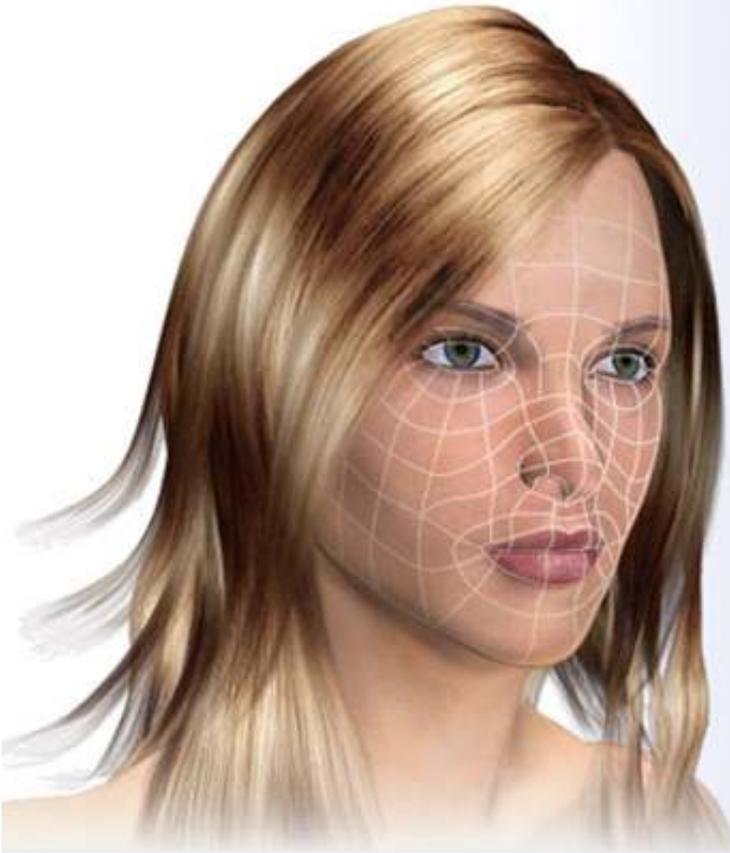




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# Laser Vein Removal



Together, spider veins and varicose veins affect approximately 80 million people in the United States each year. Spider veins are most commonly located on the face and legs. In contrast, varicose veins tend to be localized on the backside of the calf or along the inside of the leg. Although physicians do not fully understand the cause of spider and varicose veins, they do attribute factors such as genetics, weight gain, and hormonal fluctuations associated with pregnancy, birth control pills, and hormone replacement therapy, as well as sitting or standing for extended periods of time.

In addition to being unsightly, some types of spider and varicose veins can be associated with varying degrees of pain and discomfort, and in some instances, more serious medical conditions. Among the many treatments available, laser vein removal is fast becoming a popular option to effectively reduce the appearance of spider veins as well as small or medium varicose veins on the body.



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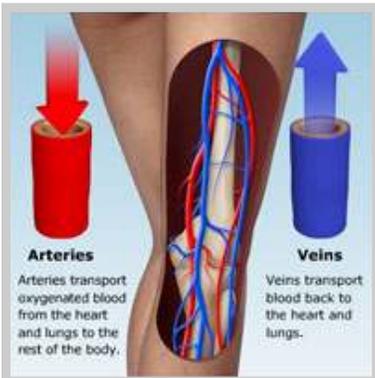
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### **Laser Vein Removal Introduction**

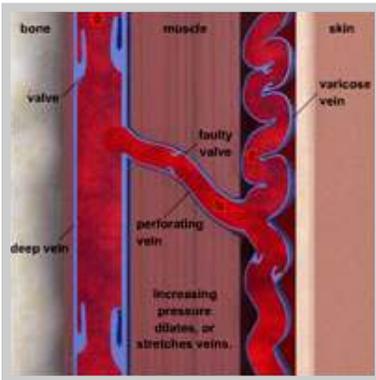
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### **Blood Flow in the Legs**

Before you learn how spider veins and varicose veins can be treated using laser therapy, you need to understand what causes spider veins and varicose veins. Your circulatory system is composed of arteries and veins. Arteries transport oxygenated blood from the heart and lungs to the rest of your body. In contrast, veins transport blood back to your heart and lungs. Spider veins and varicose veins most commonly occur in the leg, in what are known as the superficial veins. This is because the veins in your legs are subject to large amounts of pressure and must work harder than other veins in the body to transport blood upward to the heart, against the force of gravity.



### **What Causes Spider & Varicose Veins?**

Blood typically flows from superficial veins into deep veins, which are often connected by perforating veins. Normally functioning veins have uni-directional valves which prevent blood from flowing backwards in the vein, as it travels upwards toward the heart and lungs. If valves in the perforating veins or superficial veins do not work properly, some blood will be allowed to flow backwards, and collect in a pool below. As blood accumulates, it exerts increasing pressure on the walls of the vein, which causes them to weaken and become dilated, or stretched. As a result, spider veins or varicose veins form in the region.



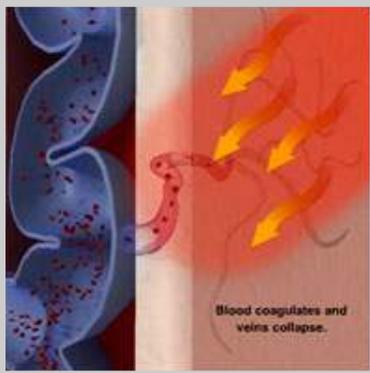
### **Differences between Spider & Varicose Veins**

Although they have similar causes, spider veins and varicose veins are not the same. Spider veins are generally small thread-like veins with a blue or reddish color that appear beneath the skin's surface. These veins can have a characteristic circular pattern similar to a spider's web, or can be independent of other veins. Unlike spider veins, varicose veins are generally swollen, twisted cord-like veins that rise off the skin's surface. Usually deeper than spider veins, varicose veins are flesh-colored or blue in appearance and can cause pain, cramps, swelling, and fatigue in the legs. While laser vein removal may treat small, and in some cases medium sized varicose veins, other treatments such as sclerotherapy, which involves injecting the veins with a special solution, or surgery, may be more appropriate for the treatment of large varicose veins.



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### ***How Laser Vein Removal Works***

During laser vein removal, a laser emits light energy that travels through the skin and is absorbed by the hemoglobin within the affected veins. Hemoglobin is a protein responsible for transporting oxygen within the blood that gives blood its red color. As the hemoglobin absorbs the light energy, it causes the blood within the vein to coagulate, or clot together. As a result, the vein collapses and is eventually reabsorbed by the body. Laser therapy can reduce the appearance of spider veins and small varicose veins on the leg by approximately thirty to forty percent in a single treatment. Like other types of laser therapy, multiple treatments are usually required to achieve your desired results. Although laser vein removal may not remove spider and varicose veins entirely, they can be significantly reduced, restoring a smoother, more youthful appearance.



### ***Procedure Preparation***

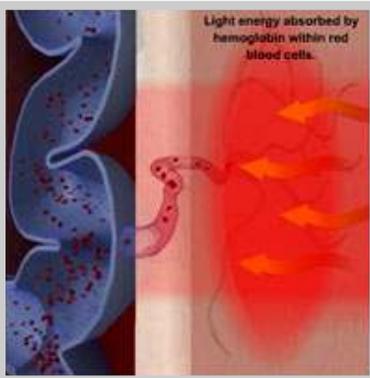
Prior to the start of your procedure, the physician may apply a cooling gel to the treatment area, which will help to prevent the heat produced by the laser from damaging your skin. In contrast, the physician may use a laser with a special cooling tip that applies a coolant as the laser glides over the skin. As the procedure is not typically very painful, an anesthetic is usually not necessary. However, you may request a topical anesthetic if you are especially sensitive to pain. You will likely be given eyewear to protect your eyes from the intense light produced by the laser.

The length of a laser vein removal procedure depends on the extent of treatment, although on average, a laser vein removal procedure may last approximately twenty minutes.



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### ***Laser Vein Removal Procedure***

During the procedure, the physician will guide the laser over the treatment area. As the laser pulses intermittently, it delivers light energy, which travels through the skin and is absorbed by hemoglobin within the veins. As the hemoglobin absorbs the light energy, the blood that has collected in the dilated vein will coagulate, or clot. As this happens, the damaged vein will collapse. Over time, the damaged veins will be reabsorbed by the body, reducing their appearance.

While the appearance of spider veins and varicose veins can be reduced significantly during a single treatment, it is important to remember that multiple treatments are usually required to treat a single area completely.



### ***Laser Vein Removal Recovery***

Following the procedure, your skin may appear red or irritated. However, the redness will likely dissipate within one to two days. In addition, you may notice some bruising, which will fade in approximately four weeks. Depending on the extent of treatment, and whether laser therapy is used in conjunction with another procedure, you will most likely be able to return to your normal activities immediately after the procedure.



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### **Laser Vein Removal Results**

As veins do not typically disappear with a single treatment, you will most likely undergo multiple treatments spaced approximately five to six weeks apart. Although the number of treatments varies by individual, most individuals receive approximately two to four treatments.

The results from a laser vein removal procedure depend on the region of the body, as well as the thickness and the extent of veins that require treatment. It is important to realize that laser vein removal may not remove spider or varicose veins completely, nor will it prevent new enlarged veins from developing in the future. However, laser vein removal can reduce their appearance significantly giving your skin the smooth appearance that you desire.