

Chronic Limb-Threatening Ischemia (CLTI)

Information and advice for patients

Vascular Service

What is Chronic Limb-Threatening Ischemia (CLTI)?

Chronic Limb-Threatening Ischemia (CLTI) is a severe condition characterised by insufficient blood flow to the limbs, primarily affecting the legs and feet. It occurs when Peripheral Artery Disease (PAD) progresses, leading to the narrowing or blockage of arteries due to atherosclerosis (plaque). The build-up of atherosclerosis restricts blood supply. Without appropriate treatment, CLTI can result in tissue damage, slow-healing wounds, and even amputation.

Causes of CLTI

CLTI is primarily caused by the following factors:

- **Peripheral Artery Disease (PAD):** Atherosclerosis, which is the accumulation of plaque in the arteries, is the most common cause of PAD. Plaque buildup narrows the arteries and restricts blood flow to the limbs.
- **Diabetes:** People with diabetes are at higher risk of developing CLTI due to damage to blood vessels caused by high blood sugar levels over time.
- **Smoking:** Smoking damages blood vessels and accelerates the progression of atherosclerosis, increasing the risk of CLTI.
- **High blood pressure and high cholesterol:** These conditions contribute to the development of atherosclerosis and increase the risk of CLTI.
- **Age and family history:** Increasing age and a family history of Peripheral Artery Disease can also increase the risk of CLTI.

Symptoms of CLTI

CLTI can cause various symptoms in the affected limb, including:

- Pain or discomfort during rest or with activity.
 - Non-healing wounds or ulcers on the feet or legs.
 - Decreased hair growth or slow nail growth on the affected limb.
 - Coldness or numbness in the affected limb.
 - Pale or bluish skin colour.
 - Weak or absent pulse in the affected limb.
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Diagnosis of CLTI

To diagnose CLTI, your healthcare provider may perform the following tests:

- **Ankle-brachial index (ABI):** This test compares blood pressure measurements in your ankle and arm to determine the severity of Peripheral Artery Disease.
- **Doppler ultrasound:** This non-invasive test uses sound waves to assess blood flow in the arteries and identify any blockages.
- **Angiography:** This procedure involves injecting a contrast dye into the arteries and taking X-ray images to visualise the blood flow and identify any blockages.
- **Computed Tomography Angiography (CTA) or Magnetic Resonance Angiography (MRA):** These imaging tests provide detailed images of the blood vessels to evaluate the extent of any arterial blockages.

Treatment Options

The treatment of CLTI aims to improve blood flow, relieve symptoms, and prevent complications such as limb loss. The specific treatment plan will depend on the severity of the condition and individual patient factors. Common treatment options include:

- **Medications:** Your doctor may prescribe medications to manage risk factors associated with CLTI, such as antiplatelet medications to prevent blood clots and medications to control blood pressure, cholesterol levels, and blood sugar for diabetic patients.
- **Angioplasty and stenting:** This minimally invasive procedure involves widening the narrowed arteries using a balloon-like device, followed by the placement of a stent to keep the artery open and improve blood flow.
- **Bypass surgery:** Bypass surgery may be better in selected cases or when an angioplasty is not feasible. This involves creating a detour around the blocked artery using a graft (vein or synthetic) to restore blood flow.
- **Wound care and infection control:** For non-healing wounds or ulcers, proper wound care and infection control are essential to prevent complications and promote healing. This may include regular dressing changes, debridement (removal of dead tissue), and off-loading techniques to reduce pressure on the affected limb.
- **Lifestyle modifications:** Adopting a healthy lifestyle can help manage CLTI. This includes quitting smoking, maintaining a healthy weight, engaging in regular exercise as recommended by your healthcare provider, and following a balanced diet.

When to Seek Medical Help

It is important to seek medical attention if you experience any of the following:

Increasing pain or discomfort in your legs or feet, especially at rest.

- Non-healing wounds or ulcers.
- Changes in skin colour or temperature of the affected limb.
- Numbness or weakness in the limb.
- Any sudden changes in symptoms.

Additional Sources of Information

Go on line and view NHS Choices website for more information about a wide range of health topics <http://www.nhs.uk/Pages/HomePage.aspx>

If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff.

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