

VEINS

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Dr. Linde is an **international beauty expert** and an acclaimed keynote speaker at conferences all over the world. He is specialized in the **treatment of fat pads, wrinkles and transformations of the skin** with the latest, most innovative technologies. Dr. Linde trains doctors in his **international Academies** and enjoys passing on his knowledge as well as his experience in the field of aesthetics.

Every year, Dr. Linde performs approximately **700 vein surgeries, 650 liposuctions** and **2000 face treatments with botulinum toxin/filler**.



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Venous diseases can evolve into chronic diseases that lead to serious complications if left untreated. The earlier you seek treatment, the higher the chances of recovery, the better the aesthetic results will be.

Every person is different, which is why we design an individual treatment plan for each patient. Usually, combining different treatment methods will achieve the most successful and long-term results.

Thanks to the latest innovative methods, the treatment of diseased veins is pain-free, easy and fast.

Please come by for a free consultation, I look forward to seeing you.

A handwritten signature in black ink, reading "Nik. L. Linde". The letters are stylized and connected, with a prominent vertical stroke for the final 'e'.

Dr. med. Nikolaus Linde

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## FAST AND PAINLESS DIAGNOSIS THROUGH COLOR DUPLEX ULTRASONOGRAPHY AND PLETHYSMOGRAPHY

Before each treatment, a comprehensive diagnosis is needed. The **color-coded duplex ultrasonography** constitutes of an ultrasound that makes the blood flow visible. This allows a rapid diagnosis of both superficial and deep veins – elegantly and painlessly. The equally painless **plethysmography**, also known as the venous pressure measurement, complements the diagnosis.



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## **THE TREATMENT OF VENOUS DISEASES IS BASED ON FIVE PILLARS:**

- compression therapy with bandages or stockings
- sclerotherapy
- laser treatment of small varicose veins
- VNUS Closure Fast and the ELVeS™ laser procedure for larger varicose veins
- surgical methods

### **COMPRESSION THERAPY WITH BANDAGES AND STOCKINGS**

Compression therapy consists of stockings that exert pressure from the outside. This pressure affects the deep tissue layers, which leads to a constriction of the pathologically enlarged veins. The non-functional, non-closing venous valves are thereby pressed together so that their regular functioning is completely restored.

Whether a bandage or a stocking is needed depends on the individual situation of each patient:

The bandage will primarily be used when the compression therapy is limited to a shorter period of time, e.g. at the beginning of a sclerotherapy, after surgery, etc.

The stocking is more suitable for long-term treatments, e.g. a thrombosis in deep veins. The stocking is the more elegant option, as there is no winding involved.

The disadvantage of the compression treatment is that the effect wears off as soon as the stocking or bandage is removed. Furthermore, compression therapy might be uncomfortable in hot summer months where compression would be especially important.

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## SCLEROTHERAPY

The treatment of varicose veins, called sclerotherapy, is a major component in the treatment of venous diseases. It is an inexpensive, easily implemented process that is applicable without any side effects. The concept is simple: a sclerosing agent is injected into the varicose veins which leads to an inflammation of the vein walls, resulting in the vein walls sticking together. This process becomes stable after 1-2 weeks, but is completed only after 3 months. The body slowly degrades these veins – until they disappear. Sclerotherapy is ideal against spider veins, but is equally suitable for varicose veins. In some cases, even the large venous trunks (saphenous vein) can be used as an injection point.

### ***Foam Sclerotherapy – the most efficient treatment against spider veins***

Foam sclerotherapy is much more efficient than any previous injection technique. Instead of injecting a liquid, a specially-prepared foam is injected into the veins, providing an even stronger adhesion between vein walls. The treatment does not require a stocking post-therapy and is currently the best method in the field of sclerotherapy.

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## LASER TREATMENT OF SMALL VARICOSE VEINS

Laser energy is a gentle yet effective treatment. Nowadays, high-energy laser devices not only provide a specific wavelength, but an entire wave spectrum.

We usually treat small varicose veins (spider veins) with foam sclerotherapy, only in a few specific cases the usage of laser appliances will be considered. In contrast to the endoluminal laser treatment (ELVeS™), the laser light is not emitted from underneath the skin but from an external point onto the skin. New laser systems such as the IPL lamp technique or the pulsed Nd: YAG lasers have a wavelength that selectively reaches the red pigmentation within the small veins. The laser pulse radiates the blood in the small vessels so that it consequently starts to heat up – the vein walls shrink, the spider veins disappear. While this treatment is very successful against dilated vessels, – for example in the face, – it often requires multiple sessions on the leg until a satisfactory result can be reached. It is also important to go through a preliminary test with a color-coded duplex sonography to detect non-visible large strains of veins, so-called "inner varicose veins". Such veins must be treated first in order to prevent a rapid recurrence of spider veins.

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## **VNUS CLOSURE FAST AND ELVES™ LASER PROCEDURE AGAINST LARGE VARICOSE VEINS**

Instead of operating, it is nowadays possible to remove large varicose veins using laser or radio frequency energy devices such as ELVeS™ or the VNUS Closure Fast. The treatment, as modified by Dr. Linde, is painless and lasts little more than an hour. Post-treatment, a bandage is worn for 24 hours – no elastic stockings are needed.

### ***ELVeS™ and ELVeS™ Painless Laser Therapy***

The ELVeS™ (Endo Laser Vein System) or ELVeS™ Painless Technology allows large varicose veins in the leg to be treated with minimal invasion, under local anesthesia. Immediately after the procedure, the patient can go home or to work. Specific modifications of the endoluminal ELVeS™ method allow the bandages to be removed the very next day. Compression stockings or a consecutive treatment are not necessary.

Dr. Linde often combines ELVeS™ and ELVeS™ Painless with the hook method and/or foam sclerotherapy for optimal results.

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### ***Radio Waves & VNUS Closure Fast***

The VNUS Closure method forces the veins by means of radio waves to shrink from the inside, similar to the ELVeS™ laser therapy. The VNUS Closure and the Closure Fast procedure have achieved worldwide acceptance as being the most gentle and most efficient procedures against venous diseases.

The treatment is performed under local anesthesia, which does not require the patient to stay in the hospital. Daily activities can be resumed on the same day.

An experience of over 10 years paired with large international studies proves the durability of this technique. After a single treatment, more than 90% of the treated veins can no longer be detected as the body has degraded them. Dr. Linde combines the VNUS Closure procedure with the hook method and foam sclerotherapy for best results.

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## SURGICAL METHODS

### ***Stripping***

Stripping is used when it comes to varicose veins in the course of the small or large saphenous vein, so-called varices of main veins. Their origin is usually located at its estuary at depth, – in the groin or the knee, – where a first section is performed to locate the venous trunk. Here, a special probe, the “stripper”, is introduced into the section and taken out via a second section on the lower leg. The entire varicose vein stem can now be pulled out using this probe, without leaving an ugly scar. This procedure requires the patient to be under anesthesia, in a hospital.

Dr. Linde rarely recommends stripping operations nowadays, as minimally invasive methods such as ELVeS™, ELVeS™ Painless and VNUS Closure Fast comply with what most patients want: a minimally invasive procedure without anesthesia and without the need of wearing “elastic stockings”. Only in very severe cases, with a lot of varicose veins on both sides of the legs, operative procedures become inevitable.

### ***Hook Method***

In this treatment, very small micro-cuts are used to introduce a tiny hook into the subcutaneous adipose tissue, where the vein runs. The hook is then pulled outwards, which in turn rips the veins under the skin. Another micro-stitch is introduced under the subcutaneous fat in order to remove the next part of the vein... and so on. In this way, it is possible to remove even large vein sections without leaving cuts and/or scars. The micro-cuts are only 1-2mm long and heal quickly.



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