



YOU'VE HAD A TIA.

Learn how to prevent another one.



HEART &
STROKE
FOUNDATION
OF CANADA

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Learn how to prevent another one.

TIA is a medical emergency. If you have had a TIA, your risk of having a stroke is much higher.

The goal of this booklet is to help you prevent another TIA in the future. By learning more about TIAs, you may be able to prevent a stroke.

What is a TIA?

The medical term is Transient Ischemic Attack (TIA). Many people call it a mini-stroke. It happens when a clot stops blood from flowing to the brain for a short time. The symptoms of TIA are almost the same as the symptoms of a stroke except they go away within a few minutes or hours. Having a TIA is an important warning sign. It tells you that you have a higher risk of having a stroke.

**A TIA warns you of a stroke.
It also gives you a chance to prevent a stroke.**

What happens during a TIA?

You may feel any or all of these symptoms:



Weakness – Sudden loss of strength or sudden numbness in the face, arm or leg, even if temporary.



Trouble speaking – Sudden difficulty speaking or understanding or sudden confusion, even if temporary.



Vision problems – Sudden trouble with vision, even if temporary.



Headache – Sudden severe and unusual headache.



Dizziness – Sudden loss of balance, especially with any of the above signs.

If you or someone you know is having any of these signs CALL 9-1-1 or your local emergency number immediately.

Why is TIA an emergency?

A TIA is a very serious warning sign that says something is wrong with blood flow to your brain.

Calling 9-1-1 or your local emergency number is really important because that way you can get help a lot faster. Doctors may be able to give you a clot-busting drug that will make blood flow back into your brain again. But you must get to the hospital as soon as you start having any of the five warning signs because the drug must be given within a few crucial hours after symptoms begin*. Do not try to decide on your own what is causing your symptoms and do not wait for them to go away. Call 9-1-1 as quickly as possible. Even if your symptoms go away, your doctor still needs to find out why you had the symptoms in the first place.

* Health Canada has approved the clot-busting drug called tPA to be used within 3 hours from the time symptoms begin. However, emerging science is now showing that tPA could be effective up to 4 ½ hours afterward. As a result, the Canadian Stroke Strategy has issued new Canadian Best Practices Recommendations for Stroke Care, which have included this new treatment time. Still, it will be up to the attending emergency doctors to determine when tPA may be administered or if it is appropriate to the situation.

A TIA is a serious warning sign that you are at higher risk for having a stroke.

If you have had a TIA, you are at a higher risk for having a stroke. The greatest risk happens immediately after the TIA and for a year later. The good news is that a TIA warns you of this higher risk and gives you a chance to take action to reduce your risk.



What causes a TIA?

The most common cause of a TIA is a blood clot or plaque that keeps blood from flowing to your brain. Here's how it happens.

TIA caused by plaque

Plaque refers to a build up of cholesterol, fatty deposits and other substances. It gathers inside the wall of an artery and narrows the size of the blood vessel (also called atherosclerosis). This may reduce blood flow to the brain. As well, a piece of plaque may break off and block the artery to the brain.

TIA caused by blood clot

A blood clot may form in other parts of the body and travel to the brain. Many blood clots travel from the heart to the artery that feeds the brain.

If you have atrial fibrillation (a fast, irregular heart rate), problems with your heart valves, a patent foramen ovale (a defect in the wall between the two upper chambers of the heart), or a weak heart muscle, you may be at higher risk for a TIA.

You may have other health problems that can cause TIAs. Talk to your healthcare provider about your health and whether you are at higher risk for TIA.

How do doctors know that I have had a TIA?

It is sometimes difficult for doctors to know if you have had a TIA because the symptoms have usually gone away by the time the doctor sees you. The key to treating a TIA is knowing that a TIA has happened. The doctor may want to do tests to find out why the TIA happened. Then you and your healthcare team can work on a plan to prevent future TIAs or strokes.

How can I prevent another TIA?

The goal of treatment is to prevent you from having another TIA or a stroke. The way to reach this goal is to reduce your risk factors. While some risk factors are out of your control, you can manage others by having a healthy lifestyle, taking a prescription medicine or having an operation (surgery).

The risk factors you cannot control are:

Age

The risk of stroke and TIA rises as people get older. Although strokes can happen at any age, most strokes happen in people older than 65.

Gender

Until women reach menopause their risk of stroke is lower than men's.

Family history

If people in your family such as a parent, brother, sister or child had a stroke before age 65, your risk is higher.

Ethnicity

First Nations, African or South Asian people are more likely to have high blood pressure and diabetes. This means they are also at higher risk of a stroke than the rest of the population.

Your own history of stroke or TIA

If you have had a TIA or a stroke, your risk of having another one rises.

Although you cannot do anything about these risk factors, if you have one or more of them, you can take action to make healthy choices that will help you prevent stroke.

The risk factors you can do something about

High blood pressure
(hypertension)

Excessive alcohol
consumption

High blood cholesterol

Inactivity

Heart disease/atrial fibrillation
(fast, irregular heartbeats)

Smoking

Diabetes

Stress

Being overweight

How to manage the main risk factors

1. High blood pressure (hypertension)

What is high blood pressure?

When doctors and nurses measure blood pressure, they are measuring the pressure or force of blood against the walls of your blood vessels. The first number in a blood pressure reading tells you what the pressure is when your heart pushes blood out (systolic). The second number is the lowest pressure when the heart relaxes between beats (diastolic).

If your blood pressure is often more than 140/90, this is considered high. For people with diabetes, a blood pressure of 130/80 is high. Normal blood pressure is below 120/80.

Over time high blood pressure can damage your blood vessel walls. This can cause scars that promote the build up of fatty plaque, which can narrow and then block your arteries. High blood pressure puts strain on your heart. Over time, your heart will be weaker. Very high blood pressure can cause blood vessels in the brain to burst. The result is a stroke.

Here are some tips to help you lower your blood pressure:

- Have your blood pressure checked once every two years or more often if recommended by your healthcare provider.
- If you have been told you have high-normal blood pressure, it should be checked at least once a year. High normal ranges between 130/85 and 139/89.
- Reduce the amount of salt in and on your food. The Heart and Stroke Foundation suggests that Canadians use no more than 5 mL (1 tsp) of salt a day.
- Have no more than one or two drinks of alcohol a day. Keep your weekly maximum to 9 drinks if you are a woman and 14 if you are a man.
- Be physically active for at least 150 minutes per week, in bouts of 10 minutes or more.
- Do not smoke and avoid second-hand smoke.
- Set aside some time every day to relax.
- Talk to your doctor about doing blood pressure readings at home.

To learn more about blood pressure, read our brochure ***Get Your Blood Pressure Under Control***.

Research has shown that lifestyle changes—such as eating a healthy diet and being physically active—can be as important to controlling high blood pressure as drugs. It is critical that people take advantage of this fact. Studies suggest that if everyone with high blood pressure kept their blood pressure in a healthy range, the number of strokes each year would drop by 35-40%.

Michael Sharma, MD, FRCPC, Heart and Stroke Foundation Researcher, Director, Regional Stroke Program, The Ottawa Hospital, General Campus

2. High blood cholesterol

Cholesterol is one of the fats in your blood. Your body uses it to make cell membranes, vitamin D and hormones. There are two main types of cholesterol:

- Low-density lipoprotein cholesterol is often called bad cholesterol because high levels in the blood promote the build-up of plaque in your artery walls.
- High-density lipoprotein cholesterol is called good cholesterol because it helps carry the bad cholesterol away from your artery walls.

Triglycerides are not a type of cholesterol but they are a type of fat that is found in the blood. High triglycerides are linked with excess weight, excess drinking of alcohol and diabetes. Your triglyceride level is usually measured at the same time as your blood cholesterol.

High blood cholesterol is a major risk factor for stroke and can lead to atherosclerosis. To reduce your chance of having a stroke, lower your cholesterol.

Here are some ways to lower your cholesterol:

- Eat a balanced diet. Limit saturated fat in the foods you eat. Avoid trans fats.
- Be smoke-free. Smoking increases LDL cholesterol.
- Be physically active for at least 150 minutes a week, in bouts of 10 minutes or more.

To learn more about cholesterol, read our brochure ***Living with Cholesterol***.

3. Heart disease and atrial fibrillation

Heart disease is a major risk factor for stroke.

One type of heart problem is atrial fibrillation. This means that the heart's electrical system is not working as it should. The heart beats become fast and irregular. This can cause blood clots to form. Blood clots can cause a stroke.

4. Diabetes

Diabetes is a health problem that happens when your body does not produce enough insulin or when it cannot use the insulin that it does produce. Your body needs insulin to break down sugar for energy.

People with diabetes are more likely to have high blood pressure, atherosclerosis and stroke. This is most likely when the person's blood sugar levels are poorly controlled. Diabetes can cause circulation problems because the person's blood vessels are damaged.

If you have diabetes, the best way to reduce its impact on your health is to control your other risk factors. Here are some ways to do this:

- Get to and maintain a healthy weight by eating a heart healthy diet and by being physically active.
- Eat a healthy diet that is low in fat, especially saturated and trans fat, and includes fresh fruit and vegetables as well as whole grains.
- Ask your doctor to refer you to a registered dietitian so you can learn about healthy eating.
- Be physically active for at least 150 minutes a week, in bouts of 10 minutes or more.

- Work closely with your healthcare team to set goals for your blood glucose levels. Know what your target levels are.
- Learn how to monitor your blood sugar. Tell your healthcare team if you cannot keep it in control.

To learn more about diabetes, read our brochure *Is Diabetes Putting You at Risk of Heart Disease and Stroke?* and visit the Canadian Diabetes Association's Web site at diabetes.ca



5. Being overweight

Getting to and staying at a healthy weight is a major way to reduce your risk of stroke and to control other health problems such as high blood pressure, high blood cholesterol and diabetes.

Here are some ways to get to a healthy weight:

Measure your waist Your risk of getting high blood pressure and diabetes is much higher if your waist measures more than:

For men	102 centimetres (40 inches)
For women	88 centimetres (35 inches)
For Chinese or South Asian people	90 centimetres (35 inches) for men or 80 centimetres (32 inches) for women

Here's a simple way to measure your waist:

1. Move clothing, belts or accessories away from your stomach. Stand up and face a mirror with your feet shoulder-width apart and your stomach relaxed. Put the measuring tape around your waist.
2. Find the upper edge of your hipbones by pressing upwards and inwards along your hipbones. Use the borders of your hands and index to help you.
3. Place the bottom edge of the measuring tape with the top of the hipbones on both sides of your body. Make sure the tape is parallel to the floor so you do not get a bad reading.
4. Relax and take two normal breaths. Then tighten the tape around your waist. The tape should be snug around your waist without indenting the skin.
5. Take the reading on the tape.
6. Keep the thumb and fingers of one hand at the place where both ends of the tape meet.
7. Release one end of the tape and see what the reading says.

To learn more about measuring your waist, visit heartandstroke.ca/healthywaists

To reach and then maintain a healthy weight, eat a heart healthy diet and be physically active. Follow *Eating Well with Canada's Food Guide* (healthcanada.ca/foodguide). For more healthy eating tips, visit heartandstroke.ca/healthyliving.

Be physically active for at least 150 minutes a week, in bouts of 10 minutes or more. Read *Canadian Physical Activity Guidelines* at csep.ca/guidelines.

To learn more about getting to and staying at a healthy weight, read our brochure *Your Health, Your Weight* or visit heartandstroke.ca/healthyliving.

6. Excess alcohol consumption

You may have heard that alcohol such as red wine is good for your heart. While this may be true, drinking too much of any type of alcohol can increase your blood pressure and may cause a stroke.

If you drink alcohol, limit yourself to one or two standard drinks a day. Your weekly maximum should be nine drinks for women and 14 for men. Talk to your doctor to see if it is safe for you to drink.

What does one standard drink mean?

Type of alcohol	One drink equals:
Beer (5% alcohol)	341 mL / 12 oz (1 bottle)
Wine (12% alcohol)	142 mL / 5 oz wine
Spirits (40% alcohol)	43 mL / 1 1/2 oz spirits

Here are some tips to help you control the amount of alcohol you drink:

- Talk to your doctor about how drinking may affect your health.
- If you have high blood pressure, limit the amount of alcohol you drink and talk to your doctor about what is safe for you.
- If you do not drink alcohol, do not start.
- If you do drink, wait at least one hour between drinks and have water or juice between each drink of alcohol.
- These limits do not apply if you have liver disease, mental illness, are taking certain medications, have a personal or family history of drinking problems or cancer, are pregnant, trying to get pregnant or breastfeeding, or are told not to drink for legal, medical or other reasons. If you are concerned about how drinking may affect your health, check with your doctor.

7. Inactivity

People who are not active are twice as likely to have a stroke. Active living is important for good health at all stages of your life. Some of the main reasons to make physical activity part of your life include: it's a great way to maintain a healthy weight, reduce high blood pressure, lower cholesterol levels, manage stress and reduce your risk of stroke.

The Heart and Stroke Foundation recommends that Canadian adults are active at least 150 minutes per week, in bouts of 10 minutes or more. Speak to your healthcare team before you start a fitness program.



Choose ways to be active that you really enjoy. Start slowly and find a friend to keep you company. Remember that doing any physical activity is better than doing none at all. If you feel short of breath, dizzy or have pain in your chest, shoulders or arms, STOP what you are doing. If the symptoms don't get better with rest, call 9-1-1.

To learn more about physical activity, read our brochure **Getting Active for Life** or check out **Canadian Physical Activity Guidelines** at csep.ca/guidelines.

8. Smoking

Smoking and being exposed to second-hand smoke can increase your risk of stroke:

- Smoking allows plaque to build up in your arteries.
- It raises the risk of blood clots.
- It lowers the amount of oxygen in your blood.
- It raises your blood pressure.
- It makes your heart work harder.

Here are some ways to become smoke-free:

- Learn what triggers you to smoke.
- Break the connection and you will break the habit.
- Set a quit date.
- Make your home and car smoke-free.
- Ask for help from your doctor, pharmacist or other healthcare professional.

To learn more about being smoke-free, read our brochure **Just Breathe—Becoming and Remaining Smoke Free**. You can also visit the Smokers' Helpline at smokershelpline.ca and Health Canada at gosmokefree.ca or 1-800-O-Canada (1-800-622-6232).

9. Stress

If your life is full of stress, it can be hard to have a healthy lifestyle. Instead of running or being active, some people eat too much food or food that is not healthy, drink too much alcohol or smoke. All of these can increase your risk of stroke.

We all have stress in our lives. By knowing what causes stress, we can learn to deal with it in a healthy way. Here are some ways to do this:

- Find out what is causing your stress.
- Be physically active.
- Share your feelings.
- Take time for yourself.
- Make time to laugh. It's one of the best ways to reduce stress.
- Eat a balanced diet.
- Take vacation when you can. Do not skip vacations.

To learn more about stress, read our brochures ***Coping With Stress and Stress Test: How fit are you when it comes to managing stress?***



Women's unique conditions related to stroke

While most of the risk factors and symptoms of stroke are the same in women as in men, there are some unique issues that apply only to women.

Birth control pills (oral contraceptives)

For a small number of women, the birth control pill raises the risk of high blood pressure and blood clots. The risk is higher if you also smoke, have high blood pressure (and are over the age of 35), have other risk factors for stroke, or have a blood clotting problem.

Pregnancy and childbirth

Stroke hardly ever happens to women of childbearing years. But being pregnant and giving birth increases a woman's risk of stroke from three to 13 times. Strokes linked to pregnancy and childbirth are usually the result of a health problem that already exists. The risk of a having stroke that is related to pregnancy is high in the six weeks after giving birth.

Diabetes in pregnancy (Gestational diabetes)

About 2% to 4% of pregnant women will get diabetes while they are pregnant. The medical term for this is gestational diabetes. Although this type of diabetes usually goes away after the baby is born, it can increase the risk that both mother and baby will have diabetes later in life. Diabetes is a risk factor for stroke.

Change of life (Menopause)

During menopause (when a woman stops having monthly bleeding), her risk of stroke rises. Women may also notice an increase in their bad cholesterol and triglyceride levels and a decrease in their good cholesterol. Some women are also more likely to have higher blood pressure at this time of life. Lower estrogen levels may increase body fat above the waist, have harmful effects on the way blood clots, and affect the way the body handles sugar. This could be a health problem that causes diabetes later in life.

Treatments for TIA

Medicines that a doctor prescribes

Doctors prescribe two main types of medicines for TIAs called antiplatelets and anticoagulants or blood thinners. They prevent or destroy blood clots and can lower the risk of stroke in people who have had TIAs or strokes.

Your doctor may also prescribe medicines to control your blood pressure and improve your cholesterol.

When you have a prescription medicine, you must:

- Take the medicine as prescribed.
- Report any side effects to your healthcare team right away.
- Only stop taking the medicine after you have talked to your healthcare team.
- Bring your medicine with you in the original bottles each time you visit the clinic or doctor's office.

If you have any questions about your medicines, talk to your healthcare team.

Surgery (having an operation)

Sometimes surgery is the best way to prevent a stroke. Your doctor will tell you if this is the right treatment for you.

For more information

Heart and Stroke Foundation

heartandstroke.ca/stroke

heartandstroke.ca/healthyliving

1-888-HSF-INFO (473-4636)

Living With Stroke

Living With Stroke is a program for people who have had a stroke. It includes their spouse or caregivers too. The program helps to promote recovery after a stroke and to reduce the risk of another stroke. It talks about risk factors and lifestyle changes. To learn how you can be part of this program in your area, contact your provincial Heart and Stroke Foundation at 1-888-HSF-INFO (473-4636).

Smokers' Helpline

smokershelpline.ca

Health Canada's Go Smoke Free website (gosmokefree.ca or 1-800-O-Canada) has resources to help you quit smoking.

Eating Well with Canada's Foodguide

healthcanada.ca/foodguide

Health Canada's Interactive Nutrition Label: Get the Facts

hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/inl_flash-eng.php

Canadian Guidelines for Physical Activity

csep.ca/guidelines

Guidelines for children, youth, adults and older adults.

The Ottawa Health Research Institute publishes has a package called Making Choices: Life Changes to Lower Your Risk of Heart Disease and Stroke. It includes a booklet, worksheet and a risk assessment tool. Visit decisionaid.ohri.ca

**TIA is a major warning sign for stroke.
Risk factors in your life may make a stroke more likely.
You can reduce your risk of having a stroke
by making healthy choices.**

The Heart and Stroke Foundation, along with the Canadian Stroke Network, is a key supporter of the Canadian Stroke Strategy. The goal of the Canadian Stroke Strategy is to support an integrated approach to stroke prevention, treatment and rehabilitation in every province and territory. Each province is developing its own unique approach to organizing stroke care. National tools like training and education programs, best practices, awareness initiatives and evaluation and monitoring systems are helping each province to do this.

For more information about stroke in Canada, visit canadianstrokestrategy.ca

Thank you to the millions of Canadians who put their hearts into supporting our vital work.

Because of you, the Foundation has helped reduce the mortality rate from heart disease and stroke by 75% over the past 50 years. Sadly, still one in three Canadians deaths are due to heart disease and stroke every year – and millions remain at risk.

More answers are needed to facilitate further medical advances, effect social change and provide public and professional health education that save lives – today and for generations to come.



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The Heart and Stroke Foundation website offers a wealth of information and tools to help you and your family prevent and manage heart disease and stroke. On our website you will find:

- Delicious heart-healthy recipes
- Tips to get and stay active for life
- Current heart disease and stroke patient information
- Breaking news on Foundation funded research
- Free newsletters, Heart&Stroke He@lthline and He@lthline for Parents
- How to get involved and make a difference in your community

heartandstroke.ca

or call

1-888-HSF-INFO (473-4636)

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