

Information for Patients : Patient Information Brochure

INTRODUCTION

If you suffer from problems related to varicose and spider veins, you are not alone. It is estimated that more than 80 million Americans suffer from some form of venous disorder.

While some people seek treatment for cosmetic improvement, many seek relief from pain. Help is available.

This on-line brochure contains useful information about the evaluation and treatment of varicose and spider veins. Special attention is given to recent advancements.

WHAT ARE VARICOSE VEINS?

Arteries bring blood from the heart to the extremities, veins, which have one-way valves, channel blood back to the heart. If the valves don't function well, blood doesn't flow efficiently. The veins become enlarged because they are congested with blood. These enlarged veins are commonly called spider veins or varicose veins. Spider veins are small red, blue or purple veins on the surface of the skin. Varicose veins are larger distended veins that are located somewhat deeper than spider veins.

Pain in the legs is frequently related to abnormal leg veins. Symptoms, often made worse by prolonged standing, include feelings of fatigue, heaviness, aching, burning, throbbing, itching, cramping, and restlessness of the legs. Leg swelling can occur. Severe varicose veins can compromise the nutrition of the skin and lead to eczema, inflammation or even ulceration of the lower leg.

Vein disorders are not always visible; diagnostic techniques are important tools in determining the cause and severity of the problem. In addition to a physical examination, non-invasive ultrasound is often used.

WHAT CAUSES VARICOSE VEINS?

Heredity is the number one contributing factor causing varicose and spider veins. Women are more likely to suffer from abnormal leg veins. Up to 50% of American women may be affected. Hormonal factors including puberty, pregnancy, menopause, the use of birth control pills, estrogen, and progesterone affect the disease. It is very common for pregnant women to develop varicose veins during the first trimester. Pregnancy causes increases in hormone levels and blood volume which in turn cause veins to enlarge. In addition, the enlarged uterus causes increased pressure on the veins. Varicose veins due to pregnancy often improve within 3 months after delivery. However, with successive pregnancies, abnormal veins are more likely to remain. Other predisposing factors include aging, standing occupations, obesity and leg injury.

HOW PHLEBOLOGY CAN HELP

Phlebology is the field of medicine that deals with vein diseases. It has been an established medical specialty in Europe for 50 years; serious interest in phlebology has developed over the last 15 years in the United States.

The American College of Phlebology was founded in 1985 and is the largest phlebology society in the United States. It was

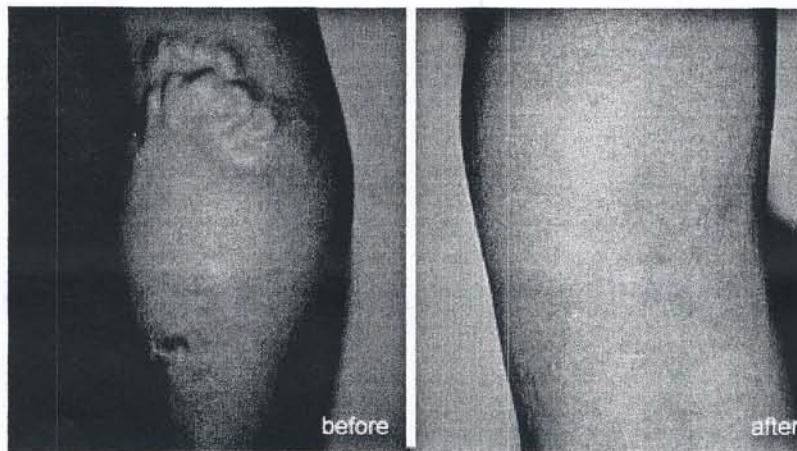
(Image courtesy of VNUS Medical Technologies, Inc.)

SURGERY

Surgical techniques to treat varicose veins include ligation (tying off of a vein), stripping (removal of a long segment of vein by pulling it out with a special instrument), and ambulatory phlebectomy (removal of veins through tiny incisions, SEE SECTION BELOW). Surgery may be performed using local, spinal or general anesthesia. Most patients return home the same day as the procedure. Surgery is generally used to treat large varicose veins.

AMBULATORY PHLEBECTOMY

Ambulatory phlebectomy is a method of surgical removal of surface varicose veins. This is usually done in the office using local anesthesia. Incisions are tiny (stitches are generally not necessary) and typically leave nearly imperceptible puncture mark scars. After the vein has been removed by phlebectomy, a bandage and/or compression stocking is worn for a short period.



Varicose veins before and after ambulatory phlebectomy.

Individual results can vary.

(Photos courtesy of S. Zimmet, MD)

LASER/LIGHT SOURCE TREATMENT

A variety of laser/light source treatments are available today. A light beam is pulsed onto the veins in order to seal them off and cause them to dissolve. Light-based treatment is generally used only to treat small veins. Treatments may be combined with sclerotherapy. Multiple treatments are usually required.

WHAT RESULTS CAN YOU EXPECT?

With the evaluation and treatment methods available today, spider and varicose veins can be treated at a level of effectiveness and safety previously unattainable. Regardless which treatment method is used, its success depends in part on careful assessment of the problem by a knowledgeable phlebologist.

HOW CAN I GET MORE INFORMATION?

established to improve the standard of care related to disorders of the veins. Its members are physicians and other health care professionals with backgrounds in a variety of medical specialties who share a common interest and expertise in vein diseases and disorders.

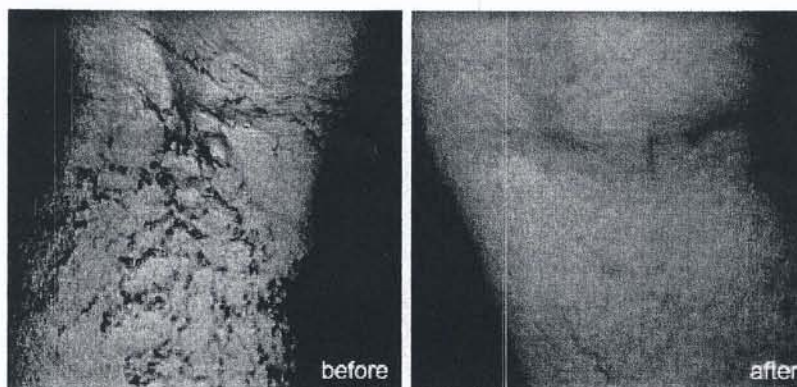
WHEN AND HOW ARE VEINS TREATED?

The most commonly asked questions are: Do veins require treatment and What treatment is best? Veins that are cosmetically unappealing or cause pain or other symptoms are prime candidates for treatment. There are two general treatment options: conservative measures, such as compression stockings, and "corrective" methods such as sclerotherapy, surgery and light source/laser treatment. In some cases, a combination of treatment methods works best.

SCLEROTHERAPY

Sclerotherapy can be used to treat both varicose and spider veins. A tiny needle is used to inject the veins with a medication that irritates the lining of the vein. In response, the veins collapse and are reabsorbed. The surface veins are no longer visible. Sclerotherapy relieves symptoms due to varicose and spider veins in most patients. With this procedure, veins can be dealt with at an early stage, helping to prevent further complications.

You may need anywhere from one to several sclerotherapy sessions for any vein region. Depending on the type and number of veins being treated you may have one to many injections per session. Generally, normal activities can be resumed after sclerotherapy. Medically prescribed support hose and/or bandages may need to be worn for several days to several weeks to assist in resolution of the veins. The procedure, performed in the doctor's office, usually causes only minimal discomfort. Bruising and pigmentation may occur after sclerotherapy. Bruising typically disappears within 1-2 weeks. Although pigmentation almost always fades, it can last for several months. Scarring and other complications are rare.



Varicose veins before and after sclerotherapy.

Individual results can vary.

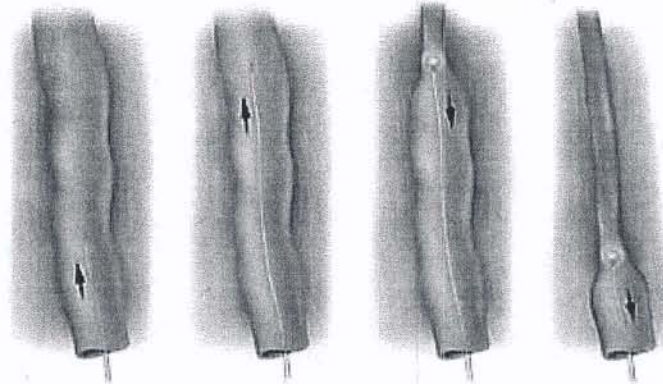
(Photos courtesy of S. Zimmet, MD)

ULTRASOUND-GUIDED SCLEROTHERAPY

This is an in-office treatment alternative to surgical stripping. With this technique, sclerotherapy is done while the doctor visually monitors the vein on an ultrasound screen. This enables treatment of veins that can't be seen because they are below the surface of the skin and would otherwise require surgical removal.

ENDOVENOUS LASER TREATMENT

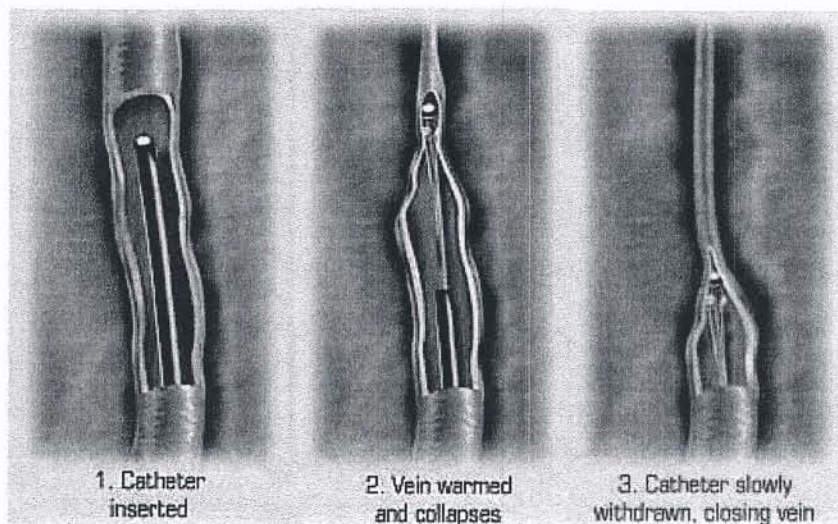
Endovenous Laser Treatment is a treatment alternative to surgical stripping of the greater saphenous vein. A small laser fiber is inserted, usually through a needle stick in the skin, into the damaged vein. Pulses of laser light are delivered inside the vein, which causes the vein to collapse and seal shut. The procedure is done in-office under local anesthesia. Following the procedure a bandage or compression hose is placed on the treated leg. Endovenous Laser Treatment is FDA-approved for the treatment of the greater saphenous vein.



Schematic of endovenous laser treatment
(Image courtesy of Diomed, Inc.)

RADIOFREQUENCY OCCLUSION (CLOSURE® PROCEDURE)

The Closure® procedure is a treatment alternative to surgical stripping of the greater saphenous vein. A small catheter is inserted, usually through a needle stick in the skin, into the damaged vein. The catheter delivers radiofrequency energy to the vein wall, causing it to heat. As the vein warms, it collapses and seals shut. The procedure is generally done in an outpatient or in-office setting. It may be done under local anesthesia. Following the procedure, the catheter is removed and a bandage or compression stocking is placed on the treated leg. The Closure® procedure is FDA approved for the treatment of the greater saphenous vein.



Schematic of Closure® procedure