

Patient information from BMJ

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Transient ischaemic attack (mini stroke)

If you have a transient ischaemic attack or ‘mini stroke’, the blood supply to your brain is reduced or stopped for a short time. It is a medical emergency that can be a sign of other blood vessel or heart problems.

If you have the symptoms of a mini stroke you should seek medical help straight away. Getting treatment quickly can prevent more serious problems, such as a stroke or a heart attack.

What is a transient ischaemic attack?

If you have a stroke the blood supply to part of your brain is cut off.

The same thing happens if you have a transient ischaemic attack (TIA or ‘mini stroke’). But with a TIA it only happens for a short time - usually less than an hour.

This does not mean that you’re okay: a TIA is a medical emergency. It’s a sign that you have problems with your heart or blood vessels that need urgent medical attention.

A TIA happens because something blocks a blood vessel in or near the brain. This can happen because:

- a blood clot gets stuck in the blood vessel
- a piece of fatty tissue (called plaque) breaks off from the wall of a larger blood vessel, then travels to a smaller blood vessel, where it gets stuck
- a blood vessel has become too narrow. This can mean that not enough blood gets to the brain, or that small blood clots or lumps get stuck in the blood vessel.

Problems with your blood vessels can happen for a number of reasons. For example, they are more likely if you:

- have other heart problems, such as an irregular heartbeat or ‘heart flutter’ (called atrial fibrillation) or heart failure
- have high blood pressure
- have diabetes
- smoke

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- have too much LDL cholesterol (sometimes called 'bad' cholesterol) in your blood
- have chronic kidney disease
- are older
- have a long history of drinking too much alcohol.

What are the symptoms?

The symptoms of a TIA are the same as those for a stroke. They usually come on suddenly, just like with a stroke. But with a TIA they are 'transient', which means that they come and then go away fairly quickly, rather than lasting a long time.

TIA symptoms usually go away after less than an hour. But this doesn't mean that the problem has gone away. If you have the symptoms of a TIA you need to get emergency medical help immediately.

You can remember the symptoms of a TIA or stroke, and what to do about them, using the word FAST. The letters stand for: Face, Arms, Speech, Time.

- **Face** when a person has a stroke or TIA, their face might drop on one side. They might not be able to smile and their mouth or eye might have drooped on the affected side.
- **Arms:** they might not be able to raise both arms and hold them up, because of weakness and numbness on one side.
- **Speech:** the person's speech might be slurred or unclear, or they might struggle to speak at all.
- **Time:** if someone has any of the above symptoms it's time to get emergency medical help.

If you have a suspected TIA you will probably be treated in the emergency department of a hospital. The doctor treating you will examine you and ask you questions to try to pinpoint what has happened.

Your symptoms may have gone away by the time you see the doctor. But don't worry that what happened wasn't important or that you are making a fuss about nothing. If you have had a TIA it was serious.

Your doctor might want to do some tests. These are done mainly to exclude other possible causes of your symptoms. For example, your doctor might test your blood sugar, to rule out diabetes.

He or she might also recommend an imaging test, such as a CT (computerised tomography) or MRI (magnetic resonance imaging), and an ECG (electrocardiograph) to check for any signs of a stroke or other problems with your heart and blood vessels.

What treatments work?

If your medical exam and tests strongly suggest that you have had a TIA, your doctor will then try to decide how likely you are to have more problems with your heart or blood vessels.

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If he or she thinks that you are at serious risk of more problems, such as another stroke or a heart attack, you might be advised to stay in hospital for a few days.

Medicines

Even if you don't stay in hospital, your doctor will probably recommend that you take medicines to help prevent a stroke or other problems. These may include:

- antiplatelet drugs. These medicines make your blood thinner, so that it passes more easily through your veins and arteries. This treatment could simply be a small daily dose of aspirin
- anticoagulant medicines. These drugs stop your blood from clotting too easily. The downside is that they can lead to unwanted bleeding. So your doctor will want to keep a close eye on how you do, and whether there are any side effects
- medicines to lower your cholesterol
- medicines to lower your blood pressure.

All of these medicines can have side effects in some people. Your doctor should discuss these with you and advise you what to look out for. If one medicine causes side effects you might be able to switch to another.

Changing your lifestyle

You will also be advised to think about your lifestyle, and about what you could do to reduce the chances of having more serious problems.

This is vital. Drugs can help prevent future problems with your heart and blood vessels. But they can't make them stronger and healthier. The things that will protect you the most are the positive changes you make for yourself.

For example, you might be advised to:

- stop smoking (if you smoke)
- drink less alcohol
- take more exercise
- eat a healthier diet
- lose some weight if you are overweight.

Surgery

If your doctor thinks that you are at very high risk of more serious problems, he or she might suggest that you have a surgical procedure called a **carotid endarterectomy**.

This means that a surgeon cleans out your carotid artery so that blood can pass through it more easily. The carotid is the large artery in your neck that carries blood to your brain.

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Another surgical option is having a **stent** fitted in your carotid artery. A stent is a small tube that is placed inside the clogged section of the artery so that blood can pass through more easily.

These procedures can be important short-term measures to help prevent serious problems. But plaque can build up again quickly in blood vessels. So you will still need to make changes to your lifestyle and take the right medicines to protect yourself.

What will happen?

A TIA is a serious medical emergency. The quicker you get treatment, the better the outcome. So remember the symptoms: FAST.

- About 10 in 100 people treated in an emergency department for a TIA will have a stroke within 3 months - most of those within the first few days.
- And about 5 in 100 people treated in an emergency department for a TIA will die within 6 months.

These figures look frightening. But it's not possible to say what will happen to you as an individual. In some people a TIA is a sign of future serious problems, while some people who have a TIA have no more problems at all.

The important thing is to give yourself the best possible chance of staying healthy. This means changing your lifestyle if necessary, and taking the right medicines.

Your doctor will want to check on you regularly. For example, he or she will keep a close eye on your blood pressure, to see that it's not getting too high.

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