

**FIND  
RELIEF  
FROM  
VARICOSE  
VEINS**

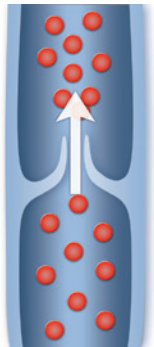
**ClosureFast™**  
Procedure

**Medtronic**  
Further, Together



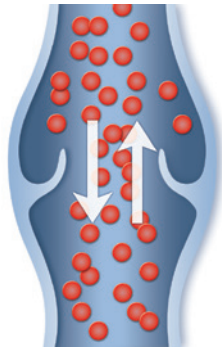
# UNDERSTAND

Varicose veins may be a sign of something more severe—**venous reflux disease.**



**NORMAL VEIN**

Valves ensure blood flows in one direction



**DISEASED VEIN**

Valves that cannot close allow blood to drain and pool

Healthy leg veins have valves that keep blood flowing to the heart. Venous reflux disease develops when the valves stop working properly and allow blood to flow backward (i.e., reflux) and pool in the lower leg veins.

If venous reflux disease is left untreated, symptoms can worsen over time. **Your doctor can help you understand if you have this condition.**<sup>1</sup>

Superficial venous reflux disease may cause the following **signs and symptoms** in your legs:<sup>2</sup>

**Varicose veins**

**Aching**

**Swelling**

**Cramping**

**Heaviness or tiredness**

**Itching**

**Restlessness**

**Open skin sores**

## Many factors contribute to the presence of venous reflux, including:<sup>3</sup>

- Age
- Gender
- Family history
- Heavy lifting
- Multiple pregnancies
- Obesity
- Prolonged standing

Using ultrasound to scan your leg(s), your physician will determine if venous reflux is present.



Varicose Veins



Swelling and  
Skin Discoloration

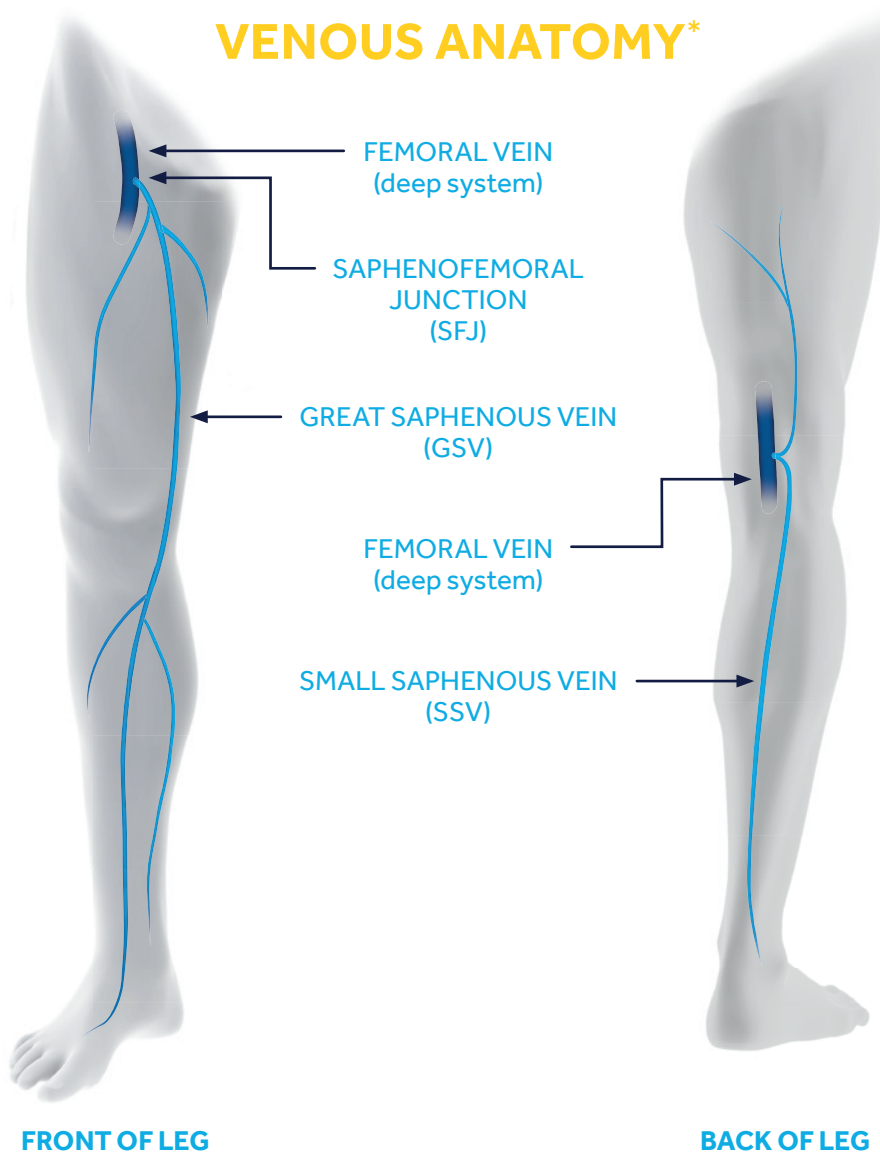


Skin Color and  
Texture Changes



Venous Ulcers

# VENOUS ANATOMY\*

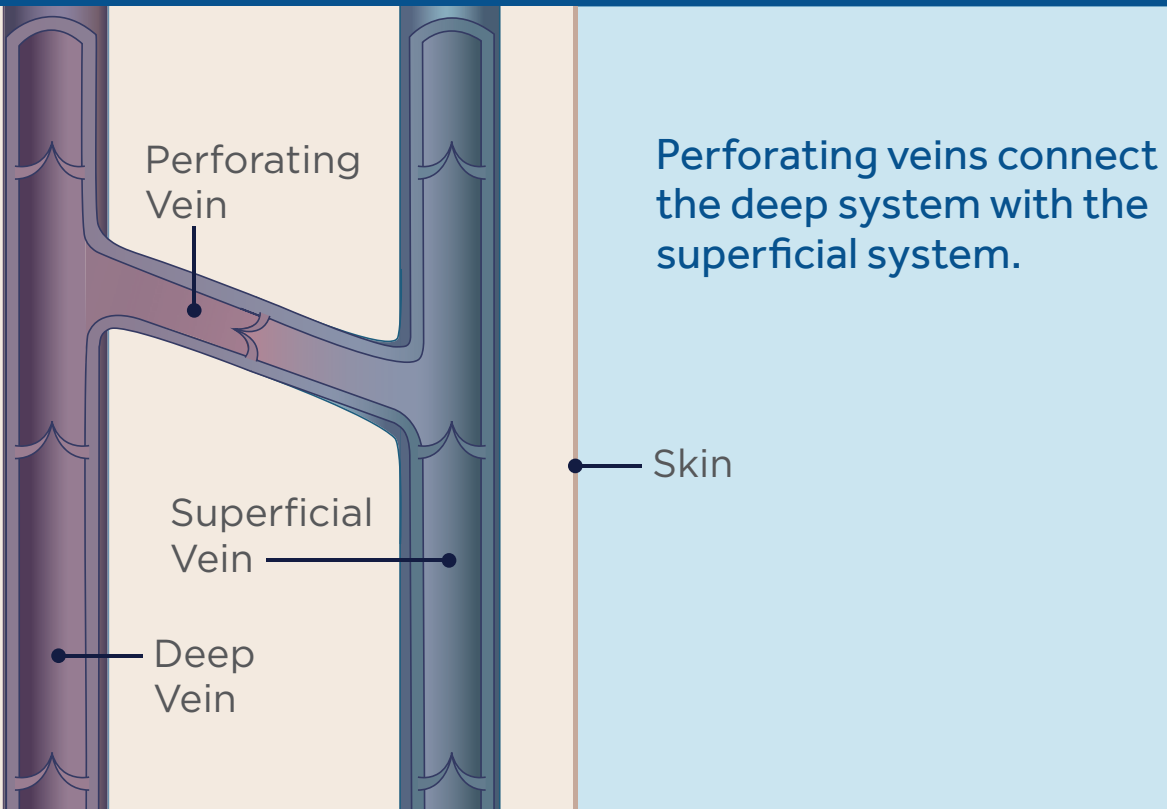


\*Representative of venous anatomy.

## The venous system is made up of a network of veins, including:

- **SUPERFICIAL VEINS** – veins located close to the surface of the skin
- **DEEP VEINS** – larger veins located deep in the leg
- **PERFORATING VEINS** – veins that connect the superficial veins to the deep veins

The ClosureFast™ procedure treats venous reflux in the superficial venous system, often the underlying cause of painful varicose veins.



# TREAT

Superficial venous reflux disease treatment aims to reduce or stop the backward flow of blood. One treatment option is the ClosureFast™ procedure. **Over 2 million patients** have been treated with the ClosureFast™ procedure in **over 100 countries around the world:**

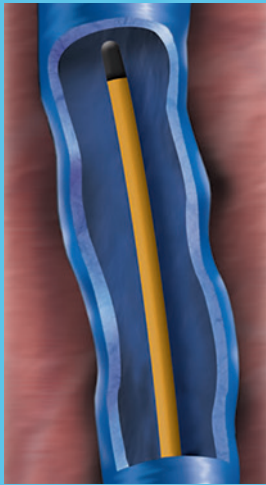
- Consistent and controlled treatment
- Proven outcomes with rapid recovery<sup>4</sup>
- A positive patient experience<sup>4</sup>

ClosureFast™  
Procedure

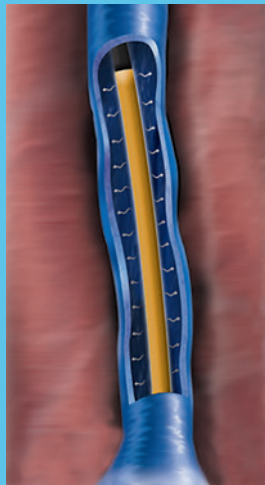


**The ClosureFast™ procedure** is performed on an outpatient basis. Using ultrasound, your physician will position the catheter into the diseased vein through a small opening in the skin.

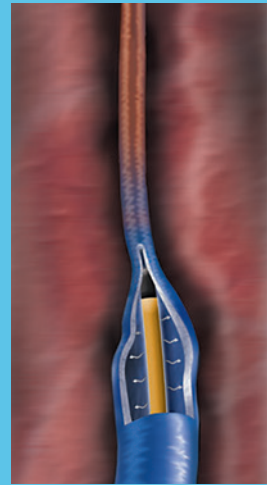
The small catheter delivers heat to the vein wall, causing it to shrink and the vein to seal closed. Once the diseased vein is closed, blood will reroute itself to other healthy veins.



Disposable catheter inserted into vein



Controlled heat collapses vein



Catheter withdrawn, closing vein

Following the procedure, a simple bandage is placed over the insertion site, and additional compression may be provided to aid healing. Your doctor may encourage you to walk, and to refrain from extended standing and strenuous activities for a period of time. The average patient typically resumes normal activities within a few days.<sup>5</sup>

## PROVEN OUTCOMES

### Studies have shown:

- Relief of symptoms after two days with a noticeable improvement in one to two weeks
- Less pain than laser—an outpatient procedure with local or general anesthesia<sup>4</sup>
- Proven results with positive patient outcomes and experience<sup>4,9</sup>
- Rapid recovery—on average patients resume normal activities within a few days<sup>5</sup>

Before Treatment



6 Weeks  
After Treatment\*



\* Individual results may vary.

Images courtesy of Jonathan Calure, M.D. of Maryland Vein Professionals.

The ClosureFast™ procedure is covered by most insurance providers for patients diagnosed with venous reflux disease. Speak with your insurance provider prior to seeking treatment.



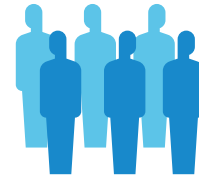


**25%**

of the global  
adult population  
**(30 million people)**  
are affected by  
venous reflux  
disease<sup>2,7</sup>

Of those people,

**17%**



are diagnosed<sup>2,7</sup>



Only

**1%**

are actually treated<sup>2,7</sup>

**With proper treatment, the progressive symptoms  
of venous reflux disease are preventable.**

## FREQUENTLY ASKED QUESTIONS

### Q: Is the ClosureFast™ procedure painful?

**A:** Most patients report feeling little, if any, pain during the ClosureFast™ procedure.<sup>4</sup> Your physician should give you a local or regional anesthetic to numb the treatment area.

### Q: How quickly can I resume normal activity?

**A:** Patients treated with the ClosureFast™ procedure may resume normal activities more quickly than patients who undergo surgical vein stripping or laser ablation. With the ClosureFast™ procedure, the average patient typically resumes normal activities within a few days.<sup>5</sup> For a few weeks following the treatment, your vein specialist may recommend a regular walking regimen and suggest you refrain from very strenuous activities (heavy lifting, for example) or prolonged periods of standing.

### Q: How soon after treatment will my symptoms improve?

**A:** Most patients report relief of symptoms after two days with a noticeable improvement in one to two weeks.

### Q: Is there any scarring, bruising, or swelling after the procedure?

**A:** Most patients report limited to no scarring, bruising, or swelling following the ClosureFast™ procedure using the ClosureFast™ catheter.<sup>4</sup>

### Q: How is the ClosureFast™ procedure different from endovenous laser?

**A:** Although the ClosureFast™ procedure and 980 nm endovenous laser ablation are both minimally invasive procedures, a comparative, multicenter study showed that the ClosureFast™ procedure was associated with statistically significant lower rates of pain, bruising, and complications. Patients undergoing the ClosureFast™ procedure also reported improvements in quality of life measures up to four times faster than patients treated with 980 nm endovenous laser ablation.<sup>4</sup>

### Q: How is the ClosureFast™ procedure different from vein stripping?

**A:** During vein stripping, incisions are made in the groin and calf, and a tool is threaded through the diseased vein to pull the vein out of the leg. With the ClosureFast™ procedure, only one small incision is made at the insertion site and the vein is then treated and left in place. This minimally invasive approach reduces the likelihood of pain and bruising associated with vein stripping surgery.<sup>8,9</sup>

### Q: Is the ClosureFast™ procedure covered by insurance?

**A:** Many insurance companies pay for the ClosureFast™ procedure in part or in full. The ClosureFast™ procedure has coverage policies with major health insurers. Please discuss your coverage with your insurance provider prior to seeking treatment.



**RELIEF**  
IS JUST THE  
**BEGINNING**

# RELIEF IS JUST THE BEGINNING

Visit [medtronic.com/endovenous](http://medtronic.com/endovenous) to receive more information about venous reflux disease and the ClosureFast™ procedure.

## REFERENCES:

\* Statistics based on individuals over the age of 40

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4. Almeida JJ, Kaufman J, Göckeritz O, et al. Radiofrequency endovenous ClosureFast versus laser ablation for the treatment of great saphenous reflux: a multicenter, single-blinded, randomized study (RECOVERY Study). J Vasc Interv Radiol. 2009;20:752-759.
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8. Lurie F, Creton D, Eklof B, Kabnick LS, Kistner RL, Pichot O, et al. Prospective randomized study of endovenous radiofrequency obliteration. (Closure procedure) versus ligation and stripping in a selected patient population (EVOLVE Study). J Vasc Surg 2003;38:2:207-14
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**IMPORTANT:** Indications, contraindications, warnings and instructions for use can be found in the product labeling supplied with each device.

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