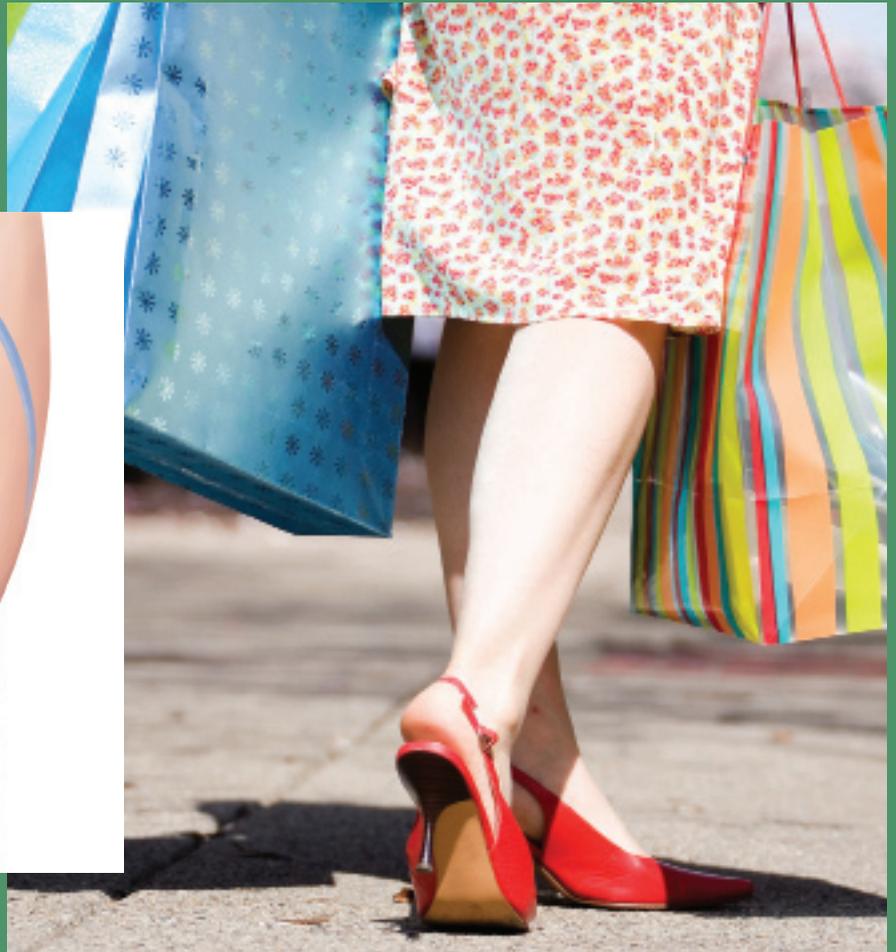


Ligation with Stripping



Understanding Problem Leg Veins

Do your legs feel tired and achy at the end of the day? Have you stopped wearing shorts because you don't like the way your legs look? Vein problems are not related to artery problems such as those that cause heart disease. But, abnormal leg veins can affect your health and your self-image. Treatments for these veins include self-care and surgery. They can relieve symptoms and help you feel better about your appearance, too.

What Are Varicose Veins?

Varicose veins occur when vein damage causes blood to flow in the wrong direction. Blood then pools in the veins, causing them to swell. The most common site of varicose veins is the legs. These veins can cause leg fatigue, aching, itching, and other symptoms. The veins may also bulge, twist, and stand out visibly.



Who Gets Varicose Veins?

Anyone, male or female, can develop varicose veins. But certain risk factors can make them more likely to form. The tendency toward vein problems can run in families. Women often develop problem veins during pregnancy. A job that keeps you on your feet or sitting at a desk all day can contribute as well. Other factors include lack of exercise, injury (trauma), and hormonal changes.



What Can Be Done About Varicose Veins?

Your doctor will guide you through the process of deciding on treatment. Surgery can be done to remove problem veins. Blood then reroutes through other veins. Meanwhile, self-care, though not a cure, can reduce symptoms. Read on to learn more about varicose veins, self-care, and treating problem veins with surgery.

Table of Contents

How Leg Veins Work

Working against gravity to return blood to the heart 4

Evaluating Your Vein Problem

Gathering information about your veins 6

Your Treatment Plan

Working with your doctor 7

Self-Care for Your Problem Veins

What you can do to relieve some of your symptoms 8

Surgery to Remove Leg Veins

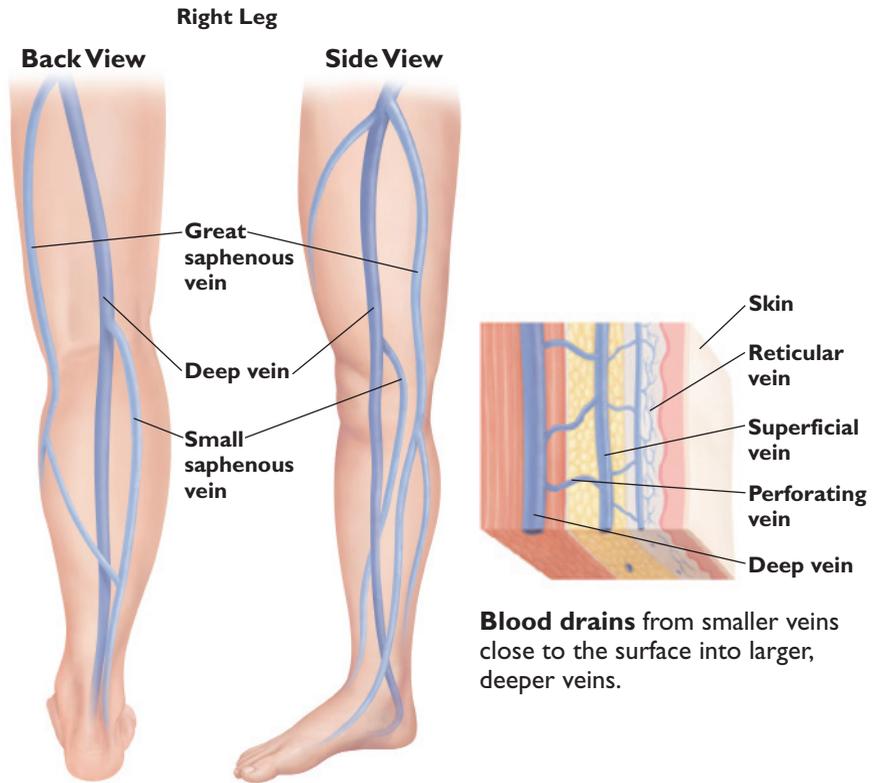
Ligation with stripping 10

How Leg Veins Work

Blood flows through a system of blood vessels, also known as **veins** and **arteries**. The job of the veins is to carry blood from the organs and limbs to the heart. The job of the arteries is to carry oxygen-rich blood from the heart to the rest of the body. Blood then drains back into the veins, and the cycle begins again.

Healthy Leg Veins

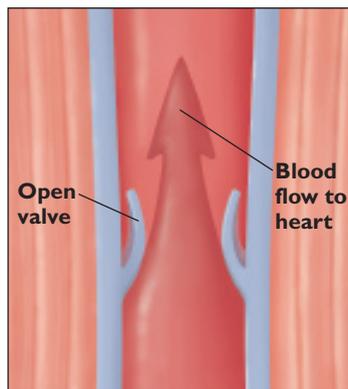
A vast network of veins manages blood flow for the entire body. The smallest surface veins drain into the **reticular** system, a web of tiny veins just below the skin. Blood then flows into the larger and somewhat deeper **superficial** veins. **Perforating** veins carry blood from the superficial veins to the **deep** veins. These large veins carry blood back to the heart.



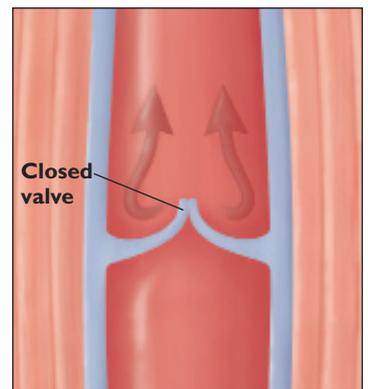
The great and small saphenous veins are the main superficial leg veins.

Returning Blood to the Heart

To get from the feet and legs to the heart, blood has to flow upward. The action of the calf and thigh muscles helps pump blood upward against gravity. Valves (small flaps inside the veins) open to let the blood through, then close to hold it in place.



The valve opens as leg muscles squeeze on the vein. This lets blood flow upward.



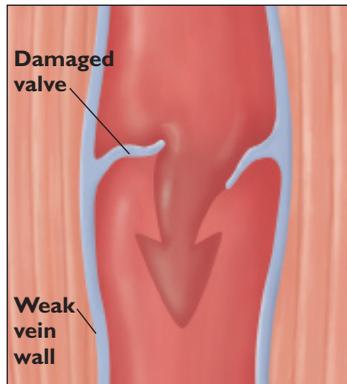
The valve closes as leg muscles relax. This prevents blood from leaking downward.

When Vein Problems Develop

The root of most vein problems is **venous insufficiency**. This condition occurs when veins widen and stretch (**dilate**) and valves become unable to close properly. As a result, affected veins have trouble carrying blood back to the heart.

Varicose Veins

When a vein is dilated or its valves are damaged, blood moves in the wrong direction. It leaks down the leg vein and “backs up.” This can cause the leg to ache and swell, and feel tired, heavy, or full. Problems with the saphenous veins can harm the side veins that drain into them, causing the smaller veins to dilate and become varicose too. Varicose veins can cause bleeding, changes in skin color, and ulcers. If blood clots in a varicose vein, the vein walls can become inflamed (**superficial thrombophlebitis**). Sudden pain, redness, or swelling in the affected area may result.



Varicose veins occur when valves don't close properly, allowing blood to leak back down the vein. Pressure from the backup of blood can cause veins to bulge and appear ropy or twisted.

Evaluating Your Vein Problem

Your doctor will gather information before recommending a treatment approach for your vein problem. Before moving ahead with treatment, your doctor must also rule out more serious problems with the deep vein system. Your evaluation includes a physical exam and tests to determine the causes and extent of the problem.

Your Medical History

Your healthcare provider will ask questions about your medical history, such as:

- Family history of abnormal veins
- Duration and symptoms of the problem
- Your job and activities
- Previous treatments
- Medications you are taking
- Current or previous pregnancies

Your Physical Exam

Your doctor will examine your legs during one or more office visits. The abnormal veins may be photographed to map their size and locations. During your exam, a hand-held Doppler scanner may be used to check for signs of reflux. This scanner is used like a stethoscope, to listen to and assess the sounds of blood flow.

Duplex Ultrasound

Duplex ultrasound is a noninvasive test that uses sound waves to create pictures. It provides detailed information about the venous system. It also shows blood flow, which helps your doctor determine where reflux is occurring. Duplex ultrasound makes it possible to pinpoint leak points that may be the source of the problem. This test can also help the doctor rule out more serious vein conditions.

During the test, gel is applied to the leg and a probe is moved over the skin. Pictures of the vein can then be viewed on a computer screen.



Your Treatment Plan

After your evaluation, you'll work with your doctor to develop a treatment plan. This plan is tailored to your individual needs. You may have several treatment options. That's why it's key to learn about each type of treatment and make sure all of your questions are answered.

Making Decisions About Treatment

Treatment for varicose veins destroys or removes veins. The remaining veins take over the workload, carrying the blood where it needs to go. Blood flow then becomes more efficient. Your doctor and his or her staff can make suggestions and offer alternatives. Together, you'll decide whether surgery is right for you. Compression stockings are likely to be prescribed as part of your plan.



What to Expect from Treatment

Know what to expect. Treatment:

- **Can** decrease or eliminate symptoms.
- **Can** improve your appearance.
- **Can't** guarantee that problem veins won't develop in the future. This can be a recurring condition, and its underlying causes may still exist.
- **Can't** make your legs look perfect—but your doctor will strive for the very best result.

If You're Pregnant

Varicose veins often develop or worsen during pregnancy. Keep in mind that:

- Self-care, such as wearing elastic compression stockings daily, can relieve symptoms during pregnancy.
- Abnormal veins may improve after pregnancy. Your veins can then be reevaluated to see if treatment is needed.
- You need not delay treatment until you're finished with childbearing. In fact, getting treated between pregnancies can reduce vein problems during future pregnancies.

Self-Care for Your Problem Veins

Proper care of your legs can help reduce the symptoms of varicose veins. Self-care is key to your comfort during pregnancy, and it's part of your aftercare for any type of treatment. Any self-care you do can help. But the more you do, the better your results are likely to be.

Compression Stockings

Gradient compression stockings fit tightly around your legs, exerting more pressure at the ankle than at the top. This moves blood upward and helps keep it from pooling in the legs. These elastic stockings come in different degrees of pressure. Your doctor will prescribe stockings in a safe and effective pressure for you. In general, stockings up to 20 mm pressure are safe—but check with your doctor before buying or wearing any compression hose. The stockings come in a variety of styles, lengths, colors, and sizes, including maternity sizes. You may be able to buy them at your doctor's office, a pharmacy, online, or at a surgical supply store.



Compression stockings can be worn with a variety of outfits.

Tips for Using Compression Stockings

To use stockings safely and effectively:

- Make sure to wear them correctly. Pull them to the designated height and no further. Don't let them bunch up at the top, as this can restrict circulation.
- Replace them when they start to become loose, which is often after about 4 to 6 months.
- Don't sleep in them unless so directed.
- Wear the length recommended by your doctor.
- Wear them for the amount of time recommended by your doctor.
- If you have trouble pulling them on, wear thin rubber gloves to help improve your grip and prevent tearing. You can also use equipment, such as a stocking donner, to help put them on.

Exercise

Working calf and thigh muscles helps move blood upward. And keeping these muscles toned may help with blood flow even when you're sitting or standing. To get the most benefit:

- Choose exercises that work the leg muscles. Walking, swimming, and cycling are great choices.
- If you're new to exercise, start slowly and build up to at least 30 minutes of exercise, most days of the week. Ask your doctor which exercises are best for you.
- If you sit most of the day, get up and walk from time to time. Just changing position may offer some relief. Also try wiggling your toes for a minute 10 times a day.



When sitting or standing for long periods, try working your calves by rising on your toes.

Elevation

Raising your legs lets gravity help blood flow back to the heart. For the most benefit, raise your feet a few inches above your heart, 2 to 3 times a day for 15 minutes. If this is not practical, do as much as you can. Any elevation can help.



Evaluating Your Lifestyle

Are there things you can change about your lifestyle that might help relieve your symptoms?

- **Are you overweight?** If so, losing weight will help relieve some of your symptoms.
- **Is your diet a factor?** Eating too much sodium can make you retain water. To help cut back on salt, take the saltshaker off the table.
- **Do you sit in one position for long periods?** You might have a long commute, be a frequent flier, or spend a lot of time in front of the TV or computer. If so, try to get up and move about every hour. While in your seat, move your feet and ankles to work your calf muscles. And wear your compression stockings!

Surgery to Remove Leg Veins

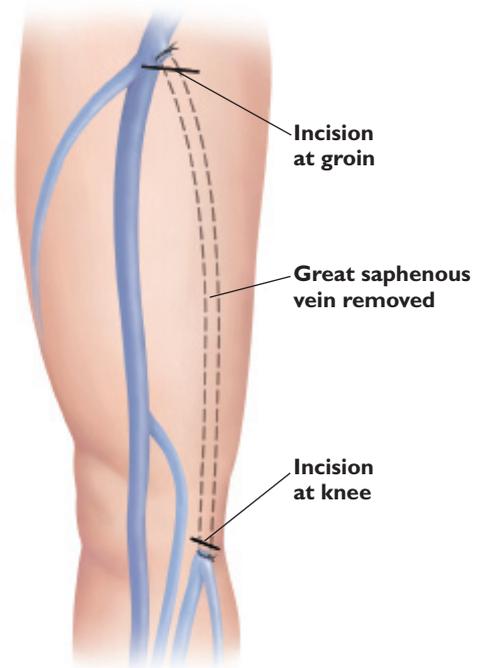
Sometimes, surgery is needed to remove varicose veins. If a saphenous vein needs to be removed, ligation with stripping can be done. This surgery may be performed in the surgeon's office, an outpatient surgery center, or a hospital. You can expect to go home within a few hours after surgery is complete.

Preparing for Surgery

Before surgery, you may be told not to take aspirin or ibuprofen for a week or more. Tell your doctor about any other medications, herbs, or supplements you take. In some cases, you may be told to adjust medications before surgery. Anesthesia will be used to make you relax or fall asleep, and control pain during surgery. Depending on the type of anesthesia you receive, you may be asked to not eat or drink anything for 6 to 8 hours before surgery. Arrange to have an adult family member or friend drive you home after surgery. Your surgeon can tell you how long surgery is likely to take.

Ligation with Stripping

This surgery can be used to remove the great or small saphenous vein. You will receive either local or general anesthesia. During surgery, small incisions are made at the top and bottom of the vein to be removed. The saphenous vein is tied off or closed (ligated) at the top and bottom. The surgeon then removes (strips) the vein through the lower incision. After surgery, your legs are wrapped in compression bandages to control bleeding and swelling. In 1 to 3 hours, an adult family member or friend can take you home. Pain medication is likely to be prescribed. You can expect to return to work and your normal routine in about a week after surgery.

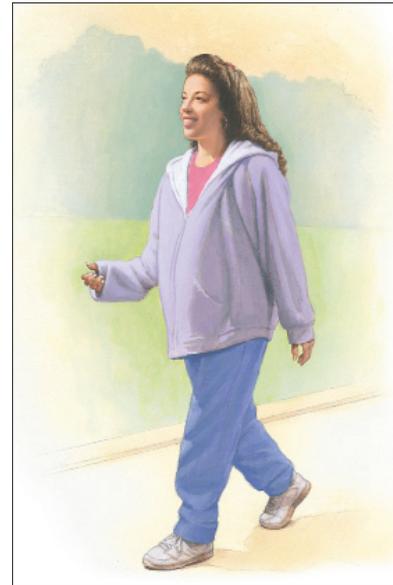


Recovering from Surgery

- Take pain medications as prescribed.
- Keep your legs elevated when sitting or lying down.
- Walk frequently, starting the day after surgery. Even short walks help.
- Wear compression stockings or bandages as directed. They can help reduce swelling and increase blood flow.
- Avoid heavy exercise, lifting, or prolonged standing for 7 to 14 days.
- Avoid hot baths, saunas, whirlpools, and other hot environments as advised by your doctor.
- Right after the surgery, avoid air travel if possible. Talk to your doctor if you need to get on an airplane.



To help blood flow, draw the letters of the alphabet in the air with your feet.



Take frequent walks after surgery.

Risks and Complications

Complications of this surgery are rare, but can include:

- Bleeding
- Swelling
- Numbness in legs
- Clots in deep veins of legs
- Complications of anesthesia

When to Call Your Doctor

Call your doctor if you have any of the following:

- Severe bleeding or swelling
- Increasing leg pain
- Numb feet
- Fever
- Chest pain
- Shortness of breath

After Vein Treatment Is Complete

Treatment for varicose veins can help you feel better and look better. To ensure the best results, keep follow-up appointments with your doctor. Use self-care to aid recovery and help reduce symptoms. And get ready to dig your shorts out of the dresser drawer!



KRAMES[®]
PATIENT EDUCATION
A MediMedia Company
www.krames.com 800-333-3032

This product is not intended as a substitute for professional medical care.
Only your doctor can diagnose and treat a medical problem.