

## Muscle cramp

A muscle cramp is an uncontrollable and painful spasm of a muscle. Any muscle can be affected, but the muscles of the calf and foot are particularly prone. A cramp can last for varying periods of time and generally resolves by itself. The exact cause of cramp is unknown but risk factors may include poor physical condition, mineral and electrolyte imbalances and tight, inflexible muscles.

Cramps are usually harmless but may sometimes be symptomatic of an underlying medical disorder, such as atherosclerosis (narrowing of the arteries). Regular cramping or severe cramping that lasts longer than a few minutes should always be investigated by your doctor.

### Symptoms

The symptoms of a muscle cramp include:

- Sudden sensation of uncontrollable and painful spasms in the muscle
- Muscle twitching.

### Minerals and electrolytes

Muscle tissue relies, in part, on a range of minerals, electrolytes and other chemicals in order to contract and relax. Some of these important substances include calcium, magnesium, potassium and sodium. Inadequate diet, dehydration, vomiting and diarrhoea are just some of the factors that are thought to disturb the body's balance of minerals and electrolytes, and make muscles more susceptible to cramping.

Tetany is a special form of cramping – it can be brought on by overbreathing, which results in a low level of carbon dioxide in the blood. It is usually caused by anxiety.

### Risk factors

The exact cause of muscle cramp is not known, but risk factors may include:

- Tight, inflexible muscles
- Poor physical condition
- Poor muscle tone
- Inadequate diet
- Physical overexertion
- Physical exertion of cold muscles
- Muscle injury
- Muscle fatigue
- Excessive perspiration
- Dehydration – caused by, for example, a bout of gastroenteritis
- Reduced blood supply (ischaemia)
- Wearing high-heeled shoes for lengthy periods.

### Muscle cramp associated with medical conditions

Certain diseases or conditions may increase the risk of muscle cramp, including:

- **Atherosclerosis** – a condition characterised by narrowed arteries due to the formation of fatty plaques. Muscles are more likely to cramp if their blood supply is inadequate.
- **Sciatica** – pain in the buttock and leg caused by pressure on nerves in the lower back. In some cases, the irritated nerve may prompt the associated muscles to contract.
- **Medications** – some medical conditions require the regular use of fluid pills (diuretics). These drugs can interfere with the body's mineral balance and contribute to cramping.

### Treatment options

Most muscle cramps resolve after a few seconds or minutes. Treatment options include:

- **Stretch and massage** – lengthen the cramping muscle using a gentle, sustained stretch then lightly massage the area until the cramp subsides. If you are unsure how to stretch leg muscles, see your physiotherapist for advice.
- **Icepack** – in cases of severe cramp, an icepack applied for a few minutes may help the muscle to relax.
- **Medication** – some medications can be helpful to control muscle cramps. See your doctor for further information.
- **Further treatment** – see your doctor if you experience regular muscle cramping or if cramps last longer than a few minutes. You may have an undiagnosed medical condition that requires treatment.

### Prevention strategies

Suggestions on how to reduce the likelihood of muscle cramp include:

- Increase your level of physical fitness.
- Incorporate regular stretching into your fitness routine.
- Warm up and cool down thoroughly whenever you exercise or play sport.
- Drink plenty of water before, during and after exercise.
- Make sure your diet is nutritionally adequate, and include plenty of fruits and vegetables.
- A regular massage may help to reduce muscle tension.
- Wear properly fitted shoes and avoid high heels.

### Where to get help

- Your doctor
- Nurse on Call Tel. 1300 606 024 – for expert health information and advice (24 hours, 7 days)
- Pharmacist
- Massage therapist
- Physiotherapist
- An accredited practising dietitian, contact the Dietitians Association of Australia
- Australian Physiotherapy Association Tel. (03) 9534 9400

### Things to remember

- A muscle cramp is an uncontrollable and painful spasm of a muscle.
- The exact cause is unknown, but some of the risk factors may include poor physical condition, dehydration and muscle fatigue.
- You can help reduce the duration and severity of cramp by gently stretching the muscle and massaging the area.
- See your doctor if you experience regular muscle cramping or if cramps last longer than a few minutes.

**This page has been produced in consultation with, and approved by:**

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