

Endovenous Laser Ablation



Endovenous laser ablation (EVLA) is a safe and effective procedure for treating venous insufficiency, often the cause of varicose veins. EVLA uses a laser to create intense local heat in the varicose vein or incompetent vein. Heat is directed through a catheter to close up the targeted vessel. This treatment closes off the problem veins, but leaves them in place so there is minimal bleeding and bruising. Ablation catheters cannot be easily passed through a vessel with many turns and bends (tortuous vein). Consequently, endovenous ablation is typically used to treat larger varicose veins, such as the great saphenous vein, which extends from the groin and inside of the thigh into the inner calf, small saphenous veins which run in the back of the calf from the top of the calf to the ankle, larger varicose veins, and incompetent perforators which can be found in the calf or thigh.

Compared to more invasive options, the treatment is fast and comfortable with a quick recovery period and no difference in effectiveness. Endovenous ablation is successful at closing the abnormal target vein almost 100 percent of the time, but small dilated branches that persist in the skin often require additional

treatment with a laser procedure or sclerotherapy (injection of a liquid medication to seal them off). Subsequent treatments are usually scheduled after an ablation procedure.

The goals of treatment are to reduce symptoms and reduce the risk of complications from venous disease, including blood clots. Patients who have large, symptomatic varicose veins and those with incompetent saphenous veins are candidates for this procedure. This procedure is essentially taking the place of "vein stripping." Each patient is evaluated, and treatment will be individualized for the patient's circumstances.



1. What should I expect during the procedure?

This procedure is routinely and safely performed at the accredited Vein Center at Fox Valley Plastic Surgery. The procedure is relatively painless and takes approximately 30-60 minutes. Procedure times are dependent on the

number of concurrent treated veins, and length of segments treated. Patients will receive a sedative and a regional anesthesia. There is a slight pin prick when the local anesthetic is injected. The area will become numb within a short time.

The provider will use an ultrasound to identify troublesome veins, and make a small needle incision – typically below the knee. The provider then inserts a laser fiber into the incompetent vein, and injects a solution of anesthesia and salt water into the vein. There may be slight pressure when the catheter is inserted, but no serious discomfort. Injection of local anesthetic around the abnormal vein is the most bothersome part of the procedure because it usually requires multiple injections along the vein. With the help of an ultrasound, the provider guides the fiber to the upper thigh. Pulses of laser light are delivered as the fiber is pulled through the vein, causing it to collapse and seal shut. Actual closure of the vein with laser is usually not painful.

There is minimal risk of scarring because this laser treatment requires just a tiny puncture. Most patients will bruise in their thigh, but this resolves itself in a few weeks. A local anesthetic is used during the procedure, so patients

don't feel pain while the laser is working. Patients report only mild discomfort associated with this procedure.



2. What do I need to do before my procedure?

Please **do**:

- Fill the prescription for **compression stockings**, and **practice putting them on** before the procedure. **Bring them on the day of the procedure.**
- Arrange to have a **ride home** from the office if you are planning on taking Valium. The medicine to relax you.
- Continue taking regular medications.
- Wear loose-fitting pants or sweats because the legs will be wrapped with elastic bandages or compression stockings after the procedure.
- Arrive 15 minutes early to check in and prepare

for the procedure. The treatment itself takes approximately 60 minutes per leg.

Please **don't**:

- **Do not eat 3 hours prior** to the procedure. Make your last meal a light one, such as yogurt, fruit, coffee, and juice. Stay away from breads and cereal, which may absorb



your medication.

3. What do I need to do after my treatment?

After the treatment, the leg will be wrapped in compression stockings. Patients are encouraged to walk afterwards, but should refrain from extended sitting or standing for the first two days. During the first week, avoid air travel or prolonged sitting (such as a long car trip). However, remain active and do not spend too much time in bed during the recovery period since this increases the chance of complications.

Wear the compression stockings continuously for three days and nights, removing them only to shower or to wash them. Starting on day 4, wear the compression stockings during the day until your next ultrasound. The compression stocking does not need to be worn after the ultrasound but some patients find it more comfortable to continue wearing them.

Typically, patients should elevate the treated limb when not moving to decrease swelling. Keep the incisions clean and dry if there are any. Most patients return to mild activities either immediately or within a day. After three days, patients may participate in more vigorous activities, such as running, biking, or aerobic exercise. Hot baths, swimming, jumping, heavy lifting, and straining are discouraged for the first 3 days. Any additional restrictions will be given following the procedure if the provider feels it is necessary.

Acetaminophen or 600 mg of ibuprofen may be taken as needed for discomfort. Full recovery will take approximately one to two weeks. It is normal to have the leg sore longer than that.

As with any surgical procedure, patients will feel somewhat tired for a few weeks. In addition, the skin will appear discolored and bruised for up to six weeks along the site of the ablation. Rarely, patients may experience some numbness or tingling along the shin. These typically resolve over a couple of months and may last up to a year.

It is normal to have clear or blood tinged drainage for several days from the areas of the leg where the numbing agent was administered.

Schedule a follow up ultrasound examination to assess the treated vein and to check for adverse outcomes. Within one week, the target vein should be successfully closed. The treated vein simply becomes fibrous tissue after treatment. Over time, the

vein will gradually decrease in size and simply will not be seen on ultrasound.

4. What will my legs feel like?

Following the EVLA procedure, the legs may be very tender and hypersensitive in the area that was treated. This typically lasts approximately 2-3 days. The area may also become red, swollen, or hard, and red streaks may develop along the vein that was treated. This is normal.

Because the procedure is performed through a tiny skin nick, there will be a minimal risk of a scar. It is possible that sclerotherapy or laser will also be needed to completely eradicate all varicose veins.

5. What are the possible complications?

This is generally a very safe procedure. However, as with any surgical procedure, there are risks. Although precautions are taken to decrease the risk of complications from EVLA, side effects may include:

- **Bruising** along the site of ablation
- **Pain** along the site of ablation
- **Mild numbness** around the thigh area
- **Mild phlebitis** (redness and tenderness of the skin), which typically resolves within 3-7 days
- **Deep venous thrombosis**, a very rare complication with a number of procedures

- Development of a **blood clot** in the treated leg
- **Nerve irritation** in the nerves that run along the treated vein
- **Infection** at an incision site is rare but possible.
- **Thermal (heat) damage** to nerves is rare and generally goes away in time.
- **Thrombophlebitis** (inflammation of the vein) is not uncommon and may cause pain and redness over the treated area, but generally responds well to non-steroidal anti-inflammatory drugs (NSAIDs).

Patients who notice an adverse reaction should call the office immediately.



Sue Barta, RVT, RDMS, RTR
Vein Center Manager

2400 Witzel Ave, Ste A
Oshkosh, WI 54904-8375
920-233-1540
sbarta@fvpsurgery.com
www.fvpsurgery.com
(6/2023)



FOX VALLEY
PLASTIC SURGERY, S.C.