

Nocturnal Calf Cramps: When Are They Caused by Varicose Veins?

Nocturnal calf cramps affect up to **60% of adults** and become more frequent with age [1]. Most cases are benign, but when the cramps are accompanied by heavy legs, swelling, or visible veins, they can be a sign of **chronic venous insufficiency** and underlying **varicose veins**.

What is a calf cramp?



A calf cramp is a sudden, involuntary and painful contraction of the calf muscles, typically the gastrocnemius or soleus muscle. The episode lasts from a few seconds to several minutes and often leaves the muscle feeling tender for 24 hours [2].

Why do varicose veins cause cramps?

With varicose veins, the valves in the veins do not function properly, causing blood to flow backwards and pool in the legs (venous reflux). This leads to:

- Increased venous pressure in the calf
- Lack of oxygen in the muscles at night, when the muscles are no longer actively pumping blood back
- Local electrolyte imbalances in the muscle tissue
- Micro-inflammation around the dilated veins

Studies show that patients with chronic venous insufficiency have a **2-3 times higher incidence** of nocturnal calf cramps than the general population [3,4].

Other causes of nocturnal cramps

It is important to rule out other causes before treatment:

- **Dehydration** and electrolyte imbalances (especially magnesium, potassium, calcium)
- **Medication**: statins, diuretics, beta-blockers, beta-2-agonists
- **Pregnancy** (up to 30% in the 3rd trimester)
- **Diabetes** and peripheral neuropathy
- **Lower back conditions** with nerve root compression
- **Hypothyroidism**
- **Peripheral arterial disease**

A thorough medical history, clinical examination, and sometimes blood tests will usually clarify the cause [2].

When should you see your GP?

Contact your GP if you experience:

- Cramps several times a week for more than a month
- Swelling, brownish discolouration, or eczema around the ankles

- Visible, winding veins on the thigh or calf
- Heavy, tired legs at the end of the day
- Ulceration in the ankle area
- Sudden, one-sided pain (suspicion of deep vein thrombosis)

For venous symptoms, a **Doppler ultrasound** scan of the leg veins is performed - this is the gold standard for investigating valve dysfunction and reflux [5].

What helps with nocturnal cramps?

For an acute attack:

- Stretch the calf by pulling the top of your foot up towards your knee
- Stand up and take a few steps
- Massage the muscle

Prevention:

- **Daily exercise** - walking, cycling or swimming activates the calf muscle pump [6]
- **Stretching exercises** before bedtime (3 × 30-second calf stretches reduce cramps by ~30%) [7]
- **Elevate your legs** for 15-20 minutes daily, above heart level
- **Graduated compression stockings** (Class II, 23-32 mmHg) for venous insufficiency [8]
- **Sufficient fluid intake** - at least 1.5-2 litres daily
- **Avoid static positions** - alternate between standing and sitting

Treatment of underlying varicose veins: If the cramps are caused by venous reflux, they resolve in up to **70%** of patients following endovenous laser treatment (EVLT) of the incompetent trunk vein [9].

Treatment at Kirurgen.dk

We offer investigation with Doppler ultrasound and modern **endovenous laser treatment (EVLT)** through the public health service. Also read our articles on [heavy, tired legs](#) and [swollen legs and ankles](#).

References

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