

What is a Transient Ischemic Attack (TIA)? **[formerly known as “mini-stroke”]**

A transient ischemic attack (TIA) is a stroke that comes and goes quickly. It happens when the blood supply to part of the brain stops briefly. Symptoms of a TIA are like other stroke symptoms, but do not last as long. They happen suddenly, and include

- Numbness or weakness, especially on one side of the body
- Confusion or trouble speaking or understanding speech
- Trouble seeing in one or both eyes
- Loss of balance or coordination

Most symptoms of a TIA disappear within an hour, although they may last for up to 24 hours. Because you cannot tell if these symptoms are from a TIA or a stroke, you should get to the hospital quickly.

TIA's are often a warning sign for future strokes. Taking medicine, such as blood thinners, may reduce your risk of a stroke. Your doctor might also recommend surgery.

A TIA is felt to be a warning sign that a true stroke may happen in the future if something is not done to prevent it.

Causes

A TIA is different than a stroke. After a TIA, the blockage breaks up quickly and dissolves. Unlike a stroke, a TIA does not cause brain tissue to die.

The loss of blood flow to an area of the brain can be caused by:

- A blood clot in an artery of the brain
- A blood clot that travels to the brain from somewhere else in the body (for example, from the heart)
- An injury to blood vessels
- Narrowing of a blood vessel in the brain or leading to the brain

High blood pressure is the number one risk for TIA's and stroke. The other major risk factors are:

- Atrial fibrillation
- Diabetes
- Family history of stroke
- High cholesterol
- Increasing age, especially after age 55

- Race (African Americans are more likely to die from stroke)

People who have heart disease or poor blood flow in their legs caused by narrowed arteries are also more likely to have a TIA or stroke.

Symptoms

Symptoms begin suddenly, last only a short time (from a few minutes to 1 - 2 hours), and go away completely. They may occur again at a later time.

The symptoms of TIA are the same as the symptoms of a stroke, and include sudden:

- Abnormal feeling of movement (vertigo) or dizziness
- Change in alertness (sleepiness, less responsive, unconscious, or in a coma)
- Changes in feeling, including touch, pain, temperature, pressure, hearing, and taste
- Confusion or loss of memory
- Difficulty swallowing
- Difficulty writing or reading
- Drooping of the face
- Inability to recognize objects or people
- Lack of control over the bladder or bowels
- Lack of coordination and balance, clumsiness, or trouble walking
- Loss of vision in one or both eyes
- Numbness or tingling on one side of the body
- Personality, mood, or emotional changes
- Trouble saying or understanding words
- Weakness on one side of the body

Exams and Tests

Almost always, the symptoms and signs of a TIA will have gone away by the time you get to the hospital. A TIA diagnosis may be made based on your medical history alone.

The health care provider will do a complete physical exam to check for heart and blood vessel problems, as well as for problems with nerves and muscles.

Your blood pressure may be high. The doctor will use a stethoscope to listen to your heart and arteries. An abnormal sound called a bruit may be heard when listening to the carotid artery in the neck or other artery. A bruit is caused by irregular blood flow.

Tests will be done to rule out a stroke or other disorders that may cause the symptoms.

- You will almost always have a head CT scan or brain MRI. A stroke will show changes on these tests, but TIAs will not.
- You will have an angiogram, CT angiogram, or MR angiogram to see which blood vessel is blocked or bleeding.
- You may have an echocardiogram if your doctor thinks you may have a blood clot from the heart.
- Carotid duplex (ultrasound) can show if the carotid arteries in your neck have narrowed.
- You may have an EKG and heart rhythm monitoring tests to check for an irregular heartbeat.

Your doctor may do other tests to check high blood pressure, heart disease, diabetes, high cholesterol, and other causes of, and risk factors for TIAs or stroke.

Treatment

The goal is to prevent a stroke.

If you have had a TIA within the last 48 hours, you will likely be admitted to the hospital so that doctors can search for the cause and observe you.

High blood pressure, heart disease, diabetes, and blood disorders should be treated as needed.

You may receive blood thinners, such as aspirin, to reduce blood clotting. Other options include dipyridamole, clopidogrel, Aggrenox or heparin, Coumadin, or similar medicines. You may be treated for a long period of time.

Some people who have clogged neck arteries may need surgery (carotid endarterectomy). If you have irregular heartbeats (atrial fibrillation), you will be treated to avoid future complications.

Outlook (Prognosis)

TIAs do not cause lasting damage to the brain.

However, TIAs are a warning sign that you may have a true stroke in the coming days or months. More than 10% of people who have a TIA will have a stroke within 3 months. Half of these strokes happen during the 48 hours after a TIA. The stroke may occur that same day or at a later time. Some people have only a single episode, and some have more than one episode.

You can reduce your chances of a future stroke by following-up with your health care provider to manage your risk factors.

When to Contact a Medical Professional

A TIA is a medical emergency. Call 911 or another local emergency number right away. Do not ignore symptoms just because they go away. They may be a warning of a future stroke.