

## Thread veins on the legs: Spider veins, telangiectasias and venous disease

Fine, red or bluish networks of veins in the skin are called **thread veins** or **telangiectasias** (veins <1 mm) and **reticular veins** (1-3 mm). They are very common - affecting up to **80% of adult women and 50% of men** - and are often the first clinical sign of chronic venous disease [1].

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### What are thread veins?

Thread veins are small, dilated veins close to the skin's surface. Contrary to what the name might suggest, these veins are not broken or bleeding - they are simply enlarged and visible through the skin. On the calves and thighs, they typically appear in clusters or networks and can resemble "[spider veins](#)".

In the CEAP classification system, thread veins are **class C1** - the earliest clinical stage of venous disease [2].

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### Why do they occur?

They develop due to a combination of:

- **Hereditary predisposition** - a family history is present in 60-80% of cases [3]
- **Hormonal factors** - oestrogen and progesterone weaken the vein wall (more common in women, during pregnancy, and with use of the contraceptive pill) [4]
- **Increased venous pressure** from valve dysfunction in the larger, deeper veins
- **Sedentary or standing work**
- **Being overweight**
- **UV exposure** (on the thighs and face)
- **Age** - prevalence increases linearly up to the age of 70

In up to **25%** of patients with thread veins, there is underlying reflux in a larger vein that is driving the problem [5].

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## When is it "just cosmetic" - and when is it more?

On their own, thread veins are usually a cosmetic concern and harmless. However, they can be a **window to underlying venous disease**. Be aware of the following:

- Visible, winding veins on the thigh or calf ([varicose veins](#), C2)
- Swelling around the ankles at the end of the day (C3) - see [swollen legs and ankles](#)
- Heavy, tired legs
- [Cramps in the calf](#) at night
- Itching or a burning sensation around the dilated veins
- Brownish discolouration or eczema (C4) - a sign of advanced venous hypertension

If you have these symptoms, a **Doppler ultrasound** should be performed before any cosmetic treatment - otherwise, there is a high risk of rapid recurrence [6].

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## Assessment

- **Clinical examination in a standing position** (this provides the full picture - not lying down)
- **Doppler ultrasound** if there are accompanying symptoms or visible varicose veins
- Assessment of reflux in the v. saphena magna, v. saphena parva and perforator veins [6]

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## Treatment

**1. Underlying reflux is treated first** If a Doppler ultrasound shows reflux in a trunk vein, this must be closed - otherwise, the thread veins will return. The standard treatment is **Endovenous Laser Treatment (EVLT)**, with a closure rate of up to **95% after 5 years** [7].

**2. Sclerotherapy (injection treatment)** Injection of a liquid or foam agent (polidocanol, sodium tetradecyl sulfate) into the small veins. This is the first-choice treatment for telangiectasias and reticular veins:

- 60-80% visible improvement after 1-3 treatments

- The best evidence supports liquid sclerotherapy for veins <1 mm [8]

**3. Surface Laser (transcutaneous laser)** Typically used for very fine veins (<0.5 mm) or in areas where injections are difficult - e.g., on the ankles or face. It is often used in combination with sclerotherapy.

#### 4. Conservative measures

- Graduated compression stockings for venous symptoms [9]
- Sun protection, weight management, exercise
- Avoiding prolonged static positions (sitting or standing)

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#### What is there no evidence for?

- Creams containing horse chestnut, vitamin K or troxerutin have **no documented effect** on thread veins [10]
- "Natural" dietary supplements do not prevent recurrence if underlying reflux is not treated

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#### Treatment at Kirurgen.dk

We provide assessment with Doppler ultrasound and treat underlying varicose veins with Endovenous Laser Treatment (EVLT) under the public health insurance scheme. Read also about varices (varicose veins) and heavy, tired legs.

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#### References

1. Rabe E, et al. *Bonn Vein Study by the German Society of Phlebology: prevalence and risk factors of chronic venous disorders*. Phlebologie 2003;32:1-14.
2. Eklöf B, et al. *Revision of the CEAP classification for chronic venous disorders: consensus statement*. J Vasc Surg 2004;40(6):1248-52.
3. Cornu-Thénard A, et al. *Importance of the familial factor in varicose disease*. J Dermatol Surg Oncol 1994;20(5):318-26.

4. Ciardullo AV, et al. *High endogenous estradiol is associated with increased venous distensibility and clinical evidence of varicose veins in menopausal women.* J Vasc Surg 2000;32(3):544-9.
5. Engelhorn CA, et al. *Patterns of saphenous reflux in women with telangiectasias and reticular veins.* J Vasc Surg 2007;46(5):964-70.
6. Gloviczki P, et al. *The 2022 SVS/AVF/AVLS clinical practice guidelines for the management of varicose veins.* J Vasc Surg Venous Lymphat Disord 2023;11(2):231-61.
7. Rasmussen LH, et al. *Randomized clinical trial comparing endovenous laser ablation, radiofrequency ablation, foam sclerotherapy and surgical stripping for great saphenous varicose veins.* Br J Surg 2011;98(8):1079-87.
8. Rabe E, et al. *European guidelines for sclerotherapy in chronic venous disorders.* Phlebology 2014;29(6):338-54.
9. Lim CS, Davies AH. *Graduated compression stockings.* CMAJ 2014;186(10):E391-8.
10. Martinez-Zapata MJ, et al. *Phlebotonics for venous insufficiency.* Cochrane Database Syst Rev 2020;11:CD003229.