

Ask *the* Expert

PAD - Peripheral Arterial Disease

What is peripheral arterial disease?

My interest in vascular disease started years ago after a personal family experience. At that time, I recognized that peripheral arterial disease (PAD) is probably the most common problem that is under-diagnosed and under-treated in our communities. I also experienced its great impact on a person's life. Patients with PAD may have a limited ability to walk, exercise, perform their jobs and hobbies, go shopping, or clean their homes. Leg pain from PAD can worsen a person's quality of life, and increase the risk of major depression. More seriously, this disease is the most common reason for leg amputation in the United States. Among patients with PAD, half will also have atherosclerosis in the coronary and/or carotid arteries. The annual incidence of heart attack is 2-3%, and

the 5-year mortality rate is 20-30%.

Who is at risk of PAD?

Peripheral arterial disease of the lower extremities, also referred to as "bad circulation" is a medical condition caused by blockage of the arteries that provide blood flow to the legs. It is a common problem in Western societies. The conditions that increase the risk of PAD are the same risk factors that increase the risk of heart attack or stroke. Cigarette smoking, diabetes, high cholesterol, and high blood pressure are among the most important correctable risk factors for the development of PAD, whereas age is the most significant non-reversible risk factor.

How common is this disease?

Doctors are recognizing that PAD is a much more common problem than originally thought. According to published research, more than 1 in 5 people older than age 65 have PAD. Surprisingly, only fewer than half of those

patients know they have a problem. More concerning, many patients with PAD do not have any symptoms. Typically, leg pain brought on by walking certain distances (intermittent claudication) that goes away after resting for a few minutes is seen in only 11% of patients with PAD. On the other hand, 54% of patients have only a sensation of fatigue, burning, heaviness, or tightness in the muscles of the legs. The other 35% have no symptoms at all. Fortunately, we are becoming aware of the fact that for each patient with claudication, there may be many more patients with PAD who have no symptoms.

When PAD does progress, especially in diabetics, it leads to a pain at rest, or sore (ulcer) that will not heal on its own, or blackened skin (gangrene) on the foot or toe.

How is PAD diagnosed and treated?

PAD can be diagnosed on the basis of a careful medical history and a thorough physical examination. When it is

suspected, patient will likely be asked to undergo an Ankle-Brachial Index (ABI) test with and without 2 minutes of exertion. It consists of measuring both arms and ankles pressures and calculating the ratio for higher ankle pressure in the studied leg over the higher arm pressure. American College of Cardiology and American Heart Association recommends the ABI test for anyone older than age 65, or older than 50 with a history of smoking or diabetes. ABI should also be done for exertional leg symptoms, or non-healing wounds. In some cases, additional tests may be necessary to determine the location of the blockages in the arteries.

Fortunately, many treatments for claudication are available and advanced technologies are focusing on this disease. All of them aim to improve symptoms of PAD, and prevent amputation and death. Importantly though, the first step in the treatment of PAD should start with awareness, education and early diagnosis.



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