17 Veins or Vanity: Who Needs Road Maps on Her Legs?

I want to wear shorts this summer. Do you think you can get rid of all these horrendous varicose veins?

—Paula, 59, schoolteacher

The five cosmetic problems that bother people the most are: facial lines, creases, and jowls; errant fat deposits; age spots; hair loss; and varicose veins and spider veins. Although there are many effective treatments for most cosmetic skin concerns, when it comes to treating varicose veins and spider veins, patience has to be the byword. Gravity is the major force working against any effort to eliminate the red, blue, and purple webs that course behind the thighs, along the calves, and even on the front of the legs. The pull of gravity would not map a network of small and large veins on our legs were we in the habit of sleeping upside down at night, like bats. However, we sleep on beds and walk upright, so gravity combines with certain factors in the anatomy of these veins to create a situation that keeps many women from wearing bathing suits and shorts.

As recently as 1970, spider veins were considered an unavoidable mark of aging, and most physicians cried

"uncle" about the possibility of ever fixing the problem. Fortunately, lower extremity road maps of small and large veins can now be successfully treated with alleviation of associated symptoms. To understand how this is now possible, let's look at the normal anatomy of veins.

▪ WHY DO I HAVE THESE VEINS?

The main purpose of your veins is to return blood to the lungs so that the blood can reload with oxygen and go on to help your body perform its next task, whether that's smashing a tennis ball back across the net, finishing an important report, or keeping up with your toddler until the end of the day. The refreshed blood flows out from the main pump (your heart) via arteries to supply cells throughout the body with nutrients and oxygen. Once the oxygen molecules are snatched from the hemoglobin, the empty molecules return through the veins to repeat this endless cycle. Without veins, in other words, your heart would wait forever for blood.

In your legs, there are basically two systems of veins, which are connected to each other as two sides of a ladder are connected by its rungs. The superficial veins, which lie right under the skin, are one side of this ladder, and the deep system of veins that runs through the muscles is the other. The rungs that connect the deep veins to the superficial ones are known as perforating veins. Blood normally flows up from your lower extremities through both of these vein systems (the deep system does the lion's share of the work). In the superficial veins the blood usually goes through the perforating veins into the muscle, then up the deep veins toward the lungs and heart. The superficial veins have valves in them, which allow blood to proceed upward only or from the skin deep into the muscle—the valves are there to keep blood from flowing backward (if they weren't there, our feet would swell enormously and we'd all have to wear clown shoes).

When the veins are working properly, the amount of excess pressure in the veins is controlled and there is no reason for the abnormal spider veins or large varicose veins to form. Gravity is just one force that your body must fight in getting blood back to the heart; the fact that we walk upright, and indeed spend much of the day standing or sitting, is equally pernicious. The pressure exerted on your veins as they fight gravity to do their work is enormous. For example, if you are five foot seven, you are effectively exerting 67 inches of water pressure on the veins in your legs. Now imagine taking a garden hose that length, filling it with water, holding it

over a patch of sand, and then releasing the water. Can you see the crater it creates? The pressure that made that crater is what the veins in your legs must contend with every minute of every day. Is it any wonder that, sooner or later, the valves and walls of these veins begin to surrender a bit to this constant pressure?

In face of the water pressure mentioned earlier, the veins in the legs can lose their elasticity, or stretchiness, and the veins may then bulge. When this happens, blood begins to pool in the stretched-out areas as it is pumped back toward the heart. This pooling creates what we call a varicose vein. In addition, the pressure stretches out the sides of the valves. Thus, a space around each valve will develop, and the blood will begin to leak backward toward the ankle and flow from the deep veins back into the superficial ones.

The change in blood-flow direction and the amount of blood in the legs can lead to various symptoms. You might experience pain, even when the only veins you can see are tiny spider veins. This pain occurs because of a tremendous backup in pressure that stretches these veins open. You may also experience aching in your legs, especially the calves, or swelling around the ankles. In a more advanced stage, when the swelling becomes too great, the oxygen going to the skin cells decreases and eczema may result, especially on the inside of your legs just above your ankles. With the swelling, blood leaks into the skin, and the pigment that gives blood its color may also give your skin a brownish red discoloration. Finally, if this goes on too long, ulcers may form just above your ankles; these are very difficult to eradicate. Some people also complain of cramping in the legs, especially at night, and a restless feeling in their legs.

SPIDER VEINS

Small "broken" blood vessels are known medically as telangiectasias; when they occur in the legs, they are referred to as spider veins. These surface blood vessels are visible to the naked eye and do not bulge out from the skin. Think of them as the little cousins of the deeper veins to which they are connected.

RETICULAR VEINS

Reticular veins are seen best from a slight distance. They are deeper and bigger than the spider veins that splatter the surface of the skin. Retic-

ular veins are faint blue or bluish green networks of veins that run a little deeper beneath the skin than spider veins. They can be as thin as wrapping cord or as thick as a cooked strand of spaghetti. These reticular veins become visible because blood is leaking in the wrong direction, backward from the deep veins to the superficial ones.

VARICOSE VEINS

Some people develop large "ropy" varicose veins that look like little worms running beneath the surface of the skin. Up to one-fifth of adults may be affected, and although men get them, varicose veins are primarily a problem for women. (This is because female hormones like progesterone are known to weaken veins.) Two-thirds of those people destined to have varicose veins will develop the first one before age twenty-five. Often, they are first noted during pregnancy.

Advanced varicose veins can be dangerous. They can be associated with bleeding and blood clots in the superficial veins and, less commonly, blood clots in the deeper veins. These deep blood clots can cause serious health problems and can lead to other clots that travel to your lungs.

▪ What Did I Do To Deserve These?

Once again, it's time to get out those family photographs and thank your ancestors. Approximately 70 percent of those who develop varicose, reticular, or spider veins do so because of heredity.

▪ Fixing Veins

Despite the cosmetic problem caused by spider veins and varicose veins, they usually form in blood vessels that are not absolutely necessary for the healthy operation of our bodies; this allows for safe removal with the right technique. Our bodies are designed with great potential for duplication, probably because it was assumed that in the rough and tumble of daily life, we would damage a finger here, break a bone there, wear out a kidney at some other time, and so on. It's the same with the blood circulation system: if a little bit of it is removed, there is enough duplication that you can still function fine.

It is best if you get help from a physician who treats veins as a regular part of his or her practice. Dermatologists, vascular surgeons, general sur-

geons, and obstetricians-gynecologists often treat superficial veins; vascular surgeons and some dermatologists have special expertise in managing the larger veins as well.

A consultation is critical. During this first visit, the physician will take a medical history to see if you have any signs or symptoms of severe disease and will perform a physical examination to see if you have any other signs of venous disease beside the veins that are visible on the surface. Approximately 10 percent of patients who have just spider veins will have deep venous problems requiring more sophisticated treatment than surface sclerotherapy, the procedure used to treat superficial vein problems.

Some physicians will perform special tests using a small ultrasound device, as well as more sophisticated equipment, in order to check for changes in blood flow that indicate valve problems. However, not everybody who seeks treatment of small veins requires these tests, and sometimes they are merely an additional expense. If you are young and healthy, have no symptoms, and have no visible large varicose veins, these special tests are not required.

▪ Easy Does It—All Good Things Take Time

Let's say that you make it through the examination phase, and your only problem is some spider veins on the surface that you don't like. What can you expect in terms of improvement?

First of all, you should not aim for perfection. None of us was born perfect, and the passage of time acts on our body much like weather does on a sparkling new copper roof. The worn patina may not shine like the original covering but it has developed its own beauty, a beauty of imperfection. Similarly, fixing a leg vein so that it looks better—not so that it disappears completely—is often improvement enough. In fact, with the standard treatment of sclerotherapy an improvement of 60 to 80 percent must be considered successful. Although different people and different veins respond in varying ways to the same therapy, it's unrealistic to expect more than that.

The smallest red spider veins resolve more slowly than the larger, more noticeable purple and blue ones. While larger, ropy veins may shrink away in only one to two treatments, small red spider veins will typically require three to five treatments, spaced two to six weeks apart. Any small spider veins that don't respond to a complete series of treatments are probably going to be resistant. Although you may be tempted to go at these cosmetic annoyances even more aggressively, this can backfire. Not only will these

veins remain resistant to whatever you do, but your risk of developing new, smaller networks of veins, called mats, will increase greatly.

I'll tell you straight out: in the year 2000, there is no total cure for these vessels. Treatment can only control them. Even after a successful first series of treatments, you will require touch-ups every one to five years, depending on how rapidly you form new veins. Why? Remember gravity. Remember pressure. Remember how we walk upright. Until these circumstances change, we will always have leg vein problems.

In most cases insurance companies do not reimburse for treatment of the small veins, which they consider medically unnecessary. If you have large varicose veins and they are causing you health problems, you may be able to get insurance coverage for the procedure. However, the medical problems caused by varicose veins must be well documented.

▪ Which Veins Came First?

Did the spider vein problem or the deeper vascular problem come first? It may not be as famous a quandary as that of the chicken and the egg, but the answer may help determine the course of your treatment. And the answer you get depends on the physician you see.

Some doctors are happy to treat your small spider veins first. Others will tell you that starting with the spider veins is treating the symptom rather than the underlying problem, that the spider veins are being fed by a deeper network of reticular veins that are not yet visible. There is no correct answer for everyone.

One approach is to treat spider veins only if you realize that you will probably have to return for additional treatments later. In a subsequent round, the underlying reticular veins or leaky perforating veins will probably need to be attended to. Alternatively, some doctors suggest that if the underlying large veins are treated first, the small veins on the surface may go away on their own accord, without further treatment.

▪ What Are the Different Ways of Treating Bad Leg Veins?

SURGERY

Surgery is required for leg veins that are more than 5 to 10 millimeters in diameter (a pencil eraser is about 5 millimeters wide). When the veins are

more than 20 millimeters wide, tying them off, or ligation, is necessary. If there are leaky valves at the junction of large veins in your groin or behind your knee, surgery—by a qualified vascular surgeon—is also required to treat it before smaller vessels can be treated on an outpatient basis.

In a relatively new treatment called *ambulatory phlebectomy,* doctors can treat many vessels greater than 5 millimeters in diameter on an outpatient basis, using tiny slit incisions and local anesthesia to remove large veins. If you have large vessels and can find such an expert in phlebectomy, this procedure can be quite effective. Once the vein to be removed has been identified and marked, local anesthesia is instilled to numb the skin. Slits are made in the overlying skin and the vein is entered with a wirelike device. The vein is then partially pulled out and the skin is then bandaged.

SCLEROTHERAPY

Sclerotherapy is the technique used to banish most small veins. It involves the introduction of one of several different solutions into the tiny vein to cause irritation of the walls of the vessel, leading to scarring of the canal. Once the blood vessel forms a scar, it cannot contain blood and therefore you will not be able to see it. It essentially shrivels up.

The three most common substances used in sclerotherapy today are hypertonic saline (concentrated salt water), sodium tetradecyl sulfate (also known as Sotradechol), and polidocanol (also known as aethoxysklerol). Despite the fact that hypertonic saline stings and can cause brief cramping, it is proven to be safe for the treatment of these spider veins. However, it should never be used during pregnancy and it will not successfully treat any of the larger, deeper veins.

Sodium tetradecyl sulfate is relatively painless, usually does not cause cramping, and is also effective in treating both small and large veins. Outside the United States, the most commonly used agent is polidocanol, but the Food and Drug Administration still does not allow polidocanol to be used in this country for this purpose.

LASERS

Increasingly, lasers are being used to treat spider veins of the legs. Are lasers better than sclerotherapy? If you are needle-phobic, then lasers are the way to go. However, if you can tolerate needles, sclerotherapy remains

a reliable method for eradication of spider veins, at least at the present time. Lasers have almost the same side effects as the sclerotherapy, except that they do not cause any cramping. In fact, a new modification of the laser used to treat leg veins allows instant cooling of the skin, which permits the use of higher laser energy for treatment. The results are promising.

▪ PREPARING FOR THE PROCEDURE

Let's look at what happens before, during, and after sclerotherapy, the most commonly performed procedure to treat leg veins. Prior to coming in for treatment, I may recommend that my patients buy and bring a pair of support hose with them. Information on specific brands, pressure, and lengths of support stockings or hose based on the particular problem is provided ahead of time.

Avoid aspirin or any aspirinlike products for ten days before treatment.

It is important not to shave your legs for at least forty-eight hours beforehand. That's because most doctors wipe the skin surface with alcohol to make the veins more visible, and the alcohol will sting if it is applied to skin recently abraded from shaving. Similarly, don't apply moisturizers to your legs the day of sclerotherapy—this makes the legs slippery, which makes it difficult for the physician to carefully inject the solution.

At the time of treatment I usually photograph the affected area, which helps me gauge progress over time. If, after several sessions, no progress is being made, we may try another approach or just fold the deck. Noting and marking veins in the standing position is also helpful. I also recommend that you eat a good meal before coming, to reduce the risk of fainting or becoming lightheaded or nauseated during the procedure.

Bring shorts that you can wear during the procedure to make it easier for the physician to have access to your veins.

▪ THE PROCEDURE

Some kind of soap or alcohol will be used on your skin to make it easier to see through the skin surface to the veins lying just beneath. A fine-gauge needle is used to inject small amounts of solution into the veins. The prick of the needle will sting, and some of the solutions do burn somewhat during treatment. If saline is used, you may get a brief cramp, like a charley horse, which resolves in minutes. Some doctors apply a cotton ball and tape over each site after injection.