



## **VNUS Closure for Varicose Veins**

### **What are varicose veins?**

Veins are the blood vessels that carry blood back to the heart. Varicose veins are abnormally enlarged and tortuous veins that are visible just below the surface of the skin. Smaller veins in the skin itself are sometimes called "thread veins" or "spider veins". Although these may be unsightly they are not the same as varicose veins.

### **What causes varicose veins?**

Varicose veins are due to a fault in the one-way valves inside the veins. These valves normally only allow the blood to flow up the leg towards the heart. If the valves leak, then blood can flow back the wrong way on standing. This reverse flow causes increased pressure on the veins, which swell and become varicose.

Varicose veins often run in the family and as you get older they are more likely to occur. They may also be caused by standing occupations, pregnancy or weight gain that increases pressure on the leg veins.

### **How common are varicose veins?**

Approximately half the population has some form of venous disease, and varicose veins affect up to 30% of all adults

### **How does VNUS Closure work?**

Previously, treatment of painful varicose veins required an operation where the veins were stripped. More recently, VNUS Closure has been used to treat leaking saphenous veins (which feed the visible varicose veins) by delivering microwave energy through a small puncture in the leg to close the vein. The procedure may be undertaken under local or general anaesthetic, depending on how extensive your varicose veins are. It is not suitable for all patients with varicose veins.

### **How is VNUS Closure different from vein stripping?**

During vein stripping, incisions are made in the groin and calf, and a stripper tool is threaded through the diseased vein, to pull the vein out of the leg. With the VNUS Closure procedure, only one small incision is made at the insertion site and the vein is then closed and left in place. This minimally invasive approach eliminates pain and bruising associated with vein stripping surgery.

### **Why is the catheter placed in the thigh, when the veins are located below the knee?**

A faulty valve located higher in the leg that can't be seen at the surface normally causes bulging varicose veins in the lower leg. VNUS Closure therapy treats the source of the problem, which then causes the varicose vein in the lower leg to shrink and disappear. If you have extensive varicose veins then these may need removing through tiny incisions in addition to the VNUS Closure treatment. This combination of treatment is often preformed under a general anaesthetic.

### **How successful is VNUS Closure?**

Clinical results have been published which document the success of VNUS treatment. Like any medical treatment, however VNUS has certain risks, which will be explained to you.

### **Is VNUS Closure painful?**

Although individual responses vary, most people report little or no pain associated with VNUS Closure.

### **What should I expect following the procedure?**

Some bruising is normal along the site of the treated vein; this is quite normal and will gradually disappear. You may experience some tenderness, tingling or itching in the treated leg. There may also be some lumpiness but this should only be present for a couple of weeks.

### **What should I do after the procedure?**

Following your VNUS treatment, a small dressing will be placed over the puncture site in your leg and a compression bandage will be applied. This should be worn continuously for the next five days. The bandage can then be removed. The stocking should then be put on and worn during the day and removed at night for the next two weeks. The steristrip dressing(s) on your leg should be removed ten days after the procedure. If you have had additional varicosities removed from your leg, these steristrips may also be removed after 10 days. You will be encouraged to mobilise straight after the procedure but also to rest with the leg elevated. You will be encouraged to return to normal activities, however swimming, vigorous exercise and hot baths should be avoided for two to three weeks as this increases the risk of blood flow returning to the treated vein.

### **Is VNUS Closure covered by insurance?**

Most major health insurers cover the VNUS Closure procedure. Your surgeon can discuss your coverage further at the time of the consultation.

### **Are there any complications following this procedure?**

Although complications are rare, there is a risk of altered pigmentation or staining on the upper thigh where the VNUS Closure has been used to treat the vein. This normally disappears within 12 months but this is permanent in 5% of patients. There will be a small scar at the site where the VNUS catheter is inserted, which will fade over time. Infection of the wounds may occur (3%) and may require antibiotics. The sensory nerves adjacent to the saphenous vein can suffer heat damage causing numbness. This is usually mild and rarely lasts for more than a few weeks. Numbness or tingling in the leg, if you have a number of small cuts, occurs in up to 10% of cases. Rarely this may be permanent. As with all surgery there is a risk of deep vein thrombosis (DVT) although this is rare. You will be supplied with compression stockings and encouraged to mobilize to prevent this. The visible veins in your lower leg will shrink but they may not entirely disappear. This is quite normal. As with conventional surgery there is a risk of recurrence of varicose veins. The taking of regular exercise, avoiding being overweight and wearing light support hosiery will help prevent you being troubled by varicose veins in the future.

Your health professionals will make every effort to make your treatment as safe as possible. However complications can happen with any medical treatment. Rarely these are serious and extremely rarely may even cause death.