

Patient Information

Carotid endarterectomy the operation explained

1. Why do I need the treatment?

- You have a narrowing of the artery to your brain, where it divides in your neck. **Either** you have had a mini-stroke (TIA), **or** have had no symptoms from this. The danger is that you may suffer a major stroke as a result of this narrowing.
- The aim of carotid endarterectomy is to prevent you having this major stroke.

2. Before the treatment

- Before carotid surgery, there are a number of tests that need to be done. These are of two types: those to assess whether you qualify for carotid surgery, and some immediate pre-operative tests.
- Tests to see whether you qualify for the operation have already been done. These always include an ultrasound scan and it will sometimes be necessary to have a dye Xray (angiogram) of the arteries too. You will usually also have had some blood tests.
- Immediate pre-operative tests include: more blood tests, an ECG, and completing the paperwork. These immediate pre-operative tests are usually completed at a pre-admission visit to the hospital a few days before your operation. They may sometimes be done when you are admitted for the operation.
- Your Surgeon will often request an ultrasound scan again within 24 hours of your operation. This is to make sure that there has been no change in the narrowing of the artery in your neck.

3. Coming into hospital

- Please bring with you all the medications that you are currently taking. You will be admitted to your bed by one of the nurses who will also complete your nursing record.
- You will be visited by the Surgeon who will be performing your operation, and also by the doctor who will give you the anaesthetic. Your operation, in exceptional circumstances, may be performed by a vascular consultant who did not assess you in clinic
- Physiotherapists and Intensive or High Dependency Care staff may also visit, to give you information about your postoperative care. If you have any remaining questions about the operation please ask the doctors.

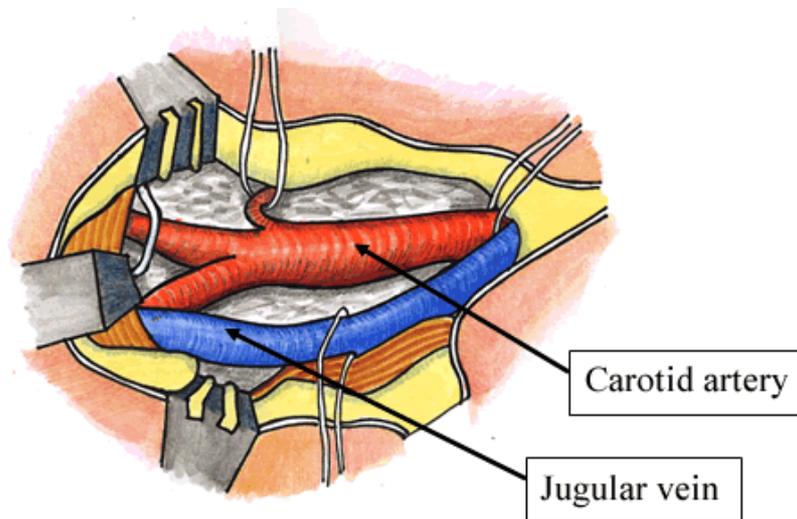
4. The treatment

- Carotid endarterectomy is usually performed under local anaesthetic, but occasionally a general anaesthetic is used.
- For local anaesthetic, the Anaesthetist will make an injection into the skin of your neck to numb it. During the operation, if you become uncomfortable, the Surgeon will inject more local anaesthetic. You will also be given some sedation, and as a result, you may not be very aware of the operation at all.
- For a general anaesthetic, a tiny needle is placed in the back of your hand. The anaesthetic is injected through the needle and you will be asleep within a few seconds.
- A tube (catheter) may be inserted into your bladder to drain your urine.
- A drip is placed into a vein in your arm (wrist usually) to give you some fluids during and following surgery.
- Sometimes, a second drip will be placed into an artery at wrist level to permit careful blood pressure monitoring during and just after the operation.

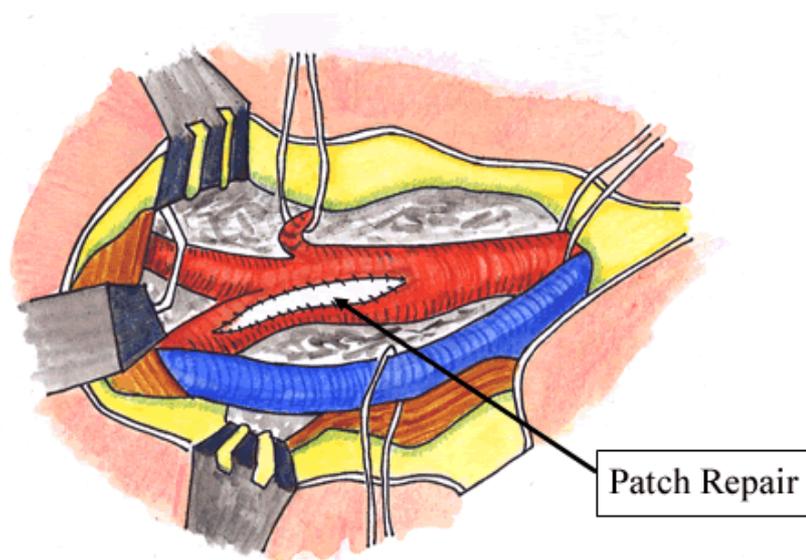
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5. The Operation

- You will have a cut running obliquely from near the angle of your jaw towards your breastbone. The incision is usually 7-10cm (between 2 ½ "and 4") in length.
- The carotid artery is displayed. After clamping of the branches of the artery, it is opened longitudinally and the narrowing carefully removed.



- When the inside of the artery has been cleared, it is closed with very fine stitches, either directly, or sometimes with a synthetic patch to prevent narrowing.



- The wound is closed with either a stitch under the skin that dissolves or by clips that will need to be removed about 5 days after the surgery.
- To protect the brain from interruption to its blood supply, while it is clamped, a shunt (narrow plastic tube) is sometimes used to maintain blood flow. The shunt lies in a loop outside the artery, passing into the artery above and below at each end of the incision in the artery.

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6. After the Treatment

- You will usually be taken to the High Dependency Bay on the vascular ward for up to 24 hours after your operation so that we can monitor your progress closely.
- Local anaesthetics are used to numb the skin so there should be little discomfort.
- Following this sort of surgery you are unlikely to feel sick, and you should be able to eat and drink again within a few hours.
- Blood transfusion is scarcely ever required.
- Your mobility will return to normal more or less immediately
- There is often some swelling in the neck, but this settles within 7-10 days.
- The incision, although initially very visible, will subside to become virtually invisible within 2-3 months.

7. Going home

- Most people stay in hospital between 2 and 5 days after carotid endarterectomy.
- If your stitches or clips are the type that need removing this is usually done whilst you are still in hospital. If not we will arrange for your GP's practice or district nurse to remove them and check your wound.
- Regular exercise such as a short walk combined with rest is recommended to provide a gradual return to normal activity.
- *Driving:* You will be able to drive when you are can perform an emergency stop safely. This will normally be 2-3 weeks after surgery, but if in doubt check with your own doctor.
- *Bathing:* Once your wound is dry you may bathe or shower as normal. This will normally be before you leave hospital.
- *Work:* If this applies to you, you should be able to return to work within 3-4 weeks of surgery. Your GP will advise you of this when you see him/her for your sick-note.
- *Lifting:* There are no limitations in this area.
- *Medicines:* You will usually be sent home on a small dose of aspirin if you were not already taking it. This makes the blood less sticky. If you are allergic to aspirin, or if it upsets your tummy, an alternative drug may be prescribed. No other changes to your medication are required.

8. Complications

- *Chest infections:* These can occur following this type of surgery, particularly in smokers, and may require treatment with antibiotics and physiotherapy.
- *Wound infection:* Wounds sometimes become infected and this may need treatment with antibiotics. Bad infections are rare.
- *Fluid leak from wound:* Occasionally the wound can bleed or bleeding beneath wound will cause swelling. Usually the swelling will settle on its own, but occasionally the wound may need further surgical attention.
- *Nerve injuries:* These are uncommon. A nerve picking up skin sensation may occasionally be severed leading to loss of skin sensation somewhere in the neck. The vagus nerve provides a branch to the voice box (larynx). Damage to it, which happens only very rarely, leads to a hoarse sounding voice. The hypoglossal nerve supplies the muscles of the tongue. Damage to it, again rare, will affect speech slightly by reducing the tongue's mobility. The facial nerve supplies the muscles of the face. Damage to its lowest branch may lead to impaired movement of muscles around the lower jaw and neck. Again this is rare.
- *Stroke:* A small number of people, between 1 and 3 in 100, having carotid endarterectomy will have a stroke during the operation. This stroke is often severe, and may lead to death. All possible precautions will be taken to prevent this eventuality.
- *Other Major Complications:* As with any major operation there is a small risk of you having a medical complication such as a heart attack, kidney failure, chest problems, or infection in the wound. Each of these is rare, but overall it does mean that some patients may have a fatal complication from their operation. For most patients this risk is about 1% - in other words 99 in every 100 patients will make a full recovery from the operation.
- If your risk of a major complication is higher than this, usually because you already have a serious medical problem, then your surgeon will discuss this with you. It is important to remember that your surgeon will only recommend treatment if he or she believes that the threat of stroke without operation is much higher than the threat posed by the operation itself.

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9. What can I do to help myself?

- If you are a smoker you should make a determined effort to stop completely. Continued smoking will cause further damage to your arteries and increases the risks of heart attacks, strokes, and problems with the circulation in your legs. It is also likely to jeopardise the success of any surgical operation carried out and to make recovery more difficult.
- Why not take this opportunity to consult your own doctor or the practice nursing staff to seek professional help in giving up the addiction?
- Further help is available locally from the [Smoking Advice Service](#) **Tel: 01752 314040**
www.smokingadvice.com
- General health measures such as reducing weight, a low fat diet and regular exercise are also important.

10. Further Questions

- If you have further questions, please do not hesitate to ask either your Consultant or one of his team, or the Nurses who are looking after you on the ward.

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