

1. What is varicose vein ablation?

Normally, blood circulates from the heart to the legs via arteries and back to the heart via the veins. Duplex Doppler ultrasound uses ultrasound images or pictures to visualize the vein and at the same time determines the direction of the blood flow. Duplex Doppler ultrasound is always carried out before and during treatment in all patients with varicose veins to identify reflux (blood flow in the wrong direction) that causes varicose veins to appear and to establish the pattern of the abnormality.

Leg veins contain one-way valves that allow blood to return from the legs against gravity to the heart. If the vein valves are faulty, blood will pool in the leg veins due to gravity, and the veins become enlarged and visible underneath the skin. After a physical examination and a duplex ultrasound, a treatment plan is developed to treat the varicose veins. This may include any or all of the following:

- Radiofrequency ablation – the ablation of unwanted veins using radio wave energy/heat
- Sclerotherapy – chemical destruction/ablation that is used to close the smaller varicose veins

Varicose vein ablation can help to treat patients with symptoms of chronic venous insufficiency.

2. Before your procedure

- Before treating your varicose veins, all the possible complications associated with the treatment and the cost involved will be discussed with you as part of the informed consent procedure to allow you to plan and prepare for the procedure.
- You should report all medications that you are taking, including herbal supplements, as well as any allergies you have, especially to local anaesthetic, or any reactions you may have had previously when undergoing sclerotherapy.
- Before the procedure, you may be advised to stop taking blood thinning medication; that is, aspirin, non-steroidal anti-inflammatory medications (NSAIDs) or blood thinner, such as warfarin or Clexane, for a specified period of time.
- You should wear comfortable, loose-fitting clothing, and you will be asked to remove all clothing and jewellery in the area to be treated.
- You should plan to walk for 30–40 minutes after the procedure and daily thereafter for 7 days.
- You may experience some discomfort (general aching or tightness in the legs or soreness in the treated vein(s) after the procedure, for which you may take paracetamol and/or Ibuprofen, also apply cold packs to the area. These symptoms might last a few days
- The procedure is carried out on an outpatient basis using local anaesthetic injected around the veins.
- Some patients while require additional conscious sedation. Speak to Dr Blignaut about this.
- **DRINK AT LEAST 1 LITER OF FLUIDS, 1 to 2 HOURS BEFORE YOUR PROCEDURE**

3. What happens during varicose vein ablation using radiofrequency ablation (RFA)?

- The leg being treated will be cleaned, sterilized and covered with a surgical drape.
- The area where the RFA catheter (a thin wire) will be inserted into the abnormal vein will be numbed with a local anaesthetic.
- Under ultrasound guidance the RFA catheter is inserted through a small 2mm cut in the skin into the vein and positioned within the abnormal vein.
- Next, local anaesthetic is injected around the abnormal vein. This requires several small needle pricks that might be uncomfortable to some patients. If this is the case, a light sedative might be required, and you would require someone to drive you home.
- The radiofrequency catheter is activated and the abnormal vein is treated. This vein has now been sealed and blood flow has been diverted to the nearby healthy veins.
- A dressing is applied to stop any bleeding. The tiny opening in the skin is covered with a small dressing, and a layered compression bandage is applied to the leg.
- More than one vein can be treated at a time.

Using foam sclerotherapy

- When sclerotherapy is used to ablate the veins, a very fine needle, smaller than a pin, is placed within the vein and a chemical substance is injected. When this is done, no local anaesthetic is used, and a compression bandage is applied afterwards.
- It is common to have inflammation in veins treated with foam sclerotherapy, also known as phlebitis. This is a benign condition that will settle with anti-inflammatory medication. If you have a particular area that is tender, the trapped blood within it can be removed by needle and syringe.

4. Are there any after effects of varicose vein ablation?

- There will usually be some bruising, swelling with minimal pain and discomfort after the procedure.
- Very few patients will develop patchy numbness in the area of the treated vein that may last for a short time or may take 3–6 months to resolve.
- Inflammatory changes around the vein called **superficial phlebitis** will show as reddening of the skin, and minor local pain and tenderness. These inflammatory changes may start 7–21 days after the procedure and may last for up to 10 days. Use an anti-inflammatory and ice packs
- If you develop calf tenderness and swelling, this may indicate deep vein thrombosis. If this happens, you need to immediately contact Dr Blignaut or go to your nearest emergency room.

5. How long does varicose vein ablation take?

- The procedure takes 30–60 minutes. Depending on the number of veins to be treated.

6. What are the risks of varicose vein ablation?

- RFA is generally low risk and safe, leaving virtually no scars.
- Injections into the skin can cause skin infection requiring antibiotic treatment and this is seen in less than 1 in 1000 people who have this procedure.
- Some patients may experience significant bruising and tenderness due to the procedure and local anaesthetic placed around the vein, which is alleviated by the compression bandage.
- Inadvertent heat damage to nerves adjacent to the veins is seen in 1 in 150 patients and generally goes away in 3–6 months, but may also be permanent.
- Thrombophlebitis (inflammation, not infection, of the vein) is not uncommon and is seen in 1 in 20 patients, causing pain and redness over the treated area. It generally responds well to ice packs and non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen and cataflam
- Deep vein thrombosis (DVT) is seen in 1 in 1000 patients, with the risk of developing a DVT returning to normal in 2 weeks, you may further lessen your risk by walking 30–45 minutes each day, not sitting for prolonged periods, avoiding long distance air travel(> 4 hours) for 1 week after treatment. Start walking the same day of your procedure.

The following symptoms should make you suspect the possibility of a DVT and if you notice them you should see your GP, or local casualty department (if at night or a weekend), and contact Dr. Blignaut as soon as possible:

Signs and symptoms of deep vein thrombosis include:

- tenderness in the calf (this is one of the most important signs)
- swelling, increased warmth and redness of the leg
- discomfort when the foot is pulled upward

7. What are the benefits of varicose vein ablation?

- No surgical incision is needed – only a small 2-mm cut in the skin that does not require stitching. No general anesthesia or hospital admission.
- When compared with traditional vein stripping, RFA has fewer complications, is associated with much less pain during recovery and offers a less invasive alternative to stripping surgery.

- Most of the veins treated become invisible after the procedure, but may take **up to 12 months to completely disappear**. It is common to have persistent bruising, or yellowish-brown or blue discolouration of the skin around the treated vein for weeks to months after the procedure.
- Most patients report relief of their symptoms within a week (such as aching and swelling of the legs, and the appearance of the varicose veins) and are able to return to normal daily activities immediately, with little or no pain. No recovery in bed is required.
- It is true that many patients with varicose veins return months to years later with new varicose veins elsewhere. It is important to understand that the underlying weakness in the vein wall and dysfunctional valves in the veins will allow new smaller veins to appear with time. These veins are easy to manage with simple sclerotherapy.
- Radiofrequency ablation with the ClosureFast catheter has a successful closure rate of >98%
- Endovenous techniques have largely replaced surgical vein stripping in many countries as the first-line treatment for varicose veins.

8. Follow-up appointment and contact

- Please schedule a follow-up appointment after your procedure, before you leave.
- You will receive further sclerotherapy, if needed at your follow-up appointment. **Please remember that most of the visible veins will only start to disappear after the sclerotherapy.**
- Contact Dr Blignaut at any time using **info@veinsurgery.co.za**
- **www.veinsurgery.co.za** for telephone numbers
- If you cannot get a hold of Dr Blignaut and you are experiencing an emergency, then please attend your local hospital, or GP.

9. Returning to work and exercise

- You may resume all your normal activities the next day and return to work the next day.
- Avoid very strenuous exercise for 14 days after the procedure.
- Remember to walk every day.
- No long haul flights(>4 hours) within one week after the procedure