

Patient information from BMJ

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Transient ischaemic attack (mini stroke)

A transient ischaemic attack (TIA) is sometimes called a 'mini stroke'. When they happen, the blood supply to your brain is reduced or stopped for a short time. It is a medical emergency.

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

What is a transient ischaemic attack?

A transient ischaemic attack (TIA) is when the blood supply to part of your brain is cut off.

But it is only cut off for a short time (usually less than an hour). This is why it is called a 'transient' attack. This is different from a stroke, where the changes to blood supply cause permanent damage to the affected part of your brain.

This does not mean that a TIA is not serious. 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.

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 (sometimes called a heart flutter) or heart failure, when the heart doesn't pump blood properly
- have high blood pressure
- have diabetes

- smoke
- have high cholesterol
- have chronic kidney disease
- are older
- have a long history of drinking a lot of alcohol.

What are the symptoms of a TIA?

The symptoms of a TIA are the same as those for a stroke. They usually come on suddenly, just like with a stroke, but go away again. The symptoms usually last less than an hour.

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 medical help as quickly as possible.

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 you still need to have some tests and may need treatment. There is a chance your symptoms will come back, or you will have a stroke following a TIA.

Your doctor might send you for tests to exclude other possible causes of your symptoms. For example, your doctor might test your blood sugar, to rule out diabetes.

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

What are the treatment options for TIA?

If your symptoms and tests strongly suggest that you have had a TIA, your doctor will give you treatment to try and prevent serious problems such as a stroke. A stroke is most likely to happen in the first 7 days after having a TIA so treatment will be started as soon as possible. You may need to stay in hospital for some treatments. You may need to continue some treatments at home.

Medicines

Your doctor will probably recommend that you take medicines to help prevent a stroke or other problems. These medicines may include:

- antiplatelet medicines. These make your blood thinner, so that it passes more easily through your veins and arteries. This treatment could be a daily dose of aspirin, or you could be given aspirin plus another medicine (dual antiplatelet therapy)
- anticoagulant medicines. These stop your blood from clotting too easily. They can lead
 to unwanted bleeding so your doctor will want to keep a close eye on you while you are
 taking them
- medicines called statins which 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.

Surgery

If tests show that you are at very high risk of more serious problems, for example if you have narrowing of the blood vessels in your neck, your doctor might suggest surgery.

The type of surgery you may have in this situation is called a **carotid endarterectomy**. This is where a surgeon clears the blockages causing the narrowed blood vessels. This allows blood to pass through the arteries into your brain more easily.

Another option is to have a **stent** put in. A stent is a small tube placed inside the narrowed artery in your neck to keep it open.

These procedures can help prevent serious problems in the short term. But because arteries can get blocked again, it is important to make changes to your lifestyle and take the right medicines to protect yourself.

Changing your lifestyle

There may be lifestyle changes you can make to help your heart and blood vessels become stronger and healthier. For many people, this is the most important thing they can do to reduce the chances of having another TIA or more serious problems.

For example, you might be advised to:

- stop smoking (if you smoke)
- drink less alcohol
- get more exercise
- eat a healthier diet that includes plenty of fruits, vegetables and fish
- lose some weight if you are overweight.

What happens next?

A TIA is a serious medical emergency. The quicker you get treatment, the better the outcome. So it is important to know what to look out for and to get help quickly if you think you are having the symptoms of TIA again.

The main risk after you have had a TIA is your increased risk of having a stroke.

- About 7 out of every 100 people treated in an emergency department for a TIA will have a stroke within 3 months. Half of those people will have a stoke within the first few days.[1]
- People treated for a TIA are also more likely to have another problem with their blood vessels or heart, for example a heart attack.

This may seem 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. Ask your doctor if you are unsure if there is anything else you can do to stay well.

Your doctor will want to check on you regularly. For example, they will keep a close eye on your blood pressure, to see that it's not getting too high. They will also want to make sure you are getting treatment for any other medical conditions you have. For example, that your blood sugar is well-controlled if you have diabetes.

References

 Najib N, Magin P, Lasserson D, et al. Contemporary prognosis of transient ischemic attack patients: a systematic review and meta-analysis. Int J Stroke. 2019 Jul;14(5):460-7.

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