



University Hospitals Bristol **NHS**

NHS Foundation Trust

Patient information service  
**Physiotherapy department**

# Intermittent claudication

## Advice and information



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This leaflet aims to explain what intermittent claudication is and how exercise, including walking, can help improve your symptoms and your general fitness.

Most people tend to avoid activity when they have leg pain; this relieves your symptoms in the short-term. Unfortunately, if you reduce the amount of physical activity you do, you will lose fitness and become weaker, and this may increase your leg symptoms over time.

## **What is intermittent claudication?**

Intermittent claudication (IC) is a cramp or pain in your calf, buttock or thigh that occurs when you walk or exercise and normally stops when you rest. Some people may only get this pain when they walk uphill. Others will get pain when they walk just a short distance on flat ground.

## **What causes IC?**

IC is caused by blockages in the arteries of the legs due to a build up of cholesterol and calcium on the inside of the arteries. It is also called 'hardening of the arteries' or atherosclerosis. It is more likely to occur in people who:

- smoke
- are diabetic
- have high levels of cholesterol in their blood
- have kidney disease
- have a family history of circulatory disorders.

The blockage means that blood flow in the leg is reduced. The circulation is sufficient when you are resting, but when you start walking, the blood flow is not enough to give the muscles enough oxygen, and you will start to feel cramp or pain.

# How can I help myself?

There are several things you can do that may help. You can:

- stop smoking
- eat a varied and balanced diet low in fat, salt and added sugars to prevent becoming overweight
- if you have diabetes, ensure that it is well controlled
- have your blood pressure and cholesterol levels checked by your GP
- exercise: walk at a steady pace and a little further each time so you can manage 30 minutes, and do the exercises on pages five to seven of this leaflet
- take good care of your feet; watch for any skin breakdown. Your GP can refer you to a podiatrist if appropriate.

# What are the benefits of exercise?

If you exercise, you:

- may increase how far you can walk without having pain
- may decrease the time it takes your pain to ease
- will feel better and be able to relax more
- will control your weight more effectively
- will help your heart work more efficiently, improving your cardiovascular fitness
- will improve your sleeping patterns
- will improve your circulation, and therefore your oxygen supply to organs and muscles
- can help reduce high blood pressure and high cholesterol.

## **Does the blockage ever clear itself?**

Unfortunately the blockage never clears itself. However, it is known that exercise can encourage the development of collateral circulation. This is when smaller arteries enlarge, allowing them to carry more blood, and therefore more oxygen, to the muscles. There is also evidence that supports the theory that if muscles are exercised to the point of being painful, they will adapt and be less demanding of oxygen to function. This may take three to six months, so please be patient.

## **How often should I exercise?**

You should walk or exercise a minimum of three times per week for 30 minutes, although you may have to work up to that level if you are not used to doing that much activity. At the start of each week, look at your diary and plan when you will walk or exercise and write it down. You can then write down the amount of exercise you managed to achieve against each time you planned to exercise.

## **How hard should I exercise?**

To gain the maximum benefit, you need to work through the pain and try to maintain that level for a short period, then rest and try again. You should aim to increase the time you can exercise without rest. It is good to push through your IC pain, but if you are getting significant pain elsewhere, for example in joints or your chest, please see your GP and discuss your concerns. Within this leaflet there are examples of exercises that you would do in the IC class and that are known to be beneficial to reduce IC pain.

# Exercises

Aim for eight minutes on each exercise.

## Step ups

Step up so both feet are on the upper step, then step down again. Change leading leg every 10 steps.



## Toe walking

Walk up and down on your tip toes wherever there is room, for example in your hall or on a garden path.



## Heel raising

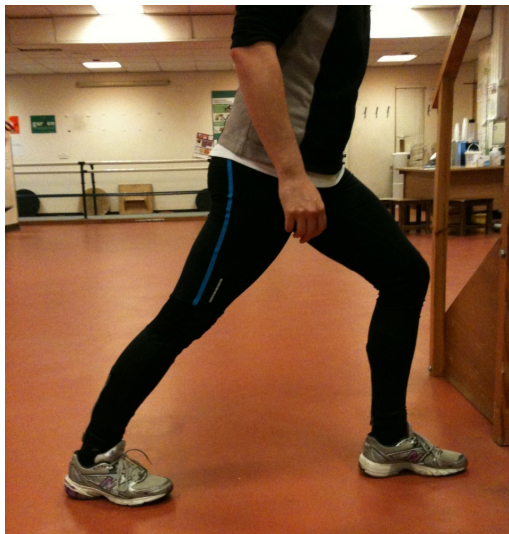
Hold onto a chair or kitchen surface. Then rise up onto your toes and lower. Aim to try on one leg.



**Stretching is really important at the end of exercise. Perform these twice on each leg, holding the position for five seconds.**

## **Calf stretch**

With both feet facing forward, bend your front knee and keep your back heel on the floor. Transfer your weight onto your front foot.



## **Hamstring stretch**

Stand on your back leg with your knee slightly bent and the heel of your front leg on the floor, and pull your toes towards you.





## Quads stretch

Stand on one leg, holding on for balance. Bring your foot up towards your bottom, holding onto your foot or trouser leg. Try to keep your knees and thighs together.



**If you have computer access, further useful information can be found on the following website:**

[www.circulationfoundation.org.uk/vascular\\_disease/tips\\_for\\_an\\_active\\_healthy\\_lifestyle](http://www.circulationfoundation.org.uk/vascular_disease/tips_for_an_active_healthy_lifestyle)

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:  
**[www.uhbristol.nhs.uk/research-innovation](http://www.uhbristol.nhs.uk/research-innovation)**  
or call the research and innovation team on  
**0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

**[www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/](http://www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/)**

**Hospital switchboard: 0117 923 0000**



**Minicom: 0117 934 9869**



**[www.uhbristol.nhs.uk](http://www.uhbristol.nhs.uk)**



For an interpreter or signer please contact the telephone number on your appointment letter.



For this leaflet in large print, audio or PDF format, please call the patient information service:



**0117 342 3728 / 3725**

