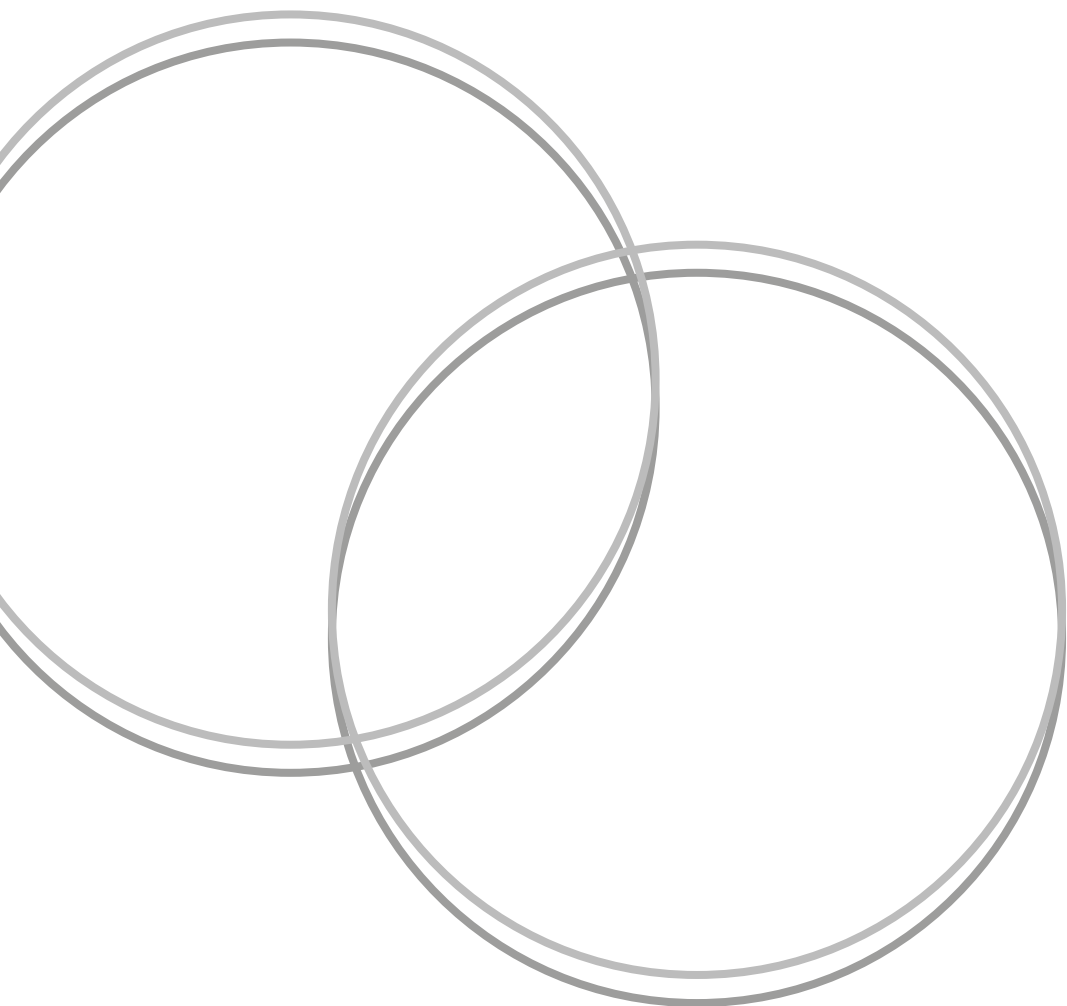


Carotid Endarterectomy

Information for patients



Introduction

This leaflet provides information about carotid endarterectomy, a surgical procedure to remove excess plaque from the inside of the carotid artery to restore healthy blood flow to the brain. It includes details about the procedure, its benefits, risks, alternatives, and aftercare.

What is Carotid Endarterectomy?

Carotid endarterectomy is an operation to remove fatty deposits (plaques) from the carotid arteries, which supply blood to the brain. Narrowing (stenosis) of these blood vessels is usually due to a build-up of plaque (atherosclerosis), similar to the plaque that builds up on teeth. The plaque consists of calcium and fatty deposits, such as cholesterol.

Why is it needed?

A carotid endarterectomy may be performed if you have had one of the following:

- A mini-stroke (called a transient ischaemic attack, or TIA)
- A sudden loss of vision in one eye
- A major stroke

In some cases, a slight narrowing of the carotid artery may be discovered during tests for another condition, before symptoms appear. Narrowing of the carotid artery increases the risk of stroke, and carotid endarterectomy can significantly reduce the chances of future stroke and/or death.

If you have already experienced symptoms due to carotid artery disease, the risk of a further stroke is highest in the **two weeks following those symptoms**. Therefore, it is important to perform the carotid endarterectomy as soon as possible.

Other treatments to reduce the risk of stroke

- **Lifestyle changes:** Controlling blood pressure, quitting smoking, regular exercise, and a healthy diet can reduce stroke risk.
- **Medication:** Blood-thinning drugs (e.g. aspirin, clopidogrel) and cholesterol-lowering medications (statins) can help manage the condition.
- **Carotid artery stenting:** A less invasive procedure that involves placing a stent to keep the artery open. It is offered as an alternative if carotid endarterectomy is not feasible.

Before the procedure

Before surgery, tests will be carried out to determine whether the operation is necessary. These tests may include:

- Ultrasound scans of the carotid arteries
- MRA (magnetic resonance angiography) or a dye X-ray (digital subtraction angiogram) of the arteries
- Blood tests
- ECG (heart tracing test) to measure the electrical activity of the heart
- Echocardiogram (ultrasound test of the heart)
- Breathing tests
- CT scan of the brain
- MRI scan of the brain, sometimes performed alongside MRA

These tests should ideally be done within a **couple of days of your symptoms**. If you are fit for surgery, an operation will usually be offered within **two weeks of symptoms starting**.

Before the procedure

You will be admitted to hospital for **one to two days**. You may be seen in a **pre-assessment clinic** before your admission, where a nurse will review your medical history, arrange blood tests, and perform an ECG. If these tests show you are fit for the procedure, you will be admitted directly to the theatre on the day of surgery. You will receive instructions on when to stop eating and drinking.

Before the operation, you will meet the **anaesthetist and surgical team**, who will explain the procedure and answer any questions. You will then sign a **consent form**. A final ultrasound scan may be performed to confirm the surgery site.

Please bring **all medications** you are currently taking.

How the procedure is performed

Carotid endarterectomy is usually performed under local anaesthetic, but occasionally a general anaesthetic is used.

- If under local anaesthetic, an injection will numb the neck area. You may receive sedation to help you relax.
- If under **general anaesthetic**, you will be asleep, and equipment may be needed to assist your breathing.
- In rare cases, a switch to general anaesthetic may be necessary during surgery.

The surgeon will make a **7-10 cm incision** on the side of your neck. The carotid artery branches will be clamped to limit blood loss. A shunt (plastic tube) may be inserted to maintain blood supply to the brain while the artery is clamped. The plaque will then be carefully removed.

Once cleared, the artery is **stitched closed**, sometimes using a **Dacron patch** to prevent re-narrowing. The wound is closed with dissolvable stitches.

In rare cases, a blood transfusion may be required due to excessive bleeding.

What happens after the procedure?

- You will spend **two hours in the recovery room** where nursing staff will monitor your pulse, temperature, blood pressure, and wound.
- You will be transferred to the **vascular ward (6A)** for continued observation.
- You can **eat and drink as soon as you feel ready**.
- Pain is usually mild and managed with painkillers.
- You will be encouraged to get out of bed the following day and can usually go home **within 24 hours**.

Discharge and Recovery

- Most people go home **the day after surgery**.
- Avoid strenuous activity such as heavy lifting for **six weeks**.
- **Driving:** You are not legally allowed to drive for one month after a stroke or TIA.
- **Returning to work:** Most people return within one to three months.
- **Wound care:** Avoid getting the wound wet for three days; keep it clean and dry.
- **Sexual activity:** Can usually be resumed after 2 weeks if you feel comfortable.

Risks and possible Complications

As with any surgery, carotid endarterectomy carries some risks:

- **Stroke (1-3%)** – A small number of people (1 to 3 in 100) have a stroke during or after surgery.
- **Heart attack (1-2%)** – Due to stress on the heart.
- **Nerve injuries (less than 5%)** – Can affect swallowing, speech, or facial movement (usually temporary).
 - » Some numbness around the wound, caused by cut nerves. This usually recovers over time.
 - » Temporary or (rarely) permanent loss of nerve function near to the carotid artery, from bruising or damage during the operation. This could cause your face to droop on one side.
 - » Hoarse sounding voice from damage to a nerve near your voice box (larynx).
 - » A change to speech from damage to the nerve which supplies the muscles of the tongue. This can affect how your tongue moves.
 - » Weakness at the corner of the mouth from damage to the nerve supplying the muscles of the face.
- **Bleeding or infection** – Rare but possible. There will be bruising and swelling around your neck, but this should settle within 7-10 days. The cut on your neck will be very visible to start with but it will fade within 2-3 months to become virtually invisible.
- **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, breathing problems, or an infection in the wound. Each of these is rare, but there is still a 2% (2 people in 100) risk of death from this operation.

Signs to watch For After Surgery

Seek immediate medical help if you experience:

- Sudden weakness or numbness in the face, arm, or leg
- Difficulty speaking or understanding speech
- Severe headache or dizziness
- Chest pain or shortness of breath
- Swelling or severe pain at the wound site

How you can help yourself

- Stop smoking – This significantly reduces the risk of stroke and heart disease.
- Eat a healthy diet – Avoid saturated fats and processed foods.
- Exercise regularly – Engage in light walking and gradually increase activity.
- Take prescribed medications – Particularly for blood pressure and cholesterol control.

Who to contact for concerns

If you have any queries after your surgery when you have returned home, you should telephone the ward:

Hospital Ward 6A: 01865-221802

Vascular Triage Clinic: Weekdays (08:00- 16:00) 01865 223693

Emergency Services: Call 999 if you have stroke symptoms.

GP Surgery: For non-urgent concerns.

NHS 111: For urgent advice outside normal hours.

For further information and support:

NHS 111

Non-emergency freephone medical helpline.

Tel: 111 (freephone from landline and mobiles)

Website: www.nhsdirect.nhs.uk

Circulation Foundation

Tel: 020 7304 4779

Website: www.circulationfoundation.org.uk

For help giving up smoking

NHS Smoking Help-Line Tel: 0800 022 4 332

Website: www.smokefree.nhs.uk

Or contact the local service via your GP.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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