What is Peripheral Vascular Disease?

Peripheral vascular disease (PVD) is a blood vessel disease that impacts the blood flow outside of the brain or heart. We usually use this term to talk about diseases affecting the arterial circulation, which are the vessels that carry oxygen rich blood from the heart to the tissues of the body. Certain venous diseases, like varicose veins, are considered a form of PVD, but, more commonly, peripheral vascular disease affects the arteries, and is called peripheral artery disease (PAD). PAD involves the buildup of fatty plaques in the blood vessels in the legs and tends to have a direct correlation to cardiovascular disease. Heart attack and stroke are both more common in patients with PAD, so it is vital to diagnose and treat the disease right away.

Symptoms of Peripheral Vascular Disease

Common symptoms of PVD are pain in the legs when walking and exercising, leg fatigue, and a heavy feeling in the legs. In some cases, a patient with PVD won’t have any symptoms, or the symptoms will be quite vague, so it can be difficult to diagnose. It is important for patients with risk factors to be evaluated for PVD, as it can increase your risk of other cardiovascular problems, including heart attack and stroke.

Another group of patients who should be looked at closely are those with non-healing wounds on their legs, particularly if they have risk factors for PVD. Wounds need a good supply of oxygen and nutrients and healing white-blood cells so that they can heal optimally. While things like diabetes and infection are often to blame for poor healing, if there are also high-grade blockages in the arteries, healing can be delayed and
tissue loss that may sometimes lead to gangrene may occur. Improving blood flow with either angioplasty or surgery can be an important part of saving the patient from having to undergo amputations.

Risk Factors for Peripheral Vascular Disease

The risk factors for PVD are similar to the risk factors for coronary heart disease, and include:

- **Tobacco use** – Smoking accelerates the narrowing of arteries, reducing blood flow faster. Tobacco use can also be linked to an increased risk for diabetes.

- **Diabetes** – Diabetics have an increased risk of PAD/PVD and often are at greater risk of gangrene or amputation because of exacerbating circulatory issues.

- **Age** – Individuals over the age of 65 are at a higher risk for PAD, as buildup of fatty plaque in arteries increases over time.

While the risk factors for coronary heart disease and PVD are similar, there is a difference in their level of significance for PVD. For instance, tobacco use is a risk factor for both coronary disease and PVD, but it seems to be an especially strong risk factor for PVD.

Diagnosing Peripheral Vascular Disease

The buildup of fatty plaque in the arteries happens over time as the arteries become weakened, narrowed, and eventually blocked by the fatty matter. Arteries are no longer able to carry enough oxygen from the heart. Because the symptoms are similar to many other diseases, recommended testing involves several stages:

- **Full history and physician questionnaire** – A cardiologist will ask a number of questions pertaining to current risk factors and problems with walking or exercising, while obtaining a full health history.

- **An asymptomatic patient with risk factors like diabetes or smoking will often be given an ankle brachial index test (ABI), which compares the blood pressure in the arm to the blood pressure in the leg. This gives the physician a good idea of how much or little blood flow is present in the leg and can gauge the severity of PAD from that number. Patients**
presenting with symptoms will also be given this test to help gauge severity and often helps as a guide for future follow-up. The advantage of this simple test is that it has no risk associated with it, is quick and easy to perform, and is low-cost.

Patients with an ABI result that points to peripheral vascular disease will likely undergo additional non-invasive testing. Sometimes the next test will be a procedure called an Ultrasound Doppler Test. During that test, sound waves create an image of the interior of a blood vessel. Using this image, the physician can determine if plaque buildup exists in the artery and get a sense of how severe it is.

For patients with suspected or known severe disease will often need a CT angiogram to help the doctor make a final diagnosis, plan treatment, and identify the best location for access if surgery is necessary. CT angiography gives a very detailed three-dimensional picture of the blood vessels and this modality has become very helpful in planning the best way to proceed from an interventional standpoint.

The right approach to PVD is one that focuses on a whole patient plan, including proper medication, smoking cessation assistance and exercise therapy, if possible.

Peripheral vascular disease does not have to be a life-threatening illness. Quick diagnosis and proper treatment can greatly impact a person’s quality of life and can positively affect their chance of survival.

If you have leg pain or a number of the risk factors for peripheral artery disease, schedule an appointment right away.

Request an Appointment

Physicians that Specialize in Vascular Disease

» Dr. Darryn L. Appleton
» Dr. Martin D. Caplan
» Dr. James B. Garnett
» Dr. Ashwani Kumar
» Dr. C. Mark Newton
» Dr. Charles W. Phillips
» Dr. Sameer Rohatgi
» Dr. Shelton W. Thomas
» Dr. Charles M. Zacharias, Jr.