

Patient information factsheet

Carotid endarterectomy

The carotid arteries carry blood to the head. When there's a narrowing of these arteries it can affect the blood supply to the brain, which can cause a blood clot to develop. This clot can travel towards your brain leading to a stroke or transient ischaemic attack (TIA).

Following your stroke or TIA you have had a scan of the arteries in your neck. This shows that there is a significant narrowing that can be treated by performing a carotid endarterectomy to reduce the risk of a further stroke.

The surgery

Surgery is performed either whilst you are asleep under a general anaesthetic or awake with injections to numb the area (local anaesthetic). The method of anaesthetic used is dependent on a number of factors including your general level of health and at which point on the artery the operation is to be performed. Your surgeon and anaesthetist will discuss this with you.

A carotid endarterectomy is usually carried out when the risk of having a stroke is higher than the risk of the surgery. Any decision on treatment will be carefully considered by your vascular multidisciplinary team (MDT) and discussed in detail with you.

What are the risks of treatment?

As with any operation there are risks involved which vary by according to your health but typically include:

- **Stroke (uncommon).** A stroke can occur during the operation. The severity of a stroke can vary from mild (causing little or no disability) to severe (causing severe disability or death).
- **Heart attack (uncommon).** Patients with disease in the arteries to the brain can often also have disease in the arteries to the heart, which may lead to a heart attack.
- **Nerve injury (common).** The nerve that supplies the tongue can be temporarily stunned. When you stick your tongue out, it may not be straight. This can happen in about 5% of cases and usually recovers within a few weeks, but can take several months. It is very rare for this to be permanent.

This injury rarely affects speech and swallowing, however if this does happen it tends to recover within months. It is rare for the damage to be permanent.

- **Large bruise (haematoma) and bleeding (uncommon).** Some blood can collect under the skin after the procedure. In rare cases extensive bleeding occurs which requires urgent surgery.
- **Wound infection (rare).** Should a wound infection occur, it usually only requires antibiotics to treat it. Occasionally the wound needs to be cleaned out under anaesthetic.

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- **Infection of the synthetic patch (very rare).** Occasionally the patch can become infected so we would have to remove it repair the artery with an operation.
- **Change in swallowing or voice (very rare).** This is usually temporary but in some cases can be permanent.

We will be happy to discuss these risks with you, or answer any questions that you may have.

Are there any alternatives to this treatment?

If you choose not to have surgery you will still be managed with the best medical therapy. This is lifelong tablets that will help reduce your risk of stroke.

Consent

We must seek your consent for any procedure or treatment before it can go ahead. Your medical team will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you're unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

Before your surgery

Preparing for your operation

Smoking is a major risk for arterial disease, increases the chances of getting a chest infection and slows your recovery. So if you're a smoker, you need to stop. The NHS Quitters service is available to help support you. You can contact them on 0300 123 3791 or visit www.solenthealthyliving.nhs.uk. You can also talk to your GP who can prescribe nicotine replacement for you. Exercise can boost your immune system and help your recovery so try gentle exercise, such as walking and cycling.

Thinking about your return home

Before your operation, it's a good idea to start thinking about how you will manage at home after your surgery. We encourage patients to stay with family or friends or to have a relative staying with them if possible. If you live alone or require additional support then we may need to help you make plans for a short period before you go home. The sooner we know this, the sooner we can start arranging something for you. Talk to your close family, friends and GP to see what options you have.

You will need to be collected from hospital on the day you are discharged so, before you come into hospital, you should arrange who will collect you. It's also worth asking someone to get you fresh food so you have something at home when you leave hospital.

Pre-assessment

Before you're admitted for surgery you will be seen by a specialist nurse and possibly an anaesthetist in clinic. We'll take a detailed medical history, as well as perform blood tests, a physical examination, blood pressure checks and a heart trace (ECG). The anaesthetist will talk to you about your anaesthetic and how your pain will be controlled.

You should bring in a list of the medications you take and when you take them. We'll let you know if you need to make any changes to your medication for your surgery.

You may also be asked to fill in a questionnaire for the therapy team to help identify if you may need any help or support after the operation. If you do then a member of the therapy team may contact you before you come into hospital. You will also be given information on local services which may be useful to you.

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Sometimes it is not possible to have a pre-assessment before your surgery as the timeframe before surgery is too short. This is to ensure you get surgery as promptly as possible. If this happens you will be assessed on the ward on admission by one of the nurse practitioners or doctors.

Coming into hospital

What to bring

When you come into hospital there are a few items that you should bring:

- All your medications (including insulins and inhalers)
- Nightwear and changes of clothes
- Toiletries
- Dentures, glasses and hearing aids if you have them

Bring them in a small bag labelled with your name. There isn't much storage space on the ward so it should only be a small bag.

We recommend that you leave valuable items at home; especially as you'll be asked to remove jewellery prior to surgery. The ward cannot accept responsibility for items left on the ward and not handed to the cashiers for safe keeping.

What to expect during your stay in hospital

Prior to surgery you will be assessed to ensure nothing has changed. You may need to have further blood tests. A drip (cannula) will be inserted into your arm to allow for medications or fluids to be given. You will also be reviewed by an anaesthetist if you haven't already seen one in pre-assessment.

On the day of surgery you will be taken to theatre where your details will be checked before you're taken to the anaesthetic room and then into surgery.

After theatre you will usually return to the ward. If you require increased observation you will be taken to the high dependency unit (HDU). Your anaesthetist will tell you if this is necessary.

You may have a number of special tubes initially which will be removed as you recover:

A drip to give you fluids directly into a vein.

A drain to collect any fluid from around your wound.

Pain

The cut in your neck is likely to be uncomfortable at first so you'll be offered pain relief. The pain should improve, but you may get twinges and aches for between three to four weeks. It's important your pain is controlled so that you can move about.

Eating and drinking

Once you're awake you will be allowed to eat and drink. You may find you're not very hungry at first but it's important to eat regularly to help your recovery.

Moving around

Moving around soon after surgery will help speed up your recovery and prevent complications.

Deep breathing and coughing exercises help to prevent chest infections so it's important that you do these. The ward staff will help you to regain your normal mobility. Moving around will not cause any damage to the surgical site.

You will be encouraged to maintain as much independence as possible with your personal care and toileting during your recovery.

Changes to medication

You'll be given aspirin (or an alternative) and a cholesterol lowering drug, if you're not already on one. You will usually have to take these for the rest of your life.

Your wound

There will be a dry dressing over your wound. Special dissolvable stitches are usually used to close the wound. Non-dissolving stitches are used occasionally which will need to be removed around 8-10 days after the operation. Your nursing staff will let you know if this is the case. You'll probably be back home before your stitches need to come out, so the ward will ask for them to be removed by your practice nurse at your GP surgery.

The wound will appear to have healed within two weeks or so, but the underlying tissues can take several months to heal completely and you may find the scar and wound are lumpy and quite hard for several months.

If your wound becomes red, sore or is oozing please let your GP know, as this could be a sign of an infection.

Frequently asked questions

How long will I have to stay in hospital?

You will usually be discharged the day after your surgery. Recovery times vary and it can take several weeks to feel 'back to normal'. It also depends on your health and activity before surgery.

Can I shower/have a bath?

Once your wound is dry you will be able to bathe and shower as normal.

Can I exercise?

Exercising after your operation will aid your recovery and help you to return to normal daily life more quickly. It's important to start slowly. Initially, you should not lift heavy objects, or do any strenuous activities or sports.

Walking is an excellent form of exercise not only for your muscles but also for your heart and lungs. Take it easy at first. You will tire easily and will need to rest but do not stay in bed. Some days you will feel better than others. Go for short walks and build up over time with a gradual return to normal activity.

You will be able to manage light work around the house, in the garden and at work when you feel fit and able. Excessive activity will cause pain rather than actual damage. Don't try to do too much, too quickly.

When can I return to work?

Most people are able to go back to work after six weeks. If you need further time off, talk to your GP.

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Can I drive after the operation?

If you have had a stroke, however minor, you may not legally be able to drive for one month. After surgery you can start driving again when you're able to move your neck freely and look over your shoulder to get a clear view of the road (providing it has been one month since you have experienced symptoms). If this causes you pain, then you are not ready to drive. This can sometimes take six weeks or so after your operation. If you are in doubt, you should check with your GP and insurance company.

Can I fly?

There aren't any cases that we know of where flying after treatment has been harmful. You may need to advise your insurance company of any recent illness or treatment you are receiving prior to travelling.

Storing your personal information

Vascular surgeons record information about surgical interventions on the National Vascular Database (NVD). This is a secure database that is used to help monitor and improve vascular services throughout the country. Strict data governance and confidentiality rules mean that personal details on the NVD can only be accessed by staff directly involved in your treatment. If you have any questions or concerns regarding this please speak to your surgeon.

Who should I contact if I have any queries?

If you need any further information about your surgery or anything covered in the booklet, you can contact the vascular nurse specialists between 9am and 5pm, Monday to Friday, on **023 8120 6039**. This number has an answerphone.

Information about general health conditions can be found at www.nhs.uk

This information is intended as a guide only. Everyone is different and treatment and recovery may vary from one person to the next.

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