

# Carotid endarterectomy

**This leaflet explains more about having a carotid endarterectomy, including the benefits risks and any alternatives. It also provides information on what you can expect when you come to hospital.**

**If you have any questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you.**

## What is a carotid endarterectomy?

The carotid arteries carry blood to your head, brain and face. When plaque builds up it causes blockages in these arteries that could lead to a stroke or a transient ischemic attack (TIA, or mini-stroke). A carotid endarterectomy is the surgical removal of this plaque.

## What happens during the operation?

A carotid endarterectomy can be performed under either local anaesthetic (with you awake) or general anaesthetic (with you asleep). You will have a cut running vertically down your neck. It will run from near the angle of your jaw/ear lobe towards your breastbone. The incision is usually seven to 10cm in length.

Once the neck is opened, the branches of the artery are clamped to reduce blood loss during the operation. A cut is made along the artery and the plaque causing the narrowing is carefully removed. When the inside of the artery has been cleared, it is closed with very fine stitches. Sometimes a patch will be stitched to the artery to prevent further narrowing.

The wound is usually closed with a dissolvable stitch under the skin. Your surgeon will place a small plastic drain in your neck for a short period to drain any blood and to reduce neck swelling after the operation.

## What are the benefits – why should I have a carotid endarterectomy?

The aim of carotid endarterectomy is to prevent you from having a stroke. When blood flow to the brain is blocked, the result can be a transient ischemic attack (TIA), which temporarily affects brain function, or a stroke, which is permanent loss of brain function.

Symptoms of a stroke can include: numbness or weakness in the face, arm, or leg, especially on one side of the body; confusion or difficulty in talking or understanding speech; trouble seeing in one or both eyes; and difficulty with walking, dizziness, or loss of balance and coordination.

**If surgery has been recommended for you, this is because the narrowing of the carotid artery responsible for your TIA is already significant. Usually the operation will be performed if the narrowing is more than 50%. Your risk of stroke varies according to the symptoms and scan results.**

## What are the risks?

A small number of people, between one and three in 100, having carotid endarterectomy will have a stroke during or immediately after the operation. The severity of stroke can be very mild (causing little or no disability) through to severe (causing major disability or death). All possible precautions will be taken to prevent this. The risk of having a stroke related to the surgery is less than the risk of leaving the narrowing in the artery without surgical treatment.

There is also a small risk of nerve injury from the surgery. Skin nerves are interrupted during the incision and will lead to loss of sensation to a small section on the side of your neck in a majority of the cases. This may recover with time or it may be permanent. Due to the loss of sensation, men must be careful when shaving. Some people experience pain or numbness around the ear and back of the head.

Dissection of nerves nearer to the carotid artery can cause a temporary, or rarely, permanent loss of function. The vagus nerve helps control the voice box, so can lead to a hoarseness of voice after the operation. The hypoglossal nerve helps control the muscles of the tongue, which can affect speech slightly, by reducing the tongue's mobility. The facial nerve helps control the muscles of the face, damage to it can affect movement of muscles around the neck and jaw. In addition, there is a future risk of infection of the patch that is used to repair the artery, and a small risk of heart attack and related to the anaesthetic around the time of the operation,

Your doctor will speak with you about the risks in more detail before the operation.

## How can I prepare for a carotid endarterectomy?

### Smoking

The most important thing you can do to help yourself before this operation is stop smoking. This will benefit your heart and lungs and help avoid complications after the operation. More importantly, stopping smoking will reduce your risk of stroke.

If you would like to give up smoking, please speak to your nurse or call the Trust stop smoking service on **020 7188 0995**, or call the NHS Smoking Helpline on **0300 123 1044**. You should also continue to take prescribed medications.

### Medicines

You may be asked to attend a pre-assessment appointment prior to your surgery. Here a doctor or nurse will assess your fitness to undergo the surgery. We will review your regular medicines when you come to hospital for your pre-admission appointment.

If you are taking any antiplatelet medicines (such as aspirin or clopidogrel) you will not be asked to stop them. Any other medicines that reduce the blood's ability to clot (such as warfarin or rivaroxaban), must be stopped temporarily before the procedure, and in most of the cases will be temporarily replaced with another antiplatelet medication. If you are taking any medicines for diabetes (for example, metformin) or using insulin, then these may also need to be stopped temporarily or the dose altered near the time of the procedure.

Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines. You will be given full information on any changes that you need to make to your medicines at the pre-admission clinic – please ask us if you have any questions.

## **Fasting instructions**

Please do not eat or drink anything (except non-fizzy water) for six hours before your procedure. This means that you cannot suck on sweets or chew gum. You are allowed to drink water up to two hours before your procedure. Please continue to take your regular medicines with a sip of water before 6am on the morning of the procedure, unless you have been told otherwise.

**If you continue to eat or drink after this, your surgery will be cancelled.**

## **General anaesthetic**

The operation can be performed under local or general anaesthetic and the operating surgeon and anaesthetist will discuss this with you. You may have your surgery under general anaesthetic, which means that you will be asleep during the whole of the operation and will not feel any pain. A specially trained medical doctor, called an anaesthetist will see you before your surgery to ask about your health and explain the different ways in which pain can be prevented and controlled after your surgery.

Once in the anaesthetic room, you will be asked to lie on the trolley and you will be attached to a heart monitor and a cuff placed on your arm to monitor your blood pressure. The anaesthetist will put a cannula (a thin tube into a blood vessel) through which the medications are given to put you to sleep. The anaesthetist will stay with you and monitor you during your surgery. You should be given the leaflet, **Having an anaesthetic**. If you do not have a copy, please ask us for one or contact the Knowledge and Information Centre (KIC) on 020 7188 3416.

## **Giving my consent (permission)**

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please speak to a member of staff caring for you.

## **Will I feel any pain?**

If you have a general anaesthetic you will be asleep during the operation. If you have local anaesthetic and start to feel uncomfortable, please let the surgeon know and they 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. You may feel some pain and discomfort in your neck after the operation, but the nurses on the ward will give you painkillers to help with this.

## **What happens after the operation?**

After your operation you will be taken to the recovery room where you will stay until you are ready to return to a ward. You will then be collected by a nurse and taken to one of the vascular wards. This will include close monitoring of your vital signs, such as blood pressure and pulse, and also monitoring of your neurological functions, such as arm, leg and facial movements.

After this sort of operation you are unlikely to feel sick, so you should be able to eat and drink again within a few hours. You may experience some temporary swallowing difficulties due to the surgery.

The following day you will have blood tests taken and the drain will be removed. Most people are able to go home in the afternoon after assessment by the physiotherapy team. However, you may need to stay a further night, depending on how you feel and your social circumstances.

There is often some swelling and bruising in the neck, but this settles within seven to 10 days. The incision on your neck will be quite visible at first, but will become almost invisible within two to three months.

## What do I need to do after I go home?

The stitches to the wound are normally dissolvable so will not need to be removed. We will give you a letter to take to the practice nurse at your GP surgery two days after you leave hospital. The practice nurse will check your wound. If you are unable to travel to your GP surgery then we may refer you to a district nurse.

You may feel tired for several weeks after the operation. Activity should be built up slowly and you should get plenty of rest.

- Regular exercise, such as a short walk, combined with rest is recommended to provide a gradual return to normal activity.
- Avoid strenuous activity for about six weeks.
- You will be safe to drive when you can move your neck freely to allow a good view of the road, especially behind you. This will normally be about four to six weeks, but if in doubt wait for your follow up appointment with your doctor. You should avoid driving long distances and on motorways at first. If you have had a recent stroke or TIA, then you are not allowed to drive for four weeks. You do not need to inform the DVLA. After one month you may be able to drive again, as long as your doctor agrees it is safe for you to do so.
- If you work you should be able to resume your job in one to three months – if in doubt check with your doctor.
- As soon as your wound is dry you can bath or shower.
- You can resume a normal sex life after two to three weeks if you feel happy to do this.

**Medicines:** You will usually require a small dose of an antiplatelet medication, to help reduce the stickiness of your blood and reduce the risk of a stroke. The surgical team will inform you of which antiplatelet they have prescribed and this will need to be continued lifelong. You will also require a statin for life to help lower blood cholesterol levels and further build up in the arteries. We will give you a prescription for these medications, if you were not already taking them and will ask your GP to continue this prescription for you.

## Will I have a follow up appointment?

After you have left hospital, you will receive an appointment to see your surgeon approximately six to eight weeks later. We will try to ensure this is arranged at your local hospital, but this may not always be possible. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

## Contact us

If you have any questions or concerns before or after you have left hospital, please contact the **vascular specialist nurses on 07825 503902** (Monday to Friday, 8am to 4pm). Out of hours, please leave a message and a member of staff will call you back in working hours; alternatively please contact your GP or NHS 111.

You can also contact **Luke ward on 020 7188 3566 or Sarah Swift ward on 020 7188 8842** (24 hours) and speak to the ward sister or nurse in charge.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

## Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

**t:** 020 7188 8748 9am to 5pm, Monday to Friday

## Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

**t:** 020 7188 8801 (PALS) **e:** [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

**t:** 020 7188 3514 (complaints) **e:** [complaints2@gstt.nhs.uk](mailto:complaints2@gstt.nhs.uk)

## Language and Accessible Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

**t:** 020 7188 8815 **e:** [languagesupport@gstt.nhs.uk](mailto:languagesupport@gstt.nhs.uk)

## NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

**t:** 111

## NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

**w:** [www.nhs.uk](http://www.nhs.uk)

## Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, and to become a member:

**t:** 0800 731 0319 **e:** [members@gstt.nhs.uk](mailto:members@gstt.nhs.uk) **w:** [www.guysandstthomas.nhs.uk/membership](http://www.guysandstthomas.nhs.uk/membership)

**Leaflet number: 2879/VER3**

Date published: February 2017

Review date: February 2020

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