You have varicose veins which can be treated using radiofrequency ablation or ‘VNUS Closure®.’ This information sheet tells you about the procedure. Please read it carefully and ask your surgeon if you have any further questions or concerns.

What is VNUS closure procedure?
VNUS is a minimally invasive treatment for varicose veins. It has been approved by the National Institute for Health and Care Excellence (NICE, www.nice.org.uk), which assesses the safety and effectiveness of all new treatments.

The size and shape of the varicose veins will determine whether we are able to treat you using VNUS. The VNUS catheter is attached to a generator which is used to obliterate (close) the faulty vein using locally directed heat, redirecting blood through nearby healthy veins as a result. You will be able to go home on the day of treatment.

The procedure is often performed under local anaesthetic.

Before the procedure
You will be sent an information leaflet along with a consent form. Please read the leaflet carefully and then if you are happy sign the consent form. It is very important that you bring this document to the hospital on the day of your treatment.

Whilst the procedure is generally not particularly painful there is some inevitable post operative discomfort. You will not be supplied with painkillers to take home by the hospital. It is a good idea to have some paracetamol and anti-inflammatory medication (ibuprofen, nurofen) to take when you get home if you are able to take these medications.

As operations such as these can take a variable amount of time it is important that you allow an adequate amount of time at the hospital. We usually recommend a minimum of two hours. Occasionally, it may be quicker than this.

What will happen during the treatment?
You will be called into the operating room. You will be greeted by the team. Your name and procedure will be checked. We will also ask you about allergies but please tell us if there is something you know you are allergic to.

A member of the team will measure your legs so that you can be fitted with some support stockings to wear after the procedure. You will then be placed on the operating couch and a cleaning solution will be painted onto your leg(s).

An ultrasound scan will be used to mark the veins that require treatment. An injection will freeze the skin and a small flexible wire will be passed into the vein. A fine tube is passed over this wire and then the VNUS probe is threaded through the tube. The position of the probe will be checked and further local anaesthetic will be injected around the vein again by ultrasound.
The generator then creates heat energy to seal the vein up from the inside. This takes just a few minutes. You should not feel anything during the treatment. Once the vein has been sealed, the probe is removed.

Finally a bandage is applied to the leg. This bandage should be kept on for one to three days. A support stocking should be worn for a further two to three weeks. Occasionally, the surgeon may decide that you are best treated with just the stockings or may even put the stockings on followed by the bandages.

**What will happen after the treatment?**

We will ask you to wait in the waiting room area for 15 minutes after the operation but if you feel fine after this time then you can go home. After VNUS you will be able to walk almost immediately and then go home. You should not drive. If you are travelling for more than an hour from the hospital you should sit on the back seat with your leg(s) up. Stop every hour and walk around for five minutes.

Normal activity, including work, can be resumed as soon as you like, although contact sports, heavy exercise and swimming should be avoided for one to two weeks.

When the bandage is taken off, you may see some bruising or hardness under the skin. This is quite normal and will gradually settle.

You should wear the stocking during the day for up to three weeks, but may remove it at bedtime or for bathing.

**What advantage does VNUS have over conventional surgery?**

- VNUS can be performed under a local anaesthetic. Normal activity can be resumed straight away, and you should be able to return to work within a few days.

- VNUS removes the need for a groin incision in the skin, leaves fewer scars and less potential for complications such as wound infection and pain following surgery.

- VNUS closure has been shown to cause much less pain and bruising than conventional surgery or endovenous laser therapy.

**What are the potential complications?**

- There is a small chance the vein may not be completely obliterated by the VNUS probe (this occurs in about three patients in a hundred).

- Some patients have bruising or tenderness that lasts for longer than three days. This bruising is more common if you have had varicose veins removed at the same time as the VNUS closure procedure.

- It is not uncommon for some discomfort to develop around the obliterated vein between five and 10 days after the procedure due to inflammation. If this occurs you may require some anti-inflammatory tablets such as ibuprofen.

- About two to five percent of patients experience some numbness in the leg after VNUS but this is almost always temporary, although it can be permanent.

- There is a very small risk of skin burns from the VNUS catheter of around one per cent.
As with any surgical procedure there is a small risk (1:1000) of blood clots forming in the main leg veins (DVT) although this is less common after VNUS than conventional surgery.

The procedure will not necessarily get rid of any bulging veins on the lower leg. It is designed to reduce the pressure in them and they often shrink but can still be visible. If there is significant bulging and further scans reveal more leakage in the veins then you may potentially require further treatment with an operation or injection treatment.

**Airline travel**

Although the risk of blood clots is minimal with these keyhole techniques we do not advise patients to undertake air travel within four weeks of the procedure.

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We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team:

patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

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