Questions & Answers: Venous Disease

BACKGROUND
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FOR MORE INFORMATION
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What are varicose veins?

Varicose veins – which afflict 10% to 20% of all adults but serve no useful purpose in the body – are swollen, twisted, blue veins that are close to the surface of the skin. Because valves in them are damaged, they hold more blood at higher pressure than normal. That forces fluid into the surrounding tissue, making the affected leg swell and feel heavy.

Unsightly and uncomfortable, varicose leg veins can promote swelling in the ankles and feet and itching of the skin. They may occur in almost any part of the body, but are most often seen in the back of the calf or on the inside of the leg between the groin and the ankle. Left untreated, patient symptoms are likely to worsen, with some possibly leading to venous ulceration.

What causes varicose veins?

The normal function of leg veins - both the deep veins in the leg and the superficial veins, which feed them - is to carry blood back to the heart. During walking, for instance, the calf muscle acts as a pump, contracting veins and forcing blood back to the heart.

To prevent blood from flowing in the wrong direction, veins have numerous valves. If the valves fail (a cause of venous reflux), blood flows back into superficial veins and back down the leg. This results in veins enlarging and becoming varicose. The process is like blowing air into a balloon without letting the air flow out again- the balloon swells.

To succeed, treatment must stop this reverse flow at the highest site or sites of valve failure. In the legs, veins close to the surface of the skin drain into larger veins, such as the saphenous vein, which run up to the groin. Damaged valves in the saphenous vein are often the cause of reversed blood flow back down into the surface veins.

Why does it occur more in the legs?

Gravity is the culprit. The distance from the feet to the heart is the farthest blood has to travel in the body. Consequently, those vessels experience a great deal of pressure. If vein valves can't handle it, the backflow of blood can cause the surface veins to become swollen and distorted.

Who is at risk for varicose veins?

Conditions contributing to varicose veins include genetics, obesity, pregnancy, hormonal changes at menopause, work or hobbies requiring extended standing, and past vein diseases such as thrombophlebitis (inflammation of a vein as a blood clot forms). Women suffer from varicose veins more than men, and the incidence increases to 50% of people over age 50.

What are the symptoms?

Varicose veins may ache, and feet and ankles may swell towards day's end, especially in hot weather. Varicose veins can become sore and inflamed, causing redness of the skin around them. In some cases, patients may develop venous ulcerations.

What are venous leg ulcers?

Venous ulcers are areas of the lower leg where the skin has died and exposed the flesh beneath. Ulcers can range from the size of a penny to completely encircling the leg. They are painful, odorous open wounds, which weep fluid and can last for months or even years. Most leg ulcers occur when vein disease is left untreated. They are most common among older people but can also affect individuals as young as 18.

What is the short-term treatment for varicose veins?

"ESES" (pronounced SS) is an easy way to remember the conservative approach. It stands for "Exercise, Stockings, Elevation and Still." Exercising, wearing compression hose, elevating and resting the legs will not make the veins go away, or necessarily prevent them from worsening because the underlying disease (venous reflux) has not been addressed. However, it may provide some symptomatic relief. Weight reduction is also helpful.

If there are inflamed areas or an infection, topical antibiotics may be prescribed. If ulcers develop, medication and dressings should be changed regularly.

There are also potentially longer-term treatment alternatives for visible varicose veins, such as sclerotherapy and phlebectomy.

What is sclerotherapy?

A chemical injection, such as a saline or detergent solution, is injected into a vein, causing it to "spasm" or close up. Other veins then take over its work. This may bring only temporary success, and varicose veins frequently recur. It is most effective on smaller surface veins, less than 1-2mm in diameter.

What is ambulatory phlebectomy?

As with sclerotherapy, ambulatory phlebectomy is a surgical procedure for treating surface veins. Multiple small incisions are made along a varicose vein and it is "fished out" of the leg using surgical hooks or forceps. The procedure is done under local or regional anesthesia, in an operating room or an office procedure room.

What is vein stripping?

If the source of the reverse blood flow is due to damaged valves in the saphenous vein, the vein may be removed by a surgical procedure known as vein stripping. Under general anesthesia, all or part of the vein is tied off and pulled out. The legs are bandaged after the surgery, but swelling and bruising may last for weeks.

When is the Closure® procedure used?

Closure is used like vein stripping to eliminate reverse blood flow in the saphenous vein, but without physically removing the vein, and can be performed without general anesthesia. Like other venous procedures, the Closure procedure involves risks and potential complications. All patients should consult their doctors to determine whether or not they are candidates for this procedure, and if their conditions present any special risks. Complications reported in medical literature include numbness or tingling (paresthesia), skin burns, blood clots and temporary tenderness in the treated limb.

What is the main difference between arteries and veins?

In simplest terms, arteries pump oxygen-rich blood FROM the heart; veins return oxygen-depleted blood TO the heart.

What are the three main categories of veins?

“Deep” leg veins return blood directly to the heart and are in the center of the leg, near the bones. “Superficial” leg veins are just beneath the skin. They have less support from surrounding muscles and bones than the deep veins and may thus develop an area of weakness in the wall. When ballooning of the vein occurs, the vein becomes varicose. “Perforator” veins serve as connections between the superficial system and the deep system of leg veins.