Restless Legs: When is it Varicose Veins?

"Restless legs" is a common complaint - especially in the evening and at night. For some, it is actually **Restless Legs Syndrome (RLS / Willis-Ekbom disease)**, a neurological condition. For others, it is a sign of **venous-related restlessness** due to chronic venous insufficiency and varicose veins. The two conditions are often confused - and can occur at the same time.

Restless Legs Syndrome (RLS)

RLS affects **5-10% of adults** and is characterised by 4 diagnostic criteria (IRLSSG) [1]:

1. An irresistible urge to move the legs, often accompanied by discomfort
2. Symptoms begin or worsen during rest
3. Symptoms are relieved by movement
4. Symptoms are worse in the evening/at night

The pathophysiology involves dopaminergic dysfunction and **iron deficiency in the brain** - even with normal serum ferritin, a central iron deficiency can be present [2].

Venous-Related Restlessness - The Overlooked Cause

Several studies have shown that a significant proportion of patients who meet the RLS criteria actually have an **underlying venous disease**:

- In a study of 174 patients with RLS, **36% had superficial venous insufficiency** [3]
- Treatment of reflux with sclerotherapy provided complete symptom relief in **53%** and partial relief in a further **30%** [4]
- A more recent study showed a significant reduction in the RLS score after endovenous laser therapy (EVLT) in patients with documented reflux [5]

Clinical rule of thumb: If the patient has visible varicose veins, heavy legs at the end of the day, or swelling around the ankles, a venous assessment should precede dopaminergic treatment.

How to Tell the Difference

Symptom	RLS	Venous-Related Restlessness
Urge to move legs	Strong, dominant	Mild or absent
Relief with movement	Significant	Partial
Relief with elevation	No	Yes
Visible varicose veins	Rarely	Frequently
Evening swelling	No	Yes
Heavy legs	No	Yes
Family history	RLS in relatives	Varicose veins in relatives

Assessment

An assessment for restless legs should include:

- A **clinical venous assessment**, including inspection while standing
- A **Doppler ultrasound scan** if visible veins or other venous symptoms are present [6]
- **Ferritin and transferrin saturation** levels (aim for ferritin >75 µg/L and saturation >20%) [2]
- **TSH, B12, glucose, creatinine** to rule out metabolic causes
- Medication review (antihistamines, SSRIs, neuroleptics can trigger RLS)

Treatment

If a venous cause is dominant:

- Graduated compression stockings (Class II)
- Leg elevation, exercise, weight reduction
- Endovenous Laser Therapy (EVLT) for documented reflux [5]

If RLS is dominant:

- Iron supplementation if ferritin is <75 µg/L [2]
- Review of triggering medications
- Sleep hygiene, avoiding alcohol and caffeine in the evening
- Dopamine agonists (pramipexole, ropinirole) or alpha-2-delta ligands (gabapentin, pregabalin) for severe symptoms
- Referral to a neurology department for treatment-resistant cases

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When Should You See a Doctor?

- Symptoms occurring several times a week for more than a month
- Disrupted sleep at night or daily function
- Visible varicose veins or swelling around the ankles

- Symptoms that worsen at rest and are relieved by movement

Treatment at Kirurgen.dk

We assess for venous disease with Doppler ultrasound and offer endovenous laser therapy (EVLT) through the public health service. Read also about leg cramps and heavy, tired legs.

References

1. Allen RP, et al. *Restless legs syndrome/Willis-Ekbom disease diagnostic criteria: updated IRLSSG consensus criteria.* Sleep Med 2014;15(8):860-73.
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3. McDonagh B, King T, Guptan RC. *Restless legs syndrome in patients with chronic venous disorders: an untold story.* Phlebology 2007;22(4):156-63.
4. Hayes CA, Kingsley JR, Hamby KR, Carlow J. *The effect of endovenous laser ablation on restless legs syndrome.* Phlebology 2008;23(3):112-7.
5. de Carvalho MR, et al. *Endovenous laser ablation in patients with restless legs syndrome and lower-limb venous insufficiency.* J Vasc Surg Venous Lymphat Disord 2020;8(5):820-6.
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.