

What causes Varicose, Reticular and Spider Veins?

Veins in the legs return blood to the right side of the heart. There are two sets, deep veins, that carry more than 90% of the blood, and superficial veins, which are just under the skin and on top of the muscles, and account for 10% and eventually empty into the deep veins.

Valves in the veins along with the calf muscles assist in pumping blood back up to the heart when standing. If the valves in the superficial veins do not work properly this leads to reflux – back flow of blood down the vein. Over time, blood pools causing veins to dilate and bulge. These dilated veins are varicose veins. Spider and reticular veins may also form. Over a period of time the leg may begin to swell; other symptoms of varicose veins include pain, aching, itching, fatigue, restless legs, cramping, and spontaneous bleeding. Non-healing ulcers may form in some cases and these will not heal until the vein is treated.

Incompetent valves may be hereditary, the result of pregnancy, prior phlebitis, or due to injury to the leg veins.

How is Venous Disease treated?

Compression Hose Stockings with Conservative Therapy

Graduated medical compression stockings are prescribed for all patients with venous disorders. This is often a prerequisite for medical coverage for further therapies. In addition to leg elevation and anti-inflammatory medication, this is considered first line treatment and is referred to as conservative therapy.

Compression stockings are graduated, meaning the highest pressure is applied at the ankle and decreases up the leg. This helps upward blood flow to the heart while standing thus reduces the pressure inside the affected veins.

Stockings are available in different lengths: calf, thigh, and pantyhose. Modern stockings are fitted, comfortable to wear, durable, and breathable. With proper care they should last up to six months.

Conservative therapy reduces symptoms and aids healing after other therapies.

It is recommended that they be worn for at least two weeks after endovascular laser vein ablation and at least one week after other therapies. Patients with venous disorders should wear compression stockings for as long as reasonable to prevent recurrence of symptoms (even after the therapies discussed next).

We recommend SIGVARIS compression hose. The Vein Center is a certified dealer with certified fitters that measure you for the proper size and fit.

Endovascular Laser Ablation

Reflux of the saphenous veins and its larger branches can be treated with a laser catheter.

All procedures are done in the office using a local anesthetic called tumescent. Tumescent is a dilute solution of lidocaine with normal saline and bicarbonate. This combination makes the solution comfortable, without the burning sensation of pure lidocaine. It is very fast acting and lasts for several hours after the procedure.

During the procedure, you will feel a small stick of a needle in order to numb the area. Through that area, a small needle is inserted into the vein followed by a guide wire, catheter and the laser fiber. Once the laser catheter is in place, you will experience a few needle sticks and some pressure while the anesthetic is placed around your vein. Once numb, the laser is activated while slowly withdrawing it. The heat from the laser causes damage to the vessel so blood is unable to flow backwards. Over time, the vein becomes a scar. This procedure improves the circulation by ensuring that blood travels in the correct direction. Symptoms improve quickly and many patients state they see and feel relief in a matter of days.

After the procedure, your legs will be wrapped – this can be removed the next day. Compression stockings should be worn for the next 2 weeks. An anti-inflammatory, such as Ibuprofen, is often given. You may resume normal activities within 2 days. Bruising is normal and mild discomfort is common.

Phlebectomy

Phlebectomy can also eliminate large bulging varicose veins. This can be done at the same time as the laser ablation but is frequently delayed, as veins may get smaller after the ablation. Typically, they do not go away completely, therefore phlebectomy will give you the best cosmetic result.

The area will be marked with a pen while you are standing. It will then be numbed by injecting a very dilute solution called tumescent. Once you are numb, small incisions (2mm) are made and the bulging veins are gently removed. The incisions are so small that stitches are not required. After the procedure, your legs will be wrapped – this can be removed the next day. Compression stockings should be worn for 2 weeks. Little to no discomfort is expected after the procedure. Normal activities can be resumed in 2 days.

Ultrasound Guided Sclerotherapy

Ultrasound Guided Sclerotherapy is used when deeper veins cause symptoms or when veins still contribute to existing varicose veins. It is a very simple procedure that takes less than 30 minutes to perform. Using the ultrasound, your physician will locate the vein and slowly inject a solution, Sotradecol, which damages the vessel walls. Over time, your body reabsorbs damaged veins much like it would a bruise.

Expect some mild bruising and on occasion you may experience hard lumps where the veins were. These may be tender but will resolve over time. You may experience brownish discoloration after these injections but that will also resolve over time. Compression stockings should be worn for 1 week after the injection and normal activities can be resumed within 1-2 days. You should schedule a follow up appointment in 1 month. It is possible a second session may be required.

Treatment Overview

The evaluation and treatment of your varicose, reticular, and spider veins involves a process that may take up to six months for a satisfactory result. A standard treatment process includes the following:

- An initial evaluation by our physician.
- An ultrasound examination looking primarily for venous reflux in the veins of your legs.
- A follow up visit to review the findings and discuss a treatment plan.

If **endovascular laser ablation** treatment is recommended, this may be covered by your medical insurance – we submit all necessary documentation for authorization which may take up to four weeks.

Phlebectomy may be combined with the other procedures, this will lengthen your treatment plan.



Before

After

Welcome to the Vein Center at Windward Heart

The Vein Center at Windward Heart is a clinic specializing in the treatment of vein disorders of the legs including varicose, reticular and spider veins. This brings state of the art care to Windward Oahu, for this neglected disease.

Treatment is provided by Drs Sonny Wong and Maria Markarian, who are both board certified in Cardiovascular Disease. They offer experienced quality care with a combined clinical experience of over forty years.

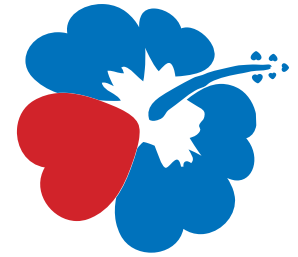
The doctors are both Fellows of the American College of Cardiology and are also on the staff at Castle Medical Center. Dr Wong has been voted one of the Best Doctors in America by his peers. He has also trained with Dr Ronald Bush, at the Midwest Vein and Laser Center. Dr Bush is one of the world's leading experts in the treatment of venous disease.

All treatments are performed in the Windward Heart office as an outpatient procedure with local anesthesia. This markedly reduces the cost when compared to the traditional treatments which were performed in a hospital setting with general anesthesia. Patients are up and about with very little down time and discomfort.

The Vein Center offers the most up to date and modern care for venous disease. The treatments offered include endovascular laser vein ablation, ultrasound guided sclerotherapy for perforator reflux, laser ablation of spider veins and sclerotherapy for spider and reticular veins.

If you have any questions regarding the material in this brochure or scheduling, contact our main office on (808) 261 VEIN.

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