

# Endovenous laser treatment of the long saphenous vein

Understanding NICE guidance –  
information for people considering the  
procedure, and for the public

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**Endovenous laser treatment of the long saphenous vein**  
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Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0500. A version in Welsh and English is also available, reference number N0501. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0501. The NICE interventional procedures guidance on which this information is based is available from the NICE website ([www.nice.org.uk](http://www.nice.org.uk)). Copies can also be obtained from the NHS Response Line, reference number N0499.

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## About this information

This information describes the guidance that the National Institute for Clinical Excellence (NICE) has issued to the NHS on a procedure called endovenous laser treatment of the long saphenous vein. It is not a complete description of what is involved in the procedure – the patient’s healthcare team should describe it in detail.

NICE has looked at whether endovenous laser treatment is safe enough and works well enough for it to be used routinely for varicose veins (in this case for a particular vein in the leg, called the long saphenous vein).

To produce this guidance, NICE has:

- looked at the results of studies on the safety of endovenous laser treatment and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the patients and carers who will be affected by this guidance.

This guidance is part of NICE’s work on ‘interventional procedures’ (see ‘Further information’ on page 10).

## About endovenous laser treatment of the long saphenous vein

Varicose veins are veins (usually in the legs) that have lost their elasticity and bulge with blood as a result. They happen if the valves in a vein become weak and let blood go the 'wrong way' back through the vein. Over time, the vein has to become wider to cope with the extra blood and this eventually means it loses its elasticity. A person with varicose veins can feel pain in the affected area, their legs can feel tired and can swell, the skin can start to look different and ulcers can appear in the area. Most commonly, a vein called the long saphenous vein is affected, which runs from the foot to the groin.

Endovenous laser treatment is a method of closing off the long saphenous vein. The doctor puts a narrow tube called a catheter into the vein. Ultrasound images are used to make sure it's in the right place. A tiny laser device is then placed through the catheter and is passed up into position at the top of the vein. Local anaesthetic is injected into the area, and the doctor then pulls the laser device slowly along the vein while watching the laser tip with ultrasound pictures. The laser is gradually pulled back until it reaches the place where it was first put in. The laser fires short bursts of energy as it moves along the vein, and this heats the vein and makes it seal up.

A common alternative to closing the vein in this way is to remove it in a process called 'stripping'.

## How well it works

### What the studies said

NICE found five studies that looked at what happened in patients who had endovenous laser treatment. The vein was sealed up in nearly everyone who had the procedure (the results of the studies went from 90% to 100%, meaning that the 'worst' result was that nine out of ten people had their vein closed and the 'best' result was that ten out of ten people had their vein closed). One study that checked on 40 patients 3 years afterwards showed the long saphenous vein had not reopened in any of them.

### What the experts said

The experts did not agree about how well endovenous laser treatment worked. One expert said it had not been shown to work well. Another said that it looked as if the results were good over a short period of time, but that it wasn't known if the effects lasted for a long time. A third expert thought that it had been shown that the results lasted quite a long time.

## Risks and possible problems

### What the studies said

The most common problems with endovenous laser treatment were pain and bruising. In one study, most patients felt a tightening along their leg and about a quarter of the patients had bruising afterwards (though these disappeared within a month). The vein became inflamed in a small number of patients (this is called phlebitis).

### What the experts said

The experts thought that a loss of feeling, burns on the skin and damage to other veins were all possible problems. One expert said that fewer problems were likely with endovascular laser treatment than with the standard operation. Another expert didn't think enough was known about how often problems happened.

## What has NICE decided?

NICE has considered the evidence on endovenous laser treatment of the long saphenous vein. It has recommended that when doctors use it, they should be sure that:

- the patient understands what is involved and agrees (consents) to the treatment, and
- the results of the procedure are monitored.

NICE noted that the studies it looked at only checked on patients up to 3 years after the procedure. NICE has also encouraged doctors who perform endovenous laser treatment to collect information about how well it works in patients over a longer period of time.

## Other comments from NICE

NICE pointed out that although the studies showed that the procedure usually closes up the vein, there wasn't much information on how this improved patients' symptoms.



## What the decision means for you

Your doctor may have offered you endovenous laser treatment. NICE has considered this procedure because it is relatively new. NICE has decided that the procedure is safe enough and works well enough for use in the NHS.

Nonetheless you should understand the benefits and risks of endovenous laser treatment of the long saphenous vein before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these benefits and risks may be described above.

## Further information

You have the right to be fully informed and to share in decision-making about the treatment you receive. You may want to discuss this guidance with the doctors and nurses looking after you.

You can visit the NICE website ([www.nice.org.uk](http://www.nice.org.uk)) for further information about the National Institute for Clinical Excellence and the Interventional Procedures Programme. A copy of the full guidance on endovenous laser treatment of the long saphenous vein is on the NICE website ([www.nice.org.uk/IPG052guidance](http://www.nice.org.uk/IPG052guidance)), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0499. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on varicose veins, a good starting point is NHS Direct (telephone 0845 4647) or NHS Direct Online ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)).

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