

Swollen Legs and Ankles: Causes, Warning Signs, and Treatment



Swelling around the ankles and lower legs (peripheral oedema) is one of the most common symptoms in general practice and can have causes ranging from harmless to serious. When the swelling is symmetrical in both legs and worsens throughout the day, [chronic venous insufficiency](#) and [varicose veins](#) are among the most common explanations [1].

How Does Venous Swelling Occur?



When the valves in the leg veins are leaky, blood flows backwards (reflux). This causes a persistently high pressure in the small veins and capillaries (venous hypertension), which forces fluid out into the surrounding tissue. The results are:

- Swelling that is worst in the evening and best in the morning
- Heavy, aching legs
- 'Indentations' from the top of stockings or socks
- Over time, brownish discolouration (haemosiderin deposition) and skin changes around the ankle (lipodermatosclerosis) [2]

Other Causes of Swollen Legs

It is important to rule out other conditions before starting treatment:

Cause	Characteristics
Heart failure	Bilateral, shortness of breath, weight gain, swelling also extending upwards
Kidney failure / nephrotic syndrome	Bilateral, facial swelling, proteinuria
Liver disease	Bilateral, ascites, jaundice
<u>Lymphoedema</u>	Often unilateral, positive Stemmer's sign, hard swelling
Deep vein thrombosis (DVT)	Acute, unilateral, painful, warm - requires urgent investigation
Drug-induced	Calcium channel blockers, NSAIDs, gabapentin, steroids
Hypothyroidism	Myxoedema - non-pitting

A thorough clinical examination, supplemented by blood tests and possibly an ultrasound scan, usually clarifies the cause [3].

When Should You Seek Urgent Medical Attention?

Contact your GP or go to A&E **immediately** if you have:

- Sudden, one-sided swelling with pain or warmth (suspicion of DVT)
- Shortness of breath or chest pain (suspicion of pulmonary embolism)
- Swelling after a long period of immobility, such as a flight or car journey
- Ulceration (sore formation) around the ankle
- Worsening swelling despite elevation and compression

Suspected DVT must be investigated the same day with a D-dimer test and a compression ultrasound scan [4].

Staging of Venous Insufficiency (CEAP)

Class	Clinical Finding
C0	No visible signs
C1	<u>Spider veins</u> / <u>thread veins</u>
C2	Visible <u>varicose veins</u>
C3	Oedema (swelling)
C4	Skin changes (pigmentation, eczema, lipodermatosclerosis)
C5	Healed venous ulcer
C6	Active venous ulcer

The CEAP classification is used internationally to grade the disease and guide treatment choices [2,5].

Investigation

The standard investigation is a **Doppler ultrasound** of the leg veins - a painless, non-invasive scan that measures:

- Valve function in each vein
- Reflux duration (>0.5 seconds in superficial veins is pathological)
- Diameter of the trunk veins (great and small saphenous veins)
- Any deep venous obstruction

Doppler ultrasound is the gold standard for investigating chronic venous insufficiency [5].

Treatment of Venous Swelling

Conservative:

- **Graduated compression stockings** Class II (23-32 mmHg) significantly reduce oedema within 4-6 weeks [6]
- **Elevation** of the legs for 15-20 minutes, 3-4 times a day
- **Daily exercise** - walk for at least 30 minutes
- **Weight reduction** if you are overweight - every extra kilogram increases venous pressure

Endovenous treatment: If reflux is confirmed in the trunk veins, **Endovenous Laser Treatment (EVLT)** is the first-choice treatment. A large randomised trial showed that EVLT provides:

- A 95% closure rate after 5 years [7]
- A significant reduction in swelling and symptoms
- A faster return to work than traditional vein stripping [8]

Treatment at Kirurgen.dk

We offer investigation with Doppler ultrasound and Endovenous Laser Treatment (EVLT). Read also about calf cramps and heavy, tired legs.

References

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8. Hamann SAS, et al. *Five-year results of great saphenous vein treatment: a meta-analysis*. Eur J Vasc Endovasc Surg 2017;54(6):760-70.