

What doctors want patients to know about peripheral artery disease

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Imagine taking a brisk walk only to feel a sharp, unyielding ache grip your legs. You stop to rest and the pain fades away—only to return with your next steps. This isn't just fatigue. It could be a sign of peripheral artery disease (PAD), also known as peripheral vascular disease (PVD), which is a hidden yet serious health threat that affects the blood vessels, gradually choking off circulation to the limbs.

Often mistaken as just another sign of aging or being out of shape, PAD quietly limits life's simplest activities—walking, climbing stairs, even standing comfortably. But beyond the discomfort lies a greater danger: PAD is a silent warning signal for heart disease, stroke and other life-threatening complications. Despite [affecting about 33 million people in the U.S.](#), many people remain unaware of the condition's symptoms and dangers, underscoring the importance of early detection and intervention.

The AMA's What Doctors Want Patients to Know™ series gives physicians a platform to share what they want patients to understand about today's health care headlines.

In this installment, Charles C. Leithead, MD, a vascular surgeon at Ochsner Health in New Orleans and Gretna, Louisiana, discusses what to know about peripheral artery disease.

[Ochsner Health](#) is a member of the [AMA Health System Program](#), which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

PAD and PVD are the same

Whether you choose to use “peripheral vascular disease” or “peripheral artery disease” to describe this condition, “they’re synonymous,” Dr. Leithead said. “Peripheral arterial disease, or peripheral artery disease, is probably more generalized to multiple other specialties that treat it.

“It’s also the name of the awareness month [in September], so it probably is better to refer to it as that,” he added. “But they’re synonymous, so if you hear a doctor say you have PVD or PAD, it is the same thing.”

It’s a buildup of plaque in arteries

“It’s also known as hardening of the arteries, and it is due to a process called atherosclerosis. And that is a buildup of plaque due to [high cholesterol](#), [high blood pressure](#) and family history,” Dr. Leithead said.

“It could also be caused by a sedentary lifestyle, tobacco use, diabetes and kidney disease, so multiple risk factors for PAD, but it ultimately forms a plaque within the artery and that will, in turn, limit the blood flow down the extremity,” he explained. “It can occur in the arms and the legs for peripheral arterial disease, but it’s the same disease process that occurs in the neck arteries that can cause strokes, the heart that can cause heart attacks and in the legs the decrease in blood flow will then deliver less oxygen to our muscles.”

“Some patients have no symptoms,” said Dr. Leithead, adding that peripheral artery disease “can occur naturally with age, but what we want to educate the public and tell the population is that leg pain is not always due to older age and arthritis.

“It may be PAD and understanding the signs and symptoms are beneficial to get an early referral to a vascular surgeon because we can limit the disease progression and begin treatment early,” he added. “That decrease in blood flow to the muscles really starts the symptoms for patients.”

“[PAD in the legs](#) is more commonly treated because it’s with use of the extremity and although some patients do have pain when they use their arms, it’s much more noticeable in the legs,” Dr. Leithead said.

PAD symptoms start with pain

“Initially, patients will have pain in the muscle, burning pain—sometimes described as aching or throbbing pain—and that is relieved with rest,” Dr. Leithead said. Loss of hair, shiny skin and thicker nails are other symptoms. This initial phase is called claudication, which is derived from the Latin word “claudicare,” which means “to limp.”

If PAD goes untreated in this early phase, “then it can progress to pain in the foot at rest—called ischemic rest pain,” he added.

That, in turn, “can then lead to wound development on the feet and on the toes. It can lead to poor healing of any traumatic wound or cut on the leg, any pressure sore from poorly fitting shoes, especially for patients with diabetes where the sensation of the lower extremity is reduced,” he said. “So, a poorly fitting shoe or pressure to an area that’s not necessarily felt creates a wound and with the less oxygen supplying that area, there can be trouble with healing of that wound.”

“The wounds are the most severe stage, and they can become infected, which is highly associated with major amputation or limb loss,” Dr. Leithead said.

Blood flow is limited with PAD

“The plaque will limit blood flow down the extremity, and it can occur in the abdomen, in the pelvis and in the lower extremities,” Dr. Leithead said. “So, depending on where the plaque is, usually it creates a burning pain in the muscle below the narrowing.

“And that occurs usually at a fixed distance. It’s different for everybody, and it’s noticed differently for everybody depending on your level of activity, what you do for work,” he added, noting “that burning does resolve with rest as the muscle is not utilized, but it typically does return at the same distance each time,” meaning how far you are walking.

Cardiovascular disease is a concern

“If you have high risk factors for PAD, you should certainly be evaluated for carotid artery narrowing or stenosis—which is a [risk for stroke](#)—and coronary artery disease, which is a risk factor for heart trouble or heart attacks,” Dr. Leithead said. “There are also other areas in the body such as our intestinal arteries called mesenteric arterial occlusive disease and that can lead to mesenteric ischemia or pain when you eat.”

“Any vessel, any artery in the body can be affected by PAD or with atherosclerosis plaque formation,” he said.

Diagnosis is based on symptoms

“Typically, patients present with pain when they walk,” Dr. Leithead said. “Some patients do present at a severe stage where they have constant pain in their foot, discoloration in their foot or wound developments occasionally with infection.

“And that’s much more of an urgent scenario,” he added, emphasizing that “if you have pain when you walk, if it’s reproducible at the same distance and relief with rest, it would be likely that you could have PAD and you should visit your doctor.”

Get screened if you’re at risk

The U.S. Preventative Services Task Force does not recommend screening for PAD in patients without symptoms, but Dr. Leithead noted that “in patients with [family history](#) or multiple risk factors, if they have these symptoms, these would be patients who we would check it on—even if the symptoms are mild—so that we could monitor it over time and prevent it from progressing.

“And that’s things that we talk to our patients about in clinic such as diet changes, [low sodium diet](#), low cholesterol diet, following an exercise program that we can develop with the patient or they can use some of our services such as our physical therapy teams,” he added. “We also talk about smoking cessation, because it’s very difficult to quit and it can take up to eight or nine times for a patient to quit smoking.”

“Changing habits and getting off the cigarettes are very, very important for long-term relief of symptoms,” Dr. Leithead said. He noted that smoking cessation also boosts success rates if a procedural intervention is indicated.

Increase physical activity

Beyond a low-sodium and -cholesterol diet, it is important to “[exercise](#), ideally with a physical therapist or some sort of trainer where it can be supervised and monitored,” Dr. Leithead said. “And, ideally, two to three days a week for about 20 minutes minimum to where you break a sweat.”

“That can be walking, exercising, working in the yard or around the house, but we do want you to try to break a sweat,” he said. “We also want you to get to that point where that thickest part of the muscle—called the muscle belly—does burn, and trying to go a few steps further each time.”

That is “because this exercise can improve symptoms, increase walking distance and develop alternate pathways with the other blood vessels down the leg to improve blood flow.”

Treatment is very individualized

One misconception about PAD is “you have to have surgery, but the benefit of being a vascular surgeon is that we can make a decision if the patient needs medical therapy, minimally invasive therapy or open surgery,” Dr. Leithead said. “But we individualize every patient’s treatment plan to their symptoms. So, you don’t always have to have surgery when you see a vascular surgeon.”

“Initially, for claudication we will do lifestyle modifications. Beyond that, there are medications that are approved by the Food and Drug Administration for opening the arteries and increasing a patient’s walking distance,” he said. “When walking limits their lifestyle, their work or any hobbies and decreases their quality of life at a significant level, then we do move to interventions and that’s where we obtain more imaging that can be

done with CT scans, MRIs or angiograms.”

“Based upon the length of the lesion, the level of narrowing, we then can sometimes treat those narrowings with balloons or stents,” Dr. Leithead said. “We can also remove the plaque at the same time as an angiogram by opening it with what we call atherectomy and if it’s highly calcified and considered not to be safe to proceed with balloons or stents, we then can offer the patient removal of the plaque with an open surgery or bypass around the blockage.”

Amputation is a dreaded complication

“Left untreated, claudication has a 1% per year risk of amputation. Once that progresses, if the plaque worsens it could be the pain in the foot at rest, and that certainly increases the risk of amputation,” Dr. Leithead said. “That becomes an urgent problem because then that can lead to sensation changes that can lead to discoloration, that can lead to openings in the skin or wound development and infection.

“And infection has a very high association with limb loss and amputation,” he added. “As it becomes more severe, the risk of amputation increases, and once you develop foot pain and wounds, that is called critical limb ischemia—an urgent matter—that is highly associated with amputation if left untreated.”

Reach out to your doctor for help

“If you have any concerns or questions regarding PAD, reach out to your primary care doctor or your nearest vascular specialist or vascular surgeon,” Dr. Leithead said. “They can help get all your questions answered.”

It is also important to “start adopting these medical changes and lifestyle changes as soon as possible,” he said.