

# Endoscopic removal of long saphenous vein for coronary artery bypass grafting

Your Consultant has advised you that you need a heart bypass operation. More about this operation, known as a Coronary Artery Bypass Graft (CABG) can be found in our Cardiac (Heart) Surgery leaflet. If you have not been given a copy, please ask.

To perform the CABG operation, your surgeon needs to remove a 'spare' vein from your leg to construct the bypass graft. The vein your surgeon would like to use is called your long saphenous vein, which runs from the ankle to the groin.

The operation to remove (or harvest) your saphenous vein may be carried out through keyhole surgery, using a special narrow surgical instrument called an endoscope. This procedure is called Endoscopic Removal of Saphenous Vein for Conduit for Coronary Bypass Grafting.

## Is the procedure new?

Endoscopic vein harvesting is still a relatively new procedure in the UK but has been used widely in the USA for 20 years. In Oxford we have been are trialing this method of operation since February 2010.

## Are there any alternatives?

The vein can also be removed by making a long cut in your leg from your ankle to your groin and carefully removing the vein. This is called the "open" method.

If you have any questions or concerns about the endoscopic procedure, please discuss this with your consultant.

Whichever type of surgery you decide to have, your choice will be respected and you will be cared for in exactly the same way by the team at The Oxford Heart Centre.

## Who can have endoscopic vein harvesting?

Most patients can have this procedure. Each patient is assessed on an individual basis. Consideration is given to the type of skin on the leg, the size of the leg and whether it is too muscular. Certain types of medication which you are taking may make this procedure less suitable.

Sometimes the surgeon may start the endoscopic procedure but then needs to change to the open procedure. This is because every person's anatomy is different and sometimes the leg is not suitable for the endoscopic procedure.

## What are the risks and side-effects?

### Side effects

Post-operative side effects are pain, redness, and swelling.

### Risks

The risks with endoscopic vein harvesting are the same as with the open method. These are:

- Risk of infection in the operated leg (1% risk as opposed to average of 4% of patients using the open method)
- Damage to nerves, leading to a feeling of numbness on the skin (very low risk)
- Bruising
- Swelling in the leg

There is some recent research evidence to suggest that some of the veins operated on

using the endoscopic method may have higher risk of blockages than veins removed using the open method. There is some uncertainty as to how well the veins work in the long term. More research is needed.

## How safe is endoscopic vein harvesting compared to open surgery?

The endoscopic procedure offers several advantages in terms of wound healing when compared to the 'open' technique, including:

- Less neurological or nerve complications
- Less wound infections (around 1% of patients)
- Reduced post-operative pain
- Less haematomas (collection of blood)
- Improved mobility after surgery
- One or occasionally two very small cuts are made as compared to a large cut from the groin to the knee or to the lower leg.
- Reduced length of hospital stay due to the above factors

## What happens during the procedure?

- You will be taken to the operating theatre and given a general anaesthetic.
- The surgeon makes a small cut just below or above the knee and inserts the specially designed instrument (the endoscope), with a light and telescope to see the vein inside the tissues.
- The vein is carefully released from the tissues around it, whilst still inside the leg.
- The vein is clipped at either end whilst still inside the leg and then removed.
- Any bleeding is stopped and the vein tract (where the vein was before being removed) is inspected for any small bleeding points.
- The small wounds are then closed. A small plastic drain tube is placed inside the leg which is removed a day or so later. The leg is bandaged and kept bandaged for 5 days.

## Recovery

Full details of what happens during the recovery period, aftercare and rehabilitation are given in our CABG and Oxford Cardiac Surgery booklets.

## Questions or concerns

If you have any questions or concerns, please do not hesitate to talk to your Consultant surgeon, Registrar, or Surgical Care Practitioner.

## Where can I find further information?

Please see our booklets "Oxford Cardiac Surgery" and "Coronary Artery Bypass Grafting". You should be given copies; if you are not, please ask.

## The National Institute for Clinical Excellence (NICE)

The National Institute for Clinical Excellence (NICE) has produced information describing its guidance on endoscopic saphenous vein harvest for CABG for patients and carers. It explains the nature of this procedure and the decisions made. This information is available from [www.nice.org.uk/ipg248](http://www.nice.org.uk/ipg248) or we can provide you with a copy.

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## Supplementary Consent Form

*(To be signed in addition to the standard consent form)*

- I have read the patient information on Endoscopic Vein Harvesting Surgery.
- I understand that this is a relatively new procedure for this unit.
- I understand that I may choose to have a conventional open operation of an incision from ankle to groin if I wish.
- I have been given the opportunity to fully consider the information above and the advice that my surgeon has given me before signing this form.

I consent to Endoscopic Vein Harvesting

Signed: (Signature) .....

Name: (Print) .....

Date: .....

Witnessed by: (Signature) .....

Name: (Print) .....

Designation (Print) .....

Date: .....

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