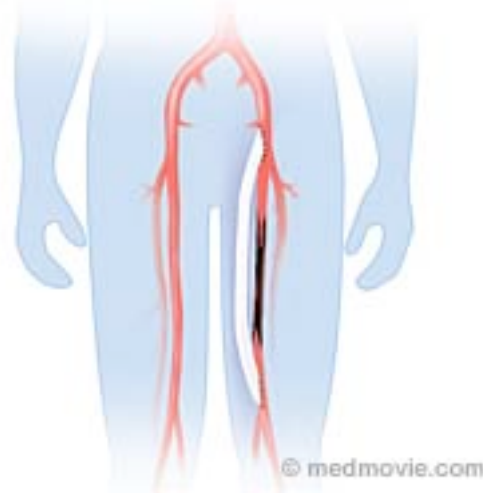


Peripheral Arterial Disease: Leg pain and what we can do about it!

Most people are aware of problems caused by cholesterol build-up and blockages in the heart arteries. Far fewer people are aware of problems caused by similar blockages in the leg arteries. The term “peripheral arterial disease” or PAD refers to artery blockages outside of the heart, primarily in the legs. These leg artery blockages may cause a range of symptoms from minor exertional calf cramping to, in the worse case, gangrene and limb loss. Many people don’t realize that leg pain is not necessarily an expected part of the aging process; it is often due to PAD which can, in many cases, be treated successfully.

PAD is a common problem affecting approximately 12 million people. The incidence increases with age affecting up to 20% of people over the age of 70 years. A minority of these people have been diagnosed and treated!



What are the risk factors for PAD?

PAD is due to the same process that can happen in heart arteries: cholesterol build-up in the artery walls. Because the process is similar, it should not be surprising that the risk factors are also similar. Risk factors include:

- 1) older age
- 2) diabetes
- 3) cigarette smoking
- 4) high blood pressure
- 5) high cholesterol
- 6) obesity

What are the symptoms of PAD?

In its earliest stages, PAD may cause exertional hip, thigh, or calf cramping which is relieved with rest. The medical term for this symptom is claudication. A classic description of claudication by a patient is, "I walk a few blocks and notice pain and cramping in my calf, so I sit down and it goes away after a few minutes." As the disease progresses, patients may notice numbness or tingling in the legs, nocturnal pain relieved with standing up or dangling the legs over the edge of the bed, changes in skin temperature or color, and, in the worse case, non-healing ulcers or gangrene.

How is PAD diagnosed?

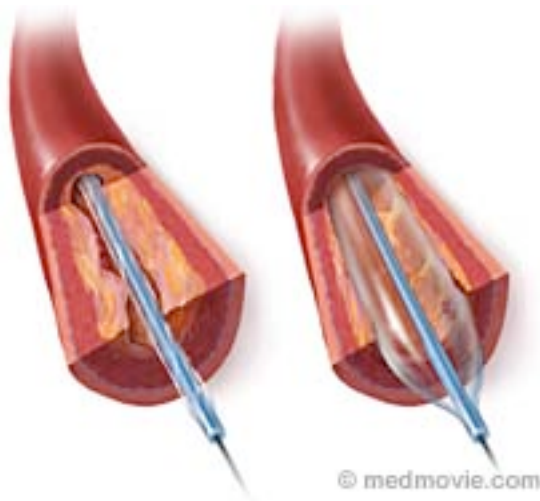
Your doctor may be suspicious that you have PAD based on your risk factors and description of your symptoms. However, he/she will want to do a confirmatory test. Most commonly, we diagnose PAD in the office using a blood pressure test called an ankle-brachial index or ABI. It is easy, fast, and painless. The doctor or nurse will check a blood pressure in your ankle and in your arm. The two blood pressures are then compared. Ideally, the two pressures should be quite similar. When PAD is present, the leg blood pressure will be substantially lower than the arm pressure. If the ABI is abnormal, then you may be scheduled for an angiogram where contrast dye is injected into the leg arteries to get pictures of where the blockages are located and how substantial the blockages are.

How is PAD treated?

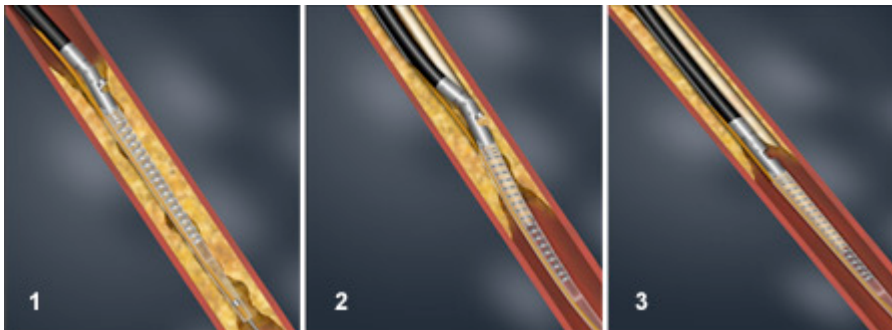
In the past, PAD was treated with surgery. A surgeon would perform a surgical bypass of the blocked leg artery similar to the way a surgeon can bypass a blocked artery in the heart. In the worse case when blockages were so substantial that even a bypass was not possible, the patient might have required amputation.

Certainly, some of these treatments are still necessary, but patients now have options that are minimally invasive and may eliminate the need for surgery. These minimally invasive procedures are performed in the catheterization lab, the same place in the hospital where we fix blockages in heart arteries. There are three main types of catheterization lab procedures which may open blocked leg arteries:

- 1) The first is an angioplasty. In an angioplasty, a little balloon is threaded over a tiny wire in the artery. The balloon is inflated inside the artery to stretch open the blockage.



- 2) The second procedure is called a stent. In a stenting procedure, a tiny tube or stent is placed inside the artery. Initially the artery is stretched open with the balloon. The stent is then placed to prevent the walls of the artery from recoiling and reblocking.
- 3) The third procedure, which is relatively new, is called an atherectomy using a device called a Silverhawk. The Silverhawk is threaded over the little wire and, while passing through the blockage, will actually scoop out the cholesterol plaque. The plaque is collected inside the device and is then removed from the body.



In summary:

- 1) Peripheral arterial disease (PAD) refers to blocked arteries in the legs. The blockage is due to build-up of cholesterol plaque. It is a process similar to what may occur in heart arteries.
- 2) PAD is common and often undiagnosed.

- 3) The risk factors for PAD are similar to the risk factors for heart artery blockages and include older age, diabetes, cigarette smoking, high blood pressure, high cholesterol, and obesity.
- 4) PAD causes a range of symptoms from exertional leg pain to resting leg pain, particularly at night, to, in the worse case, gangrene and limb loss.
- 5) The diagnosis of PAD is easy, fast, and painless.
- 6) There are many different treatments for PAD including minimally-invasive procedures such as angioplasty (stretching the plaque open with a balloon), stenting (placing a little tube inside the artery), and Silverhawk atherectomy (scooping out the plaque and removing it from the body).

If you are concerned that you may have PAD or may be at risk for PAD, please give us a call for a consultation.