

Intermittent Claudication

Information for Patients

What is intermittent claudication?

Intermittent claudication is a pain in the muscles of the leg which is brought on by walking and relieved by stopping. It is most commonly felt in the calf muscles but can also occur in the thigh or buttock.

What causes intermittent claudication?

Intermittent claudication is caused by a narrowing or blockage of the arteries which take blood to your leg. This narrowing is due to a process called atherosclerosis (hardening of the arteries), where fat builds up inside the arteries, damaging and blocking them.

Whilst the narrowed arteries are able to provide enough blood to your legs when resting, they are unable to keep up with the increased demand when you are walking or exercising. This results in pain and cramp-like symptoms and is made worse by walking briskly or uphill/upstairs. After resting for a few minutes the muscles recover and the pain or cramp subsides.

Intermittent claudication is more likely to occur as we age but it can occur much earlier in people who smoke and those who have high blood pressure, high cholesterol or diabetes.

How is intermittent claudication diagnosed?

Intermittent claudication is normally diagnosed by your doctor asking you questions about your symptoms and examining your legs. A narrowing in the arteries may cause one or more of the pulses in your legs or feet to be weaker or absent. This is usually all that is needed to make the diagnosis.

Your GP may also arrange for you to have your 'Ankle Brachial Pressure Index' or ABPI checked. This is a measure of how good the blood supply to your legs is. It can be measured by checking the blood pressure at your ankle using a hand-held ultrasound device called a Doppler and comparing this with the blood pressure in your arm.

What is the treatment for intermittent claudication?

Intermittent claudication suggests that your arteries have started to become damaged. The narrowing or blockage will not clear itself but the situation may improve naturally by smaller arteries opening themselves up to allow blood to be carried around the blockage. This is called collateral circulation. Many people notice some improvement as the collateral circulation opens up within 6-8 weeks from intermittent claudication starting. There are several things you can do to help build up your collateral circulation which are listed below. Most people with intermittent claudication can stop their symptoms from worsening and can improve their walking distance by following these measures. Following these steps is also likely to protect other arteries in your body.

Quitting smoking

If you are a smoker, it is recommended that you stop smoking. Cigarette smoke is harmful because:

- Smoking speeds up the hardening of your arteries (atherosclerosis), which is the cause of intermittent claudication
- Smoking prevents development of collateral blood vessels which help to get blood past the blockage
- Smoking makes your blood thicker and more likely to form clots and further blockages.

Giving up smoking is hard but there are several services in place to support you if you decide to quit. Services are available via community pharmacies or by phoning Quit Your Way Scotland on **0800 84 84 84**. See www.nhsinform.scot and search “stop smoking” for more information.

Exercising

Taking regular exercise by walking or cycling will improve your symptoms by helping to build up your collateral circulation around the blockage. It also makes your muscles better at using oxygen which will allow you to walk further. You will do no harm by walking as far as you can, resting when you experience pain and continuing again when the pain goes away. Try to walk a little further each day and you should find that the distance you can manage without pain slowly increases over a few months. It is important to try and walk most days. We recommend walking for 30 minutes at least 3-5 times a week.

Healthy diet

You should eat a healthy and balanced diet. A low fat diet will help lower the level of cholesterol in your blood (which is one of the causes of atherosclerosis). If you are overweight, losing weight will help your arteries and enable you to walk further. If you wish, you can be referred to a dietician for advice and support.

Controlling high blood pressure

High blood pressure is a risk factor for development of atherosclerosis and intermittent claudication because blood vessels with high pressure in them are more likely to become damaged. It is very important that you know what your blood pressure is and take steps to lower it if it is too high. If you have been prescribed medications for high blood pressure, you must make sure that you take them according to the instructions that were given to you. Lifestyle changes such as stopping smoking, exercising and reducing weight will also help control your blood pressure.

Good blood sugar control

If you suffer from diabetes, it is important that your blood sugar levels are well controlled.

Medication

Your doctor may recommend that you start on two types of medications:

1. An 'antiplatelet agent' such as aspirin or clopidogrel

These drugs help the blood to flow more easily, reducing the chance of any blood clots forming in the narrowed parts of your arteries.

2. A statin.

These help lower the level of cholesterol in your blood which can help prevent your arteries from becoming more narrowed. Studies have shown that statins can also reduce the risk of having a stroke or a heart attack, regardless of whether your cholesterol level is normal or raised.

You should be aware that all tablets have potential side effects and these may outweigh the benefits so you should discuss this fully with your GP.

Is treatment successful?

For the majority of patients with intermittent claudication, following the above advice is all that is required. Exercising and quitting smoking should stop your symptoms from getting worse and most people with intermittent claudication find that their walking distance improves.

Studies have looked at how intermittent claudication progresses over time. Less than 1 in 5 patients will need an operation to improve the blood flow to their leg. Very few patients (less than 3 in 100) with intermittent claudication will need to have part of their leg amputated. The need for these measures is reduced significantly if the above advice is followed.

When do I need to see a specialist?

If you find that the pain starts after walking a shorter distance and that the pain is stopping you from doing your regular activities, then you should see your GP. After discussion and assessment they may refer you to see a hospital specialist (vascular surgeon) for a more detailed assessment.

You must tell your GP immediately if you are experiencing:

- Pain in your foot at night which wakes you up
- Ulcers, skin breaks or gangrene in the leg or foot.

If you have these symptoms, you need to be seen urgently by a hospital specialist.

What happens when I go to see a specialist?

Most people with intermittent claudication do not need to see a specialist. If your claudication is troublesome or there is any concern about the health of your leg, you will be referred to see a vascular surgeon. They may arrange for you to have further tests to have a closer look at your arteries. The two most common types of tests are:

1. An ultrasound scan (a non-invasive test which uses high-frequency sound waves to assess the blood flow in your blood vessels and look for any areas of narrowing)

2. An angiogram (either a magnetic resonance (MR) angiogram or a computed tomography (CT) angiogram. These are scans which can help to identify any abnormalities in your blood vessels).

It is important to have a discussion with the vascular surgeon about whether doing a test is the safest option for you considering your general health and any other medical conditions.

Some narrowed or blocked arteries can be treated by using a balloon to stretch the artery open again. This is called an angioplasty. In some arteries, the results of an angioplasty can be maintained by placing a stent inside the artery. This acts like an internal scaffold by holding the artery open.

Some blockages (such as very long ones) cannot be improved by angioplasty. In these circumstances, an operation to clear the artery or to bypass the blockage will be considered and discussed with you.

Both angioplasty and surgery may not improve your symptoms and could put you at risk of serious complications, including the loss of your leg. You will need to carefully consider the risks and benefits of these procedures. People with intermittent claudication should always quit smoking and make changes to their lifestyle before considering any form of intervention as this is the safest option.

Where can I find out more information?

Circulation Foundation

The Circulation Foundation is a UK charity dedicated to vascular health. More information about intermittent claudication and its treatment can be found on their website:

www.circulationfoundation.org.uk

Vascular Society of Great Britain & Ireland

The Vascular Society of Great Britain and Ireland is an organisation which promotes vascular health by supporting education, training and scientific research. More information about intermittent claudication and its treatment can be found on their website: www.vascularsociety.org.uk

NHS Smokefree

This website contains advice and support if you wish to quit smoking: www.smokefree.nhs.uk

NHS Choices

This website provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health including advice on healthy eating, exercise and weight loss: www.nhs.uk