

# CAROTID ARTERY DISEASE

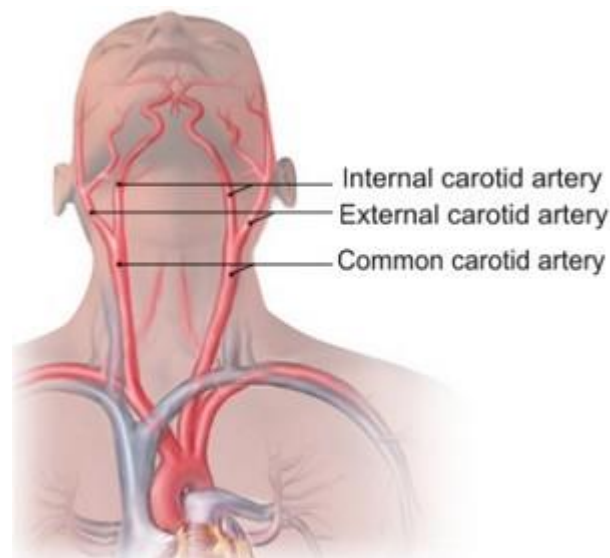
Vascular disease is as prevalent as both cancer and heart disease and accounts for **40% of deaths in the UK**, many of which are preventable.

**SAVING LIVES AND LIMBS**

## What are the carotid arteries?

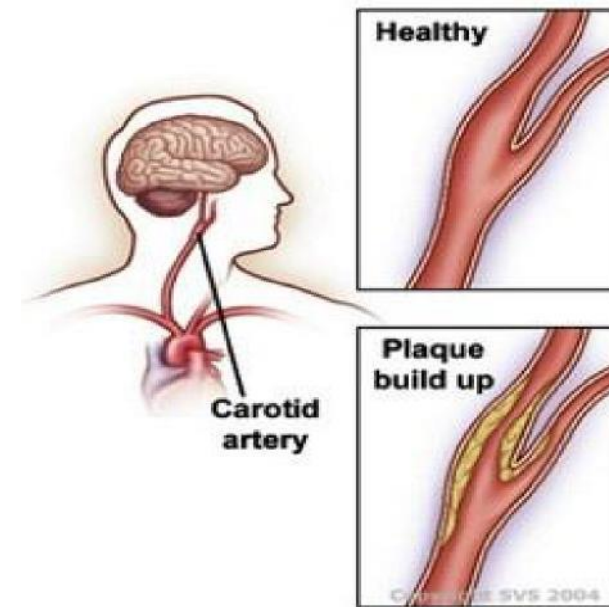
The carotid arteries are two of four major blood vessels that carry oxygen-rich blood to your brain. They are located on each side of the neck. You can easily feel them by placing your fingers gently either side of your windpipe.

The carotid arteries supply essential oxygen to the eye and most of the brain. This includes areas that controls thought, speech, personality as well as our ability to feel and move.



## What is carotid artery disease?

Carotid artery disease is the **narrowing (stenosis) or blockage (occlusion)** of these arteries due to a build-up of **fatty deposits (atherosclerotic plaque)**. The condition does not usually cause symptoms but, when parts of these plaques fragment and crack, bits can break off and travel to the brain causing temporary visual loss (amaurosis fugax), transient ischaemic attacks (TIAs) and strokes.



A TIA is a **temporary loss of brain function** which resolves completely within 24 hours whereas a stroke **can cause permanent loss of function** due to a damaged area of brain tissue.

Common symptoms of a TIA include brief periods of weakness, clumsiness, numbness or pins and needles in the face, arm or leg on one side of the body. The eye can also be affected resulting in temporary loss of vision in one eye. People who have TIAs may be at high risk of having a stroke within the next few days.

Some people recover completely from strokes or may be left with only minor problems but many people have serious life-long disabilities. These can include speech difficulties, paralysis and/or an inability to care for themselves.

# What causes carotid artery disease?

Most people have some **fatty deposition** in their arteries. For most these cause no problems.

Several factors influence the chances of having severe carotid artery disease.

It is commoner in men, in those with a close member of the family who has had atherosclerotic vascular disease (such as stroke or heart disease) and it gets more common with increased age.

Other factors that can be modified or optimised include smoking, high cholesterol, high blood pressure and/or diabetes.

If you already have symptoms from narrowed arteries in the legs or heart disease, you may be at **higher risk** of carotid artery disease and stroke.

# How is the diagnosis made?

The narrowing in the carotid arteries can be seen with an ultrasound scan of the arteries in the neck (duplex) or sometimes with a CT or MRI scan.

# How is it treated?

Treatments for carotid artery disease focus mostly on preventing stroke. These include:

**Lifestyle changes** – Stroke risk can be reduced by:

- Stopping smoking
- Eating a diet rich in fruits, vegetables and oily fish (omega-3) and low in meats, sweets and refined grains (such as white bread or white rice)
- Eating less salt (sodium)
- Doing something active for at least 30 minutes a day on most days of the week and trying to lose weight
- Limiting the amount of alcohol you drink

**Medicines** – Some medicines will also reduce the chances of having a stroke. These include:

- Medicines for blood pressure control
- Statins: drugs that lower cholesterol and reduce the chance of atherosclerotic plaques cracking or fragmenting
- Medicines to make the blood less sticky and reduce the chance of it clotting, such as aspirin and/or clopidogrel

**Surgery** – an operation called “carotid endarterectomy” is advised for people who have had a TIA or stroke with a lot of plaque in their carotid arteries. It can also be appropriate for some people to have this operation with large amounts of plaque but who have not yet had a stroke or TIA as they are at increased long-term stroke risk.

**Carotid stenting** – if this is recommended, doctors will insert a tiny metal tube called a “stent” into the carotid artery. This is designed to keep narrowed arteries open. This treatment is an alternative to surgery with on-going studies evaluating which is better for particular patients.

# Which treatment is right for me?

The right treatment will depend on:

- Whether you have already had a stroke or TIA that seems to be caused by your carotid artery disease
- How much of your carotid artery is narrowed by plaque
- Whether you have other important health problems besides carotid artery disease

If your doctor suggests surgery or stenting, you may wish to ask these questions:

- What are the chances that I will have a stroke if I **DO NOT** have this procedure?
- What are the chances that I will have a stroke if I **DO** have this procedure?
- What are the risks of the procedure?

Whether or not you need one of these treatments, you must **stop smoking completely** to significantly reduce your risk of future stroke, heart disease and peripheral vascular disease (narrowing of the arteries in the legs and abdomen).

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