

Varicose Veins

What Are Varicose Veins?

A condition called venous insufficiency causes varicose veins. This is an abnormal circulatory condition with decreased return of blood from leg veins up to the heart, with pooling of blood in the veins. Varicose veins are prominent, superficial veins that have lost their valve effectiveness and as a result of dilation under pressure, have become elongated, bulged and thickened close to the skin's surface. Any vein may become varicose, but the most commonly affected areas are the legs and feet.

What Is Venous Insufficiency?

As blood flows through your veins from your legs up to your heart, stop valves in your veins are supposed to close to keep blood from flowing downward with gravity. As you age, your veins can lose elasticity, causing them to stretch. When the valves in the vein become weak and do not close properly, they allow blood to flow backwards, or reflux, and pool in the veins. This forces the vein walls to enlarge and bulge out. This abnormal circulatory condition is called venous insufficiency.

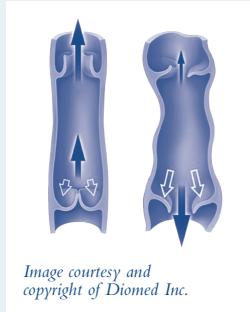


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For other people, varicose veins may cause any or all of the following symptoms:

What Are the Symptoms?

For many people, varicose veins and spider veins — a common, mild and medically insignificant variation of varicose veins — are simply a cosmetic concern.

- aching pain, fatigue or heaviness in the leg
- burning, throbbing, cramping or swelling in the leg
- enlarged veins readily seen under the skin of the leg
- brownish-gray discoloration or ulceration on the lower leg
- itching around a vein

Some people may not have visible varicose veins but still experience symptoms caused by dilated veins, as well as spider veins, that place pressure on their nerves. Often symptoms of varicose veins worsen as the day progresses. Many people who experience these symptoms find they need to sit down in the afternoon and elevate their legs to relieve their discomfort.

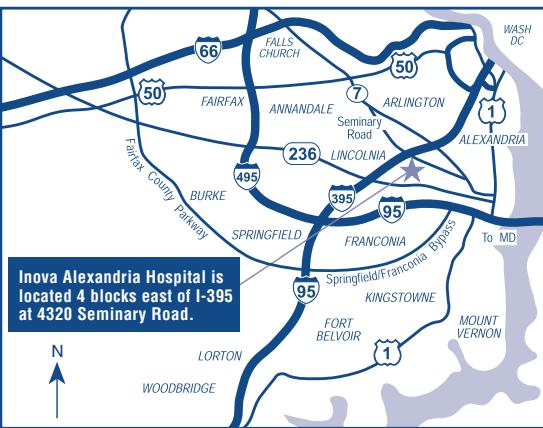
Severe cases of venous insufficiency can cause skin discoloration, ulceration or swelling, which require immediate medical attention.

Who Is at Risk for Varicose Veins?

Risk factors include age, family history, female gender and pregnancy. In women, pregnancy, especially multiple pregnancies, is one of the most common factors that accelerates the worsening of varicose veins. Additional factors that do not cause varicose veins but may speed or worsen their development include obesity, prolonged standing or physical trauma to the lower limbs. Varicose veins affect one out of two people age 50 and older, and 15 to 25 percent of all adults.

How Is Venous Insufficiency Diagnosed?

An ultrasound test is used to painlessly map the veins of the legs to assess vein anatomy, vein valve function and blood flow changes. The saphenous veins and all deep and superficial veins of the legs are examined to determine if the veins are open and to identify reflux. This test will help your interventional radiologist determine the most appropriate treatment options for you.



Inova Health System is a not-for-profit health care system based in Northern Virginia that consists of hospitals and other health services including emergency and urgent care centers, home care, nursing homes, mental health and blood donor services, and wellness classes. Governed by a voluntary board of community members, Inova's mission is to provide quality care and improve the health of the diverse communities we serve.

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Treatment Options

How Are Varicose Veins Treated?

People who experience mild symptoms can ease their discomfort by following a few simple lifestyle recommendations. These include exercising regularly, maintaining a healthy weight, wearing loose-fitting clothes, elevating the legs during rest, wearing elastic support stockings and avoiding long periods of standing or sitting.

However, if you experience severe symptoms, it may be necessary to medically treat your varicose veins. Your physician can help you decide which treatment is best for you based on the size and type of veins affected and the severity of your symptoms. Your options may include the following:

- **Vein ligation or stripping** are surgical procedures that remove or "strip" faulty veins from the leg. These procedures can be painful, have a long recovery time, and can result in the recurrence of varicose veins.
- **Ambulatory phlebectomy** is a minimally invasive surgical technique used to treat varicose veins that are not caused by saphenous vein reflux. The varicose veins are removed through a series of tiny skin punctures.
- **Sclerotherapy** is the injection of a vein-shrinking solution that is used to treat spider veins and very small varicose veins.
- **Vein ablation (Endovenous Laser Treatment (EVLT®) and VNUS® Closure®)** is a minimally invasive alternative to surgery that uses laser or radiofrequency energy to close faulty veins to eliminate bulging and symptoms while leaving the vein in its place. This causes much less trauma to the leg and fewer side effects than surgery.

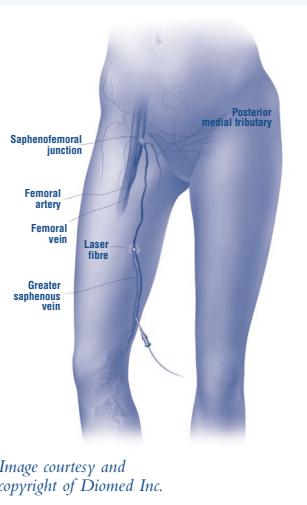
Vein Ablation

How Is Vein Ablation Performed?

This minimally invasive treatment is an outpatient procedure performed by an interventional radiologist - a doctor specializing in the use of imaging techniques to see inside the body and treat conditions without surgery.

During vein ablation, the interventional radiologist applies a local anesthetic to the skin, then inserts a thin catheter, about the size of a strand of spaghetti, into the vein. The catheter is inserted through a tiny entry point, usually near the knee. Using imaging guidance, the catheter is guided up the greater saphenous vein in the thigh. Then laser or radiofrequency energy is applied to the inside of the vein, heating and shrinking the vein walls, causing them to seal the faulty vein so blood cannot flow through it. By closing the greater saphenous vein, the varicose veins shrink and improve in appearance. The treatment takes less than one hour.

Inova Alexandria Hospital's interventional radiologists perform both Endovenous Laser Treatment (EVLT®) and VNUS® Closure® radiofrequency vein ablation procedures to treat varicose veins.



Is the Loss of this Vein a Problem?

No. After treatment, the blood in the faulty veins is diverted to the many normal veins in the leg, re-establishing normal flow.

What Happens After the Procedure?

After the procedure, your doctor may ask you to walk, wear compression stockings and refrain from rigorous activity for a period of time. Many patients resume normal activities within a day, with little or no pain. There is no scar because the procedure does not require a surgical incision.

What Are the Complications of this Procedure?

You may experience the discomfort of minor soreness and bruising, which can be treated with over-the-counter, non-aspirin pain relievers as needed. Few patients also experience numbness, which passes quickly. You should talk with your doctor about the possible complications if any procedure you may choose.

How Successful Is Vein Ablation?

More than nine people out of ten who have had vein ablation remain reflux free for nearly two years. This is a higher efficacy rate than surgical vein ligation or stripping.

Does Insurance Cover EVLT® and VNUS® Closure®?

Many insurance carriers cover EVLT® and VNUS® Closure®, based on medical necessity and symptom relief.

Cardiovascular and Interventional Radiology at Inova Alexandria Hospital

Inova Alexandria Hospital's Cardiovascular and Interventional Radiology program treats a variety of medical conditions without traditional surgery.

Our nationally recognized, board-certified interventional radiologists perform minimally invasive procedures using small incisions, tiny instruments and imaging techniques. These procedures are generally less traumatic to patients than surgery, and result in less pain and shorter hospital stays.

Our interventional radiologists performed the first peripheral and renal angioplasty and stent placement in Northern Virginia. Our team also performed the first abdominal aortic stent graft in Northern Virginia. They were some of the first doctors in the Mid-Atlantic Region to perform uterine fibroid embolization (UFE), and have one of the largest and most successful UFE programs in the country.

Our interventional radiologists are experts at treating varicose veins, peripheral vascular disease (PVD), spinal bone fractures, abdominal aortic aneurysms and stroke. Each year they perform thousands of procedures. For more information, call **703-504-7950** or visit www.inova.org.

Targeted Treatment

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to make an appointment, call
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