



Carotid Artery Stenting

This information leaflet explains carotid artery stenting, what it involves, and what to expect when you come to the Interventional Radiology department.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you for, or is performing, the procedure.

What is carotid artery stenting?

You have two carotid arteries, one on each side of the front of your neck. These are responsible for supplying blood to your brain. Carotid artery stenting is a procedure which involves placing a device called a stent, made of metal mesh, inside your carotid artery to help widen it and improve blood flow to your brain.

Why do I need a carotid artery stent?

Over time a carotid artery can become hardened and narrowed, often caused by a disease called atherosclerosis (a common condition which develops when a sticky substance called plaque builds up inside your arteries). This narrowing can lead to a transient ischaemic attack ("mini-stroke") or stroke. Strokes can lead to irreversible long-term disability or even death and so prevention is important. A carotid artery stent can reduce the risk of stroke, although it will not treat any stroke which has happened in the past.

There are other reasons you may need a carotid artery stent, for example if there has been damage to your carotid artery or if there is an area of collection overlying your carotid artery.

How do I prepare for a carotid artery stent?

Generally, you will be seen in a pre-operative clinic prior to the procedure to be assessed and to allow you to ask any questions you may have.

Your doctor will have you take a combination of blood-thinning medication (usually aspirin and clopidogrel) for seven days prior to the procedure if you are not already taking them. If you are already taking blood thinning medication you will be given specific advice on any adjustments which may be required.

You will normally be asked to come into hospital on the morning of your procedure. You should not eat any food from midnight the day before your procedure. You may drink small sips of water at any time right up until your procedure. Unless told otherwise, you should take all your medication as normal.

How is carotid artery stenting performed?

Carotid artery stenting is performed under local anaesthetic, meaning you will be awake during it but shouldn't feel any pain.

A needle is used to access your arterial system (normally through your groin or wrist), unlike other carotid artery treatments this does not require a cut in your neck. A thin wire and catheter (flexible tube) will be passed into your carotid artery and across the narrowed section under X-ray guidance and dye (called contrast). The doctor will then use a small balloon to widen the narrowing before placing the stent using X-ray guidance to ensure it is in the correct position.

Once the stent is correctly positioned the wire and catheter are removed and pressure will be applied to the access site to prevent any bleeding. Occasionally a device will be used to form a plug and prevent bleeding.

Generally, the procedure lasts less than a few hours but may take longer in more complex cases.



Who performs the procedure and where?

A specially trained doctor called an Interventional Radiologist or Interventional Neuroradiologist will perform the procedure. This is done in an interventional radiology suite, which is similar to an operating theatre.

What are the potential risks or complications of carotid artery stenting?

Like any procedure, carotid artery stenting does come with the risk of potential complications.

- Where the needle is inserted, you may develop significant bruising (known as a haematoma) or damage to the wall of the artery (known as a pseudoaneurysm).
- There is risk of infection with any procedure, although the carotid artery stenting is done in a sterile environment.
- The contrast dye injected during the procedure can cause allergic reaction in some patients and may also temporarily impair kidney function.
- There is a risk of stroke during the procedure, often a special device is used to catch any disrupted fragments from inside the artery and reduce the risk of stroke.
- There is also a risk of damage to the wall of the artery, which in severe cases may require emergency surgery.
- As with any other procedure, there is always a chance that the procedure will be unsuccessful or will have to be stopped.

What happens afterwards?

After the procedure you will be taken to a post-operative recovery area. Here you will be observed by specially trained staff for any complications. Usually this involves monitoring your vital signs, neurological function, and pulses. Depending on whether your groin or wrist has been used for access, you may be asked to lie flat for up to six hours.

You will be kept in hospital for observation overnight in a ward. Your bloods should be checked in the morning to ensure your kidney function is stable. If you haven't experienced any complications and your bloods are satisfactory, you should be allowed to go home the day following the procedure.

You will be given specific advice on what blood thinning medication to take after the procedure and how long you should take it for. This varies between patients and should be decided by a specialist doctor.

You should be seen in clinic a few months after the procedure, here you will be reviewed by a doctor and any further investigation or treatment required can be arranged.

Notes