

# **Patient information leaflet for the treatment of leg cramps**



Leg cramps are a common and usually harmless condition where the muscles suddenly contract (shorten), causing pain in your leg. This is known as a spasm, and you cannot control the affected muscle.

The cramp can last from a few seconds to 10 minutes. When the spasm passes, you will be able to control the affected muscle again.

It usually occurs in the calf muscles, although it can affect any part of your leg, including your feet and thighs.

After the cramping has passed, you may have pain and tenderness in your leg for several hours.

Three out of four cases occur at night during sleep.

## Causes of leg cramps

The cause of leg cramps is sometimes unknown (idiopathic). In other cases, there may be an underlying condition or another identifiable cause.

### Idiopathic leg cramps

Although the cause of idiopathic leg cramps is unknown, there are a number of theories about what might cause idiopathic leg cramps. These include:

Abnormal nerve activity during sleep which causes the muscle of the leg to cramp.

Excessive strain placed on leg muscles, such as when exercising, may cause the muscles to cramp at certain times.

A sudden restriction in the blood supply to the affected muscles.

Also, tendons naturally shorten over time as a person gets older, which may explain why older people are particularly affected by leg cramps. Tendons are tough bands of tissue that connect muscles to bone. If your tendons become too short, they may cause the muscles connected to them to cramp.

## Secondary leg cramps

Secondary leg cramps are caused by an underlying condition or another identifiable cause. These may include pregnancy, exercise, toxins, dehydration and some medicines.

Treating the underlying cause may help relieve your symptoms.

## Self Help

Most cases can be treated with exercises. There are two types of exercise that you can do:

- Exercises you do during an episode of cramping to relieve the pain and stop the cramping
- Exercises you do during the day to reduce how often you get leg cramps.

### The two types of exercises are explained below.

#### Exercises during cramps

During an episode of leg cramp, stretch and massage the affected muscle.

For example, if the cramp is in your calf muscle:

Straighten your leg and lift your foot upwards, bending it at the ankle so that your toes point towards your shin (the front of your lower leg).

Walk around on your heels for a few minutes.

Stand with the front half of your feet on a step, with your heels hanging off the edge. Slowly lower your heels so that they are below the level of the step. Hold for a few seconds before lifting your heels back up to the starting position. Repeat a number of times

Lean forward against a wall with

your arms outstretched, about a meter (39 inches) from the wall. Keep the soles of your feet flat on the floor for five seconds. Repeat this exercise several times, for about five minutes

#### Exercises to prevent cramps

If you often get leg cramps, regularly stretching the muscles in your lower legs may help prevent the cramps or reduce their frequency.

For example, if your calf muscles are affected by cramps, the following exercise should be beneficial:

Stand about a meter away from a wall, lean forward with your arms outstretched to touch the wall while keeping the soles of your feet flat on the floor, hold this position for five seconds before releasing, repeat the exercise for five minutes three times a day, including one session just before you go to bed.

Stretch your calves before you go to bed each night - see stretching advice above or page 6 for some alternative stretches that can be useful especially after other forms of exercise.

If you find these exercises useful you can carry on doing them for as long as you are able to. Please refer to the photos on page 6 and 7.

## The following night-time advice may also help:

If you prefer to sleep on your back; lie down, make sure that your toes point upwards, place a pillow on its side at the end of your bed, with the soles of your feet propped up against it this may help to keep your feet in the right position while you sleep.

If you prefer to sleep on your front; lie down, hang your feet over the end of the bed as this will keep your feet in a relaxed position and help stop the muscles in your calves from contracting and tensing.

Keep your sheets and blankets loose.

## Painkillers

Most leg cramps come on suddenly and do not last very long. Therefore, painkillers are unlikely to help because the cramp will probably have passed before the drugs take effect. However, if a severe leg cramp leaves your muscle feeling tender afterwards, you could take an over-the-counter painkiller such as paracetamol or ibuprofen.

## Quinine

Quinine was originally designed as a medication to treat malaria. It can be moderately effective in reducing the frequency of leg cramps however, there is uncertainty about its long-term effectiveness and concerns about its safety.

## Known side effects include:

- Tinnitus (ringing in the ears) and impaired hearing
- Headaches
- Nausea (feeling sick) and upset stomach
- Disturbed vision
- Confusion
- Hot flushes

Never take more than the recommended dose of quinine. **An overdose of quinine can result in permanent blindness and death.**

Due to these potential risks your GP will only prescribe quinine if there is evidence that a potential benefit of treatment outweighs the risks.

It is recommended that quinine is only prescribed when:

You have tried the exercise techniques discussed above and they have not helped.

You have painful and/or frequent leg cramps which affect your quality of life.

In these circumstances, you may be prescribed a four week course of quinine.

After this time if you have not gained any benefit, the treatment will be withdrawn. If you experience any of the side effects listed above, stop taking quinine and immediately contact your GP.

It is recommended that treatment with quinine is interrupted approximately every 3 months to reassess the benefit. In patients taking quinine long term, a trial discontinuation may be considered, on the recommendation of a Government safety advisory.

## Sleep and cramp diary

Your GP may ask you to keep a “sleep and cramp diary” to record how often you get leg cramps. You can use this to record when the cramps occur e.g. the time and which muscle was affected along with other information. Please see the back cover of this leaflet for a copy of the diary.

## References

NHS Choices website

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

NICE Clinical Knowledge Summary - Leg Cramps: Senario Management for leg cramps of unknown cause

<http://bit.ly/2qif6Td>

BNF Online – For adverse effects, contraindications and drug interactions of quinine.

<https://bnf.nice.org.uk/drugs/quinine/>

Drug Safety Update on quinine.

<http://bit.ly/2pCnZuv>

Please note that we have shortened the URLs for publishing therefore they may appear differently in your browser.

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# Exercises

These gentle stretches should take about 5 minutes.

Spend more time on them if you feel the need.



## Buttock stretch

To do a buttock stretch, bring knees up to chest. Cross right leg over left thigh. Grasp back of left thigh with both hands. Pull left leg toward chest. Repeat with opposite leg.

Hold for 10 to 15 seconds.



## Hamstring stretch

To do a hamstring stretch, lie on your back and raise your right leg. Keeping your left leg bent with your foot on the floor, pull your right leg towards you keeping it straight. Don't hold at the knee level. Repeat with opposite leg.

Hold for 10 to 15 seconds.



### Inner thigh stretch

For the inner thigh stretch, sit down with your back straight and bend your legs, putting the soles of your feet together. Holding on to your feet, try to lower your knees towards the floor.

Hold for 10 to 15 seconds.



### Thigh stretch

To do a thigh stretch, lie on right side. Grab top of left foot and gently pull heel towards left buttock to stretch the front of the thigh, keeping knees touching. Repeat on the other side.

Hold for 10 to 15 seconds.



### Calf stretch

For the calf stretch, step your right leg forward, keeping it bent, and lean forwards slightly. Keep your left leg straight and try to lower the left heel to the ground. Repeat with opposite leg.

Hold for 10 to 15 seconds.

*Images from: NHS Choices website*

