

THE
Closure[®]
PROCEDURE

> Finally.

*A solution to leg pain
and varicose veins.*

➤ **Do you experience
discomfort, swelling &
varicose veins?**

**If so, you may be suffering from
superficial venous reflux disease.**

Approximately 25 million people in the United States suffer from this condition. Traditionally, patients diagnosed with venous reflux would undergo vein stripping surgery. Now, patients can be treated with the Closure® procedure — a minimally invasive alternative to painful vein stripping surgery.

**98% of patients who have undergone the
Closure procedure are willing to recommend
it to a friend or family member.¹**



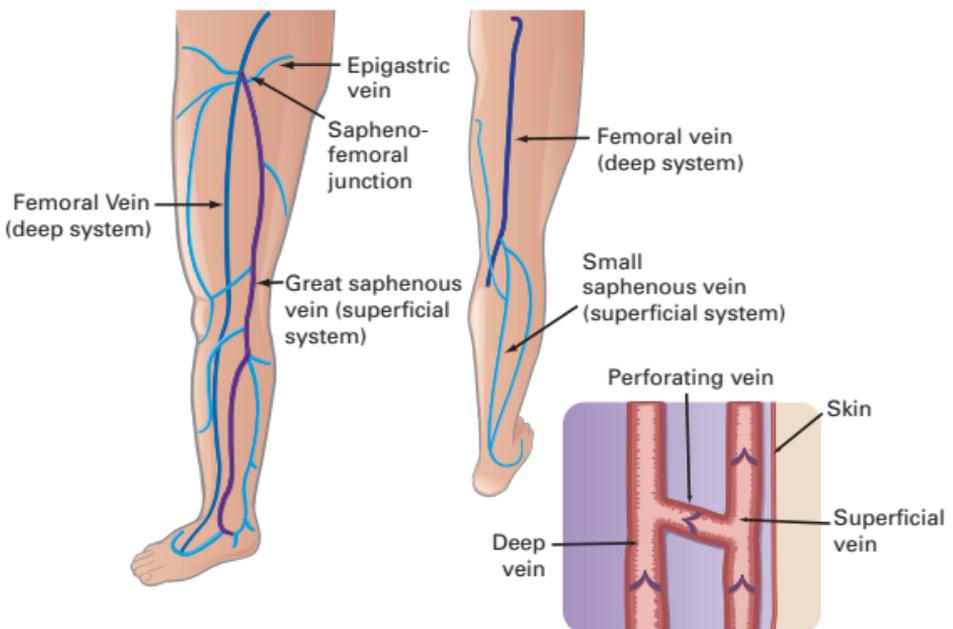
The Venous System Anatomy

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

- **Superficial veins**
- **Deep veins**

Perforator veins connect the deep and superficial venous systems.

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



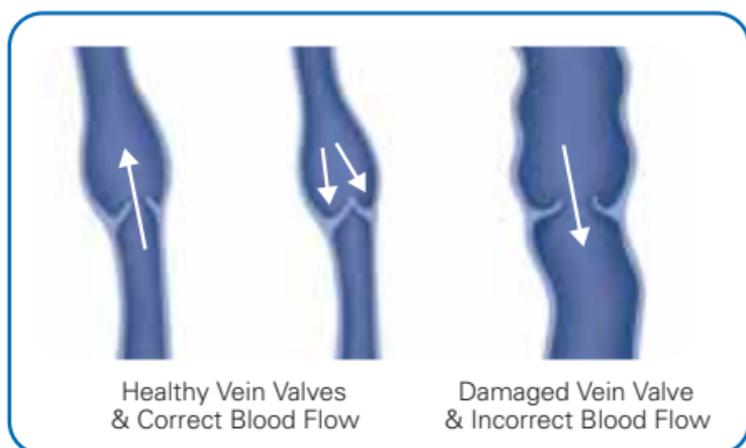
Perforating veins connect the deep system with the superficial system

Understanding Venous Reflux Disease

Healthy leg veins contain valves that open and close to assist the return of blood back to the heart. Venous reflux disease develops when the valves that keep blood flowing out of the legs and back to the heart become damaged or diseased. As a result, vein valves will not close properly, leading to symptoms of:

- Varicose veins
- Pain
- Swollen limbs
- Leg heaviness and fatigue
- Skin changes and skin ulcers

Superficial venous reflux disease is progressive — symptoms will worsen over time if left untreated.



Are You a Candidate?

Many factors contribute to the presence of venous reflux disease, including:

- Age
- Gender
- Family history
- Multiple pregnancies
- Obesity
- Standing profession

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

Speak with your physician about determining your candidacy for the Closure procedure.



Closure[®]

Experience the Closure Procedure

The Closure procedure is performed on an outpatient basis. Using ultrasound, your physician will position the Closure Catheter into the diseased vein, through a small opening in the skin. The tiny catheter delivers radio-frequency (RF) energy to the vein wall. As the RF energy is delivered and the catheter is withdrawn, the vein wall is heated causing the collagen in the wall to shrink and the vein to close. Once the diseased vein is closed, blood is re-routed to other healthy veins.



“The procedure was quick and nearly pain free. I was active following the Closure procedure, and noticed immediate relief of symptoms. For me, the Closure procedure was a success!” ~ Mary C.

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.

Patients who undergo the Closure procedure typically resume normal activities within a day.

The Closure procedure enjoys widespread health insurance coverage.

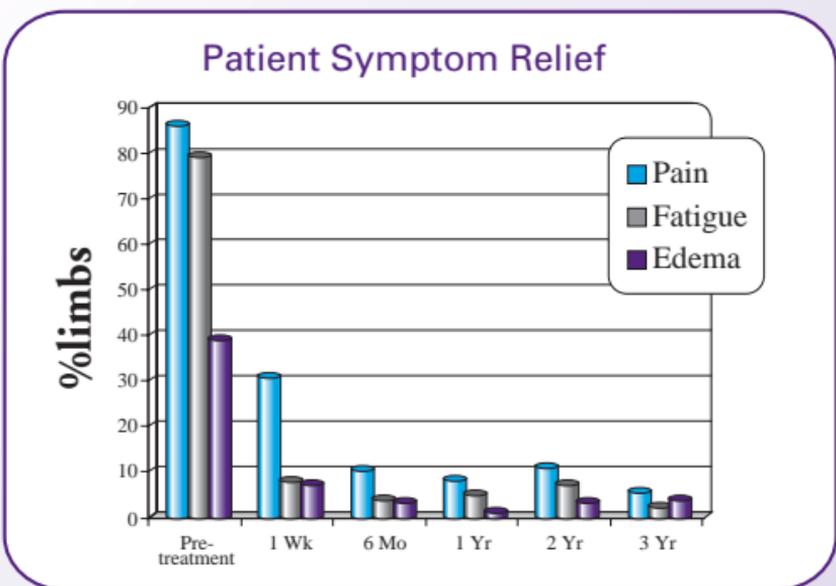
A Treatment That Works

In a comparative trial versus vein stripping surgery, results were in favor of the Closure procedure. Findings indicated that patients who underwent the Closure procedure:²

- Experienced less post-operative pain and bruising
- Resumed normal activities within one day
- Returned to work more than a week earlier than vein stripping patients

At two years following treatment, patients who had undergone the Closure procedure reported superior quality of life compared to vein stripping patients.³

The Closure procedure has proven to be highly effective, with higher than 90% of veins treated remaining reflux-free at two years.³ Results also demonstrate long-term relief of symptoms:⁴



For additional clinical results, log onto www.vnus.com

Visual Results⁵

The Closure procedure results in good cosmetic outcome with minimal to no scarring, bruising or swelling.



Pre-treatment



One week post-treatment*

*Individual results may vary.

“The cosmetic appearance of my legs has improved significantly. The bulging veins are no longer present. Now, I look forward to wearing skirts and showing off my legs during the summer months.”

~ Sandra C.

Adjunctive Treatments

To achieve good cosmetic outcome, many physicians choose to provide adjunctive treatment(s) either at the same time or following the Closure procedure. To address visible varicosities, ambulatory phlebectomy may be performed. To treat purple or red “spider veins,” your physician may perform sclerotherapy. Through these procedures, diseased and noticeable veins are removed or collapsed, to improve the cosmetic appearance of your legs.



Frequently Asked Questions

Q: Is the Closure procedure painful?

A: Patients report feeling little, if any, pain during and after the procedure.

Q: How quickly can I resume normal activity?

A: Patients are walking immediately following the procedure, and patients typically resume normal activities within one day.

Q: How soon will my symptoms improve?

A: Many patients notice an immediate relief of symptoms such as pain, leg heaviness and fatigue. The full benefits of the procedure may take 1-2 weeks.

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

A: Patients report minimal to no scarring, bruising, or swelling following the Closure procedure.

Q: How is the Closure procedure different from vein stripping?

A: During vein stripping, incisions are made in the groin and calf, and a stripper tool is threaded through the diseased vein, to pull the vein out of the leg. With the Closure procedure, only one small puncture is made at the insertion site and the vein is then closed and left in place. This minimally invasive approach eliminates pain and bruising associated with vein stripping surgery.

Q: What if I need the vein for bypass surgery in the future?

A: The Closure procedure treats diseased veins only, which are not appropriate for bypass surgery. Physicians can use other healthy vessels should bypass surgery be necessary.

Q: Is the VNUS Closure procedure covered by insurance?

A: Most major health insurers cover the Closure procedure. Your physician can discuss your coverage further at the time of the consultation.

Safety Summary

As with any medical intervention, potential risks and complications exist with the Closure procedure. You should consult your physician to receive further information.

The Closure System is intended for endovascular coagulation of blood vessels in patients with superficial venous reflux. It is contraindicated in patients with thrombus in the vein segment to be treated.

Potential complications include, but are not limited to, vessel perforation, thrombosis, pulmonary embolism, phlebitis, hematoma, infection, paresthesia, skin burn.

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References:

- ¹ Weiss, R, et al. Controlled radiofrequency endovenous occlusion using a unique radiofrequency catheter under duplex guidance to eliminate saphenous varicose vein reflux: A 2-year follow-up. *Dermatology Surgery* 2002; 38-42.
- ² Lurie F, Creton D, Eklof B, Kabnick LS, Kistner RL, Pichot O, et al. Prospective randomized study of endovenous radiofrequency obliteration (Closure) versus ligation and stripping in a selected patient population (EVOLVES study). *J Vasc Surg* 2003;38:207-14.
- ³ Lurie F, et al. EVOLVeS 2-year results. Presentation at the XVII annual meeting of European Society for Vascular Surgery, Dublin, Sep 5-7, 2003.
- ⁴ Data on file – VNUS Medical Technologies, Inc.
- ⁵ Photos courtesy of Michael A. Vasquez, MD, F.A.C.S.

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