

Relief from varicose veins is possible.

## See and feel a difference in your legs.

### Understanding the cause

#### About vein disease

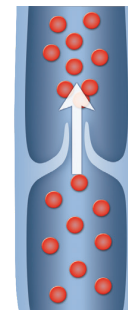
Healthy leg veins have valves that keep blood flowing to the heart.

**Venous reflux** develops when the valves stop working properly and allow blood to flow backward (i.e., reflux) and pool in the lower leg veins.

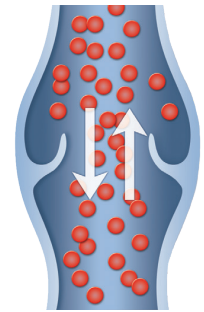
#### Chronic venous insufficiency

If venous reflux is left untreated, it may worsen over time and develop into a more serious form of vein disease called chronic venous insufficiency (CVI).<sup>1</sup>

**Normal vein**  
Valves ensure blood flows in one direction



**Diseased vein**  
Valves that cannot close allow blood to drain and pool



### CVI symptoms and risk factors

If CVI is left untreated, symptoms can worsen over time. Using ultrasound to scan your leg(s), your physician will determine if vein disease is present.

#### Signs and symptoms in the legs or ankles<sup>2,3</sup>

- Varicose veins
- Aching or pain
- Swelling
- Cramping
- Heaviness or tiredness
- Itching
- Restlessness
- Skin changes and/or discoloration
- Open sores or ulcers

#### Risk factors<sup>2</sup>

- Family history
- Lack of exercise
- Leg injury or trauma
- Prolonged sitting or standing
- Obesity or excess weight
- Current or previous pregnancies
- Smoking
- Blood clot (deep vein thrombosis)

CVI and varicose veins are more common than you think. More than 30 million people in the United States have venous reflux or the more serious disease, CVI.<sup>3</sup>

### Treatment options for lasting relief

With proper treatment, the progressive symptoms of venous reflux are preventable. Your doctor can help determine which treatment is right for you.

Photos shown are for the ClosureFast™ procedure, before treatment and six weeks after treatment. These photos are illustrative of general results a patient might expect with the ClosureFast procedure or the VenaSeal™ procedure. Individual results may vary. Talk to your doctor about which treatment option might be right for you. Photos courtesy of Dr. Jonathan Calure.



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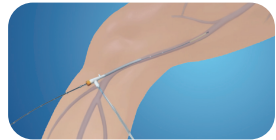
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## Two treatment options

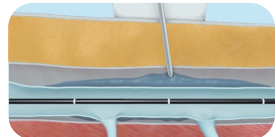
### Treatment option 1 – thermal vein closure

The ClosureFast™ procedure uses radiofrequency energy or heat to close the diseased vein, which redirects blood flow to healthy veins, relieving symptoms.

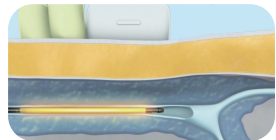
Possible complications of the ClosureFast procedure may include nerve injury, hematoma, phlebitis, thrombosis, and/or pulmonary embolism. Talk to your doctor about the risks and benefits.



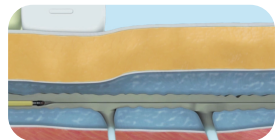
● A thermal catheter is placed in the vein.



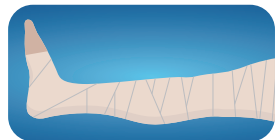
● A series of injections places numbing medication around the vein.



● The vein is heated and the catheter is withdrawn from the vein.



● The vein is "heat-sealed" along its length.

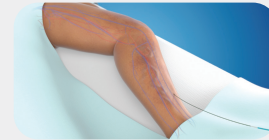


● The catheter is removed and a multilayer compression wrap is applied from foot to groin.

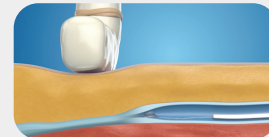
### Treatment option 2 – nonthermal vein closure

The VenaSeal™ procedure delivers a small amount of a specially formulated medical adhesive to close the diseased vein, which redirects blood flow to healthy veins, relieving symptoms.

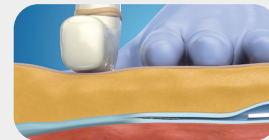
Possible complications of the VenaSeal procedure may include allergic reaction, inflammation, phlebitis, deep vein thrombosis, and/or pulmonary embolism. Talk to your doctor about the risks and benefits.



● A delivery catheter is placed in the vein.



● Advanced medical adhesive is applied.



● Light external pressure is applied to adhere the vein walls together.



● These steps are repeated for the length of the vein.



● The catheter is removed and a single adhesive bandage is applied.

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## Leg vein anatomy

### Front of leg

Femoral vein (deep vein, located deep in the leg)

Perforator vein (communicating vein)

Saphenofemoral junction (SFJ)

Great saphenous vein (superficial vein, located close to the skin)

Varicose veins

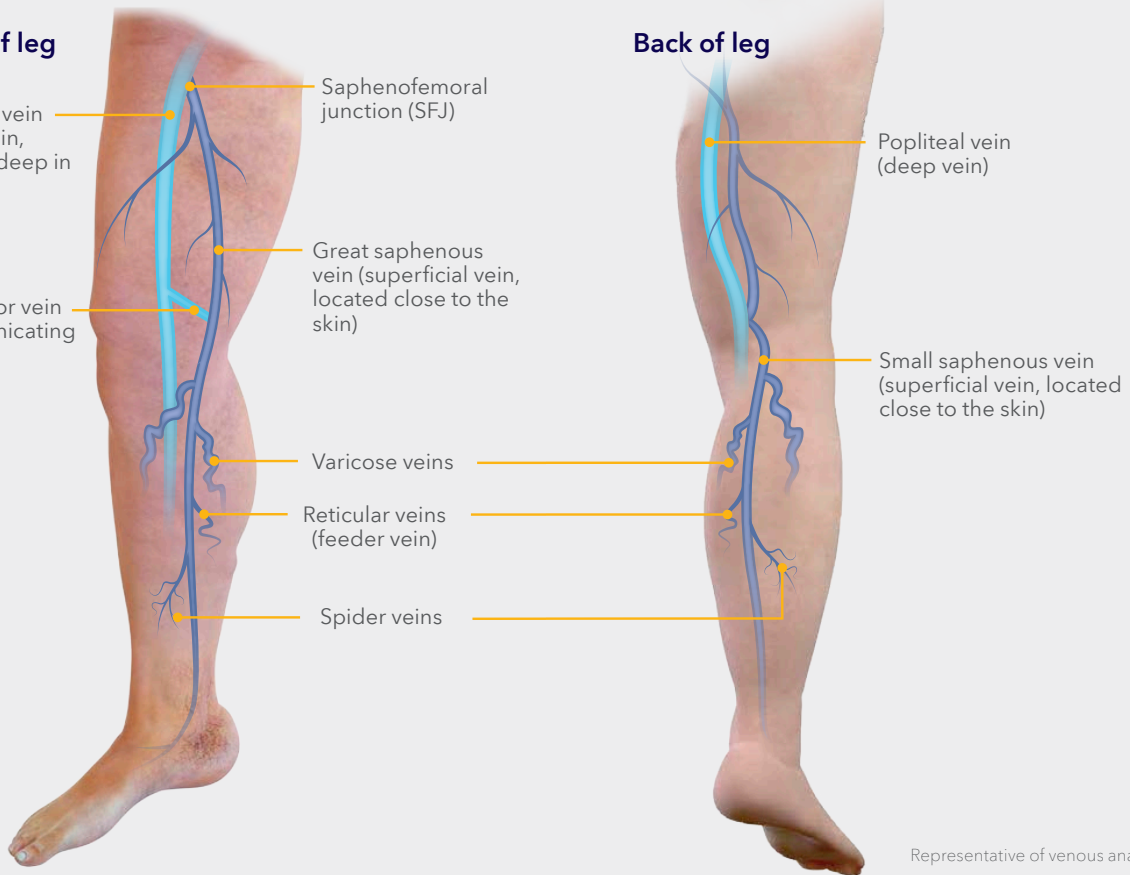
Reticular veins (feeder vein)

Spider veins

### Back of leg

Popliteal vein (deep vein)

Small saphenous vein (superficial vein, located close to the skin)



Representative of venous anatomy.

## How to tell if you have vein disease



Varicose veins



Swelling and skin discoloration

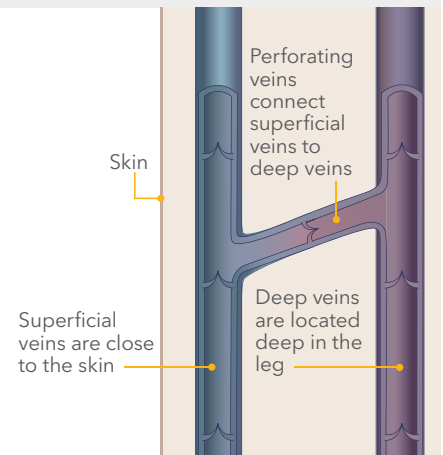


Skin color and texture changes



Venous ulcers

Photos courtesy of Rajabrata Sarkar, M.D., Ph.D.



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## ARUN CHOWLA MD FACS

Dr. Arun Chowla is a board certified surgeon, and one of the most experienced vein surgeons for over 20 years. After completing Medical School in India, he did Residency in Surgery at Mount Sinai Beth Israel Medical Center in NYC. He also completed a Fellowship in Vascular Surgery at the Mayo Clinic Florida and Endovascular training at the Arizona Heart Institute. Dr. Chowla is Board Certified and a Fellow of American College of Surgeons. He is also Certified by American Board of Venous and Lymphatic Medicine. Dr. Chowla enjoys music and playing Golf in his spare time.

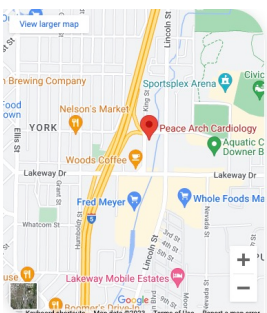


## RAJESH BHOLA MD

Dr. Bhola has been a practicing Invasive Cardiologist for more than 15 Years. He has an incredible wealth of knowledge, and three board certifications; including Echocardiography, Nuclear Cardiology, and Cardiovascular Medicine. A warm intellectual with a knack for educating patients on their personalized treatment plan, He has created a culture that fosters education, exceptional patient care, and evidence-based medicine. In his spare time he takes time for family, watching cricket, and playing golf with friends.

### Visit Us

Our goal is for you to leave our office with a memorable and enjoyable experience, which is why our welcoming and compassionate staff will do everything they can to make you feel right at home.



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