

PERIPHERAL ARTERY DISEASE

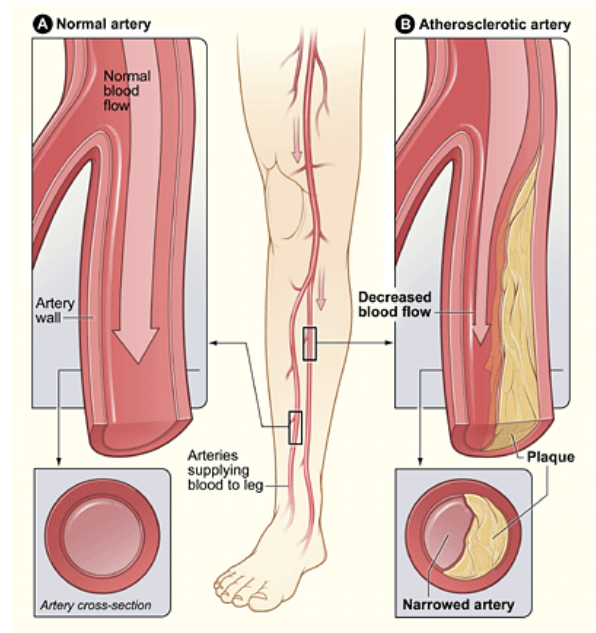
WHAT IS PERIPHERAL ARTERY DISEASE (PAD)?

Peripheral artery disease is a serious condition caused by narrowing of the arteries that carry blood away from the heart to other parts of the body. PAD is the result of atherosclerosis or hardening of the arteries caused by plaque (cholesterol and fatty deposits) buildup. Individuals with PAD may have other systemic atherosclerotic problems such as coronary artery disease, cerebrovascular disease, and renal insufficiency. The most common type is lower extremity PAD. This is a narrowing or blockage of the arteries in the legs, which reduces blood flow to the lower extremities. PAD can increase the risk of heart attack, stroke, or even death if left untreated. Early diagnosis and treatment can help slow down the progression of PAD, prevent devastating complications, and improve your quality of life. For most individuals with PAD, symptoms may be mild or absent, and no treatment is needed. However, as these blockages become more severe and widespread you may be at risk for limb loss. Improving blood flow to the limb can help reduce pain, improve functional ability and quality of life, and prevent amputation.

WHO IS AT RISK?

There are several risk factors that may predispose you to develop peripheral artery disease. As you age, your risk for developing PAD increases. Additional risk factors include:

- Tobacco use
- Diabetes
- High blood pressure
- High Cholesterol and/or High triglycerides
- Obesity
- Lack of physical activity
- History of heart attack or stroke
- Family history
- Certain genetic conditions
- Kidney failure



WHAT ARE THE SYMPTOMS OF LOWER EXTREMITY PAD?

Early on, you may not experience any symptoms from your peripheral arterial disease. If you become symptomatic, you may experience intermittent claudication, rest pain, and/or ulceration.

Intermittent claudication is characterized by muscle cramping, fatigue, and discomfort that occurs after walking short distances. This pain can occur within your calves, thighs, or buttocks. Pain from claudication resolves when you stop walking. This condition is usually treatable with early diagnosis.

Rest pain occurs when your legs do not receive enough blood flow and oxygen at rest. You may experience pain in your leg, foot, toes or heel. Rest pain usually worsens when the legs are elevated and may be relieved by lowering the legs.

PERIPHERAL ARTERY DISEASE

Ulcerations are painful sores on your legs and/or feet that may develop as your PAD progresses. They may eventually turn into gangrene (dead tissue caused by an infection or lack of blood flow). Open wounds or ulcers can be evidence of advanced PAD and need immediate medical attention. If left untreated, this can lead to infection and possible limb loss.

HOW IS PAD DIAGNOSED?

There are both non-invasive and minimally invasive tests to evaluate for PAD. Your healthcare provider will determine what is best for you.

Non-Invasive Diagnostic Imaging

Vascular Ultrasound (Duplex): evaluates blood flow, and can detect narrowing or blockages in blood vessels.

Ankle Brachial Index (ABI): utilizes inflatable cuffs to gauge circulation and measure blood pressure in the arteries at various locations on the thigh, calf, foot and toes. You should not have an ankle brachial index exam if you have severe leg pain, wounds or ulcers on your legs or feet, or an acute DVT.

CT Angiography (CTA): uses computerized tomography (CT) scanning to produce detailed views of the arteries in your abdomen, pelvis and legs, to identify the location and severity of PAD.

MR Angiography (MRA): provides information similar to that of a CT without the ionizing radiation.

Minimally Invasive Diagnostic Imaging

Angiogram: detects the specific location of blockages in your blood vessels using X-rays taken during the injection of a contrast agent. These images help your provider determine the best course of treatment.

WHAT IS THE BEST TREATMENT FOR PAD?

PAD treatment aims at slowing the disease progression, reversing painful symptoms, improving mobility, and reducing your risk for serious complications. Your vascular specialist will review your medical history, diagnostic imaging, discuss symptoms, and perform a physical exam. Most often a combination of treatments will be recommended.

Lifestyle Modifications

Atherosclerosis develops as a result of extra fat and cholesterol that accumulates along the sides of your arteries. You may be advised to lose weight, eat a healthier diet, exercise often and/or quit smoking.

PERIPHERAL ARTERY DISEASE

Medications

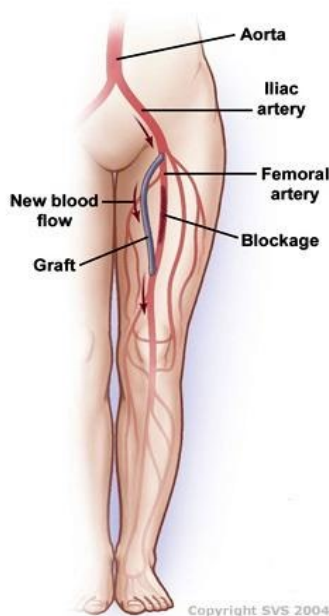
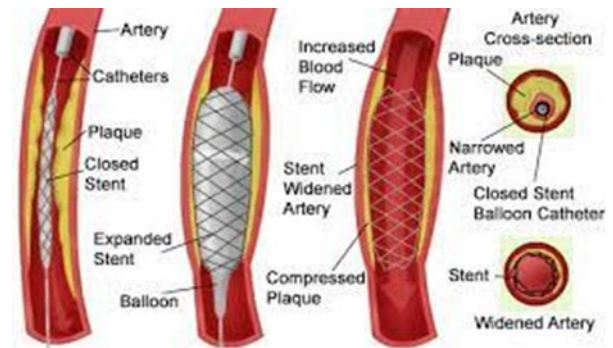
In addition to lifestyle modifications your surgeon may prescribe medication such as antiplatelet, anticoagulant, statin and blood pressure lowering medications.

HOW IS PERIPHERAL ARTERY DISEASE SURGICALLY TREATED?

Angioplasty: In a minimally invasive angioplasty procedure, a catheter is threaded through a blood vessel to the affected artery where a small balloon is inflated to reopen it. In some cases, insertion of a stent is required to help keep the artery open to allow for increasing blood flow and oxygen to the extremity.

Procedures like an angioplasty (with possible stent) can help widen your arteries, reduce blockages, and alleviate your symptoms.

Angioplasty is often suggested if you have moderate to severe PAD.



Bypass Surgery: lower extremity bypass surgery is an effective procedure for patients who are poor candidates for angioplasty, or who have already failed a prior angioplasty attempt. Surgeons create a different channel using a peripheral graft; a special tube that reroutes blood around the blockage. Grafts are made of natural human tissue or a synthetic material. The graft is sewn above and below the diseased artery allowing for direct blood flow to the lower leg and foot. This is a major surgical procedure performed under general anesthesia therefore a careful assessment of the risks and benefits prior to surgery insures the best outcomes.

For many patients with advanced PAD, lower extremity bypass surgery provides the most effective and most durable solution currently available.

Long-term follow-up, with regularly scheduled vascular examinations and ultrasound studies of the graft is absolutely essential to achieve maximal benefit.

ITIMELY DIAGNOSIS AND TREATMENT OF PAD IS ESSENTIAL TO PREVENT SERIOUS CARDIOVASCULAR COMPLICATIONS

Resources:

American Heart Association

<https://www.heart.org/en/health-topics/peripheral-artery-disease/pad-resources>

Society for Vascular Surgery

<https://vascular.org/news-advocacy/articles-press-releases/peripheral-arterial-disease-resources>