

Medtronic

Varicose veins? Tired and aching legs? They could be signs of vein disease.

Venous reflux can cause these signs and symptoms¹:

- Varicose veins
- Swelling
- Itching
- Heaviness or tiredness
- Aching
- Cramping
- Restlessness
- Open skin sores

CVI risk factors¹:

- Family history
- Lack of exercise
- Leg injury or trauma
- Prolonged sitting or standing
- Obesity or excess weight
- Current or previous pregnancies
- Smoking
- Blood clot (deep vein thrombosis)

Treatments are available using innovative technology:

- No multiple needle sticks
- Minimal to no bruising²
- Quick return to normal activities^{2,3}



Relief is just
the beginning

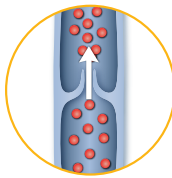
Learn more at:
[Medtronic.com/VaricoseVeins](https://www.Medtronic.com/VaricoseVeins)



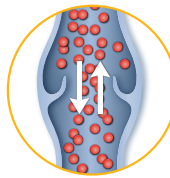
Understanding the cause

About vein disease

Healthy leg veins have valves that keep blood flowing to the heart.



Normal vein
Valves ensure blood flows in one direction.



Diseased vein
Valves that cannot close allow blood to drain and pool.

Venous reflux

Develops when the valves stop working properly and allow blood to flow backward (i.e., reflux) and pool in the lower leg veins.

Chronic venous insufficiency

If venous reflux is left untreated, it may worsen over time and develop into a more serious form of vein disease called chronic venous insufficiency (CVI).⁴

The goal when treating venous reflux disease is to reduce or stop the backward flow of blood.



If you have any of these signs and symptoms, talk to a vein specialist about further diagnosis and minimally invasive treatment options, which are covered by most health insurance plans.

Find a doctor at: [Medtronic.com/FindVeinDoctor](https://www.Medtronic.com/FindVeinDoctor)
Learn more at: [Medtronic.com/VaricoseVeins](https://www.Medtronic.com/VaricoseVeins)

VenaSeal™ Closure System Brief Statement

Intended Use/Indications: The VenaSeal™ closure system (VenaSeal system) is indicated for use in the permanent closure of lower extremity superficial truncal veins, such as the great saphenous vein (GSV), through endovascular embolization with coaptation. The VenaSeal system is intended for use in adults with clinically symptomatic venous reflux as diagnosed by duplex ultrasound (DUS). **Contraindications:** Separate use of the individual components of the VenaSeal closure system is contraindicated. These components must be used as a system. The use of the VenaSeal system is contraindicated when any of the following conditions exist: previous hypersensitivity reactions to the VenaSeal adhesive or cyanoacrylates, acute superficial thrombophlebitis, thrombophlebitis migrans, acute sepsis. **Potential Adverse Effects of the Device on Health:** The potential adverse effects (e.g., complications) associated with the use of the VenaSeal system include, but are not limited to, adverse reactions to a foreign body (including, but not limited to, nonspecific mild inflammation of the cutaneous and subcutaneous tissue), arteriovenous fistula, bleeding from the access site, deep vein thrombosis (DVT), edema in the treated leg, embolization, including pulmonary embolism (PE), hematoma, hyperpigmentation, hypersensitivity or allergic reactions to cyanoacrylates, such as urticaria, shortness of breath, and anaphylactic shock, infection at the access site, pain, paresthesia, phlebitis, superficial thrombophlebitis, urticaria, erythema, or ulceration may occur at the injection site, vascular rupture and perforation, visible scarring. Warnings, precautions, and instructions for use can be found in the product labeling at <http://manuals.medtronic.com>.

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.

References

- ¹ Chronic Venous Insufficiency. Johns Hopkins Medicine. Available at: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/chronic-venous-insufficiency>. Accessed May 10, 2022.
- ² Morrison N, Gibson K, McEnroe S, et al. Randomized trial comparing cyanoacrylate embolization and radiofrequency ablation for incompetent great saphenous veins (VeClose). *J Vasc Surg.* April 2015;61(4):985-994.
- ³ Gibson K, Ferris B. Cyanoacrylate closure of incompetent great, small and accessory saphenous veins without the use of post procedure compression: Initial outcomes of a post market evaluation of the VenaSeal System (the WAVES Study). *Vascular.* April 2017;25(2):149-156.
- ⁴ Eberhardt RT, Raffetto JD. Chronic venous insufficiency. *Circulation.* July 22, 2014;130(4):333-346.

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