

## Unightly Leg Veins

Beautiful legs are not just beautifully shaped legs. Their beauty can be undermined by the presence of unsightly blood vessels. Unsightly vessels on the legs are almost always of venous origin. The function of the venous system is to return to the heart the blood that has delivered oxygen and nutrients to muscles and other tissues. The direction of the venous blood flow is opposite to gravity. Larger veins have valves to prevent blood from flowing in the wrong direction. Gravity tends to cause the pooling of blood in the leg veins. This will lead to an increased pressure on the valves, which may eventually result in



their destruction. Malfunction of the valves causes the blood to flow in the reverse direction, and consequently, the vein will dilate. Dilated veins look like blue strings or knots, and such conditions are called "varicosis". They may be accompanied by skin abnormalities or pain.

Varicosis is frequently seen in persons who have to be standing all the time at work and women during and after pregnancy. There is usually a clear genetic predisposition.

Small red veins often observed on the thighs, calves and around the knees are called "telangiectasia" or dilated capillaries. They are also known as spider veins or broken or sunburst vessels. They are thin blood vessels lying close to

the skin surface, which are permanently dilated due to the loss of elasticity. What causes this condition is not completely unraveled, but (female) hormones, sun damage, and an inborn weakness of vessel walls are quite likely to be related to their occurrence.

## Sclerotherapy

Many women wear thick stockings to hide their unsightly leg veins. Since it is quite fashionable to go bare-legged, especially during the summer months, more and more women choose to be treated for this condition.

Large veins and serious varicosities usually require a surgical intervention. However, most of the people who request treatment for cosmetic reasons generally have dilated veins no larger than four millimeters in diameter. For these vessels, there is a simple and effective treatment called "sclerotherapy".

This is how it works: A substance called a sclerosant is injected into the dilated vessel leading to damage of its internal lining. A resulting blood clot blocks the blood flow through the vessel. The damaged vessel is gradually replaced by scar tissue, the type of tissue that accumulates during any wound healing process. This scar tissue sometimes feels hard under the skin. Hence the name sclerotherapy ("skleros" is an old Greek word for "hard"). Eventually it is eliminated by the body so that the vessel disappears without leaving a trace. In case of telangiectasia, a blood clot may not be formed. Instead, the blood vessel will collapse with its walls stuck together, precipitating scar tissue formation. Since dilated veins are not functioning, they can be removed without affecting the circulation of the legs.

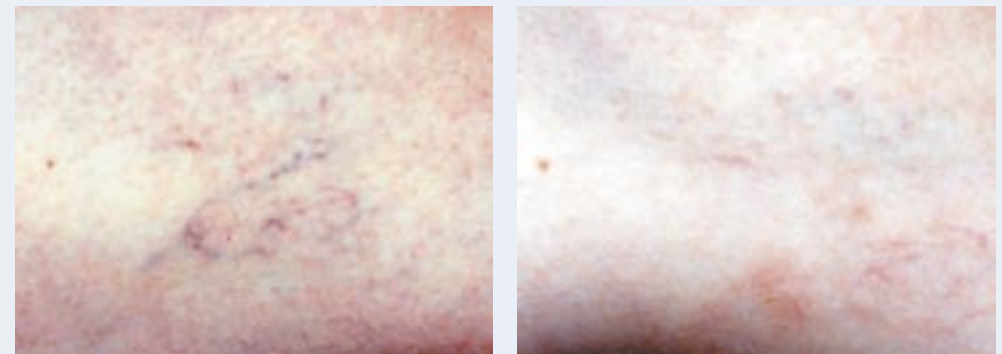
Several substances serve as injections for sclerotherapy, of which "polidocanol" is most



widely used at present. With its anesthetic effect, polidocanol is well-tolerated. Injection with a very fine needle minimizes the pain to a degree that you only feel a pin prick when the needle penetrates the skin. One session of sclerotherapy usually takes 30 minutes to one hour.

After each injection, a cotton roll will be attached to the skin with tape to exert pressure on the treated vessel. After completing all injections, the whole treated area is covered with an elastic bandage to give further compression. There is no need for follow-ups or special aftercare. The compression bandage has to be left in place for up to 72 hours. The patient can remove this bandage at home. Removal of the bandage often reveals red and blue spots caused by inflammation and bruising. They usually disappear within two weeks. Red blotches turn easily into brown discolorations, so the skin should not be exposed to the sun without applying a sun screen until redness goes down. Part of the vessels may already have disappeared when the bandages are removed. Other vessels will gradually fade away over a period of several days to weeks. Several sessions are often necessary before the completion of treatment, because some vessels only disappear after repeated injections and patients who are prone to it are likely to keep getting new ones.

Serious side effects are extremely rare. Hives due to an allergy to the injected substance may occur. Also temporary discolorations and aggravation of telangiectasia are possible.



*before sclerotherapy*

*21 days after first treatment*

### Laser treatment

Color-selective lasers and intense-pulse light sources are also used for the treatment of dilated veins. When a blood vessel is irradiated with a laser beam that is selectively absorbed by red pigment, absorption of laser energy by red blood cells in the vessel causes the generated heat to destroy the vessel. While laser therapy has been found to be useful for smaller vessels, its effect for larger veins remains to be determined. In Tokyo Skin Clinic we make use of the new long-pulse NdYAG laser with which vessels up to a diameter of 3 mm can be treated successfully.



### Treatment costs

The fee for one session of sclerotherapy is 52,500 yen (incl. 5% consumption tax), including polidocanol and other materials used during the session. The minimal charge for laser treatment is 31,500 yen (incl. 5% consumption tax). A consultation (follow-up) fee is always added to the treatment cost.

Compression stockings which patients are advised to wear after sclero-therapy cost around 5,000 yen per pair.



# LEG VEIN TREATMENT

## - patients' guide -

