

FREQUENTLY ASKED QUESTIONS

Q: Is the Vein Ablation procedure painful?

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

Q: How quickly can I resume normal activity?

A: Patients are encouraged to walk immediately following the procedure, and most patients resume normal activities within 2-4 days.

Q: How soon after treatment will my symptoms improve?

A: Most patients report a noticeable improvement in their symptoms within 1-2 weeks following the procedure. Most patients report minimal to no scarring, bruising, or swelling following the Vein Ablation procedure.

Q: How is the Vein Ablation 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 Vein Ablation procedure, only one small incision is made at the insertion site and the vein is then closed and left in place. This minimally invasive approach virtually eliminates pain and bruising associated with vein stripping surgery.^{1,2}

Q: Is the Vein Ablation procedure covered by insurance?

A: The Vein Ablation procedure is covered by most health insurances for symptomatic patients diagnosed with venous reflux.

References

¹ LurieF, 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

² Hinchliffe RJ, et al. A prospective randomised controlled trial of VNUS Closure versus Surgery for the treatment of recurrent long saphenous varicose veins. Eur J Vasc Endovasc Surg 2006 Feb;31;2:212-218

Additional Available Venous Procedures

Venous Micro Phlebectomy
Sclerotherapy
Intravascular Ultrasound of Deep Iliac Veins

Do you experience the discomfort and swelling of varicose veins?

If so, you may be suffering from Chronic Venous Insufficiency. 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 Vein Ablation procedure, a minimally invasive and more comfortable alternative to painful vein stripping surgery.



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EXPERT PHYSICIANS

Our physicians are board certified in Cardiology and Interventional Cardiology with extensive experience in diagnostic and interventional procedures of the heart and peripheral vascular system. In addition to vein ablation, our physicians perform angioplasty, atherectomy and stenting for lower extremity peripheral arterial disease.

Additional areas of expertise include percutaneous coronary revascularization, endovascular abdominal aortic aneurysm repair and percutaneous intervention of the renal and carotid arteries.

Vascular Center of Michigan

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Do you have VARICOSE VEINS?

If yes, you may suffer from venous reflux disease. Our cardiologists are experts in the diagnosis and treatment for Chronic Venous Insufficiency.



We can help you return to a more active and enjoyable lifestyle

**VASCULAR CENTER
OF MICHIGAN**



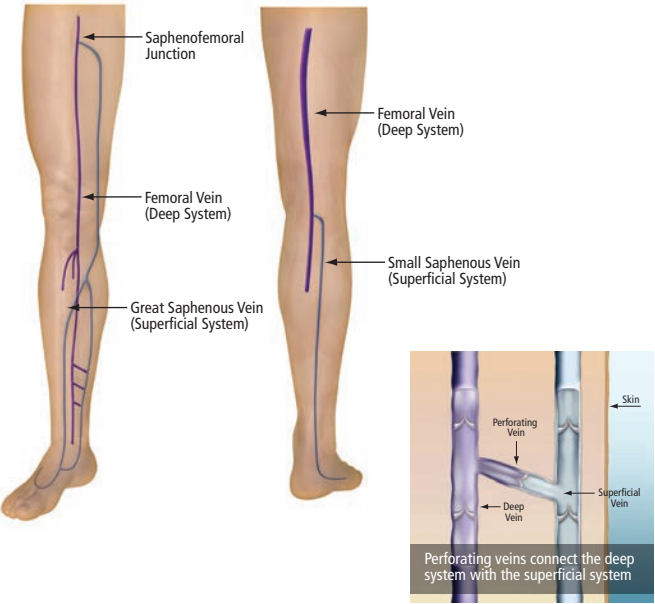
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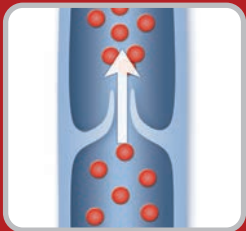
THE VENOUS SYSTEM ANATOMY

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.
- Perforator veins- veins that connect the superficial veins to the deep veins.



Healthy Vein Valve



Healthy valves keep blood moving in one direction

Diseased Vein Valve



Diseased valves cause blood to move in both directions, elevating venous pressure

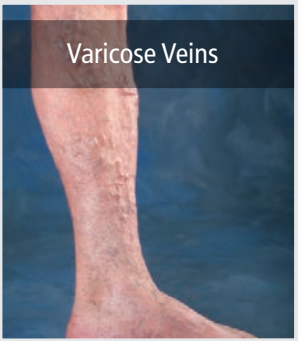
UNDERSTANDING VENOUS REFLUX DISEASE

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:

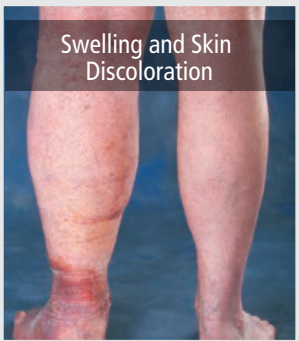
- Varicose veins
- Leg heaviness and fatigue
- Leg pain
- Skin changes
- Swollen limbs
- Skin ulcers
- Nighttime cramps
- Restless legs

VENOUS REFLUX DISEASE IS PROGRESSIVE — SYMPTOMS CAN WORSEN OVER TIME IF LEFT UNTREATED.

A Serious Progressive Disorder



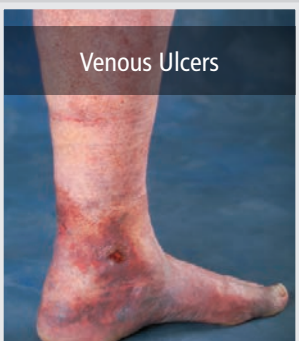
Varicose Veins



Swelling and Skin Discoloration



Skin Color and Texture Changes



Venous Ulcers

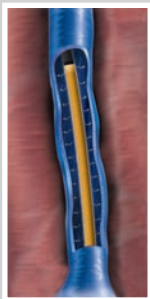
Photos courtesy of Rajabrata Sarkar, MD, PhD.

VEIN ABLATION PROCEDURES

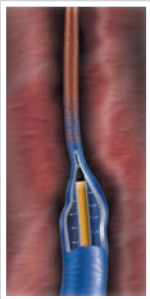
The Vein Ablation procedure is performed on an outpatient basis. Using ultrasound, your physician will position the Ablation catheter into the diseased vein through a small opening in the skin. The tiny catheter powered by radiofrequency (RF) energy delivers heat to the vein wall. As the thermal energy is delivered, the vein wall shrinks and the vein is sealed closed. Once the diseased vein is closed, blood is re-routed 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 will be provided to aid healing. Your doctor will encourage you to walk, and to refrain from extended standing and strenuous activities for a period of time. Most patients who undergo the Vein Ablation procedure typically resume normal activities within 2-4 days.

PROCEDURAL HIGHLIGHTS

- Relief of symptoms
- Outpatient procedure
- Can be performed under local anesthesia
- Most patients resume normal activities within 2-4 days
- Good cosmetic outcome with minimal or no scarring, bruising or swelling¹

VISUAL RESULTS¹



Pre-treatment



Post-treatment*

*Individual results may vary.

¹Photo courtesy of Vein Institute of the North Shore, Beverly, MA

ARE YOU A CANDIDATE?

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

- Age
- Gender
- Family history
- Heavy lifting
- Multiple pregnancies
- Obesity
- Standing or sitting profession

Using ultrasound to scan your leg(s), your physician will determine if venous reflux is present as well as the level and severity of venous reflux.

INDICATIONS: TMThe Vein Ablation procedures treat leg veins

in the superficial and perforating systems that have venous reflux, the underlying cause of varicose veins and venous ulcers. Individual results may vary based on each patient's condition.

CONTRAINDICATIONS: Patients with thrombus (blood clots) in the vein segment to be treated should not have the Vein Ablation TM Procedures.

POTENTIAL COMPLICATIONS: As with all medical procedures, potential risk and complications exist including vessel perforation (when the catheter punctures the vein wall), thrombosis, pulmonary embolism (when a blood clot travels to the lungs), phlebitis (inflammation of the vein), infection, nerve damage, arteriovenous fistula (an abnormal connection between an artery and a vein), hematoma (bruising), and skin burn. Consult with a physician to receive more information.