



## Thermal Ablation (Radiofrequency / Laser Ablation) Before & After Care Instructions

### Thermal Saphenous Vein Ablation (Radiofrequency or Laser)

You have been offered a thermal ablation procedure, which uses radiofrequency or laser to treat backwards flow (or "reflux") in one or more of the saphenous veins. The great and small saphenous veins are the main superficial veins of the leg and travel down the inner thigh/calf and the back of the leg, respectively. Reflux in the saphenous veins and their branches can lead to pain, swelling, varicose veins, and other symptoms. This minimally invasive procedure will be done in our office with the use of local anesthesia. Under ultrasound guidance, a catheter (thin plastic tube) will be positioned in the diseased vein through a tiny puncture in the skin. The thin catheter uses radio-frequency or laser energy to deliver heat to the vein wall. This causes the vein to shrink and eventually seal closed. Blood continues to return to the heart through normal healthy veins.

### Preparing for your treatment

- You will check in 30 minutes prior to your scheduled procedure and sign your consent for treatment, at which point we will set up for the sterile procedure.
- **Bring your prescribed medical grade compression stockings with you to your appointment.** You will wear them after treatment. Please try your stockings on now to confirm proper fit.
- We do not recommend shaving your legs before the procedure because the compression stockings may cause ingrown hairs.
- **In the morning of the procedure, shower and use antibacterial soap to wash your leg.**
- Bring a pair of loose-fitting pants to your appointment (your leg will be wrapped with an ACE bandage). You should also bring extra underwear as we will need to use ultrasound gel near the groin.
- We recommend you eat a light meal before you arrive.
- Our procedure rooms are equipped with TVs and Netflix, but you are welcome to bring a book or iPad to use during the procedure.
- Please notify our office if you are scheduled to have any type of medical procedure or surgery two weeks before or after your treatment.
- If you become pregnant or are breastfeeding, please notify us, as your treatment will need to be postponed.
- **If you must reschedule, we kindly request that you contact the office at (858) 550-0330 at least 48 hours prior to your procedure, as we must open sealed sterile supplies prior to your arrival. No-shows may be charged \$150 for sterile supplies which cannot be re-used.**

## Medications

- If you have asthma, please bring your inhaler to your appointment.
- If your La Jolla Vein & Vascular provider recommended a prophylactic blood thinner (e.g. Xarelto, Eliquis, or Lovenox) or an antihistamine (e.g. Zyrtec or Claritin), please take your first dose at least two hours prior to our procedure
- If you were prescribed a blood thinner during treatment, continue to take it until your final ultrasound 3-7 days after the last treatment unless instructed otherwise.
- If you already take aspirin or another blood thinner, you will continue it during treatment unless instructed otherwise.
- **If you were prescribed Valium, you will take it at the office** after you've completed the paperwork. You must make transportation arrangements to and from the procedure as you will not be able to drive yourself after taking the sedative.
- For mild pain or discomfort after treatment, you may take anti-inflammatory medication such as ibuprofen (Advil, Motrin) or naproxen sodium (Aleve) as directed on the bottle. If you cannot take NSAIDs, you can use acetaminophen (Tylenol) for pain control.
- If you have any changes to your medication list, please notify us.

## The thermal ablation procedure

- After you check in, a staff member will go through a checklist with you and take your blood pressure.
- You will put on disposable shorts and will be positioned on the procedure table. Your leg will be washed with sterile soap, then surrounded with a sterile drape.
- The doctor will perform an ultrasound of your leg and administer lidocaine to numb the skin. The lidocaine can burn for a few seconds. They will then place the catheter within the vein under ultrasound guidance.
- The doctor will use a small needle to administer a numbing solution of cool saline and lidocaine in a pocket around the vein. This "tumescent anesthesia" solution compresses the vein and insulates the surrounding tissue from the heat which will be produced by the catheter. You will feel pressure in the areas where the fluid is administered.
- At this point, the doctor will begin the thermal ablation. You will hear a series of beeps, which indicates that the vein is being treated. If you feel new discomfort or heat at this stage of the procedure, please notify us.
- Following treatment of the vein, we will perform a final ultrasound. We will then clean the leg and apply paper tape strips and gauze to the puncture sites.
- Your body will absorb most of the "tumescent anesthesia" solution around the vein, but some blood-tinged saline may leak from the puncture sites; this is normal. You may also note a "bubble" of saline in the groin which has been pushed above the band of the thigh-high stockings. This saline will reabsorb over several hours, but some swelling may still be present the following day.

## Graduated Compression Stockings

- **Wearing compression stockings is a part of your vein treatment.** Compression stockings have been shown to reduce complications and to alleviate symptoms as the veins heal.
- Directly after treatment, we will help you into your compression stocking. **Keep the stocking on for 72 hours (3 days) without taking it off unless you are instructed otherwise.** If you come in for treatment the next day, we will take off your stocking in the office to examine the leg.
- An ACE bandage may be applied over your compression stocking. You should take this wrap off before bed on the day of your procedure.
- Following your last procedure, you will wear the stockings a final 72 hours, then an additional week during the day only. Be sure to wear your stockings at all times while standing.
- If your stockings are slipping down, you can wipe the silicone band with rubbing alcohol to make it tacky again. We also have stocking glue available for purchase in your office.
- At night, you can roll down the silicone band at the top of stocking for comfort.
- **If you develop tingling, pain, and/or numbness in your foot due to a pressure point from the stocking,** it is okay to remove the stocking at night. You may need to make a small cut in the foot of the stocking to relieve the pressure. **AVOID** cutting the top band of the stocking as this will cause the toe of the stocking to roll. Instead, cut a 1/2 to 1 inch long slit on the side and in the middle of the foot area. Try to make a small cut first and make it bigger if needed.

### Care for your puncture site(s)

- Paper tape strips will be applied to the puncture site(s) after treatment. Allow the tape strips to fall off on their own; do not pull on them.
- **Some blood-tinged saline may leak from your puncture site(s) onto the gauze under your stocking.** You can roll down your stocking, discard the wet gauze, and then roll your stocking back up.
- Your treated leg must stay dry for at least 48 hours after treatment to allow the puncture site(s) to heal. However, you can sponge bathe or use a plastic bag to keep the treated leg dry in the shower. We have the bags available for purchase.
- After 48 hours, you may take a quick cool shower without the stocking or you may shower in your stocking and allow it dry on your leg like a bathing suit.

### Activity

- You will walk 30 minutes on the medical campus prior to going home. Call or return to our office immediately if you are not feeling well during your walk.
- You can return to your normal activities the same day of your treatment. You can return to work the same day as long as you will be able to walk around at least once an hour.
- **Walk at least 30 minutes twice daily** for 2 weeks. There is no limit to the amount of walking you can do and it is okay to walk on hills/incline.
- Avoid pooling of blood in the legs by keeping the calf muscles active with heel-raises, pointing/flexing the feet, and walking. Avoid high heels for two weeks because these immobilize the calf muscles.
- When you are sitting, you may feel better if you elevate your legs. If you must sit for prolonged periods, get up for a short walk every 30-45 minutes.

- **Avoid running, spinning, strenuous exercise (anything more than a brisk walk), heavy lifting (>10 pounds), and exercise in hot environments for at least 2 weeks** after each treatment. You will be cleared to return to heavy exercise at your 1-month follow-up appointment.
- Avoid hot tubs and leg massages for 2-3 weeks after treatment.

### **Travel**

- Avoid long trips for the next 3 weeks. For car trips over an hour, get out every 45 minutes and walk for 10 minutes.
- During airplane trips, get up to walk around frequently, and flex your ankles every few minutes.
- Wear your compression stockings during travel.

### **The healing process after treatment**

- It is normal for your legs to ache for several days after the thermal ablation procedure. This usually improves with walking and anti-inflammatory medication. You can also apply ice packs over the sore treated veins.
- When you remove your stockings, you may see a bruise over the injection/catheter site. This will fade over about two weeks, but you can use Arnica or Recova cream in the meantime.
- Wash your legs and check your legs and feet for sores.
- Expect that the treatment areas will look worse before they look better. Initially, large veins may feel tender, firm, or "lumpy and bumpy". This indicates that the vein is closed. For large or painful lumps, the doctor may offer needle drainage of the "trapped blood" within the vein to make your recovery more comfortable.
- The whole healing process may take several weeks to months.
- It is important to remember that the thermal ablation procedure treats the underlying source of reflux in the veins, which provides symptomatic relief for most patients. However, the appearance of your legs may not change because the vein branches at the skin level are not treated with this procedure.

### **Adverse Effects**

Thermal vein ablation procedure is very well tolerated by most patients but there are some adverse effects and complications that patients should be aware of.

The skin overlying larger varicose veins may develop some temporary inflammation and/or brownish "hyperpigmentation" as blood pigments within those veins are absorbed by the body. Hyperpigmentation may take up to a year to fade. Uncommon complications include a clot within a deep vein, a small area of skin numbness over a branch of a skin nerve near a treated vein, thermal injury to skin allergic reaction (rash, hives, or anaphylaxis), or infection. Please come to all of your follow-up appointments so your provider may follow your progress and address any adverse effects promptly. Most patients complete treatment without any complications but it is important to understand potential complications to ensure that all your needs are met and addressed within a timely manner

## Follow-up appointment

We will schedule an ultrasound 2-7 days after your final treatment to make sure the veins are responding appropriately. You will also have appointments at 1 month, 3 months, 6 months, and 1 year. At that point, we will re-evaluate your symptoms and anatomy and discuss if additional treatment is indicated. Be sure to come to all of your scheduled follow-up appointments to ensure that your veins are healing properly.

### When to call the doctor (858) 550-0330

- If you have questions or concerns about compression stockings or your before/after care instructions.
- If you have large, firm, painful/throbbing areas and/or redness over the treated vein(s). In that case, the doctor may offer needle drainage of the "trapped blood".
- If you have worsening swelling in your leg after treatment.
- If walking makes your legs hurt more and does not relieve pain.
- Red and warm skin along the treated vein.
- If you develop a rash or fever.

### When to Seek Emergency Care

The following symptoms may indicate a serious medical concern. If you experience any of the following **after hours**, please seek emergency care.

- Sudden severe pain in your leg that worsens as you walk.
- Sudden and severe swelling in your treated leg.
- Fever, chills, and night sweats
- **If you have any shortness of breath, difficulty breathing or chest pain call 9-1-1 or go to the nearest emergency room.**