



THE VEIN INSTITUTE

AT ROCHESTER RADIOLOGY

EVLT Information Guide

Up until the last ten years, the only treatment option available for venous insufficiency was a major surgery called vein stripping, which was an invasive procedure with a long recovery that tended to fail after a few years. Over the past decade, a revolutionary new treatment has been developed by interventional radiologists, doctors who are experts in imaging and specialize in minimally invasive treatments.

This new treatment, called endovenous laser ablation (EVLT), is a minimally invasive procedure used to close down, or ablate, the incompetent superficial vein which is the underlying source of your symptoms and varicosities. This is accomplished through thermal ablation - or heat sealing - the vein shut using a very hot laser fiber tip which has passed into the vein through IV access lower in the leg. In order to allow the laser tip to heat up enough to seal the vein without causing damage to surrounding tissue, we will also be injecting a small amount of lidocaine all along the course of the vein to be treated. Ultrasound imaging is used before (to locate the target section of the vein), during (to monitor the therapy), and after (to ensure the treatment has been completed and other important deep veins have not been damaged). The procedure is commonly done in the office outpatient setting with minimal anesthesia and is generally very safe. The EVLT generally takes less than 30 minutes.

In conjunction with EVLT, a minimally invasive surgical technique called ambulatory microphlebectomy is commonly used to complete treatment of varicose veins. After EVLT treats the source problem, the varicose veins which are bulging and dilated are then removed using a tiny nick. The blade used for this procedure is the same scalpel used for eye surgeries, and therefore is relatively painless after lidocaine administration and generally leaves no scars. The abnormal vein is then removed through this tiny incision or incisions using special tools. The procedure is done under local anesthesia and typically takes only a few minutes. Recovery is rapid, and most patients do not need to interrupt most regular activity after the procedure.

What are the benefits of EVLT?

- Minimally invasive – no surgical incision, no visible scars
- High success rate and low recurrence compared to surgery - success rate for vein ablation ranges from 93-97%
- Extremely safe with very low complication rate
- Minimal recovery time – patients are encouraged to walk and resume normal activities the same day!
- Covered by nearly all insurance carriers/healthcare plans
- Done in less than an hour
- Performed in a comfortable outpatient office setting
- No general anesthesia or sedation required for most patients

What should you do before an EVLT procedure?

- Do not shave the legs.
- Do not apply moisturizer on the day of treatment.
- Wear slacks or loose trousers and sandals or loose shoes to allow for the thickness of the bandages and compression garments.

What happens during an EVLT procedure?

- A sonographer will perform a limited ultrasound scan similar to the initial screening scan to familiarize us with the veins. The course of the vein will be marked.
- After you stand for 5 minutes, your varicosities will be marked with a marker using a device called a VeinLite so that their location is known after the EVLT procedure for the ambulatory microphlebectomy.
- You are awake with no need for anesthesia apart from one tiny injection to introduce the needle, similar to IV access. Some people request a small dose of anti-anxiety medication prior to the procedure.
- The EVLT tube, or catheter, is inserted into the vein under ultrasound control, and the tip is positioned at the top of the vein.
- Small amount of lidocaine are injected around the vein all along its course using multiple tiny needle sticks. The lidocaine around the vein, or tumescent, is used for pain relief, to further compress the vein, and finally to act as a layer of protection for surrounding adjacent structures such as nerves and skin.
- The laser tip is confirmed in place and the device is turned on. The laser is slowly retracted over 2-3 minutes, a process which the patient generally does not feel.
- Compression is then applied by a combination of bandages and compression garments.
- You may need to return later to complete treatment with ultrasound-guided sclerotherapy of the residual varicosities.

Do I have any limitations in what I can do after EVLT?

- Resume normal daytime activities and avoid standing still for long periods immediately following the procedure. Walking is encouraged, especially after the procedure.
- You may continue with normal exercise activities, such as cardio workouts (running, treadmill, elliptical, etc.). Avoid strenuous exercises such as Pilates, core training, heavy weightlifting, and abdominal crunches/sit-ups for the first two weeks following the procedures as well as any other activity that increases abdominal pressure.
- Avoid hot tubs, saunas, and other similar activities for two weeks following the procedure as these cause your veins to vasodilate and may open up the treated vein.
- Avoid flights of greater than 4 hours duration for 6 weeks after treatment. If travel is unavoidable, speak with your doctor prior to departure for your trip.

What can you expect following EVLT?

The following features are expected and are a result of the treatment working. They are not a cause for concern although you will be asked about them at the follow-up appointment:

- Mild pain persists for several days. The degree is related to the initial size of the veins. Pain is usually improved by walking or by taking Tylenol. Please do not take Advil (ibuprofen) as it may interfere with the vein closing.
- After the procedure, you may feel some inflammation and bruising on the skin surface overlying the treated areas. Over the next few days, you will also note that the area where the vein was ablated will feel like a “rope-like tightening” or “rubber band-like” feeling.

- Soreness can occur in the leg, especially behind the knee, from the tight compression and/or from rubbing by the bandage or compression garments.
- Recurrence. Treated veins can reopen or new veins can develop. For this reason, ultrasound surveillance is carefully performed at all follow-up exams to ensure closure.

In general, we generally tell our patients that the first two weeks with the bandages/compression stockings will be the recovery time as your vein closes. By the second to third week, many people experience that “rope-like tightening” or “rubber band-like” feeling as the vein starts to scar down. By the one month follow-up, generally all the mild pain and bruising as well as the “rope-like tightening” should be dissipating if not gone. Many of the symptoms will usually start to improve by this point. At the 3 month follow-up, nearly all patients have complete resolution of symptoms and varicosities. Follow-ups at 6 months and 1 year are for surveillance. Often we will take ‘before and after’ pictures at this time.

What are the possible complications of EVLT?

Complications are rare but can occur even when the procedure was technically successful:

- Severe bruising and pain during the weeks after ablation, which generally resolves after a few weeks. Notify us if you take or start taking blood thinners (Aspirin, Plavix, Coumadin, Heparin, etc.) if this occurs.
- Prolonged redness and tenderness around the puncture sites or over the treated vein segment. This may also occur with watery fluid noted from the puncture site. This may represent a mild superficial infection/inflammation at the vein site called thrombophlebitis. If you see pus from the puncture sites, call us immediately or go to the Emergency Department as this may be a sign of a more serious infection.
- Deep vein thrombosis, which are clots extending into the important deep veins, can occur. This potentially serious complication is very uncommon if the protocol of compression and regular daily walking is followed. If this is demonstrated on the postoperative scan, you may require treatment with daily heparin injections until further scans show the clot is resolving.
- Burning of the skin or adjacent structures such as nerves has been reported.