

Transient ischaemic attack

Signs, treatment and
reducing your risk



What you need to know

- › A transient ischaemic attack (TIA) happens **when the blood supply to your brain is blocked temporarily**. The signs are the same as for a stroke, but they disappear within a short time. Often, they are only present for a few minutes.
- › After a suspected TIA, **your doctor will do tests** to provide a diagnosis and decide what treatment you need.
- › **You must not drive for two weeks after a TIA.** If you have a commercial driving licence, you must not drive for four weeks.
- › **After a TIA, your risk of stroke is higher.** Stroke can lead to death or disability. A TIA is a warning that you may have a stroke and is an opportunity to act to prevent this happening. With investigation and treatment, the risk of stroke following a TIA can be reduced by up to 80 percent.
- › **A TIA should never be ignored.** Call 000 immediately if you think you may be having a TIA, even if the signs go away and you feel better.

What is a TIA?

Blood is carried to your brain by blood vessels called arteries. Blood carries oxygen and nutrients for your brain cells. If the blood supply to your brain is blocked, your brain cells will die.

A transient ischaemic attack happens when the blood supply to your brain is blocked **temporarily**. When the blood supply is stopped, the brain cells in the area start dying, and you experience signs that something is wrong.

If the blockage clears and the blood supply starts again, the brain gets the oxygen and nutrients it needs and the signs disappear. This makes a TIA different to a stroke, where the brain cells die and your brain is permanently damaged.

Transient ischaemic [is-key-mick] attack is often shortened to 'TIA'.

After a TIA, your risk of stroke is higher. Stroke can lead to death or disability. A TIA is a warning that you may have a stroke and an opportunity to prevent this from happening.

Signs

A TIA should never be ignored. The risk of stroke is highest in the first few hours and days after a TIA. You should call 000 immediately even if the signs go away and you feel better.

The FAST test is an easy way to remember the most common signs of stroke and TIA.

The signs are the same as for a stroke, but they completely disappear within a short time. Often, they are only often present for a few minutes.

The signs can be different for different people, depending on which part of the brain is affected.

There can be other signs, such as:

- › Numbness, clumsiness, weakness or paralysis of the face, arm or leg on one or both sides.
- › Dizziness (in particular 'head spins'), loss of balance or an unexplained fall.
- › Loss of vision in one or both eyes.
- › Headache, usually severe and sudden.
- › Difficulty swallowing.
- › Nausea or vomiting.

It is important to make your family and friends aware of the signs of stroke and the need to call 000 immediately.

— Recognise — **STROKE** Think *F.A.S.T.*



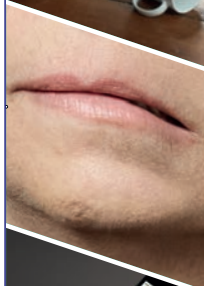
F

Has their
FACE
drooped?



A

Can they lift both
ARMS?



S

Is their
SPEECH
slurred and do they
understand you?



T

Call 000,
TIME
is critical

If you see
any of these
symptoms

Act FAST call 000





Tests

Your doctor will want to know about your signs – what they were, how long they lasted and whether you have had them before. This will help distinguish between a TIA and other possible causes.

Your doctor will do a series of tests. These vary from person to person and may include:

Brain scans. Computerised tomography (CT scan) or magnetic resonance imaging (MRI) take detailed pictures of your brain. After a suspected TIA, everyone should have a brain scan.

A brain scan is used to decide if you have had a TIA, a small stroke (with no ongoing impacts) or something that 'mimics' a TIA. There are other conditions that mimic TIA, so expert review is needed to distinguish TIAs from these other conditions.

If you have had a TIA, your scan will not show any signs of recent brain injury.

Imaging of the arteries. Arteries carry blood from the heart to the brain. Tests can see how the blood flows through the arteries, as damaged or blocked arteries in the neck can cause TIA. This is done in a variety of ways including ultrasound, CT angiogram or magnetic resonance angiogram.

Blood pressure check. After an initial check of your blood pressure, you may need it measured regularly.

Heart tests. An electrocardiogram (ECG) tests for abnormal heart rhythm. Everyone suspected of having had a TIA should have an ECG. Atrial fibrillation (AF) is a heart condition in which your heart beats out of rhythm. Atrial fibrillation increases your risk of stroke, so testing for atrial fibrillation is very important after a TIA.

You may also need to wear a Holter monitor for 24 hours or longer. This checks your heart rhythm over an extended period of time. Your doctor may also order an echocardiogram (cardiac echo or ECHO) which is an

Your doctor will discuss your test results with you so you have a better understanding of what has happened and what you need to do. Your doctor will make a plan for follow up, including referrals and appointments. You may need to go back to the hospital for further tests. Your doctor may refer you to a specialist. It is important to go to these appointments, even if you are feeling better.

ultrasound test that looks at the structures of the heart, as well blood flow within the heart.

Blood tests. These tests are used to check your health. Blood tests can cover:

- › Cholesterol (fasting lipids).
- › Blood sugar levels
- › How well your kidneys work.
- › The way your blood clots.

Driving

You must not drive for two weeks after a TIA. If you have a commercial driving licence, you must not drive for four weeks.

If you drive before this time, you might be criminally liable if you have an accident. Also, your insurance may not cover you. If you are unsure, check with your doctor and with the licensing authority in your state.

The rules about driving are different for different medical conditions, which means it is important to have it confirmed by your doctor that you have had a TIA.

For more information contact your State licensing authority.



Reducing your risk of a stroke

The risk factors for stroke after a TIA are the same as those for recurrent stroke. The more risk factors you have, the higher your chance of having a stroke.

There are some risk factors that you cannot do anything about. These include older age, being male, family history and having already had a stroke.

There are a number of **risk factors you can do something about**. Taking medication and having a healthy lifestyle reduces the risk for everyone. Ways to help manage your risk include:

Medication

Almost everyone who has had a TIA will need to take medication to reduce their risk of stroke. You will most likely need to take medication for the rest of your life. High blood pressure, high cholesterol and atrial fibrillation can be controlled with medication.

Blood pressure-lowering medication. High blood pressure, or hypertension, is the biggest risk factor for stroke. Keeping your blood pressure in the normal range is very important. Normal blood pressure is around 120/80. If your blood pressure is regularly over 140/90, you have high blood pressure.

If your blood pressure is too high, your arteries can become weaker, less flexible or more prone to clots and this can cause a stroke. Medicines that lower your blood pressure are called anti-hypertensives.

Cholesterol-lowering medication. Cholesterol can build up in the artery walls that narrows or blocks blood flow to the brain, causing a stroke. Statins are the most common type of medication used to reduce cholesterol build up. These medications prevent stroke even if your blood cholesterol levels are normal before treatment.

Blood-thinning medication. Blood clots can travel through the bloodstream and block an artery in the brain, causing a stroke. Blood-thinning medication lowers the risk of blood clots forming. If you have had a TIA you will almost always need to take blood-thinners. There are two types: antiplatelet and anticoagulants.

If you have atrial fibrillation, or certain heart conditions such as a prosthetic heart valve, you should take anticoagulant medication (like warfarin, apixaban, dabigatran or rivaroxaban). Otherwise you should take an antiplatelet medication like aspirin, aspirin-dipyridamole or clopidogrel.

If your doctor prescribes a medication keep taking it until they tell you to stop. It can be dangerous to suddenly stop taking medicines or change the dose. Speak to your doctor or pharmacist if you are worried or have questions about your medications.

Lifestyle

Lifestyle changes can reduce your risk of stroke.

Eat well. Poor diet can increase your risk of high blood pressure and cholesterol, increasing your risk of stroke. A healthy diet will reduce this risk and help you maintain a healthy weight.

Eat a wide variety of nutritious foods from these five groups every day:

- › Plenty of vegetables. Choose different types and colours. Eat legumes – peas, lentils and beans.
- › Fruit.
- › Grain or cereal foods. Choose wholegrain and high-fibre types of bread, cereal, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley.
- › Lean meats and poultry, fish, eggs, tofu, nuts and seeds, peas, lentils and beans.
- › Milk, yoghurt, cheese and their alternatives, mostly reduced fat.
- › Drink plenty of water.

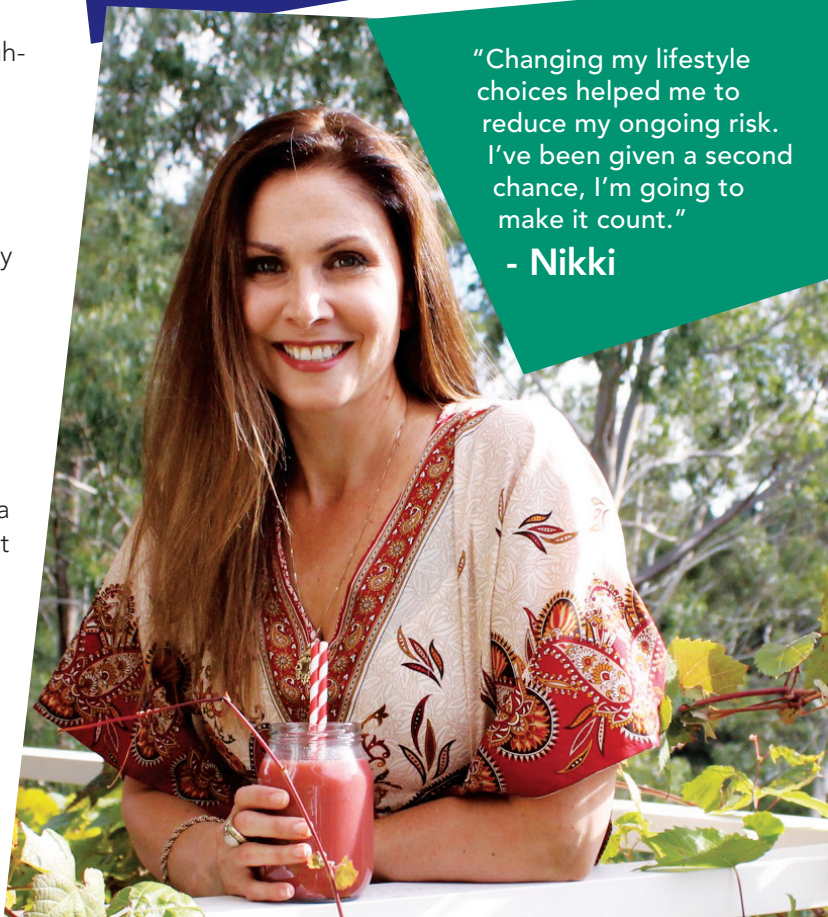
Things to limit are:

- › Salt. Too much salt can raise your blood pressure. Try to consume less than four grams of salt each day, six grams is the maximum daily limit (around a teaspoon). Read food labels and choose lower salt options. Don't add salt (often shown as sodium) when cooking or at the table.
- › Sugar. Too much sugar can damage blood vessels. Foods containing added sugar include confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy drinks and sports drinks. Read labels as foods you may not think of as sugary can have added sugar.

Almost everyone who has had a TIA will need to take medication to reduce their risk of stroke. You will most likely need to take medication for the rest of your life. High blood pressure, high cholesterol and atrial fibrillation can be controlled with medication.

"Changing my lifestyle choices helped me to reduce my ongoing risk. I've been given a second chance, I'm going to make it count."

- Nikki



Six ways you can reduce your risk

- › Eat well
- › Be active
- › Be smoke free
- › Maintain a healthy weight
- › Manage your diabetes
- › Only drink alcohol in moderation



- › Saturated fats. These cause high cholesterol. Foods high in saturated fat include biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks. Foods which contain mostly saturated fats include butter, cream, cooking margarine, coconut oil and palm oil. Eat mostly polyunsaturated and monounsaturated oils and spreads. Try nut butters or avocado.

Be active. Regular exercise can help lower blood pressure and help you maintain a healthy weight.

Do at least 30 minutes of moderate activity each day. You don't need to do it all at once – three sessions of 10 minutes is fine. This can be any form of exercise, as long as it increases your heart rate. Vigorous walking is ideal.

Talk to your doctor or physiotherapist before beginning or changing an exercise program.

Be smoke free. Smoking increases your risk of stroke by increasing blood pressure. It reduces oxygen in the blood, damaging your arteries. Smoking increases the stickiness of the blood and the risk of clots forming.

Stopping smoking will dramatically reduce your risk of stroke. It is never too late to stop smoking. There is help available – your doctor and Quitline will help you to quit successfully. Call Quitline on 13 7848.

Maintain a healthy weight. Being overweight can increase blood pressure, cholesterol, and lead to heart disease and type 2 diabetes. Eating well and being active can help you achieve and maintain a healthy weight.

Manage your diabetes.

You should be checked for diabetes after a TIA. If you find out you have diabetes, you will need support to learn to manage it. If your diabetes is untreated or uncontrolled, it increases the risk of your artery walls becoming hard and narrow. They become more prone to clots and can cause a stroke.

Controlling diabetes by maintaining healthy blood sugar levels will help reduce these risks.

Drink alcohol only in moderation. Regular heavy drinking can increase blood pressure. Healthy people should drink no more than two standard drinks a day. This may be different for you, so talk to your doctor about how much is safe for you to drink.

Surgery

The carotid arteries in your neck carry blood to the brain. If your tests show that your carotid arteries are narrowed, you may be advised to have surgery.

A carotid endarterectomy removes the plaque from the narrowed area of the artery and improves blood flow to the brain. It is useful for people who have severe, but not total, blockage of their carotid arteries.

Risk factor checklist

1. Check the risk factors that apply to you.

2. Talk to your doctor about how you can address these risk factors. **Your doctor can provide advice about all risk factors.**
3. Find out more about the risk factors that apply to you.

4. See a health professional if needed for help to address the risk factors.

Risk factor	Yes / No	Where can I get more information?	Who can help with this risk factor?
High blood pressure		Medication fact sheet strokefoundation.org.au	Your doctor.
Cholesterol		Medication fact sheet strokefoundation.org.au	Your doctor. Dietitian.
Atrial fibrillation		Living with atrial fibrillation strokefoundation.org.au	Your doctor.
Diet		Diet fact sheet strokefoundation.org.au Australian dietary guidelines www.eatforhealth.gov.au	Your doctor. Dietitian.
Exercise		Australia's physical activity and sedentary behaviour guidelines www.health.gov.au	Your doctor. Physiotherapist or exercise physiologist.
Smoking		Quitline 13 78 48 www.quitnow.gov.au	Your doctor. Psychologist or other mental health professional.
Weight		Healthy weight guide healthyweight.health.gov.au	Your doctor. Dietitian.
Alcohol		National guidelines for alcohol consumption alcohol.gov.au	Your doctor. Psychologist or other mental health professional.
Diabetes		Diabetes Australia diabetesaustralia.com.au	Your doctor. Diabetic educator.

Appointments





Speak with your doctor about the referrals and appointments arranged for you. Write these in the space below. Some appointments arranged by your doctor may be sent to you after you leave hospital.

Appointments

StrokeLine’s health professionals

Further information

StrokeLine’s health professionals provide information, advice, support and referral. StrokeLine’s practical and confidential advice will help you manage your health better and live well.

-  If you’re not able to access the internet, call StrokeLine on 1800 STROKE (1800 787 653) for assistance.
-  strokeline@strokefoundation.org.au
-  Download our fact sheets and the *Living with atrial fibrillation* booklet from strokefoundation.org.au
-  Your doctor can advise how to access allied health professionals such as dietitians and psychologists.











How to get more involved

Many people affected by TIA, their family members and friends want to become involved in the fight against stroke and TIA.

There are many options and we would love to have your support.

-  **Give time** – become a volunteer.
-  **Raise funds** – donate or hold a fundraising event.
-  **Speak up** – join our advocacy team.
-  **Leave a lasting legacy** – include a gift in your Will.
-  **Know your numbers** – check your health regularly.
-  **Stay informed** – keep up-to-date and share our message.

About the Stroke Foundation

The Stroke Foundation partners with the community to prevent, treat and beat stroke.

We do this through raising awareness, facilitating research and supporting stroke survivors.

-  **1300 194 196**
-  **strokefoundation.org.au**
-  **[/strokefoundation](https://www.facebook.com/strokefoundation)**
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