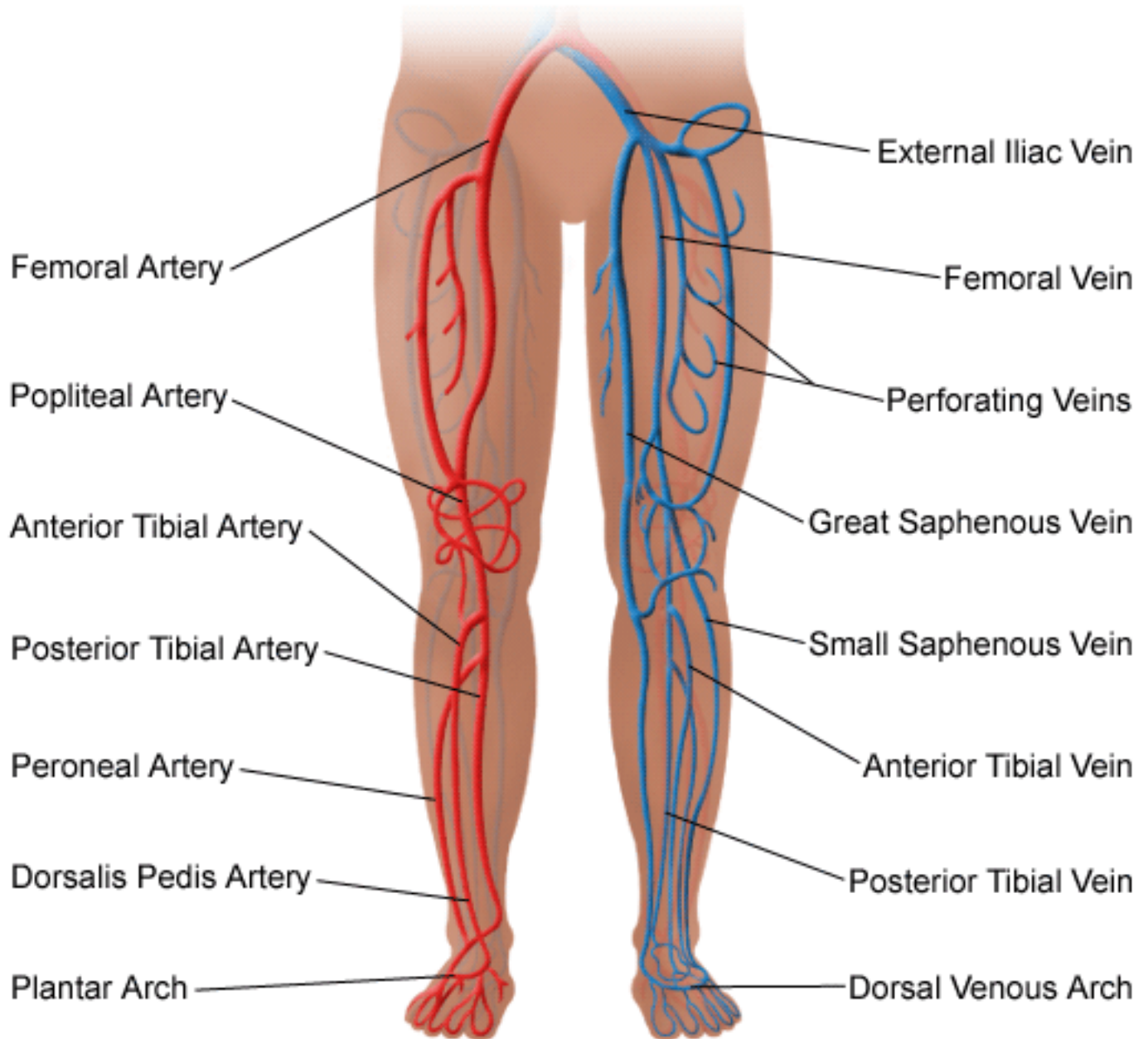
Exercise

This should be part of your daily activity. You should walk, ride a stationary bicycle, swim, etc., three to four times a day. This will help your arterial circulation and strengthen the arteries. If cramping occurs during exercise stop, rest for a few minutes and then continue.

Follow-up appointment

Regular follow-up appointments with your doctor are necessary to monitor the progression of your disease.

Arterial and Venous Circulation of the Legs



MEDICAL TREATMENT

Pletal (cilastazol) is a medication that may be suggested to take to help with the symptoms you experience when walking. It has an antithrombotic, antiplatelet, and vasodilating properties. It is contraindicated in patients with congestive heart failure (CHF). It works best on an empty stomach.

Side effects include headache, diarrhea, and heart palpitations.

It will not take away the walking pain completely but if it works effectively will improve your walking distance. Pletal takes 6-8 weeks before relief is usually seen.

ANGIOGRAM AND ANGIOPLASTY (BALLOON) OR STENTING

This is a procedure done by a vascular radiologist and physician assistant in which a catheter (needle) is inserted into one of the arteries in your groins, after the area is numbed. Dye is injected and several x-rays are taken.

The procedure takes approximately one to one and a half hours. If the blockage in your artery is short and it is a large artery, then the radiologist may be able to dilate it with a balloon or stent. This is called an angioplasty and/or stent placement. If he/she is able to do this you will stay overnight in the hospital.

SURGICAL TREATMENT

You may consider surgical treatment if your claudication is interfering with your lifestyle, preventing you from doing your day to day activities or job. Also, if your atherosclerosis progresses to a point where you are unable to sleep at night due to discomfort in your leg, or if you have a non-healing ulcer present on your leg or foot.

FOOT CARE

People with poor circulation must be very careful in caring for their feet. You must remember your circulation is impaired and any injury to your feet may result in poor healing, and/or infection. It is important to examine your feet daily.

Bathing

- It is very important to wash your feet daily using a mild soap and warm (not hot) water.
- Check water temperature with your hands not your feet.
- After bathing, dry feet well paying special attention to between your toes.
- Inspect your feet daily. Examine around your toenails, between your toes and the bottom of your feet. If you are unable to inspect them, have a family member do so for you. Look for any corns, calluses, redness, swelling, bruises or open areas.

Pedicure

Cut your toenails straight across and file rough edges carefully. Do this under good light after nails are softened from bathing. Do not trim your nails if they are thickened, badly ingrown, infected, painful or if you are a diabetic. Nails in this case should be cut by a foot doctor (podiatrist).

Footwear

- Shoes should be of soft, flexible leather. Man-made materials such as patent leather and plastic should be avoided as they prevent evaporation and may contribute to fungal infections.
- Shoes should be closed toe and allow all toes to wiggle when standing.
- Sandals ideally should not be worn, even the thong type should be avoided because they can cause blisters and open ulcers.
- It is best to buy shoes at the end of the day to take into account any swelling you may have.
- It is important to remember that people with vascular disease should never go barefoot. Splinters on the floor or carpet can go unnoticed as can heat from sidewalks or sand from the beach. This may cause damage to feet with altered sensation.
- Socks or stockings should always be worn with shoes to prevent blistering. Socks should be clean, preferably cotton or wool, non-mended and without seam in order to prevent pressure points.
- Stockings should not be held up by garters or girdles, which constrict the groin. Men's socks should not constrict the ankle or above the calf.
- Support hose for men and women must be of adequate length to allow free movement of the toes. Support panty hose must be loose at the groin.

Heat and Cold

- Keep feet warm; avoid exposure to cold for long periods of time.
- Avoid application of heating pads or hot water bottles. Remember your sensation is altered due to poor circulation, you can burn yourself. Instead wear an extra pair of wool or cotton socks.
- Prevent sunburn in summer and avoid wading in very cold water.
- Check inside of shoes before wearing them. Inspect for protruding seams, torn lining, faulty lumps or sharp objects.
- Wear shoes when out of bed. Avoid going barefoot.

- Allow wet or damp shoes to dry slowly on shoe trees to prevent misshaping.

Remember peripheral arterial disease is a lifelong disease. If you take the proper precautions you can prevent the acceleration of the disease and lead a normal productive life.