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Varicose Veins and Spider Veins

Q: What are varicose veins and spider veins?

A: Varicose veins are enlarged veins that can be flesh colored, dark purple or blue. They often look like cords and appear twisted and bulging. They are swollen and raised above the surface of the skin. Varicose veins are commonly found on the backs of the calves or on the inside of the leg. During pregnancy, varicose veins called hemorrhoids can form in the vagina or around the anus.

Spider veins are similar to varicose veins, but they are smaller. They are often red or blue and are closer to the surface of the skin than varicose veins. They can look like tree branches or spider webs with their short jagged lines. Spider veins can be found on the legs and face. They can cover either a very small or very large area of skin.

Q: What causes varicose veins and spider veins?

A: The heart pumps blood filled with oxygen and nutrients to the whole body. Arteries carry blood from the heart towards the body parts. Veins carry oxygen-poor blood from the body back to the heart.

The squeezing of leg muscles pumps blood back to the heart from the lower body. Veins have valves that act as one-way flaps. These valves prevent the blood from flowing backwards as it moves up the legs. If the one-way valves become weak, blood can leak back into the vein and collect there. This problem is called venous insufficiency. Pooled blood enlarges the vein and it becomes varicose. Spider veins can also be caused by the backup of blood. Hormone changes, inherited factors, and exposure to the sun can also cause spider veins.

Q: How common are abnormal leg veins?

A: About 50 to 55% of American women and 40 to 45% of American men suffer from some form of vein problem. Varicose veins affect 1 out of 2 people age 50 and older.

Q: Who usually has varicose veins and spider veins?

A: Many factors increase a person's chances of developing varicose or spider veins. These include:

- Increasing Age
- Having family members with vein problems or being born with weak vein valves.
- Hormonal changes. These occur during puberty, pregnancy, and menopause. Taking birth control pills and other medicines containing estrogen and progesterone also increase the risk of varicose or spider veins.
- Pregnancy. During pregnancy there is a huge increase in the amount of blood in the body. This can cause veins to enlarge. The expanding uterus also puts pressure on the veins. Varicose veins usually improve within 3 months after delivery. A

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growing number of abnormal veins usually appear with each additional pregnancy.

- Obesity, leg injury, prolonged standing and other things that weaken vein valves.
- Sun exposure, which can cause spider veins on the cheeks or nose of a fair-skinned person.

Q: Why do varicose veins and spider veins usually appear in the legs?

A: The force of gravity, the pressure of body weight, and the task of carrying blood from the bottom of the body up to the heart make legs the primary location for varicose and spider veins. Compared with other veins in the body, leg veins have the toughest job of carrying blood back to the heart. They endure the most pressure. This pressure can be stronger than the veins' one-way valves.

Q: Are varicose veins and spider veins painful or dangerous?

A: Spider veins usually do not need medical treatment. But varicose veins usually enlarge and worsen over time. Severe varicose veins can cause health problems. These include:

- Severe venous insufficiency. This severe pooling of blood in the veins slows the return of blood to the heart. This condition can cause blood clots and severe infections. Blood clots can be very dangerous because they can move from leg veins and travel to the lungs. Blood clots in the lungs are life-threatening because they can block the heart and lungs from functioning.
- Sores or skin ulcers can occur on skin tissue around varicose veins.
- Ongoing irritation, swelling and painful rashes of the legs.

Q: What are the signs of varicose veins?

A: Some common symptoms of varicose veins include:

- Aching pain.
- Easily tired legs.
- Leg heaviness
- Swelling in the legs.
- Darkening of the skin (in severe cases).
- Numbness in the legs
- Itching or irritated rash in the legs

Q: How can I prevent varicose veins and spider veins?

A: Not all varicose and spider veins can be prevented. But some things can reduce your chances of getting new varicose and spider veins. These same things can help ease discomfort from the ones you already have:

- Wear Sunscreen to protect your skin from the sun and to limit spider veins on the face.
- Exercise regularly to improve your leg strength, circulation, and vein strength. Focus on exercises that work your legs, such as walking or running.
- Control your weight to avoid placing too much pressure on your legs.
- Do not cross your legs when sitting.
- Elevate your legs when resting as much as possible.

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- Do not stand or sit for long periods of time. If you must stand for a long time, shift your weight from one leg to the other every few minutes. If you must sit for long periods of time, stand up and move around or take a short walk every 30 minutes.
- Wear elastic support stockings and avoid tight clothing that constricts your waist, groin, or legs.
- Eat a low-salt diet rich in high-fiber foods. Eating fiber reduces the chances of constipation which can contribute to varicose veins. High fiber foods include fresh fruits and vegetables and whole grains, like bran. Eating too much salt can cause you to retain water or swell.

Q: Should I see a doctor about varicose veins?

A: Remember these important questions when deciding whether to see your doctor:

Has the varicose vein become swollen, red, or very tender or warm to the touch?

- If yes, see your doctor.
- If no, are there sores or a rash on the leg or near the ankle with the varicose vein, or do you think there may be circulation problems in your feet?
  - If yes, see your doctor.
  - If no, continue to follow the self-care tips above.

Q: How are varicose and spider veins treated?

A: Besides a physical exam, your doctor can take x-rays or ultrasound pictures of the vein to find the cause and severity of the problem. You may want to speak with a doctor who specializes in vein diseases or phlebology. Talk to your doctor about what treatment options are best for your condition and lifestyle. Not all cases of varicose veins are the same.

Some available treatments include:

Sclerotherapy

This is the most common treatment for both spider veins and varicose veins. The doctor injects a solution into the vein that causes the vein walls to swell, stick together, and seal shut. This stops the flow of blood and the vein turns into scar tissue. In a few weeks, the vein should fade. The same vein may need to be treated more than once.

This treatment is very effective if done the right way. Most patients can expect a 50% to 90% improvement. Microsclerotherapy uses special solutions and injection techniques that increase the success rate for removal of spider veins. Sclerotherapy does not require anesthesia, and can be done in the doctor's office.

Possible side effects include:

- Temporary stinging or painful cramps where the injection was made.
- Temporary red raised patches of skin where the injection was made
- Temporary small skin sores where the injection was made.
- Temporary bruises where the injection was made.
- Spots around the treated vein that usually disappear.
- Brown lines around the treated vein that usually disappear.

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- Groups of fine red blood vessels around the treated vein that usually disappear.

The treated vein can also become inflamed or develop lumps of clotted blood. This is not dangerous. Applying heat and taking aspirin or antibiotics can relieve inflammation. Lumps of coagulated blood can be drained.

Laser surgery

New technology in laser treatments can effectively treat spider veins in the legs. Laser surgery sends very strong bursts of light onto the vein. This can makes the vein slowly fade and disappear. Lasers are very direct and accurate. So the proper laser controlled by a skilled doctor will usually only damage the area being treated. Most skin types and colors can be safely treated with lasers.

Laser surgery is more appealing to some patients because it does not use needles or incisions. Still, when the laser hits the skin, the patient feels a heat sensation that can be quite painful. Cooling helps reduce the pain. Laser treatments last for 15 to 20 minutes. Depending on the severity of the veins, two to five treatments are generally needed to remove spider veins in the legs. Patients can return to normal activity right after treatment, just as with sclerotherapy. For spider veins larger than 3 mm, laser therapy is not very practical.

Possible side effects of laser surgery include:

- Redness or swelling of the skin right after the treatment that disappears within a few days.
- Discolored skin that will disappear within one to two months.
- Rarely burns and scars result from poorly performed laser surgery.

Endovenous Techniques (radiofrequency and laser)

These methods for treating the deeper varicose veins of the legs (the saphenous veins) have been a huge breakthrough. They have replaced surgery for the vast majority of patients with severe varicose veins. This technique is not very invasive and can be done in a doctor's office.

The doctor puts a very small tube called a catheter into the vein. Once inside, the catheter sends out radiofrequency or laser energy that shrinks and seals the vein wall. Healthy veins around the closed vein restore the normal flow of blood. As this happens, symptoms from the varicose vein improve. Veins on the surface of the skin that are connected to the treated varicose vein will also usually shrink after treatment. When needed, these connected varicose veins can be treated with sclerotherapy or other techniques.

Possible side effects:

- Slight bruising.

Surgery

Surgery is used mostly to treat very large varicose veins. Types of surgery for varicose veins include:

Surgical Ligation and Stripping — With this treatment, problematic veins are tied shut and completely removed from the leg. Removing the veins does not affect the circulation of blood in the leg. Veins deeper in the leg take care of the larger volumes of blood. Most varicose veins removed by surgery are surface veins and collect blood only from the skin. This surgery requires either local or general anesthesia and must be done in an operating room on an outpatient basis.

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Possible side effects: Serious side effects or problems from this surgery are uncommon.

- With general anesthesia, a risk of heart and breathing problems.
- Bleeding and congestion of blood can be a problem. But the collected blood usually settles on its own and does not require any further treatment.
- Wound infection, inflammation, swelling and redness.
- Permanent scars.
- Damage of nerve tissue around the treated vein. It is hard to avoid harming small nerve branches when veins are removed. This damage can cause numbness, burning, or a change in sensation around the surgical scar.
- A deep vein blood clot. These clots can travel to the lungs and heart. Injections of heparin, a medicine that reduces blood clotting reduce the chance of these dangerous blood clots. But, heparin also can increase the normal amount of bleeding and bruising after surgery.
- Significant pain in the leg and recovery time of one to four weeks depending on the extent of surgery is typical after surgery.

Ambulatory Phlebectomy — With this surgery, a special light source marks the location of the vein. Tiny cuts are made in the skin, and surgical hooks pull the vein out of the leg. This surgery requires local or regional anesthesia. The vein usually is removed in one treatment. Very large varicose veins can be removed with this treatment while leaving only very small scars. Patients can return to normal activity the day after treatment.

Possible Side Effects:

- Slight bruising.
- Temporary numbness.

Endoscopic vein surgery — With this surgery, a small video camera is used to see inside the veins. Then varicose veins are removed through small cuts. People who have this surgery must have some kind of anesthesia including epidural, spinal, or general anesthesia. Patients can return to normal activity within a few weeks.

Q: Can varicose and spider veins return even after treatment?

A: Current treatments for varicose veins and spider veins have very high success rates compared to traditional surgical treatments. Over a period of years, however, more abnormal veins can develop. The major reason for this is that there is no cure for weak vein valves. So with time, pressure gradually builds up in the leg veins. Ultrasound can be used to keep track of how badly the valves are leaking (venous insufficiency). Ongoing treatment can help keep this problem under control.

The single most important thing a person can do to slow down the development of new varicose veins is to wear graduated compression support stockings as much as possible during the day. ■

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For More Information…

For more information on varicose and spider veins, contact the National Women's Health Information Center (NWHIC) at 800-994-9662 or the following organizations:

National Heart Lung and Blood Institute (NHLBI)
NHLBI Information Center
1-800-575-WELL (9355)
Internet Address:
http://www.nhlbi.nih.gov

American Academy of Dermatology
847-330-0230
1-888-462-DERM (3376)
Internet Address: http://www.aad.org

American Society for Dermatologic Surgery
847-330-9830
Internet Address:
http://www.asds-net.org/

The American College of Phlebology
510-346-6800
Internet Address:
http://www.phlebology.org/

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