



# Critical Limb Ischaemia

## What is Critical Limb Ischaemia?

Critical limb ischaemia is an extreme form of peripheral arterial disease whereby the blood supply to the leg is so severely compromised that even when at rest the leg is not receiving adequate blood supply to function normally.

You may be affected with a constant often debilitating pain affecting your foot and/or calf. The pain may be exacerbated by lying down or upon elevation of the foot: you may notice the pain to be worse at night and lessened by hanging the foot out of the bed or by sleeping in a chair. Sometimes even the pressure of bedclothes on the foot is reported to be unbearable. Your foot may be cold or pale.

If left untreated skin ulceration may occur followed by blackening mummification (gangrene) of the toes/foot which are susceptible to infection.

## What causes Critical Limb Ischaemia?

Critical limb ischaemia is caused by narrowing or blockage of the arteries supplying the leg. This is typically caused by atherosclerosis in which fatty deposits build up over time in the arteries (furring up) eventually leading to a critical narrowing or even occlusion of one or multiple arteries. During this period of disease progression, you may have noticed your ability to walk gradually or suddenly decline due to pain (intermittent claudication). As the blood flow becomes increasingly compromised often as a result of multiple blockages the perfusion to the foot/calf may become sufficiently compromised to cause pain even at rest.

In addition to atherosclerosis, popliteal artery aneurysms and other conditions that cause insidious silting up of the calf arteries may also cause critical limb ischaemia.

## Why is Critical Limb Ischaemia important?

Critical limb ischaemia implies your leg is threatened and is one of the commonest causes for leg amputation in the developed world. In addition, it is a general reflection on your overall health status particularly that related to your heart, brain and kidneys. A significant proportion of patients suffering with critical limb ischaemia will suffer a heart attack or stroke over the ensuing five years. The risk to your overall survival is similar to if you had bowel cancer or lymphoma and thus addressing this condition is of utmost importance to both your quality of and longevity of life.

## Will I lose my leg?

If you are diagnosed with critical limb ischaemia there is a chance that even with the best treatments available we will not be able to save your leg. On rare occasions individuals prefer to or are not fit enough to undergo complex limb salvage surgeries and undergo an amputation for pain relief instead.

At the Circulation Clinic our experts will undertake an honest appraisal as to what we believe to be in your best interests taking your whole well-being into account.

## What investigations should be performed for Critical Limb Ischaemia?

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

For those clients with multiple medical conditions in addition to their vascular disease we may also seek a second opinion from our anaesthetists regarding your overall fitness for what are often complex and lengthy surgeries.

## What are the treatments for Critical Limb Ischaemia?

Our two main aims when treating critical limb ischaemia are: a) saving the leg (limb salvage), and b) Improving the overall survival and well-being of our clients by preventing major cardiovascular morbidity (heart attack, stroke, kidney failure) through risk factor modification.

### a) Saving the leg

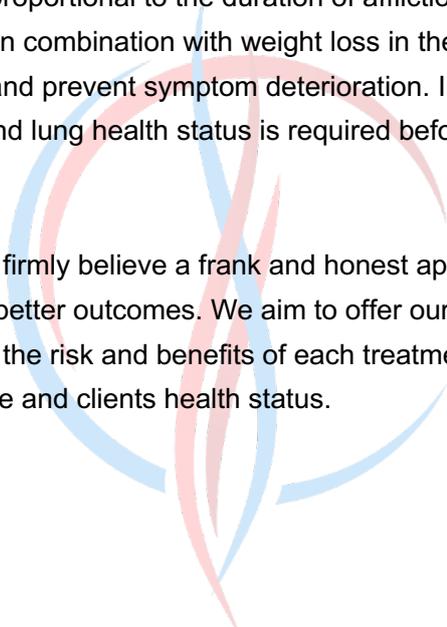
The main treatment options for critical limb ischaemia are endovascular surgery (angioplasty +/- stent insertion), open surgical reconstruction (endarterectomy, arterial bypass) or a combination

of both (hybrid procedures). Your pattern of disease is the single best determinant for choosing which technique is likely to provide you with the best result. However, your overall fitness to undergo each procedure will also impact on the decision-making process.

#### b) 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. In some clients pre-procedural optimisation of their heart and lung health status is required before undergoing limb salvage surgery.

At the Circulation Clinic, we firmly believe a frank and honest appraisal of each client's needs and expectations results in better outcomes. We aim to offer our clients individualised treatment plans that take into account the risk and benefits of each treatment option available given the underlying pattern of disease and clients health status.



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