

VARICOSE VEINS

PATIENT INFORMATION

About Varicose Veins:

Varicose veins are twisted, enlarged veins often dark blue in color, near or raised above the surface of the skin. Varicose veins are often a symptom of an underlying condition called venous insufficiency.

Veins are the blood vessels that return deoxygenated blood to the heart. Valves in the vein open to allow the blood to pass through and close to prevent reflux, or the backward flow of blood.

There are three types of veins:

- Deep veins are located deep in the leg between muscle and tough fibrous tissue. They are responsible for returning 90-95% of the deoxygenated blood back to the heart.
- Superficial veins are small veins at the skin's surface, responsible for taking blood from the skin and returning it to the heart.
- Perforating veins link the deep and superficial veins together.

Cause:

In healthy veins, blood travels in one direction only, towards the heart. In contrast, varicose veins are abnormal or damaged veins that have lost their ability to efficiently return the deoxygenated blood back to the heart. Blood leaks back through weakened valves and pools in the vein, distending and twisting the vein. This condition is called venous reflux and is often the underlying cause of varicose veins. Any of the vein types may become varicose. There are multiple causes of varicose veins, and treatments differ by cause and severity of symptoms.

Contributing Risk Factors:

An estimated 10-20% of adult Americans have varicose veins. While the cause of varicose veins is not known, a number of contributing risk factors have been identified.

- Heredity - Varicose veins tend to run in families. A defect in vein walls or valves is the greatest contributing factor in 70% of cases.
- Gender - Women are much more likely to get varicose veins than men.
- Age - Presence of varicose veins is a progressive condition that worsens in frequency and severity with age.
- Obesity - Excess weight increases the pressure on vein valves and can lead to their weakening.
- Hormones - Changes in hormone levels brought on by puberty, pregnancy, menopause, hormone replacement therapy and the birth control pill can cause varicose veins to develop.
- Pregnancy - An increased progesterone level, increased volume of blood in the body and increased pressure on the pelvic veins are all contributors. Veins usually improve within 3 months after delivery and may disappear completely. However, more abnormal veins are likely to develop and persist after subsequent pregnancies.
- Occupation - People whose jobs require them to stand or sit for prolonged periods of time have an increased risk of developing varicose veins. While standing still or sitting, there is an increase of blood pressure on the closed vein valves that contributes to their weakening.

Occasionally, varicose veins may appear as a symptom of a more serious medical condition such as:

- Blood clots or blockage in the deep veins or perforating veins
- Injury to the deep veins
- Arteriovenous fistulas, an abnormal passageway between arteries and veins.

Symptoms:

People with varicose veins may notice visibly twisted, swollen veins just below the skin's surface. In addition, some will experience discomfort from swelling, throbbing or cramping at night. Additionally, because the skin tissue around the varicose vein may not be receiving enough nourishment, itching or burning of the skin over the vein is not uncommon. In cases where the symptoms are mild and limited to the above, home treatment can be very successful and medical treatment is usually not necessary.

In cases where the varicose veins are symptomatic of more serious vein problems, the patient may experience more severe signs and symptoms including:

- Fluid buildup or swelling in the leg.
- Swelling and pain in the calf after sitting or standing for an extended period of time.
- Changes in the color and pigmentation in the skin around the ankles and lower legs.
- Dry, itchy skin or rashes in the area of the varicose vein
- Open sores or ulcers

More severe symptoms such as these may be reduced through one of a number of medical procedures. Only a doctor can determine whether a particular medical procedure is appropriate.

Exams and Tests:

If your varicose veins become red, swollen or tender and warm to the touch, you should see a doctor. If you experience heaviness, fatigue, or pain in your legs, you should consult a physician. Additionally, if you have a rash or sores on your leg or ankle or are experiencing circulation problems in your feet, you should see a doctor. Your doctor will perform a physical exam and take a medical history. In addition, your doctor may use duplex ultrasound to take pictures of the blood flow through the vein and assess the cause and severity of the problem.

There are multiple causes of varicose veins, and treatments differ by cause and severity of symptoms.

Possible Complications:

Varicose veins are common and are not generally associated with more severe health problems. However, they can become painful, unattractive and worsen over time. Varicose veins can cause legs and feet to swell, create a sense of fatigue in leg muscles and throbbing and cramping at night. The skin surrounding the veins may also itch and burn.

In some severe cases, a clogging of the vein can prevent the blood from returning to the heart. This condition is called venous insufficiency and can lead to problems like a deep-vein thrombosis (blood clot) or a severe bleeding infection. Patients with venous insufficiency often benefit from medical treatment.

You should see a doctor if the varicose veins have become swollen, red or tender or warm to the touch.

Common Treatment Options:

For people with only mild symptoms, home treatment is the recommended course of action. While home treatments are not a cure, they will help to alleviate discomfort and slow the progression of the condition.

Home Treatment:

- Maintain a healthy weight.
- Exercise regularly to improve leg strength and circulation. Walking and running are particularly good exercises for preventing varicose veins.

- Elevate your legs when resting to ease the pressure required for the leg veins to return the blood to the heart.
- Wear elastic support stockings

Medications:

There is no drug available for the treatment of varicose veins.

Surgical Procedures:

If complications develop or symptoms become more severe despite home treatment, it may be necessary to medically treat or surgically remove the damaged veins. **The course of treatment depends on the size and type of vein and the severity of the damage.**

PROCEDURES FOR SMALL VARICOSE VEINS AND SPIDER VEINS:

→ **Sclerotherapy** is a non-surgical treatment for varicose veins, that involves injecting a saline or detergent-like solution into the vein, causing the lining of the vein wall to swell, stick together and ultimately seal shut. Once the vein is sealed, the flow of blood is stopped and scar tissue develops in the vein. With the diseased vein sealed, blood is forced into healthier veins. The treated vein is absorbed and eventually becomes nearly invisible. Sclerotherapy may need to be performed multiple times over the course of weeks or months to achieve the desired results. Sclerotherapy is commonly used to treat small veins or to improve the appearance of larger veins after more invasive corrective surgery. The American Academy of Dermatology states that most patients will experience a 50%-90% improvement in the appearance of varicose veins if the procedure is performed correctly. The procedure is minimally invasive, does not require anesthesia and can be performed in a doctor's office. Side effects of Sclerotherapy may include mild stinging, bruising, and rashes around the injection site. These symptoms usually disappear. Additionally, the vein could become infected, inflamed or lumps of coagulated blood may develop. These symptoms are not dangerous and can usually be decreased by applying heat, taking aspirin or antibiotics to relieve inflammation or by draining the coagulated blood. If Sclerotherapy is performed strictly for cosmetic purposes, the procedure will likely not be covered by insurance. However, treatment may be covered if medically necessary.

→ Medium-sized and larger varicose veins can be removed by a procedure called stab avulsion or **Phlebectomy**. This procedure can be performed using local or general anesthesia. Small stab incisions are made in the skin to allow a tool to be placed through the skin to hook the vein and pull it out through the skin incision. The vein is then pulled until it breaks, causing the varicose vein to be removed in pieces. This process is repeated until all targeted varicose veins have been eliminated. Common side effects may include pain, bruising, hematoma, and bleeding.

→ **Laser surgery** can be used to destroy spider veins by sending a very strong beam of light onto the vein, making the vein slowly disappear. There are no needles or incisions. Patient discomfort is limited to a small pinch when the laser hits the skin. This can usually be soothed by cooling the skin prior to and after the 15 - 20 minute procedure. Side effects are minimal and include some redness and swelling of the skin that disappears within a few days. Patients may also notice some skin discoloration for a week or two after treatment. Most veins require two to five treatments to achieve the desired results.

PROCEDURES FOR LARGE OR DEEP VARICOSE VEINS:

→ Vein Ligation and Stripping:

Until recently, vein Ligation and stripping was the standard for treating larger or perforating varicose veins. These veins are treated by making an incision over the vein and tying off the vein. If the majority of the valves in the vein are healthy, Ligation can be used to isolate the faulty valves and the remaining vein may be left in place to continue circulating blood. If the vein is heavily damaged it is usually removed, or stripped. To strip a vein, an incision is made below the vein and the vein is grasped and removed. Most people are able to return to their normal daily and recreational activities within a few weeks.

Vein Ligation and stripping is effective in producing long-term results in 85% of people. Some common side effects from vein stripping and Ligation surgery may include temporary pain or discomfort, bruising, hematoma, numbness, and less frequently wound infection.

Vein stripping is an invasive procedure and should not be performed on older individuals for whom surgery poses a risk due to other medical conditions. It is also not an appropriate choice for people who have circulatory problems of the legs, skin infections, blood-clotting defects or an abnormal passageway between an artery and vein. Pregnant women are also inappropriate candidates for vein stripping.

→ VNUS® Closure® Procedure - Radio Frequency Ablation (RFA)

The VNUS Closure® procedure is a minimally invasive treatment alternative to traditional vein stripping surgery for venous reflux, the underlying cause of varicose veins. The Closure® system was cleared for marketing in the US in March 1999. The Closure® procedure is becoming increasingly popular as doctors become more familiar with this treatment. The procedure is done by placing a very small tube (catheter) into the vein to deliver radio frequency energy to the vein wall, causing it to collapse and seal shut. Once the diseased vein is sealed, healthy veins will take over and redirect the blood flow.

The procedure is minimally invasive and can be performed under local anesthesia in a doctor's office. Patients have reported feeling little, if any pain, during the procedure and most return to their normal activity within a day. Some common side effects may include temporary tenderness and numbness. Most patients report a noticeable improvement in their symptoms in 1-2 weeks following the procedure and experience good cosmetic outcomes with little to no scarring. None of the procedures will prevent new varicose veins from developing in alternate veins.

Prevention:

There is no way to prevent varicose veins from occurring. However, by adhering to the following suggestions, you may be able to alleviate symptoms of varicose veins and slow down the progression of the condition.

- Maintain a healthy weight to avoid placing excess pressure on your legs.
- Avoid crossing your legs while sitting.
- Do not sit or stand for extended periods of time. Be sure to shift your weight from side to side or get up and stretch every 30 minutes.
- Avoid tight clothing that might constrict your waist, groin or legs, such as garter belts.
- Wear elastic support stockings
- Control your salt-intake to prevent inadvertent water retention and swelling.

Since the majority of vein procedures are required by insurance companies to have pre-approval to rule out cosmetic issues and to establish medical necessity, our billing office will be happy to assist you with any questions on our office policies regarding varicose vein procedures.

PLEASE NOTE: PRE-APPROVAL FROM AN INSURANCE COMPANY DOES NOT GUARANTEE PAYMENT. IN MOST CASES A DOWN PAYMENT IS REQUIRED.