

Varicose Veins

What are varicose veins?

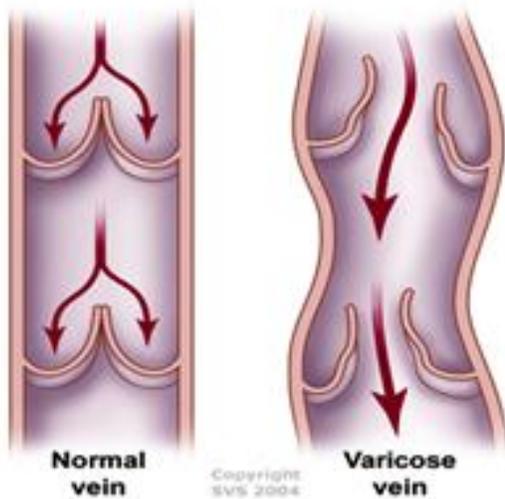
Arteries bring oxygen-rich blood from your heart to the rest of your body and veins return oxygen-poor blood back to your heart.

Varicose veins are swollen veins that you can see through your skin. They often look blue, bulging, and twisted. Left untreated, varicose veins may worsen over time. Varicose veins can cause aching and feelings of fatigue as well as skin changes like rashes, redness, and sores. As many as 40 million Americans, most of them women, have varicose veins.



You have three kinds of veins in your legs; the superficial veins, which lie closest to your skin, the deep veins, which lie in groups of muscles and perforating veins, which connect the superficial veins to the deep veins. The deep veins lead to the vena cava, your body's largest vein, which runs directly to your heart. Varicose veins occur in the superficial veins in your legs.

When you are in the upright position, the blood in your leg veins must work against gravity to return to your heart. To accomplish this, your leg muscles squeeze the deep veins of your legs and feet. One-way flaps, called valves, in your veins keep blood flowing in the right direction. When your leg muscles contract, the valves inside your veins open. When your legs relax, the valves close. This prevents blood from flowing in reverse, back down the legs. The entire process of sending blood back to the heart is called the venous pump. When you walk and your leg muscles squeeze, the venous pump works well. But when you sit or stand, especially for a long time, the blood in your leg veins can pool and the pressure in your veins can increase. Deep veins and perforating veins are usually able to withstand short periods of increased pressures. However, if you are a susceptible individual, your veins can stretch if you repeatedly sit or stand for a long time. This stretching can sometimes weaken the walls of your veins and damage your vein valves. Varicose veins may result. Spider veins are mild varicose veins. They look like a nest of red or blue lines just under your skin. Spider veins are not a serious medical problem, but they can be a cosmetic concern to some people, and they can cause symptoms of aching pain and itching in others.



What are the symptoms?

If you have varicose veins, your legs may feel heavy, tired, restless, or achy. Standing or sitting for too long may worsen your symptoms. You may also experience night cramps.

You may notice small clusters of veins in a winding pattern on your leg, or soft, slightly tender knots of veins. Sometimes, the skin on your legs may change color, become irritated, or even form sores.

If you have severe varicose veins, you have slightly increased chances of developing deep vein thrombosis (DVT). DVT may cause sudden, severe leg swelling. DVT is a serious condition that requires immediate medical attention.

What causes varicose veins?

High blood pressure inside your superficial leg veins causes varicose veins.

Factors that can increase your risk for varicose veins include having a family history of varicose veins, being overweight, not exercising enough, smoking, standing or sitting for long periods of time, or having DVT. Women are more likely than men to develop varicose veins. Varicose veins usually affect people between the ages of 30 and 70.

Pregnant women have an increased risk of developing varicose veins, but the veins often return to normal within 1 year after childbirth. Women who have multiple pregnancies may develop permanent varicose veins.

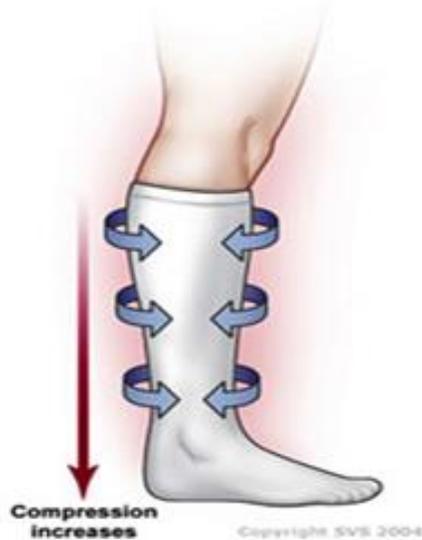
What tests will I need?

First your physician asks you questions about your general health, medical history, and symptoms. In addition, your physician conducts a physical exam. Together these are known as a patient history and exam. Your physician will examine the texture and color of any prominent veins. He or she may apply a tourniquet or direct hand pressure to observe how your veins fill with blood. To confirm a diagnosis of varicose veins, your physician may order a duplex ultrasound test.

Duplex ultrasound uses painless, high-frequency waves higher than human hearing can detect. Your physician uses duplex ultrasound to measure the speed of blood flow and to see the structure of your leg veins. The test can take approximately 20 minutes for each leg. Besides showing varicose veins, duplex ultrasound may help your physician decide whether your varicose veins could be related to some other condition rather than the veins themselves.

How are varicose veins treated?

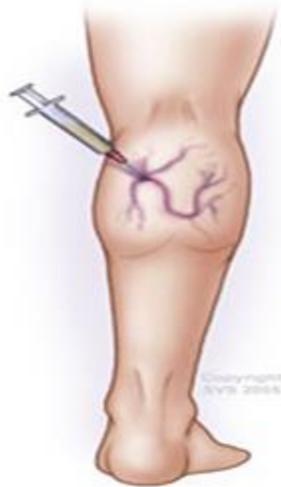
Varicose veins may sometimes worsen without treatment. Your physician will first try methods that don't require surgery to relieve your symptoms. If you have mild to moderate varicose veins, elevating your legs can help reduce leg swelling and relieve other symptoms. Your physician may instruct you to prop your feet up above the level of your heart 3 or 4 times a day for about 15 minutes at a time. When you need to stand for a long period of time, you can flex your legs occasionally to allow the venous pump to keep blood moving toward your heart.



Compression Stockings

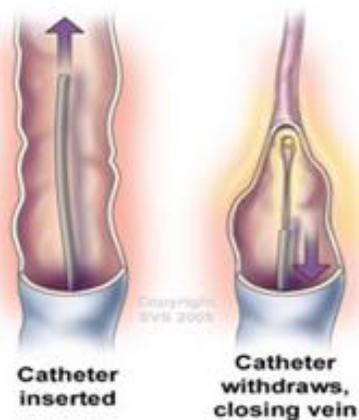
For more severe varicose veins, your physician may prescribe compression stockings. Compression stockings are elastic stockings that squeeze your veins and stop excess blood from flowing backward. In this way, compression stockings also can help heal skin sores and prevent them from returning. You may be required to wear compression stockings daily for the rest of your life. For many patients, compression stockings effectively treat varicose veins and may be all that are needed to relieve pain and swelling and prevent future problems.

When these kinds of treatments alone do not relieve your varicose veins, you may require a surgical or minimally invasive treatment, depending upon the extent and severity of the varicose veins. These treatments include sclerotherapy, ablation, vein stripping, and laser treatment.



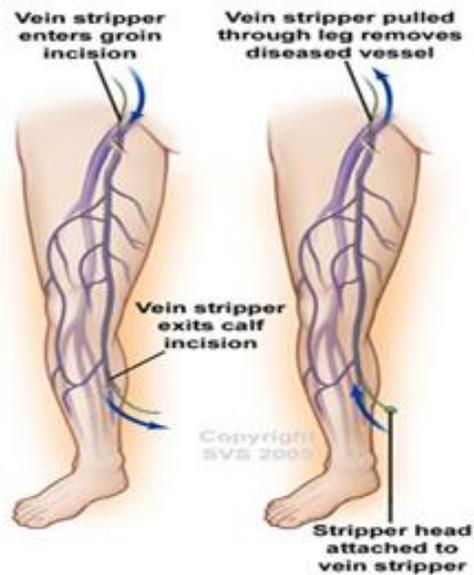
Sclerotherapy

During sclerotherapy, your physician injects a chemical into your varicose veins. The chemical irritates and scars your veins from the inside out so your abnormal veins can then no longer fill with blood. Blood that would normally return to the heart through these veins returns to the heart through other veins. Your body will eventually absorb the veins that received the injection.



Vein Stripping

To perform vein stripping, your physician first makes a small incision in the groin area and usually another incision in your calf below the knee. Then your physician disconnects and ties off all major varicose vein branches associated with the saphenous vein, the main superficial vein in your leg. Your physician then removes the saphenous vein from your leg. A procedure, called small incision avulsion, or sometimes ambulatory phlebectomy, can be done alone or together with vein stripping. Small incision avulsion allows your physician to remove individual varicose vein clusters from your leg using hooks passed through small incisions. In a similar procedure called TIPP, your physician shines an intense light on your leg to show your veins. Once your physician locates a varicose vein, he or she passes a suction device through a tiny incision and suctions out the vein. Although these procedures sound painful, they cause relatively little pain and are generally well tolerated. Your vascular surgeon will advise you regarding which procedure is the best for your particular situation.



Ablation and Laser Treatment

Ablation uses a thin, flexible tube called a catheter inserted into a vein in the leg. Tiny electrodes at the tip of the catheter heat the walls of the vein and destroy it. Similarly, laser treatment uses a tiny fiber that is placed in the vein through a catheter. The fiber sends out laser energy that kills the diseased portion of the vein, and the vein closes off. These two modes of treatment frequently replace the stripping that is performed on the saphenous vein that is described above. The objective is to destroy the saphenous vein that is providing the source for varicose vein development. It can be performed alone or in conjunction with ambulatory phlebectomy, which removes individual clusters of varicose veins from the leg. Your vascular surgeon will advise you regarding which procedure is best for your particular situation.