

Transient ischaemic attack

A transient ischaemic attack (TIA) is caused by a temporary cut in blood supply to the brain, due to the partial blockage of an artery by a blood clot or debris. A TIA has the same symptoms as a stroke, but they are temporary as the clot naturally dissolves or is dislodged from the blockage. A TIA does not usually cause long-term brain damage.

A person who has had a TIA, or 'mini-stroke', is at greater risk of having a stroke or heart attack. Early identification of symptoms and a diagnosis from your doctor greatly reduces the chances of a major stroke.

TIA is an early warning for stroke

A stroke interrupts blood flow to an area of the brain. A blood clot could block a blood vessel or (more rarely) a blood vessel might break. Brain cells in the immediate area are starved of oxygen and die. Without prompt medical treatment, the surrounding brain cells may also die.

A TIA has identical symptoms to a stroke, but these last for less than 24 hours and are followed by a full recovery. A TIA is a powerful warning that an area of the brain is being deprived of blood and that a stroke may follow in the next few hours, days, weeks or months. Urgent medical attention is needed.

Symptoms

The specific symptoms of a TIA depend on which areas of the brain are being deprived of blood. They can include:

- Visual problems, such as blurring or reduced vision in one or both eyes
- Numbness, weakness or paralysis of the face
- Numbness, weakness or paralysis in an arm or leg, on either or both sides of the body
- Difficulty speaking or understanding
- Dizziness
- Loss of balance
- Swallowing difficulties
- Severe headache or an unusual change in headache pattern
- Nausea
- Vomiting.

The **FAST test** is an easy way to recognise and remember the common signs of stroke or a TIA. The **FAST** test involves asking three simple questions. If the person has a problem with any of these functions, dial triple zero (000) to call an ambulance immediately:

- **F**acial weakness – can the person smile; have their mouth or eyes drooped?
- **A**rm weakness – can the person raise both arms?
- **S**peech difficulty – can the person speak clearly and understand what you say?
- **T**ime to act – act **FAST** and **call 000 immediately**.

If you suddenly experience any of these symptoms, get to a hospital immediately. Remember, stroke is a life-threatening emergency.

Temporary loss of blood supply

The carotid arteries in the neck supply blood to the head. These arteries branch into smaller blood vessels in order to service the brain. If one of these blood vessels is temporarily blocked – by a blood clot or piece of fatty debris – then the symptoms of TIA will occur. If the blockage remains, the person will experience a full stroke. Sometimes, the cause of a TIA is a haemorrhage, when a small blood vessel inside the brain bursts.

Risk factors

Some of the risk factors for TIA and stroke are outside the individual's control, such as advancing age, gender (men are more likely than women to experience stroke) and family history. However, most risk factors can be attributed to lifestyle factors and can be changed.

Lifestyle-related risk factors include:

- High blood pressure
- Cigarette smoking
- Unmanaged diabetes
- High cholesterol levels
- Lack of regular exercise
- Overconsumption of alcohol, such as frequent binge drinking
- Obesity
- High fat diet, particularly saturated fats
- High salt diet, which can cause high blood pressure.

High-risk groups

A full stroke within three months (or more commonly within the first week) of a TIA is more likely under certain circumstances, including:

- If the TIA lasts for longer than 10 minutes
- If TIA symptoms include weakness and speech problems
- If the person is older than 60 years
- If the person has high blood pressure
- If the person has diabetes.

Diagnosis

A TIA is a medical emergency and you should always seek immediate help. It is important that your medical team distinguishes between a TIA and stroke so they can decide on the right treatment for you. Medical history of specific symptoms and neurological examination provide the most important information required to diagnose a TIA.

The cause of a TIA is determined using a number of tests including:

- Physical examination, including blood pressure measurement
- Blood tests
- Electrocardiogram (ECG) tests to check for abnormal heart rhythms
- Chest x-ray
- Computed tomography (CT) scan of the head
- Ultrasound scan of the carotid arteries
- Heart ultrasound (echocardiogram) to check for heart disease.

Treatment

Treatment aims to prevent the person from experiencing a stroke. Some of the options may include:

- Drugs, such as aspirin, to reduce the risk of blood clots forming in the blood
- The blood-thinning drug warfarin, if the blood clot was caused by heart problems such as atrial fibrillation (abnormal heart rhythms)
- Antihypertensive medication, if your blood pressure is too high
- Drugs to lower cholesterol, if your blood cholesterol is too high

- Surgery to remove the blockage inside an affected carotid artery (carotid endarterectomy). Sometimes, surgery is needed on both arteries.

Lifestyle changes

A person who has experienced a TIA needs to make lifestyle changes to reduce their risk of stroke, including:

- Stop smoking, since cigarette smoke narrows arteries and makes the blood 'sticky' and more likely to clot.
- Switch to a low fat, low salt, high fibre diet.
- Strictly limit your dietary intake of saturated fats to help reduce your blood cholesterol.
- Maintain a healthy weight for your height.
- Exercise regularly.
- Limit alcohol to no more than one or two standard drinks per day.
- Properly control diabetes.

Where to get help

- Always dial triple zero (000) to call an ambulance if you think someone is having a stroke or TIA
- Your doctor
- Emergency department of your nearest hospital
- Neurologist (brain doctor)
- National Stroke Foundation StrokeLine Tel. 1800 787 653

Things to remember

- A transient ischaemic attack (TIA) is a minor stroke and provides a powerful warning that a stroke may follow in the next few hours, days, weeks or months.
- A TIA has identical symptoms to stroke; however, these last for less than 24 hours and are followed by a full recovery.
- A TIA is a medical emergency.
- Treatment aims to prevent the person from experiencing a stroke and may include drugs and lifestyle changes.

This page has been produced in consultation with, and approved by:

National Stroke Foundation

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