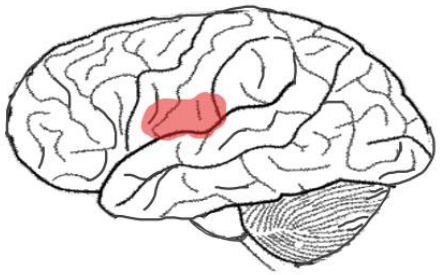
Intracerebral Hemorrhage

What is an intracerebral hemorrhage?

An intracerebral hemorrhage happens when blood vessels in the brain burst, causing bleeding into the brain. This is often referred to as a bleeding or hemorrhagic stroke.



How does bleeding in the brain cause a stroke?

When blood builds up in the brain it can cause physical injury to the brain tissue and there is increased pressure within the skull. Blood can also cause inflammation that is irritating to the brain tissue and can cause brain cells to die. The part of the brain affected by the bleeding will stop working properly. This results in a stroke.

What are the signs and symptoms of an intracerebral hemorrhage?

Stroke symptoms occur **suddenly** and include the following:

- Sudden and severe headache, different than your usual headaches
- Weakness on one side of the body
- Slurred speech
- Change in vision (loss of vision or double vision)
- Trouble with balance or coordination
- Decreased level of consciousness with nausea and vomiting

If you experience any of these symptoms, **call 9-1-1 immediately**.

How is an intracerebral hemorrhage diagnosed?

A bleeding stroke is diagnosed with a computed tomography (CT) scan or magnetic resonance imaging (MRI) of your brain.

What can cause an intracerebral hemorrhage?

- High blood pressure (most common cause)
- Cerebral amyloid angiopathy (protein deposits in blood vessel walls that result in weakened vessels with age)
- Other less common causes: head trauma, tumours, bleeding disorders, bleeding after an ischemic stroke, abnormal blood vessels in the brain, genetic conditions that can weaken the small blood vessels in the brain, etc.

How is an intracerebral hemorrhage treated?

Treatment of a bleeding stroke depends on many factors including the size of the bleed.

Immediate treatment may include:

- Medications to reduce blood pressure.
- Medications to reverse the effect of blood thinning medications or increase the body’s ability to rapidly develop blood clots.
- Medications or surgery to reduce pressure build up in the brain.
- Medications to maintain normal body temperature and blood sugar.
- Procedures to secure or remove abnormal blood vessels that may have caused the bleeding.

Long-term treatment may include:

- Adjustments to your medications and lifestyle changes to lower blood pressure.
- Temporary or permanent changes to your blood thinning- or cholesterol- lowering medications.

What to expect regarding recovery after an intracerebral hemorrhage?

- Patients with a bleeding stroke can have continued recovery up to a year following their stroke. They will often have initial severe disability but this can gradually improve over time.

- The extent of recovery and a person's ultimate level of functioning after a bleeding stroke varies depending on the individual. Factors that will influence an individual's recovery include the size of the bleed, the parts of the brain that were involved or damaged by the bleed, and the patient's age and overall health.

- Up to thirty percent of patients with bleeding stroke will develop difficulty with thinking clarity, multitasking, or memory as a result of their stroke or within a year of their stroke.

Risk factors for intracerebral hemorrhage

Some risk factors are under your control. Check the ones that apply to you.

Risk factor	What you can do…
❒ High blood pressure	✓ Keep your blood pressure in check. High blood pressure is the leading cause of stroke. ✓ Check your blood pressure regularly with a home blood pressure monitor. Your blood pressure should be consistently less than 130/80 mm Hg (morning and evening) after a bleeding stroke. If your blood pressure is consistently above these numbers, follow up with your family doctor. **When to check your blood pressure:** • Before taking your blood pressure medication • At least two hours after a meal • After emptying your bladder and bowel • One hour after drinking coffee or smoking • Thirty minutes after exercise • Always after resting five minutes, without talking

	How to measure your blood pressure: • In a comfortable, distraction-free environment • Without talking or moving • In a sitting position with back supported • Legs uncrossed with feet flat on the floor • Ensuring your arm is bare • Using your non-dominant arm, unless told otherwise, with the lower edge of the cuff 3 cm above your elbow • Arm supported with the middle of the cuff at heart level (i.e. resting on the table in front of you)
❒ Tobacco use	✓ Quit tobacco products. This will help to reduce plaque build-up in your arteries and will also help to prevent blood from clotting or sticking to the plaque. You are more likely to be successful in quitting smoking if you plan ahead and have support: • Get help and counselling from your health care provider • Make your home and car smoke-free • Use quit smoking medications like nicotine patches to manage your cravings and withdrawal symptoms • Contact your local Stroke Prevention Clinic for an up to date list of community resources to help you quit smoking
❒ Excessive alcohol	✓ Reduce alcohol intake. If you do not drink, do not start. ✓ Do not exceed two standard drinks per week (ideally, abstain from alcohol entirely). ✓ A standard drink means: • Beer: 341 ml (12 oz) of beer, 5% alcohol • Cooler, cider, ready-to-drink: 341 ml (12 oz) of drinks, 5% alcohol • Wine: 142 ml (5 oz) of wine, 12% alcohol • Spirits (whisky, vodka, gin, etc.): 43 ml (1.5 oz) of spirits, 40% alcohol

Risk factor	What you can do…
❒ Food choices	✓ Healthy food choices can improve your blood pressure, blood sugar, cholesterol and weight, reducing your risk for stroke. See section titled "Make healthy food choices" for more information.
❒ Exercise	✓ Include at least 30 minutes of exercise most days of the week. ✓ Regular exercise can lower blood pressure, cholesterol and improve your blood sugars.
❒ Stress	✓ Identify your stressors, be active, make time for yourself, and laugh often. ✓ Try to find a balance in your work, personal time and activities. ✓ Find someone you can talk to. This is an important way to reduce stress. ✓ Consider meditation or mindfulness exercises
❒ Herbal medications	✓ Where possible, **avoid** herbal supplements that can potentially increase the risk of bleeding. ✓ Commonly used supplements within this list include: concentrated garlic, curcumin, fish oil, omega-3 fatty acids, ginko biloba, ginseng, dong quai, and feverfew (amongst others)

Medications

When you have had a stroke or a transient ischemic attack (TIA), medications will help you recover and prevent another stroke.

Medications have positive effects and possible side effects. If you have side effects, they usually happen when you begin treatment or when a dose is increased. Most side effects will go away once your body gets used to the medication. Talk to your doctor or pharmacist about how to manage side effects before you decrease or stop taking prescribed medications.

Tips

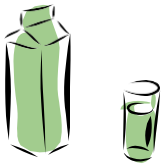
- Keep an updated list of your medications with you. Know the names of your medications, the dosage and when you take them.
- Take your medication according to the directions on the label and as prescribed by the physician.
- Take your medication at the same time each day, such as with breakfast or at bedtime as prescribed.
- Do not stop taking medication without checking with your doctor.
- If you forget to take your medication, do not double the dose. Call your pharmacist for directions on what to do.
- If you take medication to lower your blood pressure, sit at the side of the bed and dangle your legs before getting up to avoid feeling dizzy.
- Taking “over-the-counter” medications can interact with your prescribed medication. Check with your doctor and pharmacist before taking vitamins, supplements, herbal medicine, cough and cold medications, pain relievers and all other over-the-counter medications.
- 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.
- Use the same pharmacy for all of your medications.
- If you are taking at least 3 prescribed medications for a chronic condition, you are eligible for the MedsCheck Program. Call your pharmacist to book an appointment.

Make healthy food choices

Eat a variety of natural, whole and minimally processed foods at each meal.

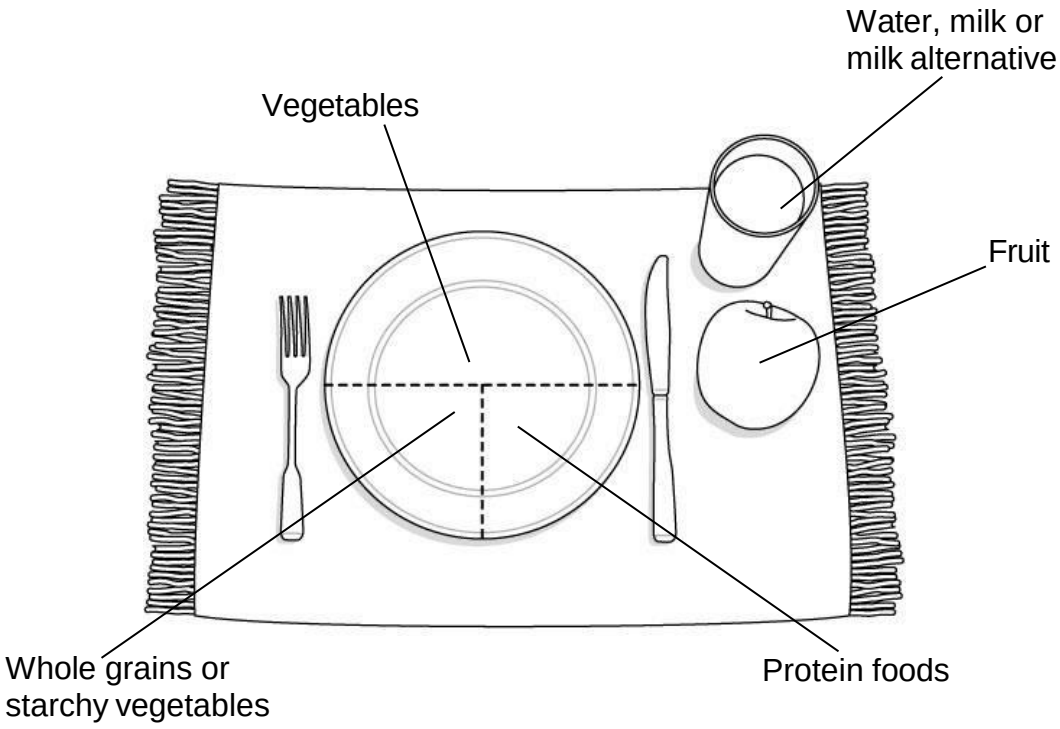
- Eat mostly plant-based foods **daily**. These include:
  - fresh, frozen or canned vegetables without additives
  - fresh or frozen unsweetened fruit, or fruit canned in water without added sugars
  - legumes such as kidney beans, black beans, chickpeas, lentils and soybeans (if using canned legumes or vegetables, choose cans with no added salt, or rinse the legumes well to remove excess salt)
  - unsalted nuts and seeds, or their natural butters (without other added ingredients)
  - whole grains such as whole grain bread, brown rice or pasta, oats, quinoa, barley, bulgur and wheat berries
  - healthy oils such as olive oil or canola oil
- Eat fish a few times a week.
- Choose skinless white meat such as chicken or turkey. Limit red meat.
- Avoid processed or cured meats such as deli meats, sausage and bacon.
- Include lower-fat dairy products such as milk, milk alternatives (like fortified soy beverage) or yogurt daily.
- Drink water when thirsty. Avoid soft drinks, energy drinks, fruit drinks and juice.



What do healthy servings look like?

- Fill ½ of your plate with vegetables (such as broccoli, asparagus, green beans, carrots, tomatoes, beets, lettuce or other green leafy vegetables).
- Aim to have at least two different colours of vegetables on your plate.
- Fill ¼ of your plate with whole grains or starchy vegetables such as potatoes (white or sweet) or corn.
- Fill the other ¼ of your plate with protein foods such as fish, lean meats, eggs, and plant-based protein choices like legumes (such as kidney beans, black beans, chickpeas or lentils) or tofu.
- Have a glass of water, milk or milk alternative (such as fortified soy beverage) and a piece of fruit to complete your meals.

Use this picture as a guideline to help you keep healthy servings on your plate.



Fibre

Did you know most Canadians get ½ of the fibre they need every day? In general, adults should get 21 to 38 grams each day.

Fibre is only found in plant foods. To increase your fibre intake, include whole grains, fruits and vegetables, oats, oat bran, ground or crushed flax seed, psyllium, barley and dried or canned legumes such as kidney beans, black beans, chickpeas or lentils.

When increasing your fibre intake, make sure to do so **gradually** and increase your water intake at the same time.

Salt

Limit your intake of salt (sodium).

Most of the sodium in our diet comes from processed foods and restaurant or take-out meals. Adults should have less than 2300 milligrams (mg) of sodium each day, which is equal to a teaspoon of salt from all sources.

Nutrition Facts Table

It is important to read the Nutrition Facts Table labels to find out the sodium content of foods.

1. Look at the serving size at the top. Compare this amount to the amount that you eat.
2. Look at the milligrams of sodium. Choose foods with less sodium.

Vegetable Soup #1

Nutrition Facts	
Per 250 mL (1cup)	
Amount	% Daily Value
Calories 110	
Fat 1 g	2%
Saturated 0.5 g + Trans 0 g	3%
Cholesterol 10 mg	
Sodium 770 mg	29%
Carbohydrate 22 g	7%
Fibre 4 g	16%
Sugars 6 g	
Protein 3 g	

Vegetable Soup #2

Nutrition Facts	
Per 250 mL (1 cup)	
Amount	% Daily Value
Calories 120	
Fat 1.0 g	1%
Saturated 0.5 g + Trans 0 g	3%
Cholesterol 0 mg	
Sodium 410 mg	17%
Carbohydrate 24 g	8%
Fibre 4 g	16%
Sugars 8 g	
Protein 3 g	

Vegetable Soup #3

Nutrition Facts	
Per 250 mL (1 cup)	
Amount	% Daily Value
Calories 110	
Fat 2.5 g	4%
Saturated 0 g + Trans 0 g	0%
Cholesterol 0 mg	
Sodium 75 mg	3%
Carbohydrate 17 g	5%
Fibre 3 g	12%
Sugars 4 g	
Protein 3 g	

Soup #3 has the least amount of sodium (milligram or mg) for each 1 cup (250 ml) serving.

The best thing you can do is to eat unprocessed and homemade foods more often. That way you control the sodium!

Use herbs, spices and lemon juice instead of salt-containing seasonings to flavour food.

Ask your family physician for a referral to a Registered Dietitian for additional support if needed.

Fatigue after stroke

Fatigue or feeling tired is one of the most common effects of a stroke and can range from mild to severe. It has been described as the most difficult or upsetting problem that people deal with after stroke. You are more likely to experience fatigue after a stroke than a TIA.

Tips to help manage fatigue:

- Give yourself plenty of time to complete activities or tasks; the more you push yourself the worse you are likely to feel.
- Do not try to do all of the things that you used to do and at the same speed. Pace yourself – start off doing less for a while so that you may slowly and steadily attempt to build stamina.
- Plan rest periods in your daily routine. Even tasks that do not require much energy can make you feel tired such as riding in a car or eating a meal.
- Try not to push yourself if you are having a better day. You may feel exhausted the next day or longer. Simplify tasks by organizing your environment.
- Listen to your body; rest during the day if you need to.
- Engage in planned exercise. Go for a short walk or use a stationary bike for a few minutes. Being active may help improve fatigue.
- Make healthy food choices (see pages 7 to 9).
- If you are able to return to work after stroke, it may be helpful to start with less hours at first. Slowly build up to your regular work schedule as tolerated.
- Prioritize activities that are meaningful to you and your well-being.

Depression

Depression is a normal reaction to a major life change. Here are some key points about depression:

- Up to half of all people who have had a stroke will have some degree of depression.
- Changes in the brain from the stroke can cause depression.
- Sometimes depression happens right after a stroke or not until weeks or months later.
- Symptoms of depression can vary from mild to severe.

Symptoms of depression include:

- Appetite and weight changes
- Memory and concentration problems
- Lack of interest in activities of daily living (such as caring for yourself or household chores)
- Lack of interest in preferred activities (such as spending time with friends, watching favourite TV shows, or doing hobbies)
- Headaches, chronic pain, digestive problems
- Feeling worthless
- Feeling sad, anxious, guilty, irritable or hopeless
- Withdrawing from others
- Trouble sleeping
- Always feeling tired

Treatment for depression includes medication and counselling:

- In most cases, medication does work and can take up to 6 weeks before you notice a change.
- Continue to communicate with your care provider (family doctor, social worker or counsellor).
- Having proper rest and meals will aid in having the energy you need for your recovery.

- Explore local support groups and services. For more information on support and services in your area visit www.ontario.cmha.ca or www.marchofdimes.ca.
- Depression that is treated improves recovery and survival.

Sex and intimacy

After a stroke, you may experience changes that can affect your sexual relationships and intimacy. Some of these changes include:

- fatigue, depression, fear
- loss of feeling on one side of your body
- difficulty communicating with your partner
- changes related to obtaining an erection
- changes related to vaginal dryness

It is up to each person to decide when to return to having sex based on their own readiness.

If you have questions about intimacy or need to talk about it, please speak with your health care provider.

Return to work

Returning to work is an important goal for some people who were working before their stroke.

Stroke affects everyone differently and recovery is different for each individual. A successful return to work starts with understanding how the effects of your stroke may impact you at work.

If returning to work is important to you, talk to your doctor and rehabilitation team. Getting medical clearance is recommended to make sure that you are able to do your job safely.

It is also important to contact your place of employment as there may be services that can help you return to work. There may also be services available for you if you cannot return to work.

Prevent a fall

A person who has had a stroke can be at higher risk for falls, however, your risk of falls can be reduced. You are at a risk for falling if you have:

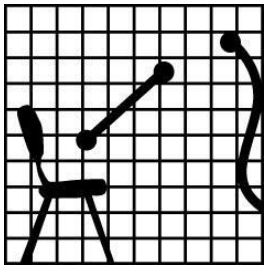
- poor balance
- decreased muscle and bone strength
- reduced vision or hearing
- unsafe conditions in and around your home

You can help prevent falls by making changes to your home and lifestyle.

Consider a self-referral to Home and Community Care Support Services for occupational therapy and/or physiotherapy assessment. Call 1-800-810-0000 to self-refer.

Consider an emergency alerting system, such as Lifeline.

Bathroom



- Make sure that you have non-slip surfaces in the tub or shower.
- Install grab bars by the toilet and bath if you need them to help you sit and stand. Make sure they are well anchored.
- Use a raised toilet seat, and a bath seat in the shower, if you need them.
- Wipe up moisture or spills right away.

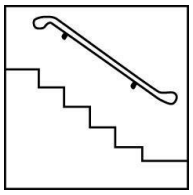
Living room and bedroom

- Reduce clutter! Get rid of loose wires and cords as well as any other obstacles.
- Consider using a cordless phone to avoid rushing to answer.
- Have good lighting throughout the house and install night lights.
- Make sure the path is clear between the bedroom and bathroom.
- Scatter mats are tripping hazards. Get rid of them or make sure they are non-slip.
- Move slowly out of your bed or chair. Getting up suddenly can make you dizzy.

Kitchen

- Store kitchen supplies and pots and pans in easy-to-reach locations.
- Store heavy items in lower cupboards.
- Use a stable step stool with a safety rail for reaching high places.
- Always wipe up any spills right away to prevent slipping.
- If you use floor wax, use the non-skid kind.

Stairs

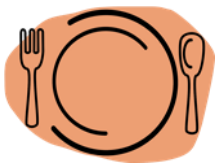


- Make sure your stairs are well lit.
- Have solid handrails on both sides of the stairway, if possible.
- Remove your reading glasses when you go up or down the stairs.
- Never rush up or down the stairs. It is a major cause of falls.
- If necessary, lead up with your strong leg and down with your weak leg.

Exterior

- Keep front steps and walkway in good repair and free of snow, ice and leaves.
- Use/add railings whenever possible.
- Keep your front entrance well lit.
- Put gardening tools such as hoses and rakes away when not using them.

Eat healthy meals



- Nutritious meals help keep you strong, fight off colds and flu and maintain your balance.
- Do not skip meals. It can cause weakness and dizziness.

Keep fit

Do some activity every day. It is your best defense against falls.

- Maintain or improve your flexibility and balance by keeping active. Try activities such as walking, Tai Chi, aqua fit and yoga. Talk to your doctor before starting an exercise program.
- Build your muscle and bone strength by doing “resistance” activities or exercises (such as weight lifting). Talk to your doctor or therapist before starting weight training activities.
- Have your hearing and vision checked regularly.

Use medication wisely

- If your medication causes dizziness or sleepiness, adjust your activities so you are not at risk of falling.
- Do not mix alcohol and medications. Alone or in combination with medications, alcohol can cause falls.
- See pages 5 to 6 for more information on medication safety.

Use safety aids

- Wear your glasses and hearing aids.
- Talk to your therapist or family doctor about using a walker, cane or neuro pole. If you use a cane, make sure that it is the correct height and that it is rubber-tipped for safety.

- Wearing the right footwear is important. Comfortable shoes that provide good support can help to prevent falls.
- Find out about other gadgets that can make your life safer. This includes reachers, anti-skid soles, portable phone, or a long handle shoe horn. There are many types of gadgets or devices to help you. Ask your health care provider for more options.

Tests that may be ordered at your Stroke Prevention Clinic appointment

Ordered	Type of test	Purpose of test	How the test is done
❒	CT Scan (Computerized Tomography)	This test shows detailed images of the brain and helps to identify conditions in the brain.	You lay in a scanner that takes pictures of your brain using special x-rays.
❒	CTA (CT Angiography)	To visualize anatomy of the arteries of the brain and potential for abnormal blood vessels that may have caused the bleeding.	You lay in a scanner that uses a CT Scan and contrast dye injected into the arteries through an intravenous to take pictures of the blood vessels in the head and neck.
❒	MRI (Magnetic Resonance Imaging)	This test shows detailed images of the brain and helps to identify conditions in the brain. You may need this if your doctor needs to see areas of the brain that cannot be seen clearly on a CT scan.	You lay still in a scanner that uses magnetic field and radio waves to produce a 3-dimensional picture of the brain.
❒	MRA (Magnetic Resonance Angiography)	To visualize anatomy of the arteries of the brain and potential for abnormal blood vessels that may have caused the bleeding.	You lay in a scanner that uses magnetic field and radio waves and may or may not require contrast dye to take pictures of the blood vessels in the head and neck.
❒	Digital subtraction angiography	To visualize anatomy of the arteries of the brain and potential for abnormal blood vessels that may have caused the bleeding.	The procedure involves inserting a catheter (a small, thin tube) into an artery in the leg and passing it up to the blood vessels in the brain. A contrast dye is injected through the catheter and X-ray images are taken of the blood vessels.
❒	EEG (electroencephalogram)	This test records your brainwaves. It is often ordered to look for seizure activity.	Electrodes are placed over the scalp and the brain's electrical activity is recorded.
❒	Blood tests	To check for any abnormalities in your blood.	Blood is taken from your arm and studied.

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