

# Intermittent Claudication

## What is intermittent claudication?

Intermittent claudication is discomfort that starts during exercise and goes away when activity is slowed or stopped. It is a symptom caused by partial blockage of the blood flow to an arm or leg. It is usually described as a cramp, tightness, or severe fatigue in the exercising muscles. Usually the pain is in the calf, but it may also be in the thigh, hip, buttocks, and (rarely) in the arms.

## How does it occur?

The pain is caused by muscles not getting enough blood because of narrowing of the arteries that carry blood to the muscles. The narrowing is usually caused by atherosclerosis, or "hardening of the arteries." It occurs when fats and cholesterol build up in the artery wall. This buildup makes the artery stiff and blocks the flow of blood and oxygen to the body. There may be enough blood flow and oxygen for the muscle at rest, and that is why the muscle doesn't hurt at rest. However, when the muscle exercises, the lack of enough blood and oxygen causes pain.

## How is it diagnosed?

Your provider will ask about your symptoms and check the pulses in your arms, wrists, groin, behind your knees, below your ankles, and on the tops of your feet. If the pulses are weak or absent, a blocked blood supply is likely. Blood pressures in the arms and legs on both sides of your body may be checked to look for blockage in the arteries. If the blood pressure in your legs is lower than in your arms, you may have blockages in the arteries going to your legs.

You may have one or more of these tests:

- angiogram, which uses special X-rays to outline the arteries
- ultrasound, which uses sound waves to make pictures of your arteries
- Doppler ultrasound, which can measure both the amount of blockage and the speed of blood flow in your arteries
- MRI (magnetic resonance imaging) scan, which uses magnetism, radio waves, and a computer to produce images
- CT (computed tomography) scan, in which X-rays are taken at different angles and then combined by a computer.

## How is it treated?

Your healthcare provider may advise lifestyle changes to try

to halt or reverse the buildup of plaque in your arteries. Depending on your symptoms, your provider may prescribe medicine to reduce blood clotting, relax the blood vessels, or lower cholesterol.

- Take the medicine prescribed.
- Exercise under the guidance of your provider.
- Have your blood pressure and blood cholesterol checked regularly.
- If you smoke, quit. Tell your provider if you need help quitting.
- If you are overweight, talk to your provider about losing weight.
- Eat a low-fat, low-cholesterol, high-fiber diet. Your provider or a dietician can tell you which foods to avoid.

If your symptoms cannot be controlled or they keep you from doing normal activity, you may need balloon angioplasty or surgery to remove or bypass the blockage. In balloon angioplasty, a small balloon is inserted into the artery to the blockage and expanded at the area of blockage to flatten the blockage against the artery wall. Angioplasty may be combined with inserting a stent. A stent is a device that keeps the artery open to improve blood flow.

### **What are the results of treatment?**

How well treatment works depends a lot on how fast your atherosclerosis gets worse. It is very important for someone with intermittent claudication to do everything possible to control atherosclerosis. Exercise programs and surgery or angioplasty can improve symptoms. Effective treatment can help you resume your normal activities and enjoy life more.

Written by Donald L. Warkentin, MD for RelayHealth

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