

Varicose Veins No More... A New Treatment

Jonathan Calure, M.D.



Varicose veins, often mischaracterized as a cosmetic problem are actually a sign of an underlying disorder of the circulatory system called venous insufficiency. This condition is an enormous problem in the USA as it afflicts five times as many as arterial disease. By age sixty, 70% of women and 40% of men will suffer from this condition. Left untreated, it can become a chronic, debilitating, and sometimes limb-threatening condition. A new, minimally invasive, office based treatment called the Closure® Procedure offers excellent relief from varicose vein disease.

To understand the treatment of varicose veins, it is important to understand their cause, venous insufficiency. Our circulatory system has four components; the heart, arteries, tissue capillaries, and veins. The heart pumps blood through the arteries to the tissues.

Blood filters through tiny capillaries where oxygen and nutrients are delivered. Blood then circulates back to the heart and lungs through the veins. Whereas the heart pressurizes the blood for the trip to the tissues, this pressure is lost to the resistance of the capillary bed, so the pressure directing blood back to the heart in the veins is low. In the head, arms, and chest, gravity helps pull blood into the heart. However gravity works against the return of blood from the lower half of the body. The return of blood from the legs is directed by a series of one-way valves. When we walk, the veins are compressed as our muscles pump. Blood within the veins moves when they are compressed, and when the valves are working properly blood flows up towards the heart. When these valves leak, gravity wins the battle and pulls blood down.

These leaky or insufficient valves are the underlying mechanism of varicose vein disease. Much like driving

where one goes from driveway to side street to major road to interstate, the return of blood through the veins proceeds through ever-larger branches. In the legs, the tiny veins in the skin (driveways) empty into larger branches below the skin (side streets), and then into the Greater Saphenous Vein, or GSV. The GSV runs from the ankle to the groin where it joins the large femoral vein, returning blood to the larger veins in the pelvis. Now what would happen if the valves in the GSV were to leak and allow gravity to pull blood down into the leg instead of returning to the heart?

This reverse flow through the GSV forces veins to progressively enlarge to varicosities. Over time this unhealthy circulatory pattern leads to tissue damage, including swelling, dermatitis, and ulceration. As the blood is not flowing, the varicosities may clot, causing phlebitis, or they may rupture and bleed. Additional risks of untreated



Disposable catheter inserted into vein

Vein warmed and collapses

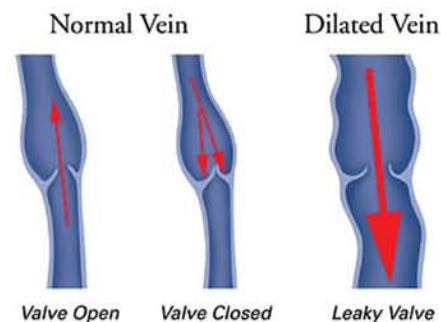
Catheter withdrawn, closing vein

venous insufficiency include deep venous thrombosis and pulmonary embolism, a potentially fatal event. Patients with venous insufficiency may complain of aching, fatigue, itching or restless legs. Symptoms worsen at the end of the day. Relief is obtained with leg elevation, support stockings and pain medication. Because symptom onset is gradual, this disease may take decades to become apparent. All too often patients and physicians alike defer seeking care.

"Spider Veins" or telangiectasias are an early sign of venous insufficiency that appear when tiny skin veins, previously invisible, become engorged and enlarge. We evaluate many patients who present for treatment of spider veins, who have had these treated, only to see reappearance after 6-12 months. A careful ultrasound evaluation will usually show a deeper source of reflux in the GSV.

A new outpatient treatment called the Closure® Procedure uses radiofrequency energy to close the leaky GSV, and eliminate a major cause of varicose veins. With the Closure Procedure, a tiny catheter placed into the GSV delivers a form of light energy to the vein wall. This energy causes collagen in the vein to change shape, closing the vein. This elegant procedure is completed in about an hour with minimal or no discomfort and a return to work or normal activity the same day. Closure is covered by most insurances and is performed in an office setting. Clinical studies have shown outstanding safety, efficacy, and patient satisfaction. Patients are delighted with symptom relief and cosmetic improvement, 98% of whom would recommend Closure for a friend. Please visit our Website, www.MDVeinProfessionals.com for more information or call us at 877-7MD-VEIN for free physician screening. We have offices conveniently located in Chevy Chase, Columbia, Clarksville, and Elkridge, Maryland.

As a Cardiovascular Surgeon, Dr. Calure holds two American Board Certifications, in General Surgery as well as Thoracic and Cardiovascular Surgery. As a lifelong resident of Maryland, Dr. Calure completed his General Surgery Residency and his Cardiac Surgery Fellowship at the University of Maryland Hospital in Baltimore. As one of the first physicians in the region to perform The Closure® procedure, Dr. Calure is now one of the most experienced physicians in the Baltimore-Washington region with this new technology.



Normal Vein

Dilated Vein

Valve Open

Valve Closed

Leaky Valve

Varicose Veins?

The Closure® procedure may be the answer.



There is a solution to the discomfort, swelling and appearance of varicose veins that doesn't involve painful vein stripping.

- Minimal or no pain
- Covered by most insurances
- Performed by Board Certified expert in Cardiovascular Surgery
- Patients return to normal activities the same day

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