

Endovenous Radiofrequency Ablation Treatment

Endovenous Radiofrequency Ablation Treatment procedure (EVRFA) is a minimally invasive treatment option that uses radiofrequency energy to effectively treat patients suffering from varicose veins or chronic venous insufficiency (CVI). This prevents much of the pain and bruising that is often associated with the more conventional method of ligation and stripping. Some patients may experience temporary soreness or some slight swelling, which can be treated effectively with over-the-counter, non-aspirin pain relievers and typically subsides within the first five days

In endovenous treatment, a thin tube, or catheter, is inserted into the damaged vein through a very small entry point in the skin. Radiofrequency energy is emitted through the catheter, as it is pulled back through the vein, delivering just the right amount of energy. The targeted tissue reacts with the energy, causing the vein to close and seal shut. The veins that are closed are superficial veins that handle less than five percent of the body's blood flow. The blood is automatically routed to other, healthy veins

The procedure is minimally invasive and requires no general anesthesia. Only local anesthetic is used to numb the area where the physician is working. Patients are encouraged to walk immediately after the procedure and can resume normal activities the same day.



Disposable catheter
inserted into vein



Vein heats
and collapses



Catheter withdrawn,
closing vein

What happens during an EVRFA procedure?

- You are awake with no need for anesthesia apart from one tiny injection to introduce the needle, similar to IV access. We also give our patients a small dose of anti-anxiety medication prior to the procedure.
- The EVRFA tube, or catheter, is inserted into the vein under ultrasound control, and the tip is positioned at the top of the vein.
- Small amounts 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 catheter tip is confirmed in place and the device is turned on. The catheter is retracted over 2-5 minutes, a process which the patient generally does not feel.
- Compression is then applied by a combination of bandages and compression garments.

What are the possible complications of EVRFA?

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.