

ENDOVENOUS LASER TREATMENT OF VARICOSE VEINS

INTRODUCTION

Lasers have been used for numerous medical applications throughout the body. Recently, a novel technique utilizing laser energy delivered endovenously (directly inside the vein) has been developed to treat varicose veins. An 810 nm diode laser will be used to deliver the laser energy via a small laser fiber. Endovenous laser treatment is performed under local anesthesia in the doctor's office. There is little to no scarring and a relative short recovery period after the procedure. The procedure is called Endovenous Laser Treatment (EVLT); it is an outpatient procedure which means you can resume your normal activities almost immediately.

PROCEDURE DESCRIPTION

Your doctor will perform a duplex ultrasound examination using a machine that allows the doctor to visualize the blood vessels and record their size and shape. He will "map" out the venous system so he can know where all the leaky points are. Photographs of the treatment areas will be taken.

During the procedure, you will be given special eye goggles to protect your eyes against accidental exposure to laser light. Next, the treatment area will be anesthetized with a common anesthetic, Lidocaine. A sterile fiber will be inserted into the vein and positioned under ultrasound guidance. Laser energy will be delivered to selectively treat the target vein. A compression stocking will be applied and must be worn for at least one week following treatment.

You will return to the office in 3 to 7 days and the doctor will examine the treated area. Doppler and duplex ultrasound evaluation will be done and additional photos may be taken. Repeat endovascular laser treatment (EVLT) using modified parameters may need to be done at the discretion of the doctor. Further treatment with compression sclerotherapy (injections) may also be needed.

RISKS AND DISCOMFORTS

If you undergo endovascular laser treatment (EVLT) for varicose veins, your symptoms of varicose veins may improve, remain the same, or worsen. There are several uncommon local side effects that could occur with EVLT. These include bruising, discoloration and inflammation. They are temporary and will usually resolve in a few weeks to a few months. There are a few potential serious side effects that have never been proven, but theoretically, may occur, such as blood clots, perforation of the vein or breaking of the fiber inside the vein. Lastly, since this is a relatively new treatment offered by only a few super specialized specialty centers like Cornell University and The Nevada Surgical Group, there may be problems and side effects that are not known at this time that could occur.

POTENTIAL COMPLICATIONS OF NOT HAVING TREATMENT

The potential complications of not undergoing treatment are most often limited to merely a worsening of the condition with an increase in the number of veins or enlargement in the existing veins. In cases of large varicose veins, spontaneous superficial phlebitis or bleeding may occur. Patients with varicose veins associated with underlying venous insufficiency may develop ankle swelling and/or skin changes (eczema, hyperpigmentation, ulceration). There is an increased risk of getting blood clots if you have varicose veins.

ALTERNATIVE TREATMENTS

Since varicose veins and spider veins are not necessarily life threatening, treatment is not mandatory. Some patients may get adequate relief of symptoms by wearing graduated compression stockings. Alternative treatments for varicose veins include surgery, ambulatory phlebectomy, ultrasound-guided sclerotherapy (Injections), bipolar radiofrequency (heat destruction), or a combination of these treatments.

POTENTIAL BENEFIT

The potential benefits from the procedure are reduction in the size or closure of the treated varicose veins and improvement in your symptoms associated with the varicose veins. There is no guarantee that you will receive any medical benefit as a result of endovenous laser treatment (EVLT).

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I understand that the goal is for my legs to have better circulation and to look and feel better. This is a new treatment offered by Eddy H Luh, M.D., F.A.C.S. problems and side effects that are not known at this time could occur. Furthermore, I understand that the following known side effects may occur:

- † Laser – Thermal injury (burn) to the overlying skin or intervening tissue such as nerves, or arteries.
- † Laser Fiber Complications – Perforation of the vein. Breakage of the laser fiber. These are theoretical and unproven possibilities.
- † Bruising/discoloration – This is a fairly common side effect. Like any other bruise you may have had, this will usually fade in a few days to weeks. Hyperpigmentation, often described as “staining”, is common and it is usually caused by iron from your own blood being deposited in the skin. It almost always fades away with time, but may take 6 months or more to fade away in patients with light skin, or even longer in patients with darker skin.
- † Inflammation and trapped blood – Inflammation is a mild tenderness and/or slight swelling in treated veins that may last a few days. Trapped blood is another common problem that occurs when a little blood gets stuck in a closed section of the treated vein. Trapped blood feels like a firm, tender bump in the treated vein. Trapped blood resolves by itself in a few weeks or months, but sometimes we may use a tiny needle to remove trapped blood to speed up the healing.
- † Neovascularization – Growth of new veins
- † Blood Clots – Surgical vein treatments cause a real risk of developing blood clots. Endovenous Laser treatment may also cause a very small, (unproven) theoretical risk of getting blood clots. We reduce this possibility by having patients wear compression hose that are designed to prevent blood clots. We also keep patients active, thereby keeping blood flowing naturally and freely in the legs.
- † Allergic Reaction – There is a very remote possibility of an allergic reaction to the lidocaine used as a local anesthetic. Generally, lidocaine has an extremely low allergenicity in the general population. Temporary allergic reactions can include hives, tingling, flushing, or a brief feeling of shortness of breath.
- † Recurrence of veins – Repeat endovascular laser treatment using modified parameters may need to be done at the discretion of the doctor.

The risks and benefits of treatment have been explained to me in a way that I can understand. Furthermore, I understand that there may be other treatment options, including the option to do nothing. I have read and understand this document, and my questions have been addressed and answered to my satisfaction. I agree to the terms of this agreement.

Patient: _____ Date: _____

Witness: _____ Date: _____