



Oxford University Hospitals
NHS Foundation Trust

Intermittent Claudication

Information for patients



What is intermittent claudication?

Intermittent claudication is pain in the leg brought on by walking, caused by poor blood flow to the muscles. The pain is intermittent because it only occurs during walking or exercise and disappears with rest. Patients often experience aching, cramping, or tired legs during exercise, which is relieved after resting for a few minutes. Depending on the severity of the condition, pain may occur in the buttocks, thigh, calf, or foot.

What causes intermittent claudication?

Intermittent claudication is caused by atherosclerosis (hardening of the arteries), which leads to narrowing or blockage of the arteries. This prevents the extra blood needed during exercise from reaching the muscles. When the muscles are deprived of blood, they begin to cramp, causing tightness and pain. After a short rest, the muscles recover, but the discomfort returns with more walking.

It is important to note that there are other causes of leg pain during walking, and a specialist examination is required to determine whether narrowed arteries are the true cause of your pain.

How is claudication detected?

A blockage in circulation can be detected by examining the pulses and blood pressure in the legs. A blockage will result in the loss of one or more pulses in the leg. The blood pressure in your feet is measured using a handheld ultrasound device called a Doppler. The blood pressure in the foot is compared with the blood pressure in the arm (which is usually normal). This measurement is called the Ankle Brachial Pressure Index (ABPI) and is expressed as a ratio. The ABPI provides an objective measure of the lower limb circulation.

Sometimes, an arterial ultrasound (duplex) may be performed to confirm the extent and location of arterial disease. An arterial duplex is a detailed ultrasound scan of the arteries in the lower limb, performed by a vascular scientist.

What is the best treatment for me?

Your doctor will discuss the best treatment options with you based on how badly your intermittent claudication affects your quality of life. In most cases, intermittent claudication may remain stable for many years and rarely leads to serious complications.

Four approaches to treating claudication:

Exercise, diet, and lifestyle

- These are the most important treatments, beneficial not only for your legs but also for your entire cardiovascular system (heart, brain, and internal organs).
- Structured daily exercise can more than double the walking distance for most patients with intermittent claudication.
- If you do not attend a hospital-based exercise programme, a brisk walk at least three times a week for 30 to 45 minutes can noticeably improve walking distance over 3 to 6 months.

Further diet and lifestyle advice is provided on the following pages.

Medication

- Medications that help prevent the progression of atherosclerosis and cardiovascular disease are crucial for patients with intermittent claudication.
- These medications prevent the progression of diseased arteries in the legs, as well as in the heart and brain.
- You will be prescribed a statin to lower your cholesterol and stabilise atherosclerotic plaques, and a blood-thinning tablet (Aspirin and/or Clopidogrel).
- Your GP will regularly check your blood pressure and blood sugar levels, treating them if required.

Angioplasty

- Angioplasty (stretching the artery where it is narrowed with a balloon) may help improve walking distance for some people.
- It is less effective in the long term than simple exercise but may be required in patients with severe or progressive symptoms.

Surgery

- Bypass surgery is usually reserved for severe disease with long blockages of the arteries.
- Surgery may be required for very short-distance claudication that significantly affects your quality of life, pain when resting, ulceration of the skin in the foot, or gangrene in the foot or toes.
- Because surgery and angioplasty procedures are not always successful, they should only be offered when symptoms are severe, including short-distance claudication, which significantly impacts your quality of life or employment, pain keeping you awake at night, or ulceration or gangrene of the foot or toes.
- Some bypasses performed may need future “maintenance” procedures to keep them functional, which may involve further surgery or an angiographic procedure.

What is the risk of losing my leg?

Very few patients with intermittent claudication are at risk of losing their leg. It is the vascular surgeon’s job to prevent this outcome at all costs. If there is any risk to the limb, a vascular surgeon will always act to save the leg if possible. You can minimise the risk of progression of your symptoms by following the advice below. The simplest measures are the most effective, and the vast majority of patients do not need surgical intervention to treat their symptoms.

What can I do to help myself?

Smoking

If you are a smoker, the single most important thing you can do to help yourself is to quit smoking. Tobacco use is strongly linked to heart disease and the onset and progression of vascular disease, including intermittent claudication.

Smoking contains over 4,000 active compounds and affects blood vessels in many ways. Nicotine causes blood vessels to narrow, reducing blood flow to the extremities, and raises heart rate and blood pressure. Inhaled carbon monoxide from tobacco reduces oxygen transport to the tissues.

We understand how difficult it can be to quit smoking. When you are ready to stop, you don't have to do it alone. Your GP and our clinical support teams can provide help when you need it.

Exercise

Regular exercise, such as walking, is important for general health and wellness. You will not harm yourself by trying to walk as far as your comfort allows. Exercise related to intermittent claudication has a unique role as it enhances the development of collateral circulation, encouraging small arteries in the legs to carry more blood. Exercises such as walking, stair climbing, cycling, and swimming can all help. Exercise programmes need to be carefully chosen and adjusted to fit a patient's lifestyle and fitness level.

Diet /obesity (high cholesterol)

Abnormal fat levels in the blood result in atherosclerosis. High cholesterol is a significant risk factor for developing vascular disease and intermittent claudication. If you are overweight, losing weight is helpful, but maintaining a normal weight does not necessarily mean you are maintaining a healthy diet. Referral to a nutritionist or dietician for advice and support can be arranged if required.

Hypertension (high blood pressure)

High blood pressure is a significant risk factor in vascular disease and is associated with the development of atherosclerosis and claudication. If you have high blood pressure, it is usually managed by your doctor, who will also recommend lifestyle changes to lower blood pressure and reduce alcohol and salt intake. Your doctor may also prescribe medication. Please ensure you have your blood pressure checked regularly.

Diabetes

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

References:

Circulation Foundation. The Vascular Research Charity. Intermittent Claudication

www.circulationfoundation.org.uk/help-advice/peripheral-arterial-disease/intermittent-claudication#Risks

National Institute for Health and Care Excellence (NICE). Management of Intermittent Claudication

www.nice.org.uk/guidance/cg147/chapter/Recommendations

Smokefree

www.smokefree.nhs.uk

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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