

Carotid Artery Disease

What is the carotid artery?

The carotid artery is the main artery in the neck that supplies blood to a large part of the brain. It is a branch of the aorta and ends by forming a complex network of blood vessels at the base of the brain. There is one on each side of the neck which can be easily felt.

What is carotid artery stenosis?

Stenosis means 'narrowing' and a carotid artery stenosis is therefore a narrowing in the carotid artery, usually caused by a build-up of plaque on the inner wall of the artery. The degree of narrowing can vary and not all patients who have carotid artery stenosis notice any symptoms.

What symptoms does it cause?

A large proportion of patients who have mild to moderate carotid artery stenosis do not have any symptoms. However, this narrowing can cause problems by either reducing the blood flow to the brain or by parts of the plaque dislodging and entering the circulation to the brain. This may lead to a transient ischaemic attack (TIA) or stroke. The symptoms from a TIA or stroke are the same but the duration of symptoms differ hugely. Symptoms that resolve within 24 hours are classified as a TIA and those that have longer term effects are called a stroke. Although there can be other reasons for a TIA or stroke, one of the commonest is due to carotid artery stenosis.

The commonest symptoms that you may notice are weakness in one half of your body, either arm or leg or both (hemiplegia). Sometimes rather than a weakness, you may notice a numbness in this area. It is important to note that this will only affect one side of the body. You may notice loss of vision in one eye, commonly described as a curtain or shutter obscuring the vision (amaurosis fugax). The final symptom is a slurring of speech, sounding as if you are drunk or talking 'jibberish' (dysphasia). You only need one of the above for this to be a TIA or stroke.

If you have symptoms of one-sided facial, arm or leg weakness or numbness, slurred speech or loss of vision in one eye, you could be having a TIA or stroke and should call 999 immediately

What causes carotid artery stenosis?

The risk factors for carotid artery disease are identical to those that cause peripheral artery disease (see other chapters) and heart disease. The non-modifiable risk factors include male

sex, increasing age, ethnicity and a possible family history. Risk factors that can be corrected are smoking, high blood pressure, diabetes and high cholesterol.

How can I tell if I have carotid artery disease?

The only real way to tell is to have a scan. The best scan is a duplex ultrasound scan of the neck arteries. This is pain free, non-invasive, quick and easy to perform. Sometimes, this is used in combination with a CT scan or MRI scan depending on the disease seen.

How can I reduce my risk of suffering a stroke?

If you come to know that you have a diseased carotid artery and no symptoms (asymptomatic), the key management involves lifestyle change and correcting risk factors. You **MUST** stop smoking, receive adequate treatment for high blood pressure and diabetes and lose weight if appropriate. You will need to start taking two specific tablets. One is an 'anti-platelet', usually clopidogrel. This thins your blood in a similar way to aspirin and the second is a statin tablet, which keeps the cholesterol under control.

Some clients with a significant but asymptomatic narrowing of the carotid artery may also benefit from surgery (Carotid Endarterectomy) to reduce the risk of stroke, in addition to medical management. The benefits versus risk associated with surgery vary between clients and a number of parameters influence this decision e.g. the extent of disease, ulcerated disease in the carotid, the presence of other medical conditions and age.

If you have symptoms, you need to be seen urgently by the stroke team in your nearest hospital (usually referred by your GP) for further assessment. They will perform various tests including blood tests, CT or MRI scan of the brain, ECG, and a carotid duplex scan. If appropriate, you will be referred onto vascular surgery for consideration of an operation on the neck artery; a carotid endarterectomy.