

## Going home

Most people stay in hospital between 2 and 4 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.

**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.

## Complications

**Stroke:** A small number of people, between 1 and 3 in 100, having carotid endarterectomy will have a stroke during the operation. This severity of stroke can be very mild causing little or no disability through to severe causing major disability and 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 2% - in other words 98 in every 100 patients will make a full recovery from the operation.

**Fluid leak from wound:** Occasionally the wound can bleed or bleeding beneath the wound will cause swelling. Usually the swelling will settle on its own, but occasionally the wound may need further surgical attention. If you have been started on tablets to thin your blood when you were admitted for symptoms of TIA or stroke, then you may be at an increased risk of bleeding that may require a return to theatre

**Nerve injuries:** These are uncommon. Skin nerves are interrupted by the incision leading to some loss of skin sensation, which may recover over time. Movement of nerves nearer the carotid artery can lead to temporary or rarely permanent loss of function.

The vagus nerve provides a branch to the voice box (larynx) leading to a hoarse sounding voice. The hypoglossal nerve supplies the muscles of the tongue affecting 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.

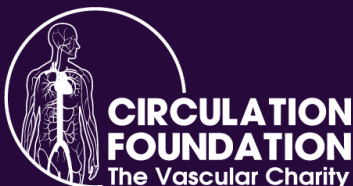
## How you can help yourself

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.

You should eat a low fat diet, avoiding food with high saturated fat content and take regular exercise.

Whilst we make every effort to ensure that the information contained in this patient information sheet is accurate, it is not a substitute for medical advice or treatment, and the Circulation Foundation recommends consultation with your doctor or health care professional. The information provided is intended to support patients, not provide personal medical advice. The Circulation Foundation cannot accept liability for any loss or damage resulting from any inaccuracy in this information or third party information such as information on websites to which we link.



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## PATIENT INFORMATION



**CIRCULATION  
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# CAROTID ENDARTERECTOMY

Vascular disease is as common as both cancer and heart disease and accounts for **40% of deaths in the UK**, many of which are preventable.

**SAVING LIVES AND LIMBS**  
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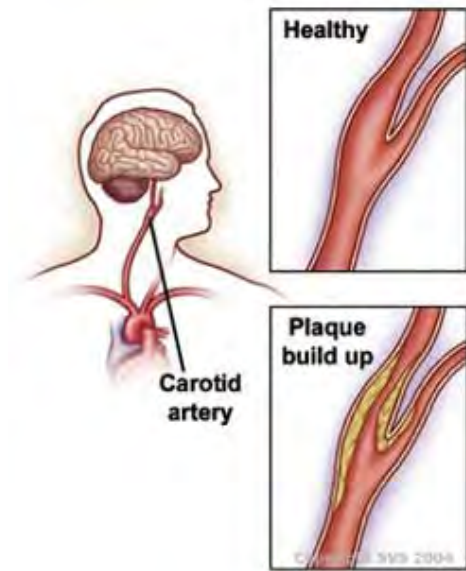
## Carotid endarterectomy

A carotid endarterectomy may be performed if you have had a TIA (mini-stroke), a sudden loss of vision in one eye, or a major stroke.

This is due to carotid artery disease, the narrowing of the main artery to your brain in your neck. The danger is that you may suffer another major stroke in the future.

In a small number of people a tight narrowing is discovered whilst under investigation for another problem. If this applies to you, you will still undergo the same preoperative tests, but will be admitted to hospital electively for surgery.

The aim of carotid endarterectomy is to prevent you having a major stroke. The following information will help explain the process of a carotid endarterectomy operation.



## Before the treatment

Before you have carotid surgery, there are a number of tests that need to be done to assess whether you are able to have the operation, and some immediately before the surgery (pre-operative tests).

Tests to see whether you are suitable for the operation include:

**Ultrasound scan**

**MRA or a dye X-ray (digital subtraction angiogram) of the arteries**

**Blood tests**

**ECG (a heart tracing)**

**Echocardiogram (an ultrasound test of the heart)**

**Breathing test**

**CT scan (special X-ray scan) of your brain.**

You may also have a special MRI scan of your brain at the same time as the MRA.

These tests should have been done within a couple of days of your symptoms. If you are fit enough, you will then be offered an operation within two weeks of your symptoms.

## The operation

### The anaesthetic

Carotid endarterectomy can be performed under either regional (local) or general anaesthetic. Not all cases are suitable for regional anaesthetic and not all hospitals are able to offer this service. Your surgeon will advise you as to which method of anaesthetic you will be offered.

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. Occasionally it may be necessary to convert to a short general anaesthetic during the operation.

### The Operation

You will have a cut running vertically down from near the angle of your jaw / ear lobe towards your breastbone. The incision is usually 7-10cm in length.

Once the carotid artery is displayed, the branches of the artery are clamped to limit blood loss during the operation. A small incision is made along the artery and the plaque or narrowing is carefully removed.

When the inside of the artery has been cleared, it is closed with very fine stitches. A small patch will usually be stitched to the artery to prevent further narrowing. This patch is normally made of a material called Dacron, but sometimes a vein from your leg may be used or a piece of animal tissue (bovine).

The wound is usually closed with a stitch under the skin that dissolves. To protect the brain from interruption to its blood supply while the artery 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.



To monitor the blood supply to your brain a special listening device may be placed onto your head. This allows the surgeon to hear and see how fast your blood is running, which will help them make decisions during the operation.

At the end of the operation your surgeons may look inside the artery with a special camera to check that the repair is satisfactory and that there is no blood clot.

Your surgeon may place a small plastic drain in your neck for a short period to look for bleeding and to reduce neck swelling after the operation.

### Recovery and Aftercare

You may be taken to the High Dependency Unit for up to 24 hours after your operation so that your progress can be closely monitored.

There is often some swelling in the neck, but this settles within 7-10 days. The incision on your neck will initially be very visible; however this will subside to become virtually invisible within 2-3 months. A blood transfusion is rarely required.