

What is a Intermittent Claudication

Intermittent claudication is a clinical diagnosis caused by muscle lactic acid production due to inadequate blood flow to meet the demands of the muscle for a particular activity e.g. walking. It is classically described as a debilitating cramp, ache or dull pain that is:

- reliably brought on by walking;
- not present on taking the first step (unlike arthritis);
- reliably relieved by rest, usually within 5 minutes of stopping

The distance you are able to walk without stopping (claudication distance) is often very consistent, but you may notice a decrease if walking uphill or walking at a quicker pace. Your general medical health can impact on your claudication distance if your capacity to deliver oxygenated blood to the muscles is compromised e.g. anaemia or heart failure.

What causes Intermittent Claudication?

The underlying process is predominantly atherosclerosis –fatty deposits- affecting the arteries in the legs. These fatty deposits gradually ‘silt up’ the artery causing a narrowing (stenosis) or blockage (occlusion) resulting in inadequate blood flow to the muscle. This is commonly seen after the age of 55, but in combination with other risk factors it is increasingly seen at a younger age. Those risk factors are smoking, diabetes mellitus, elevated cholesterol, and high blood pressure. Occasionally, particularly in the younger person, other causes of intermittent claudication occur such as popliteal entrapment syndrome, iliac artery endofibrosis or arterial trauma following a sporting injury e.g. knee dislocation.

The muscle group affected by claudication is classically one anatomical level below the level of arterial narrowing or blockage. For example, pain felt in the calf usually results from disease affecting the artery in the thigh (superficial femoral artery). Similarly, disease affecting the aorta or pelvic arteries can cause buttock, thigh, and calf symptoms as well as impotence: Leriche's syndrome

Why is Intermittent Claudication important?

Atherosclerosis tends to be a multisystem disease; the presence of intermittent claudication in the legs correlates with arterial disease elsewhere in the body including the heart (>50%) and head (>40%). Thus, individuals with intermittent claudication are at a higher risk of stroke, heart attack or kidney failure compared to their disease-free counterparts. The overall risk of a major cardiovascular event is 5-7% per year if risk factors are not adequately addressed. The common

modifiable risk factors for peripheral arterial disease mirror those for coronary artery disease: smoking, diabetes mellitus, high blood pressure, and elevated cholesterol.

Will I lose my leg?

One-quarter of clients presenting with intermittent claudication will experience deterioration in their walking distance during their lifetime. The overall risk of progression to a leg that is threatened due to a lack of blood supply –critical leg ischaemia- is small with <5% of clients requiring amputation during the subsequent 5 years.

What investigations should be performed for Intermittent Claudication?

Following a thorough clinical review your surgeon may organise further tests and imaging investigations aimed at: a) confirming the presence and severity of peripheral arterial disease, b) identify the location of the affected arteries, and c) assess your suitability for the differing types of treatments we offer.

A combination of the following tests may be recommended depending on your clinical presentation:

1. Blood analysis to check for anaemia, kidney function, cholesterol levels,
2. Ankle brachial pressure index (ABPI) assessment
3. Electrocardiogram (ECG)
4. Duplex Doppler ultrasound scan
5. CT angiogram
6. MR angiogram

What are the treatments for Intermittent Claudication?

The two main aims when treating intermittent claudication are: a) prevent major cardiovascular morbidity (heart attack, stroke, kidney failure) through risk factor modification, and b) improve your walking distance.

a) Risk factor modification

All individuals with evidence of peripheral arterial disease benefit from risk factor modification to reduce the risk of cardiovascular morbidity. These include stopping smoking, blood pressure control and cholesterol optimization. Medications to help achieve these goals will often be used

and include clopidogrel, aspirin, and statins. Diabetes mellitus increases the risk and severity of intermittent claudication proportional to the duration of affliction. Thus, the diagnosis and strict control of diabetes mellitus in combination with weight loss in the overweight individual is vital to reduce cardiovascular risk and prevent symptom deterioration.

b) Symptom relief

For many individuals with intermittent claudication a structured exercise program in combination with stopping smoking will lead to sustained improvement in their claudication distance and a reduction in cardiovascular risk. However, for some clients a structured exercise program in isolation is insufficient to relieve their symptoms. For these clients, particularly those suffering from severe life-style limiting claudication, more invasive therapies in the form of angioplasty or bypass surgery may be indicated.

The Circulation Clinic is able to offer a full range of individualised treatment plans to ensure our clients receive the best care for their intermittent claudication.



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