

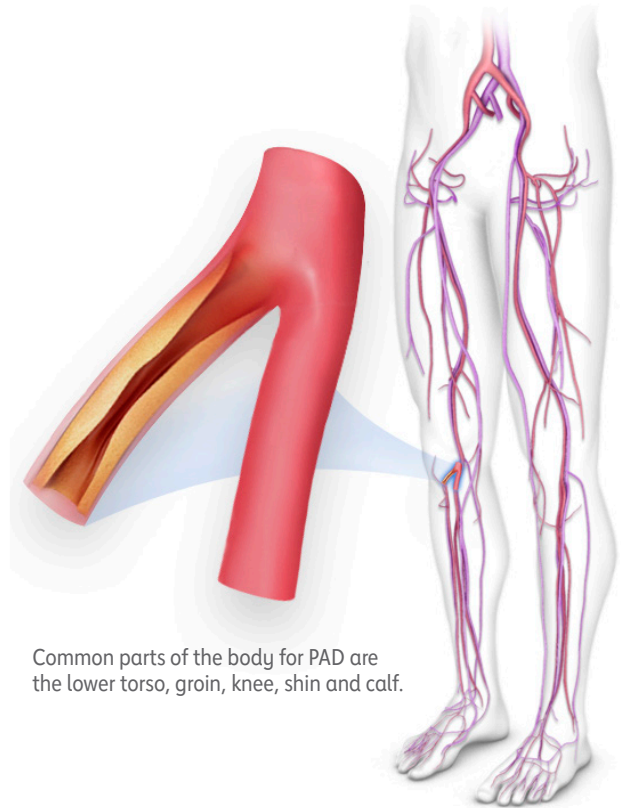


# What Is Peripheral Artery Disease?

Peripheral artery disease, or PAD, is a circulation problem in the leg. It is a narrowing of the peripheral arteries that carry blood away from the heart to other parts of the body. The most common type is lower-extremity PAD, in which blood flow to the legs and feet is reduced.

PAD is a form of atherosclerosis, the buildup of fatty deposits and other substances in the arteries of the lower extremities. Atherosclerosis narrows and blocks arteries throughout the body, including in the heart, brain, arms, legs, pelvis and internal organs such as kidneys.

It can be hard to know if you have PAD. Many people with PAD have little or no symptoms. Others have pain in their legs while they're physically active. The pain usually goes away when they rest.



Common parts of the body for PAD are the lower torso, groin, knee, shin and calf.

## Who is at risk for PAD?

PAD is more common as people get older. It affects about 10 to 12 million U.S. adults over age 40. And people who smoke and those with diabetes are at especially high risk.

Certain risk factors for PAD can't be controlled. These include aging and a personal or family history of PAD, cardiovascular disease, stroke or chronic kidney disease. But you can manage or control the following risk factors:

- Smoking
- Abnormal blood lipid levels
- History of diabetes
- High blood pressure

## What are the symptoms?

The most common symptom of lower-extremity PAD is muscle cramping in the buttocks, hip, thigh, calf or foot, singly or in combination, while walking, climbing stairs or exercising. This usually goes away when the activity stops. It's called intermittent claudication.

Severe symptoms include:

- Leg pain that doesn't go away when you stop exercising
- Foot or toe wounds that won't heal or heal very slowly

- Gangrene, or dead tissue
- A marked decrease in the temperature of a lower leg or foot, compared to the other leg or the rest of the body
- Poor nail growth on the toes or hair growth on the legs

## How is PAD diagnosed?

PAD diagnosis begins with a medical history and physical exam. Your health care professional will also ask about your symptoms and check the pulses in your legs.

Your physical exam will include a simple test called the ankle-brachial index (ABI). It compares the blood pressure in your ankle to the blood pressure in your arm. A normal ABI is 1 to 1.4. A value less than or equal to 0.90 is considered abnormal, and, in severe disease, it's less than 0.5. If your ABI results are normal or borderline (.91 to .99), an exercise treadmill ABI may be done. If your ABI is greater than 1.4, a toe-brachial index (TBI) test also may be done.

If your ABI is abnormal or you have claudication, other tests may be needed.

*(continued)*



## What Is Peripheral Artery Disease?

They include:

- Duplex ultrasonography
- Magnetic resonance angiography (MRA)
- Computed tomography angiography (CTA)

### How is PAD treated?

PAD treatment includes lifestyle changes, medications or both. Lifestyle changes to lower your risk include:

- Stopping smoking
- Managing diabetes
- Controlling blood pressure
- Being physically active (including a supervised exercise program)
- Eating a heart-healthy diet low in saturated and trans fats

Medications that may be prescribed include:

- Antiplatelet agents such as aspirin and/or clopidogrel to prevent blood clots
- Cholesterol-lowering medicine such as statins
- High blood pressure medicine
- Medications to help you stop smoking

If you have claudication, you also may be prescribed medication (cilostazol or rivaroxaban) to help improve your walking distance.

Lifestyle changes, physical activity and medications aren't enough for some people with PAD. They may need minimally invasive treatment or surgery. Your health care professional will discuss your treatment options and help you choose the best one for you.

Minimally invasive procedures include angioplasty and stent placement and clot removal. These are nonsurgical treatments. Peripheral atherectomy is a surgical procedure for PAD.

Angioplasty is done by making a small incision through which a thin tube (catheter) is inserted to reach the blocked artery. A tiny balloon on the tip of the catheter is inflated inside the artery to open the clog. A stent — a tiny wire mesh cylinder — may also be put in at this time. The stent acts like a scaffolding and holds the artery open. Sometimes doctors give a medication through the catheter or insert a special device through it to remove a clot that's blocking the artery.

If a long part of an artery is narrowed, bypass surgery may be needed. A vein from another part of the body or a synthetic blood vessel is attached above and below the blocked area to detour blood around the blocked spot.

## HOW CAN I LEARN MORE?

- 1 Call 1-800-AHA-USA1 (1-800-242-8721) or visit [heart.org](https://www.heart.org) to learn more about heart disease and stroke.
- 2 Sign up for our monthly *Heart Insight* e-news for heart patients and their families at [HeartInsight.org](https://www.heartinsight.org).
- 3 Connect with others sharing similar journeys with heart disease and stroke by joining our Support Network at [heart.org/SupportNetwork](https://www.heart.org/SupportNetwork).

### Do you have questions for the doctor or nurse?

Take a few minutes to write down questions for the next time you see your health care professional.

For example:

**Should I be checked for PAD?**

**What tests do I need?**

### MY QUESTIONS:

We have many other fact sheets to help you make healthier choices to reduce your risk for heart disease, manage your condition or care for a loved one. Visit [heart.org/AnswersByHeart](https://www.heart.org/AnswersByHeart) to learn more.