



Information about TIA

Transient Ischemic Attack (mini-stroke)



Saskatchewan
Health Authority



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■ Did I Have a TIA?

Did you have stroke-like symptoms such as slurred speech or weakness in one arm that seemed to go away after a few minutes or hours? If so, you may have had a TIA. A transient ischemic attack is also called a mini-stroke because it is caused by the same thing as stroke, and it has the same symptoms.

The difference between a TIA and a stroke is how long symptoms last. With a TIA, symptoms tend to resolve quickly, lasting from minutes to less than an hour. With a stroke, symptoms can persist for a longer period.

Because a TIA does not last long, it does not cause permanent brain damage, like a stroke does. But it is still a medical emergency!

A TIA is a warning sign that you have an increased risk of having a stroke. You and your medical team can take action now to prevent a more serious stroke from happening. Read this booklet to find out how.

■ Warning Signs of a TIA Stroke

Weakness on one side

do you feel weak in one hand, arm or leg?

Droopy face

does your face feel numb?

Does it look droopy on one side?

Speech difficulty

do you suddenly have trouble speaking?

Change in vision

do you suddenly lose vision in one eye?

Do you have double vision?

Headache

Do you have a sudden, severe headache, dizziness or sudden loss of balance (especially combined with any of the other warning signs)?



Learn the signs of stroke

Face is it drooping?

Arms can you raise both?

Speech is it slurred or jumbled?

Time to call 9-1-1 right away.

Act **F A S T** because the quicker you act, the more of the person you save.

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Do not ignore these symptoms, even if they are temporary!
ACT FAST!

What Causes a TIA?

In most cases, a TIA is caused by a blood clot that becomes stuck in a blood vessel in the brain. This clot blocks the blood flow and part of the brain cannot receive oxygen.

With TIA, the blood clot breaks up quickly which returns oxygen to the brain. That is why most people are not left with any permanent damage.

TIA or stroke is usually a sign that blood vessels are not working very well. Arteries might be narrowed, blocked or damaged, and that makes it easier for a clot to form or to get stuck.

What if I have symptoms?

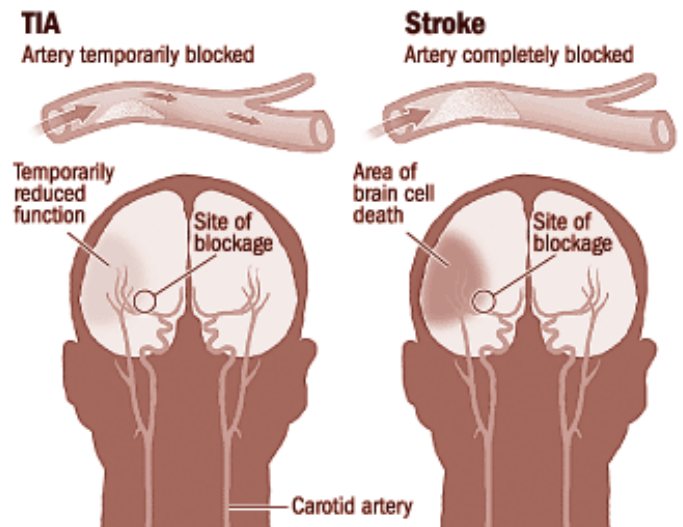
If you experience any of these symptoms, call 911 or go to your nearest emergency department as soon as possible. The next time you have symptoms it could be a full stroke. If you can get treatment very quickly after a stroke you have a better chance for good recovery. The quicker you act, the more brain cells you save.

Why did I have a TIA?

You are more likely to have TIA or stroke if you have specific health conditions, or if stroke runs in your family. Everyone's risk of stroke increases as they age. Any health condition that affects your heart or blood vessels will increase your risk of stroke. That includes high blood pressure, high cholesterol, heart disease or diabetes. Fortunately, there are things you can do to manage those conditions and reduce your risk.

Stroke and mini-stroke

Transient ischemic attacks – TIAs, or mini-strokes – result when a cerebral artery is temporarily blocked, decreasing blood flow to the brain. Many strokes result from a complete blockage of a cerebral artery, leading to death of brain cells and permanent loss of certain functions.



The Washington Post

How Can I Manage Risk Factors?

Smoking: Choose to be smoke free. Smoking is a major cause of strokes. It raises your blood pressure and decreases oxygen to your brain. Ask about smoking cessation programs in your area.

High Blood Pressure: Check your blood pressure often. Blood pressure testing is usually offered at drugstores or wellness clinics, or you can buy a blood pressure monitor to keep at home. If your blood pressure is continually above these numbers you should speak with your doctor or nurse practitioner (NP) about treatment.

Blood pressure should be no higher than 140 systolic (the top number) and 90 diastolic (the bottom number).

less than 140/90



If you are diabetic, your systolic number should not be higher than 130 and the diastolic should not be higher than 80.

less than 130/80



High Cholesterol: Cholesterol is a type of fat in the blood – too much of it can block off blood vessels. High cholesterol can be treated with a healthy diet and exercise. If diet and exercise are not effective, then medication may be considered to lower your cholesterol levels.

Diabetes: It's important to keep your blood sugar levels within normal limits if possible.

If you are overweight: Losing weight will decrease your chance of TIA or stroke. Even moderate weight loss has a good impact on other risk factors.

Exercise regularly: Increase your exercise as much as possible to decrease your risk of developing cholesterol in your vessels, to help lower blood pressure and decrease stress levels. It can also prevent or better control diabetes and help you maintain a healthy weight.

Diet: Aim to eat a healthy diet filled with a variety of fruit and vegetables. Include fish in your diet and eat lean meat and poultry. Try to cut down on the high fat foods. Limit adding extra salt to your food, as this can increase blood pressure.

Alcohol: Men should drink no more than three drinks per day to a weekly maximum of 15, and women no more than two drinks per day to a weekly maximum of 10. One drink is equal to: a 12 oz bottle/can of regular beer (5% alcohol), a 5 oz glass of wine (12% alcohol) or 1 ½ oz shot of spirits (40% alcohol).

Stress: Stress can cause an increased heart rate and blood pressure, increased blood sugar levels and it can also increase your cholesterol levels. If you feel you aren't coping with stress in your life, you may consider seeking professional help.

For more information about managing risk factors, visit www.heartandstroke.ca.

■ What is the Treatment for TIA?

Once you have been diagnosed with a TIA, your doctor or nurse practitioner will start you on medications to help prevent it from happening again. The most common medications that are used following a TIA are:

- **Blood Pressure Lowering Medications** (antihypertensives)
- **Blood Thinners** – these will reduce the development of blood clots that may cause a TIA or a stroke. There are two types:
 - Anticoagulants – (prevent blood from clotting) like Heparin and Warfarin
 - Antiplatelets – (prevent platelets from sticking together) like Aspirin or Plavix.
- **Cholesterol Medications** – these will help lower your cholesterol to prevent blockages in any of the blood vessels.

Medications will only do their job if you remember to take them regularly.

Medication Tips

- Keep an updated list of your medications in your wallet. Know the names of your medications, the dosage and when you take them.
- Take your medication at the same time each day, such as with breakfast or at bedtime. Follow the directions on the label.
- Do not stop taking prescribed medication unless you check with your doctor first.
- If you forget to take your medication, do not double the dose. Call your pharmacist for directions on what to do.
- Ask your doctor/nurse practitioner (NP) and pharmacist about possible interactions before taking vitamins, herbal medicine, traditional medicine, or over-the-counter drugs like cold or cough medicine.
- Pill organizers such as pill boxes, dosettes, and blister packs, can be useful.
- Do not share your medications with anyone else and do not take anyone else's medications.
- Inform your doctor/NP or dentist if you are taking any type of blood thinner, especially if you are having surgery or an invasive dental procedure.
- Use the same pharmacy for all of your medications.

What is a Stroke Prevention Clinic?

In the Stroke Prevention Clinic (SPC) you can see a number of different care providers who have expertise in stroke, and you will get access to most of the exams and tests that you need. The SPC team will review all of your risk factors and help you manage them. But they cannot cure these things or make them go away. Most likely, you will have to manage these risk factors for the rest of your life.

You are an important part of the solution. Your participation is needed to prevent another TIA or Stroke.

What happens in the SPC?

- A staff member from the SPC will phone you to book an appointment.
- You might need to get blood tests done before your appointment. If so, the clinic will send a requisition and you will go to a lab and give blood before you visit the SPC.
- You will be asked to bring all of your medications with you to the SPC, or bring a list of all your medications' names, doses and how often you take them.
- At the SPC, a nurse who specializes in TIA/Stroke will take your vital signs, record your medications and ask you about your medical history.
- A neurologist will examine you (in person or by telehealth) and discuss required tests or medications.
- The nurse and neurologist will talk to you about managing your risk factors, answer your questions, and give you more information to take home.
- The nurse will arrange any tests that the neurologist orders.
- Some of your tests might be done during your SPC visit, so be sure to plan enough time for your appointment. It might take several hours to get everything done.

What kind of tests are done and why?

All of the tests that are requested at the SPC give information to help the neurologist understand what caused your TIA. With this information, the SPC team can make a plan to help you lower your risk of having another attack that could be more serious.

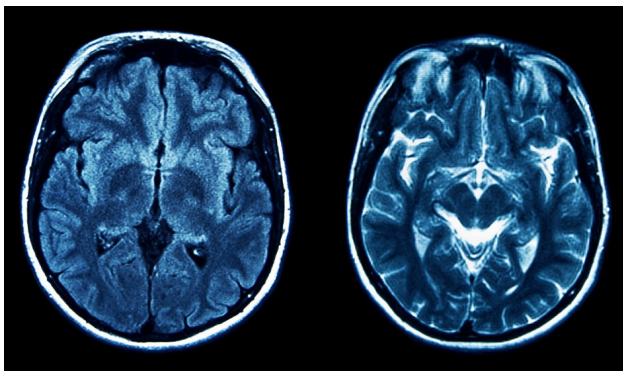
Not everyone who experiences a TIA gets all the tests. The SPC team might order specific tests for you, or they might send you home without any further testing. To save time your doctor might order some of these tests locally while you wait for your SPC appointment. Tests could include:

Blood Tests

- Fasting glucose tests show how well your body breaks down sugars in your blood.
- Fasting cholesterol tests give an analysis of the different types of cholesterol in your blood. (Fasting means you don't eat or drink anything but water for a period of time before you give blood.)
- Creatinine testing shows how well your kidneys are functioning. This result is important if a CT angiogram is requested, because your kidneys need to be healthy enough to process the contrast (dye).

Brain Imaging

- **Computed Tomography (CT)** is also known as a CAT scan. This procedure provides several pictures of your brain. It helps to rule out any other cause of your symptoms that might mimic the symptoms of stroke.
- **Computed Tomography Angiogram (CTA)** uses a contrast (sometimes called a dye) that changes the density of blood, making it appear bright white on the CT scan. This allows the neurologist to see if there is anything blocking the flow of blood to the brain. If blockages are identified, your medical team will discuss options for treatment that may include surgery.
- Like CT scans, **Magnetic Resonance Imaging (MRI)** shows detailed images of the brain and helps to identify conditions in the brain. You may need this if your medical team needs more detailed information.



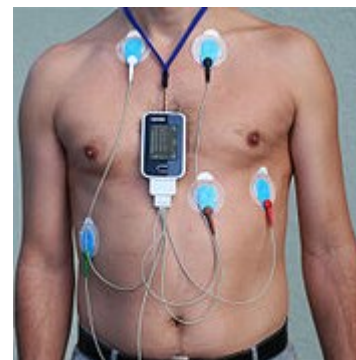
MRI brain scan

Ultrasound

- **Carotid ultrasound:** In this test a sonographer rolls a probe around on your neck to see images of the carotid artery. This test can determine if plaque buildup has narrowed the arteries, affecting the blood flow to your brain.

Echocardiogram: This is commonly referred to as an Echo, which is an ultrasound of the heart. A sonographer will put a probe on your chest and roll it around to watch your heart beating. When the cardiologist looks at the images, he/she can watch the valves open and close to make sure they are functioning properly. An Echo also shows how effectively the heart is pumping.

Ultrasound is not a painful test, and there is no preparation for it.



Holter Monitor

Heart Monitoring

- **Electrocardiogram (ECG or EKG):** For this test a few electrodes will be attached to your chest to measure the electrical activity of your heart. An ECG provides information about the strength, speed and rhythm of your heartbeat. This is also known as heart tracing.
- **Holter monitor:** This is the same as an ECG, except you will wear the electrodes for a day or two (either 24 or 48 hours - as directed by the neurologist). The holter monitor comes with a small computer recorder that stores all the information from the ECG. When you return the holter monitor, your medical team will look at the records and print-outs to see the continuous record of your heart beat.

Care providers are specifically looking for a rhythm called atrial fibrillation. This rhythm is known to cause strokes by allowing clots to form in the heart that can travel to your brain and block an artery.

■ What is My Stroke Prevention Plan?

Do you have questions about your TIA and what it means? Make a note of any other questions to ask your doctor or Stroke Prevention Clinic.

Follow-up plan:

- If you were given any new prescriptions or changes to your medications, make sure you fill the prescription right away and start taking the medication.
- Make a follow-up appointment with your family doctor within the next two weeks.
- If you were contacted by other medical offices to arrange tests or referrals, please make it a priority to attend those appointments.
- Attend the Stroke Prevention Clinic (the clinic will contact you with a date and time).
- Reduce your risk factors for stroke:
 - Reduce the salt and saturated fat in your diet.
 - Increase the fiber, vegetables and fruits in your diet.
 - Get moderate exercise (at least 30 minutes/day, four days/week).
 - If you smoke, call smokers helpline 1-877-513-5333 for advice on quitting, or talk to your pharmacist or family doctor/nurse practitioner.
 - Keep alcohol consumption low.
 - If you have diabetes, do your best to manage your blood sugar.
 - Try to relax and control your stress or anxiety.

Lessen your chance of having a serious stroke
and increase your chance of having a long healthy life!



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Healthy People, Healthy Saskatchewan

The Saskatchewan Health Authority works in the spirit of truth and reconciliation, acknowledging Saskatchewan as the traditional territory of First Nations and Métis People.

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