

# Peripheral Arterial Disease (P.A.D.)

## What is P.A.D.?

P.A.D. is short for Peripheral Arterial Disease. People have P.A.D. when the arteries in their legs become narrowed or clogged with fatty deposits, or *plaque* (pronounced "plak"). The buildup of plaque causes the arteries to harden and narrow, which is called atherosclerosis (pronounced "ath-er-o-skler-o'-sis"). When leg arteries are hardened and clogged, blood flow to the legs and feet is reduced. Some people call this *poor circulation*.

P.A.D. occurs most often in the arteries in the legs, but it also can affect other arteries that carry blood **outside** the heart. This includes arteries that go to the aorta, the brain, the arms, the kidneys and the stomach. When arteries that **supply** the heart are hardened or narrowed, it is called *coronary artery disease* or *cardiovascular disease*.

The **good news** is that like other diseases related to the arteries, P.A.D. can be treated by making lifestyle changes, by taking medicines, or by undergoing leg artery angioplasty or vascular surgery, if needed. And you can live well with P.A.D.

## Is P.A.D. serious?

P.A.D. is a serious disease commonly affecting Americans over the age of 50. The hardened arteries found in people with P.A.D. are a sign that they are likely to have hardened and narrowed arteries to the heart and the brain. That is why people with P.A.D. have a two- to six-times greater chance of death from a heart attack or a stroke.

When the blood flow to the legs is greatly (or severely) reduced, people with P.A.D. may have pain when walking. P.A.D. may cause other problems that can lead to amputation of a toe, foot or a leg. People with P.A.D. may become disabled and not be able to go to work. As time goes on, they may have a very poor quality of life.

## Who is at risk for P.A.D.?

The chance of having P.A.D. increases as you get older. People over age 50 have a higher risk for P.A.D., but the risk is increased if you:

- Smoke, or used to smoke
- Have diabetes
- Have high blood pressure
- Have abnormal blood cholesterol levels
- Are of African American ethnicity
- Have had heart disease, a heart attack or a stroke
- Have a family history of P.A.D., heart attack or stroke.

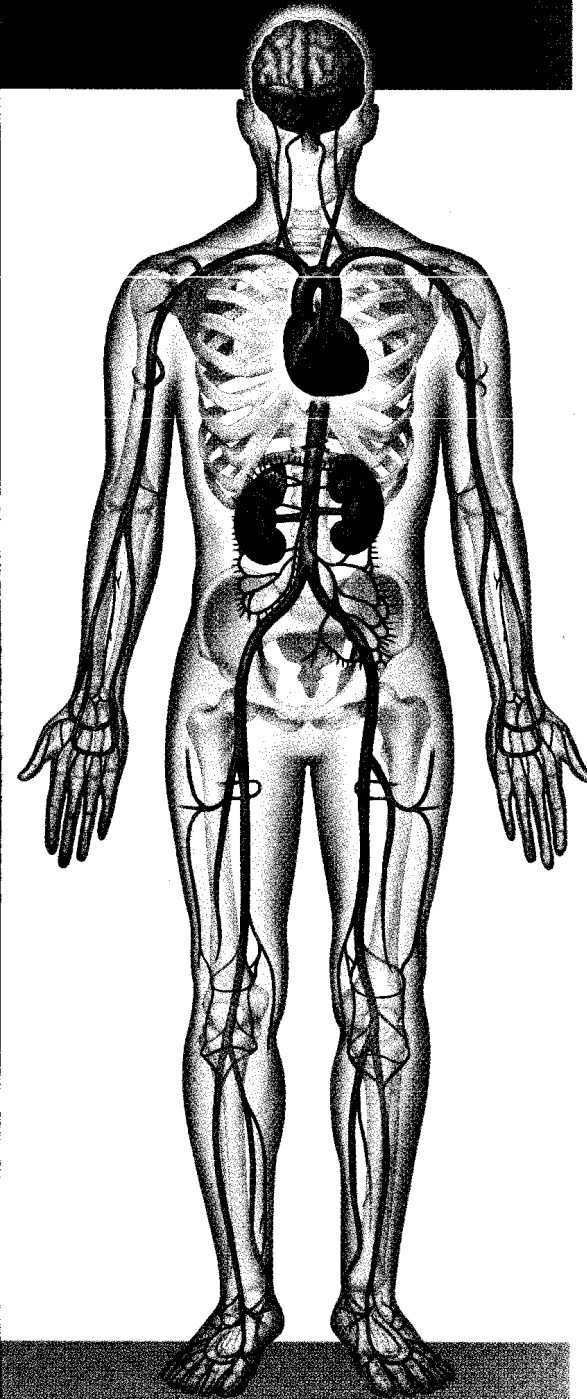
## What are the warning signs or symptoms of P.A.D.?

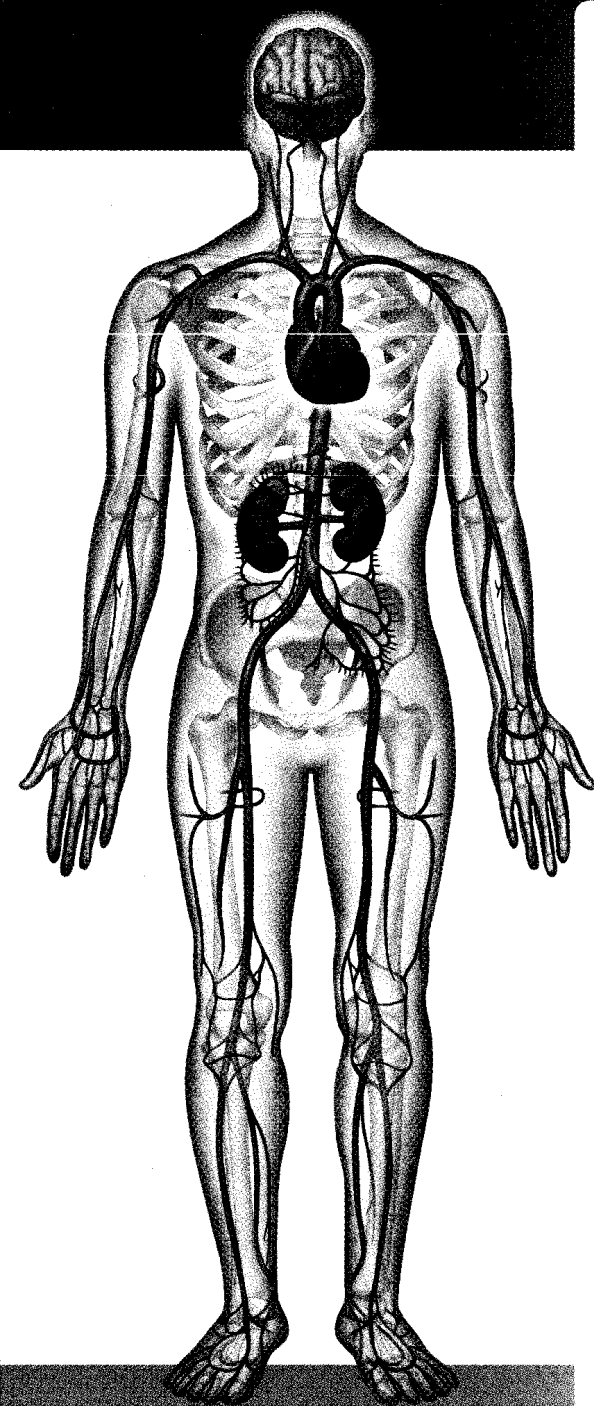
P.A.D. develops slowly over many years. In the early stages, most people with P.A.D. have no symptoms. Only about one out of four people with P.A.D. actually feel typical symptoms of P.A.D. in their leg muscles (known as "claudication", defined below). By that time, their arteries may be so clogged or hardened that they are not getting enough oxygen to supply their leg muscles.

## The most common signs of P.A.D. include one or more of these problems:

- Cramps, tiredness or pain in your legs, thighs or buttocks that always happens when you walk but that goes away when you rest. This is called *claudication* (pronounced "claw-di-kay'-shun").
- Foot or toe pain at rest that often disturbs your sleep.
- Skin wounds or ulcers on your feet or toes that are slow to heal, or that do not heal.

Sometimes, people ignore their leg pain and think it is just a sign that they are getting older. As a result, many people with P.A.D. do not know they have it and do not get treatment. It is important to **discuss any leg or thigh pain you may be having with your health care provider** since it may be a warning sign of a serious disease such as P.A.D.





## How do I find out if I have P.A.D.?

If you think you have P.A.D., see your health care provider and talk about any symptoms you are having and go over your medical history and your risk factors for P.A.D. Your provider will examine the pulses in your feet and legs. If your provider finds those pulses are weak and thinks you may have P.A.D., your provider may order a test called the ABI, which stands for *ankle-brachial index* (pronounced "an'-kel-bray'-key-el in'-dex").

## The ABI is the best test for finding out if you have P.A.D.

It uses sound waves to find out if there is reduced blood flow in the arteries. It also compares the blood pressure in your ankles with the blood pressure in your arms. P.A.D. also can be diagnosed by other tests that measure blood pressures in the leg (segmental pressure), toe pressures (toe-brachial index or TBI) or artery blood flow (with ultrasound).

## How is P.A.D. treated?

P.A.D. can be treated with lifestyle changes, medicines and surgery, if needed. Since people with P.A.D. are at high risk for heart attacks and stroke, they must take charge of controlling their risk factors related to cardiovascular disease.

## These life-saving steps will help to prevent and control P.A.D.:

- **Get help to quit smoking** and set a quit date now.
- **Lower your blood pressure** to less than 140/90 mmHg or less than 130/80 mmHg if you have diabetes or chronic kidney disease.
- **Lower your LDL (bad) cholesterol** to less than 100 mg/dl or to less than 70 mg/dl if you are at very high risk for a heart attack or stroke (if you smoke, have diabetes or have chronic kidney disease).

- **Manage your blood glucose** to reach an A1C level of less than 7 and practice proper foot care if you have diabetes.
- **Talk to your doctor about taking antiplatelet medicines** such as aspirin or clopidogrel to prevent clotting.
- **Follow a healthy eating plan** to control your blood pressure, cholesterol and blood glucose (for diabetes).
- **Get regular exercise** such as walking for 30 minutes at least 3 or 4 times per week.

If you have pain or cramps in your legs, ask your health care provider about an exercise program that will help improve your symptoms. If possible, get a referral to a special P.A.D. exercise program.

For most people with P.A.D., these life-saving steps may be enough to slow down the disease and even improve any symptoms. If needed, your health care provider can refer you to a specialist for procedures or surgery to treat arteries that are severely blocked. These procedures often help people with P.A.D. to improve symptoms and to avoid losing a foot or leg.

**Remember: Finding and treating P.A.D. early can help keep your legs healthy, lower your risk for heart attack or stroke, and save your life and limbs.**

The P.A.D. Coalition has united over 50 medical and vascular organizations to work together to improve the health and health care of people with P.A.D.

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## Reference

Hirsch AT, Haskal ZJ, Hertzler NR. ACC/AHA 2005 Guidelines for the Management of Patients With Peripheral Arterial Disease (Lower Extremity, Renal, Mesenteric, and Abdominal Aortic): A Collaborative Report from the American Association for Vascular Surgery/Society for Vascular Surgery, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine and Biology, Society of Interventional Radiology, and the ACC/AHA Task Force on Practice Guidelines (Writing Committee to Develop Guidelines for the Management of Patients With Peripheral Arterial Disease). Available at: <http://www.acc.org/qualityandsafety/clinical/guidelines/PAD/index.pdf>

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