CONDITION

Transient ischemic attack

A transient ischemic attack is a brief loss of blood flow to the brain that causes temporary stroke-like symptoms.

WHAT IT IS
Brief brain blood-flow blockage without lasting tissue damage

BODY SYSTEM
Brain, nerves, heart and circulation

MAIN SYMPTOMS
One-sided weakness, speech trouble, vision loss, loss of balance

WHAT CAUSES IT
Temporary artery blockage, usually by a blood clot

HOW IT IS DIAGNOSED
Symptom history, examination, brain and blood-vessel imaging

MAIN TREATMENT
Urgent stroke prevention tailored to the cause

CAN IT BE CURED?
No - episode resolves, but future risk remains

IS IT AN EMERGENCY?
Yes - any sudden stroke-like symptom

LONG-TERM OUTLOOK
Usually full recovery, but stroke risk remains elevated

Overview

A transient ischemic attack, or TIA, happens when blood flow to part of the brain, spinal cord, or the eye's retina is briefly blocked. This causes sudden symptoms like those of a stroke. The symptoms then disappear because blood flow returns.

A TIA is sometimes called a "mini-stroke," but this term can make it sound less serious than it is. A TIA does not cause the lasting area of brain injury seen with an ischemic stroke. However, it is an important warning that a stroke may happen in the future. The risk is highest soon after the TIA, so prompt assessment matters even if you feel completely well again.

It is impossible to tell at home whether sudden neurological symptoms are from a TIA or a stroke. Neurological symptoms affect functions controlled by the brain and nerves, such as movement, speech, vision, and balance. Treat new symptoms as a possible stroke and call

emergency services.

Symptoms

TIA symptoms usually begin suddenly. They often last a few minutes and commonly resolve within an hour, although the traditional definition allowed symptoms lasting up to 24 hours. If testing shows an area of new brain injury, the event is generally classified as an ischemic stroke even if the symptoms disappeared.

Symptoms depend on which part of the brain or retina temporarily lost blood flow. They may include:

The FAST reminder covers several common warning signs: Face drooping, Arm weakness, and Speech difficulty mean it is Time to call emergency services. Not every TIA fits FAST. Sudden vision loss, marked imbalance, or several symptoms occurring together also need emergency assessment.

Fainting, isolated dizziness, or tingling can have many causes and are not always due to a TIA. Even so, new or unusual symptoms need medical assessment, especially when they start suddenly.

- Weakness, numbness, or loss of movement on one side of the face or body
- Slurred speech, difficulty finding words, or trouble understanding speech
- Sudden loss or dimming of vision, often in one eye
- New double vision, severe unsteadiness, or loss of coordination
- Sudden confusion or difficulty carrying out familiar actions

Causes and risk factors

Most TIAs happen when a blood clot briefly blocks an artery supplying the brain or retina. The clot may form in a narrowed artery or travel through the bloodstream from elsewhere.

Possible causes include fatty deposits called plaque in the neck or brain arteries. A small piece of plaque or a clot can break away and block a smaller vessel. Atrial fibrillation, an irregular heart rhythm, can also allow clots to form in the heart and travel to the brain.

Less common causes include tears in an artery wall, certain blood-clotting disorders, and problems affecting the heart's valves or structure. Sometimes no definite cause is found despite testing.

Factors linked with a higher risk of TIA and stroke include:

Having one or more risk factors does not mean that you will have a TIA. Some people have a TIA without a previously recognised risk factor.

- High blood pressure
- Atrial fibrillation and some other heart conditions
- High cholesterol and diabetes
- Smoking
- Narrowing of the carotid arteries in the neck
- A previous TIA or stroke
- Increasing age and a family history of stroke
- Physical inactivity, heavy alcohol use, and sleep apnea

Diagnosis

There is no single test that proves every TIA. Diagnosis is based on what happened, how suddenly it began, which functions were affected, and whether another condition could explain the symptoms. Because symptoms may be gone by the time you are examined, your description and observations from anyone who was present can be important.

Brain imaging helps distinguish a TIA from a stroke, bleeding, or another problem. A CT scan uses X-rays to create images of the brain and is often available quickly. An MRI provides more detailed images and may detect a small area of recent brain injury.

Tests may also look for the source of a clot. These can include CT or MRI imaging of the blood vessels, or an ultrasound scan of the carotid arteries. An electrocardiogram, or ECG, checks the heart rhythm. Longer heart monitoring may be used because atrial fibrillation can come and go.

An echocardiogram uses ultrasound to examine the heart. Blood tests may check glucose, cholesterol, blood counts, clotting, and other possible contributors.

Migraine, seizures, low blood sugar, inner-ear disorders, and other conditions can sometimes resemble a TIA. The assessment considers these possibilities without delaying stroke care.

Treatment and management

Treatment focuses on preventing another TIA or a stroke. The plan is guided by the likely cause, imaging results, other health conditions, and bleeding risk.

Antiplatelet medicines make platelets, small blood cells involved in clotting, less likely to stick together. They are commonly used when a TIA is thought to come from disease in an artery. Some people receive two antiplatelet medicines for a limited period after a high-risk TIA, followed by one medicine. This is not suitable for everyone.

Anticoagulants like warfarin or apixaban slow the blood-clotting process. They may be used when atrial fibrillation or another heart-related source of clots is found. Anticoagulants and antiplatelets are different medicines and should not be started, stopped, or combined without specific medical direction.

Other management may include cholesterol-lowering treatment and care for high blood pressure, diabetes, or sleep apnea. Support to stop smoking, become more active, and make sustainable dietary changes may also lower future cardiovascular risk.

If a carotid artery is severely narrowed and is believed to have caused the TIA, a procedure to remove the plaque may be considered. This operation is called carotid endarterectomy. Carotid stenting may be an alternative in selected situations. Specialists weigh the narrowing, timing, overall health, and procedure risks before recommending either option.

Clot-dissolving stroke treatment is not used for a TIA after symptoms have resolved. If symptoms are still present, however, emergency teams assess for an active stroke and whether time-sensitive treatment is appropriate.

Complications

The main concern after a TIA is an ischemic stroke. This happens when an artery remains blocked long enough to injure brain tissue. A stroke can lead to lasting difficulties with movement, speech, swallowing, vision, memory, or independence.

Another TIA can also occur. The underlying artery or heart condition may continue to produce clots unless it is identified and managed.

A TIA can affect emotional well-being even when there is no lasting physical injury. Some people become worried about every unusual sensation or avoid normal activities because they fear a stroke. Discuss persistent anxiety, low mood, or sleep problems during follow-up; these concerns deserve care too.

Prevention

It is not always possible to prevent a first TIA. Age, family history, and some medical conditions cannot be changed. Many important risk factors can still be treated.

After a TIA, taking prescribed medicines consistently is one of the main ways to reduce future risk. Regular checks may be needed for blood pressure, cholesterol, diabetes, and heart rhythm. Do not stop preventive medicine because you feel well; these treatments often work by controlling risks that cause no symptoms.

Not smoking, limiting alcohol, getting regular physical activity, and eating a balanced diet can support blood vessel health. The safest activity plan may depend on your recent symptoms and other conditions.

Seek advice before using over-the-counter aspirin or supplements to prevent stroke. Aspirin can cause bleeding and is not the right treatment for every cause of stroke-like symptoms.

Living with it and what to expect

A TIA does not usually leave an ongoing neurological disability. If weakness, speech trouble, vision loss, or another new deficit continues or returns, treat it as an emergency rather than assuming it is part of recovery.

Follow-up often focuses on completing tests, reviewing results, and adjusting prevention. Heart monitoring or specialist imaging may continue after you leave the emergency department or hospital. Some causes are found quickly, while intermittent heart rhythm problems can take longer to detect.

Many people return to their usual activities. The timing may depend on what caused the TIA, whether symptoms have fully resolved, and whether treatment or a procedure is planned. Rules about driving after a TIA differ by location, so follow the local licensing requirements and the advice given by your healthcare team.

Over the following months and years, the event itself does not gradually worsen. The long-term concern is the health of the heart and blood vessels and the possibility of another clot. Ongoing preventive care can reduce this risk but cannot remove it completely.

Keep an up-to-date list of medicines and attend routine reviews. Report side effects rather than stopping treatment on your own, since another option may be available.

When to get medical help

Call emergency services immediately for any new, sudden stroke-like symptom, including

facial drooping, one-sided weakness, speech difficulty, vision loss, severe loss of balance, or new confusion. Note the time the symptoms began, or the last time you were known to be well.

Do not drive yourself to hospital. An ambulance team can begin assessment and alert a stroke service before you arrive. Do not wait to see whether symptoms improve, and do not take leftover medicine unless an emergency professional tells you to do so.

If the symptoms have already disappeared and you did not seek help, you still need urgent same-day assessment. A normal feeling afterward does not remove the short-term stroke risk.

Routine follow-up is appropriate for reviewing test results, preventive medicines, risk factors, side effects, emotional well-being, and return to activities. Routine appointments are not a substitute for emergency care if symptoms return.

Common questions

Is a TIA the same as a stroke?

No. A TIA causes temporary dysfunction without evidence of lasting brain tissue injury. An ischemic stroke causes brain injury from interrupted blood flow. The symptoms can look identical at first, so emergency assessment is needed.

How long does a TIA last?

Most symptoms last minutes and often resolve within an hour. Duration alone cannot safely distinguish a TIA from a stroke. Even a symptom lasting only a few minutes can be important.

Does a normal CT scan rule out a TIA?

No. A CT scan may be normal after a TIA and after some small or early strokes. It is useful for finding bleeding and other conditions. Diagnosis also uses the symptom history, examination, MRI when appropriate, and blood-vessel and heart tests.

Can stress cause a TIA?

Stress by itself is not considered a direct cause of a TIA. It can temporarily raise blood pressure or make other symptoms more noticeable. Sudden focal symptoms, such as weakness on one side or loss of speech, should not be assumed to be stress.

Can a TIA happen more than once?

Yes. Another TIA can occur if the underlying source of clots or narrowed artery remains. Preventive treatment lowers the risk but cannot guarantee that another event will not happen.

Can you have a TIA without knowing it?

Some episodes may be brief or mistaken for another problem. However, a TIA usually causes a

noticeable loss of function rather than vague symptoms alone. Imaging may reveal an older silent stroke, but that is different from confirming a past TIA.

Sources

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