

Vascular Surgery

Intermittent Claudication

What is intermittent claudication?

Intermittent claudication is the term for cramp-like pain in the calf, thigh or buttock associated with walking. This is a symptom of a disease called atherosclerosis (hardening of the arteries), which causes narrowing and furring up of the arteries in the leg and elsewhere.

It often happens in old age, but there is a risk of getting problems at an earlier age in smokers, those with diabetes and those with a high blood cholesterol level. Around 5% of the population over the age of 50 years have this problem, although many patients symptoms are fairly mild and do not really interfere with walking ability.

Symptoms

At rest there is usually no problem with the circulation to the leg. With exercise, the muscles in the calf, thigh and buttock need more blood (i.e. more oxygen and nutrients) to function properly. If there is a narrowing or blockage of the artery then the body is unable to increase blood flow down the leg and cramp develops, which is due to a chemical build-up in the muscle.

Resting muscle needs less blood and the pain quickly resolves once exercise stops, usually within 5 minutes. Any exercise that increases the work done by the muscles e.g. walking up stairs or up a hill will cause pain to occur more quickly.

Tests

In the outpatient clinic, the blood pressure in your feet will be measured with an ultrasound probe (hand-held Doppler). This compares the blood pressure in your feet to that in your arms. These should be similar, but if there is a narrowing in the arteries in your legs the pressure will fall. Unless you have had your cholesterol checked recently by your GP this will be arranged for you in outpatients.

You may be sent for a painless ultrasound scan of your legs (a Duplex scan), which shows us the extent of the problem and whether the arteries are just narrowed or actually blocked.

You might also be sent for a similar scan to look at the main artery in the abdomen (the aorta). A treadmill test may be arranged to look at your walking distance.

Initial Treatment

Most patients with this condition do not need hospital treatment. The most important thing is to change your lifestyle i.e. take regular exercise, change your diet and stop smoking.

Exercise: There is strong evidence that, by taking regular walks up to the distance where you experience discomfort, your walking distance should slowly improve with time and the cramp should be less severe. Don't be frightened about continuing to walk when the pain starts. This will not harm your leg and may in fact help you increase your walking distance. Exercise trains the muscles to work more efficiently and allows the body to develop natural bypass channels to improve blood flow.

Smoking: If you can manage to stop smoking **completely** there is an excellent chance that your symptoms will improve. Smoking damages the lining of the blood vessels, allowing furring up to occur. Smoking will also prevent the body developing its natural bypass channels. You will be offered referral to the local smoking cessation service, although you may prefer to seek help via your GP.

Diet: It would be helpful to lose weight if you are overweight, and to eat a sensible (low-fat) diet.

Cholesterol: Many patients with narrowed arteries have a raised cholesterol level. As well as controlling this with diet, you are likely to be prescribed a cholesterol-lowering tablet (a statin), which will lower your cholesterol and reduce the chance of your arterial disease getting worse. Even if your cholesterol is normal you may be asked to take a statin to protect your arteries.

Aspirin / clopidogrel: You should also be taking a tablet to try to make the blood less sticky. This will mean it is less likely to clot on the surface of the narrowed blood vessel and cause worsening of your symptoms. Aspirin (normal dose 75 mg each day) is the usual blood-thinning treatment, unless you have had problems with stomach ulcers, indigestion or allergies to aspirin. There is recent evidence from NICE that 75mg of clopidogrel each day may be more beneficial than aspirin. You should discuss this with your doctor.

Other medication: Vasodilator tablets work by opening up small blood vessels, helping more blood get to the muscles. There is evidence to suggest that naftidrofuryl (Praxilene) can increase walking distance in some patients. A second medication - cilostazol - may also be tried, although some patients may not tolerate this. These medications are only used in selected cases and this will be discussed with you if it is a good option.

With the above treatment 70% of patients show an improvement in the distance walked, while about 20% will be unchanged. Only 10% of patients are likely to get worse, and this is when it is right to go on to more complicated treatments. The risk of losing your leg with this condition is extremely small if these simple measures are followed.

Further Treatment

If your walking continues to get worse despite the above treatment then further tests may be required. Firstly you will need either an ultrasound scan (Duplex scan) as mentioned above, a magnetic resonance angiogram (MRA) or a CT angiogram. Both MRA and CT are outpatient tests where contrast (dye) is injected through a vein in the arm. The legs are then scanned with an MRI scanner or CT scanner to obtain a 'road map' of the blocked or narrowed arteries and allow us to make a decision about treatment.

It may be possible to unblock the arteries using a balloon (angioplasty). This would have the effect of increasing blood flow into the leg and improving your walking distance. However, this is not without some risk. The stretched area may close off, leading to a return of your symptoms. Some patients may have worse symptoms after the procedure. Rarely, this may lead to urgent surgery and in the extreme situation there may be a risk of losing your leg.

It may not be possible to stretch your arteries with a balloon, often due to the length or number of blockages. The alternative would be to consider bypass surgery. This is usually kept for those patients who cannot live a normal life because of problems with walking, despite trying the simple treatments discussed above. Surgery will be discussed with you if this is felt to be the best treatment.

If you have any questions, please do not hesitate to discuss them when you next come up to the outpatient clinic.

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