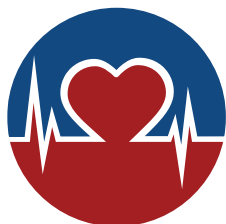


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# Addressing Unmet Needs in Peripheral Artery Disease



PARTNERSHIP TO ADVANCE  
**Cardiovascular  
Health**



## Overview

Peripheral artery disease affects more than 200 million people worldwide.<sup>1</sup> More commonly known as “PAD,” the disease can cause pain, impaired mobility and even the loss of limbs.

In the United States, peripheral artery disease is already a serious health concern, affecting as many as 12 million Americans.<sup>2</sup> Yet the disease’s toll is expected to rise as the population ages, as obesity rates increase and as diabetes becomes more common.

It is more important than ever that this serious disease receives greater public awareness — and that people facing PAD have better access to diagnosis and treatment.





# About PAD

PAD is a narrowing of the peripheral arteries that carry blood away from the heart to other parts of the body. It can happen in any blood vessels but is most commonly found in the legs and feet.<sup>3</sup> PAD is often the result of atherosclerosis, a buildup of fatty plaque on blood vessel walls, though there can be other causes, such as damage to blood vessels.

The primary symptom is usually pain in the legs while walking or performing other physical activity. The pain subsides with rest. Pain, aches, tingling or cramps with walking can happen in the hip, buttock, thigh or calf. About 40% of people with PAD, however, experience no leg pain at all.<sup>4</sup>

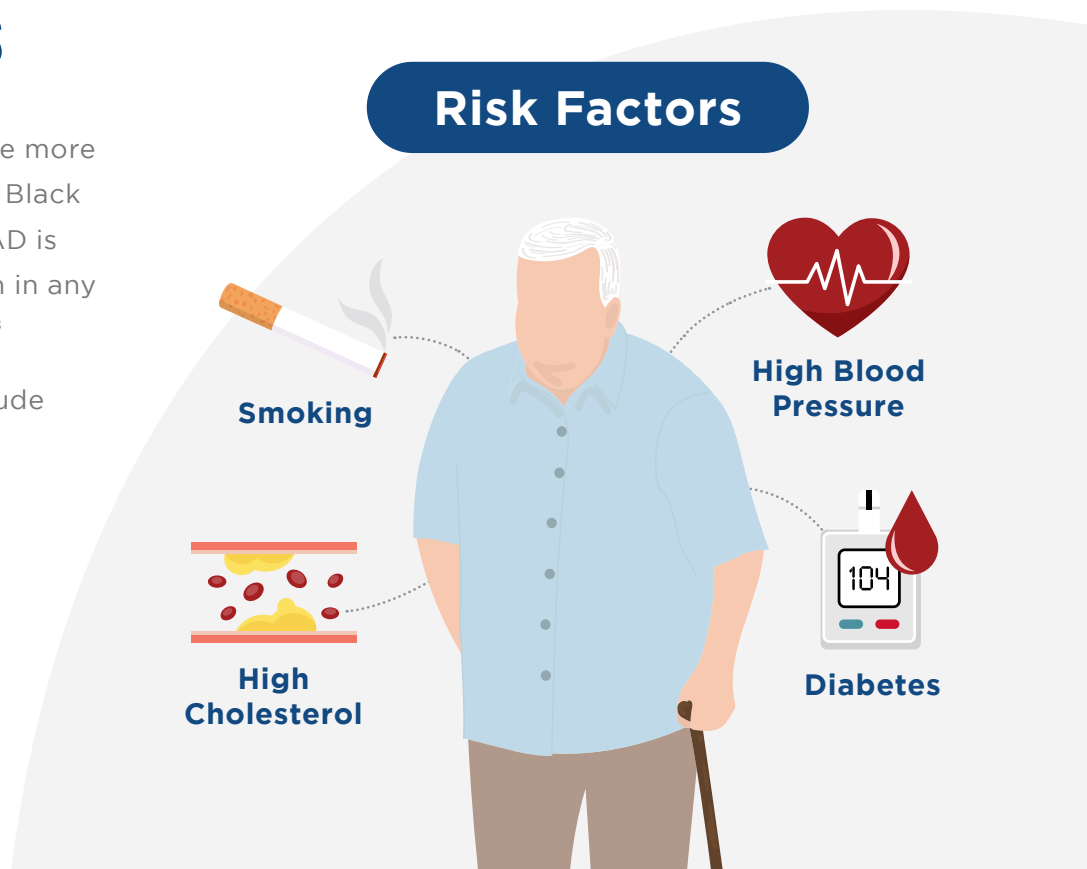
People with advanced PAD can also develop limb ischemia, in which rest does not alleviate leg pain. This chronic condition can cause non-healing skin ulcers and gangrene. In severe cases, amputation may be required.<sup>5</sup>

As the leg condition worsens, so does the overall health of the patient.<sup>6</sup> The risk of dying from a heart attack or stroke increases as PAD progresses. Mortality from all causes is about three times greater, and cardiovascular disease mortality is six times greater, among patients with PAD – even if they show no symptoms.<sup>7</sup>

## Risk Factors

People over the age of 60 are more likely to develop PAD, as are Black Americans and Hispanics. PAD is more common in Blacks than in any other racial or ethnic group.<sup>8</sup>

Controllable risk factors include smoking, unmanaged high blood pressure, diabetes and high cholesterol. Physical inactivity can also increase the likelihood of getting PAD.<sup>9</sup>





## Diagnosis & Treatment

Physicians may use imaging tests to diagnose PAD. These include ultrasound, magnetic resonance angiography or computed tomographic (CT) angiography. Other health care providers may prefer an ankle-brachial index test. This is a quick, noninvasive test that measures the blood pressure in the ankles and compares it with the blood pressure in the arms, both at rest and after exercise.<sup>10</sup>

Following diagnosis, treatment for PAD can include lifestyle changes, medication and, in some cases, interventional surgical procedures. As with treating any cardiovascular condition, physicians urge patients to quit smoking, eat a heart-

healthy diet, manage comorbidities such as hypertension or high cholesterol, and exercise regularly.<sup>11</sup>

One of the best exercise regimens for PAD patients is walking. People with PAD who walk regularly can see a significant and steady increase in the distance they can cover before their legs begin to hurt.<sup>12</sup>

In advanced cases of PAD, revascularization procedures may be necessary. These can be minimally invasive operations such as angioplasty, which opens narrowed arteries with a tiny balloon. Another possibility is a procedure called atherectomy, which involves using a sharp tool at the end of a catheter to physically clear out plaque.<sup>13</sup>



# Disparities in Care

While greater awareness, screening and treatment would benefit patients across the board, they would be especially helpful to communities that disproportionately bear the burden of PAD.

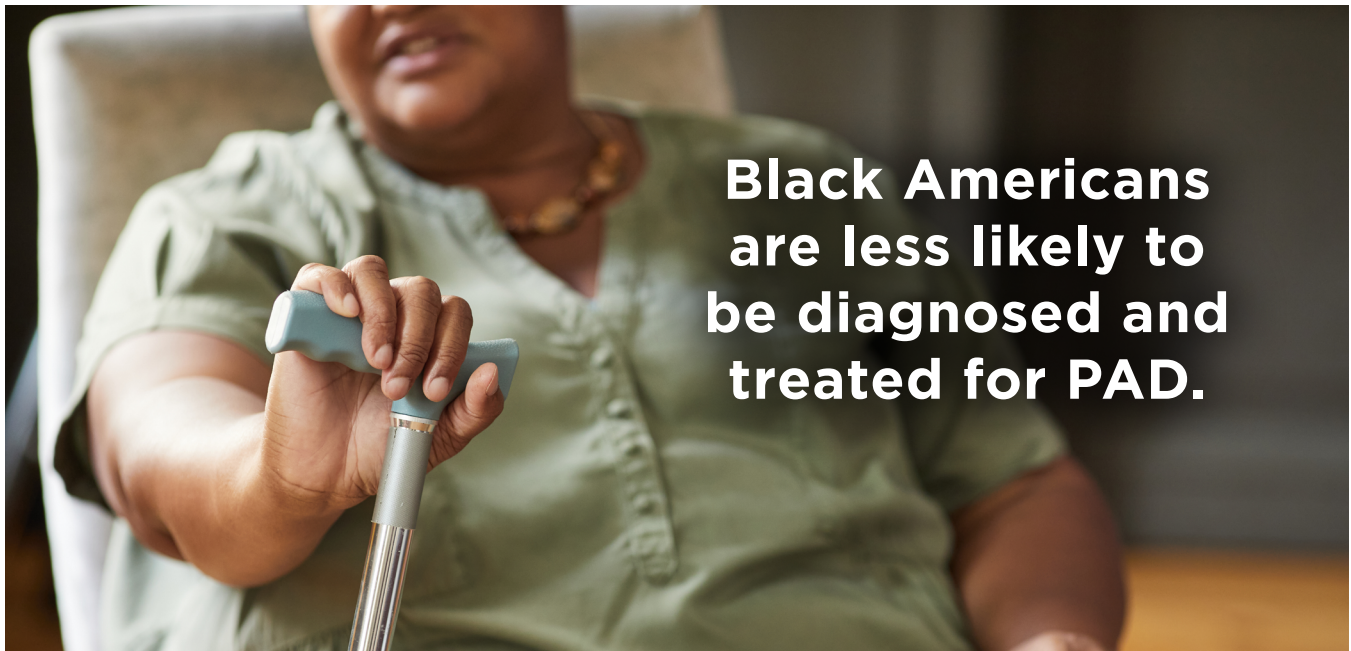
As with other types of cardiovascular disease, PAD impacts Black Americans with greater force. They are more likely to undergo a lower extremity amputation and less likely to receive limb-saving surgical procedures.

Hispanics are also more likely to face amputation and a higher fatality rate following treatment, compared to non-Hispanic whites.<sup>14</sup> But PAD is more common

among Black patients, whose rate of PAD among people over 40 is twice as high as that of other ethnicities.<sup>15</sup>

This disparity may be due in part to the fact that Black Americans are more prone to PAD risk factors, such as diabetes and hypertension. On top of that, however, they are also less likely to be diagnosed and treated for PAD.<sup>16</sup>

A gender disparity exists as well. Women with PAD are more likely than men to undergo a major amputation. That can lead to reduced mobility, poorer functional status, and higher morbidity and mortality.<sup>17</sup>



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# Diagnosis Challenges

Despite available treatments, many people misinterpret the symptoms of PAD. Even health care professionals may struggle to correctly diagnose the disease. Undiagnosed or misdiagnosed PAD frequently occurs across all races, ethnicities and sexes, and for a variety of reasons.

One issue is a lack of knowledge about the disease. Even though PAD affects one in five Americans older than age 60, only about 25% of the general public is aware of it.

Many older people ignore the symptoms of PAD, thinking leg pain is just a normal part of aging. Diabetes patients sometimes confuse PAD pain with the discomfort and burning sensations caused by neuropathy, a common diabetic symptom. Failing to report

symptoms can lead to a lack of diagnosis and treatment, and the subsequent health problems that result. So too can the absence of symptoms among some patients, which makes PAD difficult to detect.<sup>18</sup>

There are other problems as well.

Frontline and community-based providers, including the primary care physicians, nurses and podiatrists who are often the first to examine patients with PAD, may have received limited vascular disease training. When family physicians and their support staff are not fully aware of PAD symptoms and treatments, it is easy for them to misdiagnose the condition or fail to recommend suitable care.





# Solutions

Improving the diagnosis and treatment of PAD requires several steps.



## Campaigns to increase public awareness.

Greater public understanding will empower people to ask their health care providers about PAD and, in turn, to receive proper testing and diagnosis.



## Outreach to at-risk communities.

Increased awareness of PAD among Black Americans should be a point of focus. Educational campaigns aimed at Black and other high-risk populations can diminish the disparities in diagnosis and treatment. They also should be accompanied by clinical trials and community-based research studies that include populations most impacted by PAD.



## Education & training for health care providers.

Medical schools and other health care training institutions can do a better job of educating providers on the importance of screening and diagnosis in a primary care setting. All health care professionals, both specialists and primary care, should know that a large percentage of patients with PAD are asymptomatic and could progress to the point of irreversible damage or even mortality if they are not diagnosed in a timely manner. The medical community could also better implement guideline-based care.<sup>19</sup>



## Improved coverage policy.

To improve access to effective and timely care, health plans — both private and government-funded — must cover access to PAD diagnostics and treatments. This includes ankle-brachial index testing and amputation-preventing vascularization treatments.

# Conclusion

Despite its widespread impact, PAD remains one of the most underrecognized conditions in America. By bridging the gap in public awareness and improving access to diagnosis and treatment, however, policymakers and the medical community can reduce PAD's impact on millions of Americans.

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**About the Partnership to Advance Cardiovascular Health**

The Partnership to Advance Cardiovascular Health works to advance public policies and practices that result in more treatment options and improved cardiovascular health for heart patients around the world.



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