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The Heart and Stroke Foundation created this book as a resource for families to help children understand more about stroke and its effects on stroke survivors and caregivers. The book is designed for children between the ages of 5 and 10 years. We suggest that children review the book with a family member or another supportive adult that can help them read, understand, and discuss the information. For more information on this resource or the Heart and Stroke Foundation, please call 1-888-HSF-INFO or visit www.heartandstroke.ca

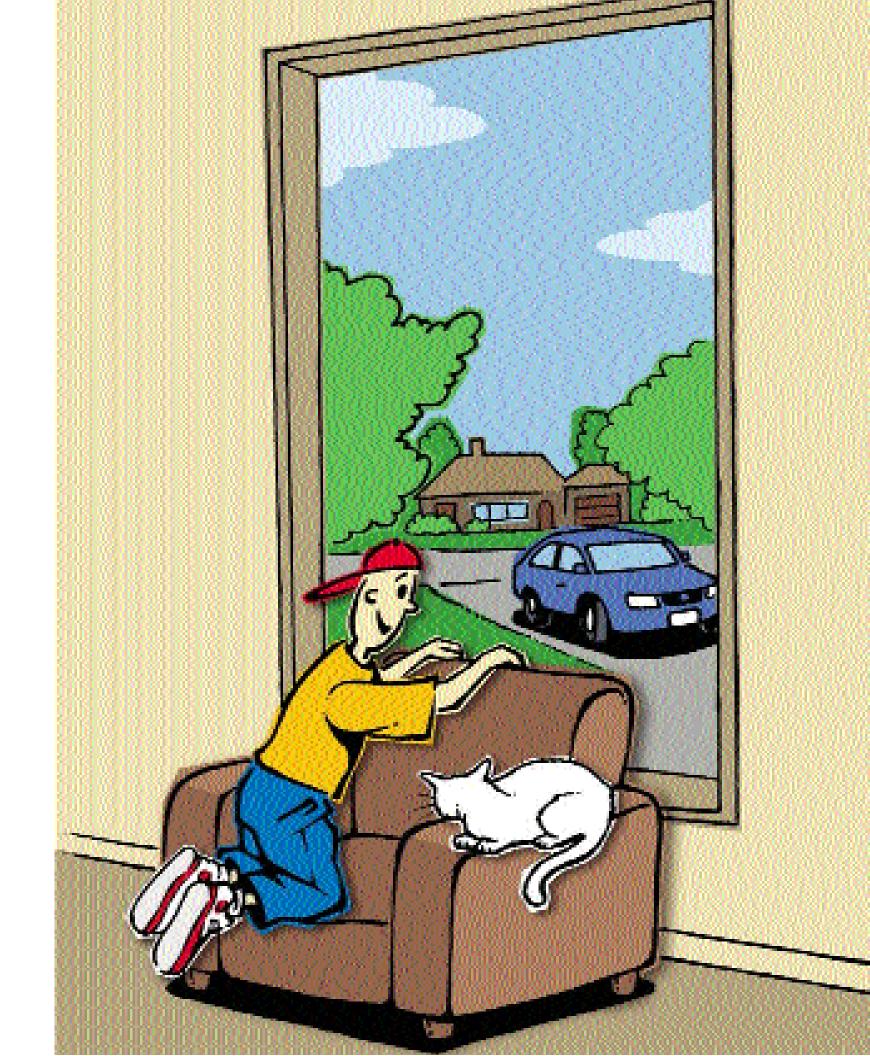
Jack was looking out the living room window when he saw his grandmother's familiar blue car pull into the driveway.

"Yippee! Yeah! Grandma's here to stay!" It was the first day of March Break, and Jack's Grandma Lily was staying the week. He looked forward to her visit and all the great things they were going to do together during the school holiday.

Jack and his dad went out and helped Grandma Lily carry her things in. They took them to the guest room.

She had two big suitcases and a metal cookie box. Jack knew the box would be full of his grandma's homemade chocolate chip cookies.





Both of Jack's parents went to work every day. That meant Jack had Grandma Lily all to himself.

They ate big bowls of cereal together in the morning. After that, they went to the park where Grandma sat on a bench and watched Jack try out his new skate board. She made sure he wore a helmet and knee pads.

They did lots of things that week. They baked cookies together, watched television and played games on the computer. It was an awesome week!

They even made special trips during the day so they could eat ice cream at a nearby fast food restaurant.

Grandma loved ice cream, and usually made sure there was a tub in the freezer while she was there. Jack loved all the yummy special treats Grandma got him, even though his mom kept pointing out they weren't good for them.





All too soon, March Break came to an end and Jack had to go back to school. Grandma Lily was up early and was helping Jack get his breakfast, but something was wrong.

Grandma was rubbing her right arm, and said it felt funny.

"It feels numb," she said. "I probably slept in a funny position last night. Nothing to worry about," she said. She knocked a box of cereal off the kitchen-counter by accident, and Jack's mother picked it up. Grandma Lily blinked her eyes a few times, as though she had problems seeing.

"I didn't know we ate cereal here," Grandma said. She sounded confused and upset.

"We eat cereal every morning, Grandma," Jack said. Grandma should know that, Jack thought. He could tell something was wrong, but he didn't know what.

"Time to brush your teeth, and go to school," said Jack's mother. She looked worried.



Later that same day, as Jack walked home from school, he saw both his Mom's car and his Dad's in the driveway. That was strange...

...because his dad never got home this early. When he got inside, his mother was on the phone, and seemed upset. Grandma was nowhere in the house.

Jack's mom hung up the phone. "Jack, I have some bad news. Grandma is very, very sick and had to go to the hospital."

Jack didn't know what she was talking about. How could Grandma be sick?

"Grandma had a stroke," his mom said. "Remember that her arm felt numb? Her leg started to get numb too. She was very confused. Those were signs that something was wrong," she said.

Dad came out of the guest room with one of Grandma's bags. "I have some of her things. We should take them to her," he said.





Jack and his parents went to the hospital to visit Grandma Lily. Dad was very upset – Grandma Lily was his mother.

She was pale, had a tube in one arm, and her eye looked like it was stuck shut. Jack was afraid. Grandma Lily was truly sick.

Jack started to cry. His mom and dad both gave him a big hug. The visit was short because Grandma Lily needed to rest. They spoke to a nurse and then went home.

At home that night, lying in bed, Jack worried. He couldn't get to sleep. Was it his fault Grandma was so sick? Was there anything he could have done to stop it from happening? Maybe he shouldn't have asked her for so many chocolate chip cookies?

Jack remembered what a nurse at the hospital had said. She explained that a stroke happens when not enough blood gets to a certain part of the brain. When that happens, some parts of the brain don't work properly. That's what caused Grandma Lily to feel numb and act strange.

"There are ways that doctors can help get the blood flowing again," she said. "Medicines and therapy will help your grandma get better."



Jack was tired after his restless night, and was late for school the next day. A note from his mother explained what had happened.

His grade three teacher, Mr. Chu, read the note and said "Jack, I'm very sorry to hear about your grandmother. She's lucky to have someone like you to visit her. Your visits will help cheer her up."

Mr. Chu announced there would be a class discussion about the brain and stroke. It turned out some of Jack's classmates had relatives or knew of family friends who'd had a stroke.

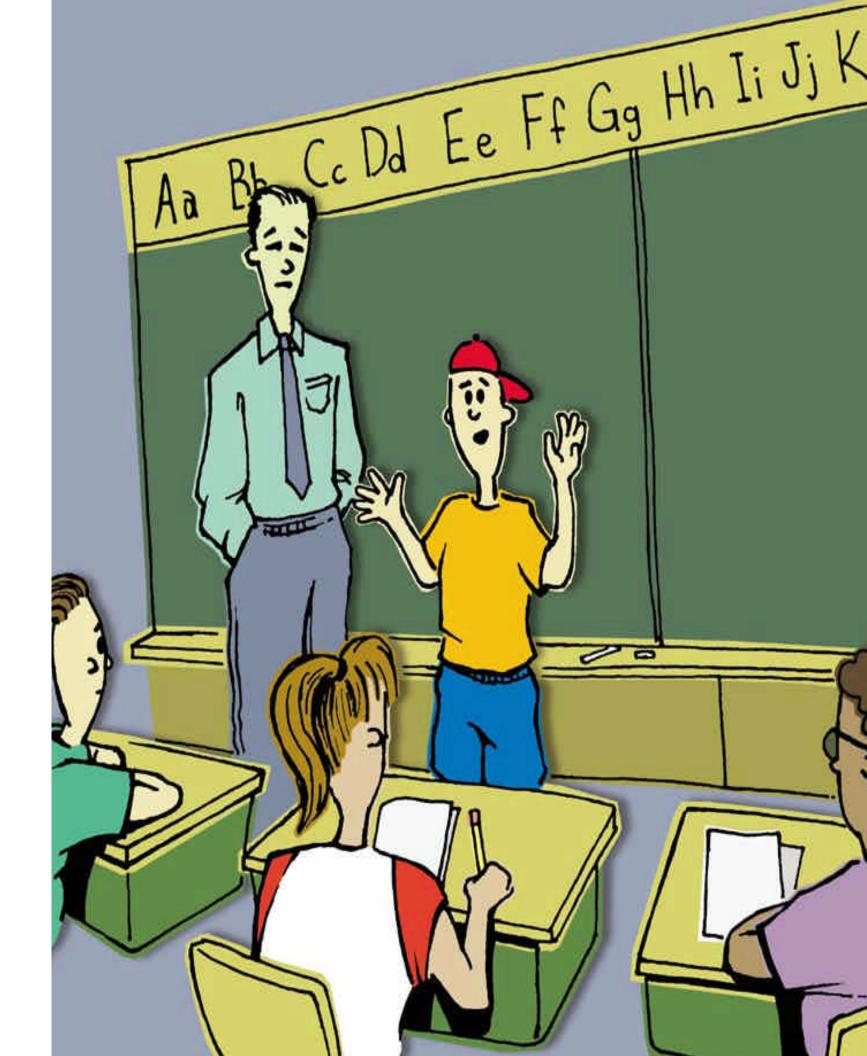
Abdul told the class his grandmother had a stroke last year. "Now she sounds funny when she talks. You can barely understand her. Sometimes she makes up words by mistake," he said.

Jack asked Abdul what it was like when his grandma first had the stroke. "It was really bad. She couldn't say any words at all. She just made funny noises. She's much better now than she was," Abdul said. "I felt bad because I thought I had done something to make it happen. But I found out that her stroke had nothing to do with anything anybody did."

This made Jack feel much better. Grandma's stroke wasn't his fault.

Pat told everyone that when his uncle had a stroke, his memory got really bad plus he couldn't walk anymore. "He gets around in a wheelchair now," he said. "Plus, he gets moody sometimes, too."

Monika said that nobody in her family had a stroke.



Mr. Chu explained that the different parts of the brain help us do different things. " Some parts of the brain help us see, think, or smell. Other parts help us hear, speak and move," he said. He also explained that the brain needs blood from the vessels to stay healthy. During a stroke, some of the blood supply is blocked.

"What happens to a person who has had a stroke depends on where in the brain the stroke happened," he said.

At the end of the day, Jack was still confused. Some of the kids said stroke causes major changes that last forever. Stroke can cause things like not being able to walk anymore, or talk funny. One kid even knew somebody who had died from a stroke. Jack really hoped his grandma wouldn't die, and he felt a knot in his stomach. He was afraid.

Not long after Jack got home from school, he and his parents went to the hospital to visit.

Grandma looked a little bit better, but still had the tube in her arm. She was sitting up in bed, and looked around the room with her one open eye.

Mr. Chu had said visiting would help cheer Grandma up, so Jack told her a few new jokes. Grandma chuckled at the jokes, but her smile was only half a smile. She couldn't move part of her mouth. Jack found the closed eye and the half smile funny-looking.

The doctor was there. She explained to Jack and his parents that the stroke had affected the left side of Grandma Lily's brain. "The left side of the brain affects the right side of your body. Your Grandma can't move her right side. She can't open her right eye, lift her right arm, or use her right leg," the doctor said.

It also meant Grandma could only smile half a smile. She had trouble saying things because the right half of her mouth didn't move. The doctor gave Jack and his parents a few brochures from the Heart and Stroke Foundation. "These will help explain what a stroke is," the doctor said.



Jack and his parents took the brochures home and spread them out on the dining room table.

The first brochure showed how each part of the brain controls different parts of the body. It explained when a stroke happens in the speech part of the brain, a person has trouble talking. Some people who have a stroke here also have trouble understanding what is said to them.

When a stroke happens in the memory part of the brain, a person has trouble remembering things. Others might have trouble recognizing family members, or keep calling people by the wrong name. Every stroke is different.

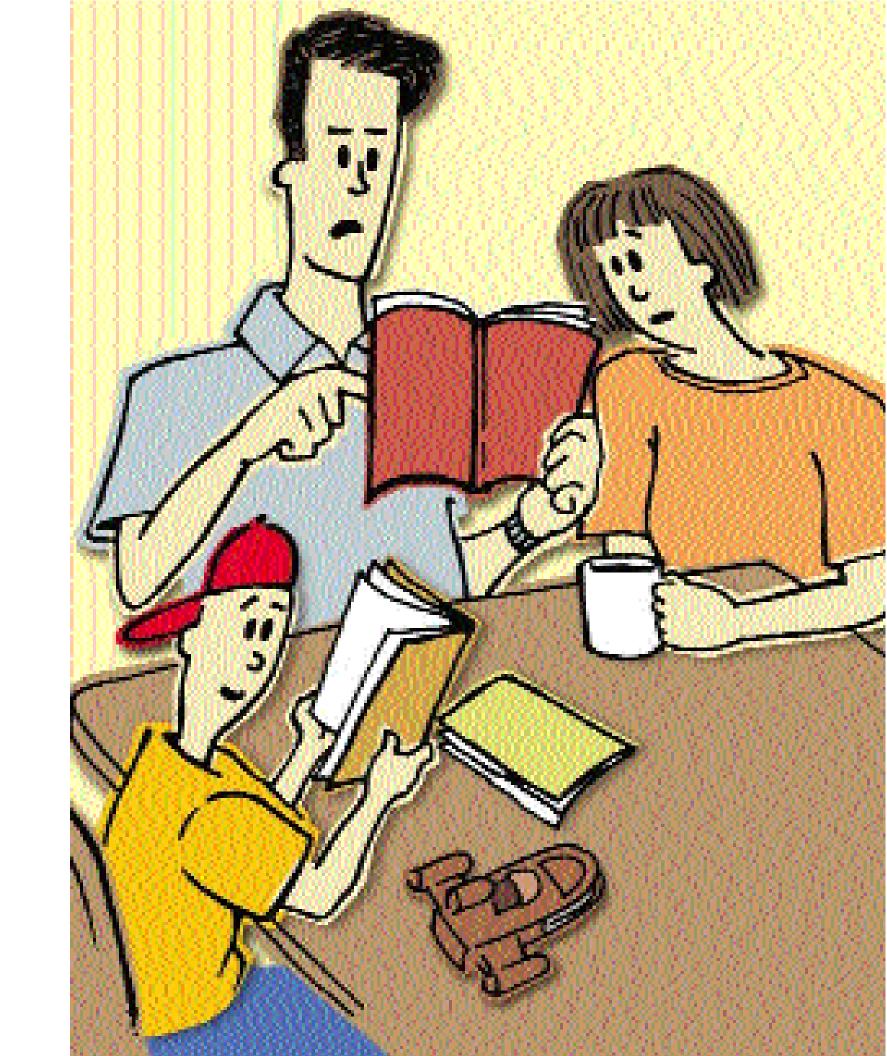
The second pamphlet talked about how getting a stroke is very upsetting to the person who gets it. Some people who get strokes suddenly find they can't do things they've always been able to do — like write with a pen, or talk clearly. They can get moody and depressed. It said people who have a stroke need lots of help and love from their family.

A third book said getting better takes a long time and a lot of hard work. It provided information to help patients and families find answers to their questions. It is important for patients to understand about their road to recovery, and for families and friends to learn how they can help.

Now Jack understood that every stroke was different. He also learned that some people could get back some of the movement they may have lost after the stroke.

Jack was tired and went to bed early, but he woke up in the dark. There was a strange sound in the house. Jack listened carefully, and finally figured out what it was. His dad was crying, and he could hear his mother trying to comfort him.

"The doctors said she's improving," his mother said. Jack's dad was really upset about his mother being so sick. Jack got up and went into his parents' bedroom. The three of them had a good, long, family hug together.



Three weeks had gone by since Grandma Lily's stroke. She was moved to a different hospital. This hospital had a lot of people there who had a stroke. Some of them were older than Grandma, some were a lot younger. They were all here because the place had special programs that taught them how to cope with their strokes.

Jack's Grandma was looking much better. Her eye didn't droop as much and she could raise her right arm up a couple of inches. She still couldn't hold a pen with her right hand. Grandma Lily was trying to teach herself to write with her left hand. She could now move her right leg, and that was good. She might be able to walk again. She was already going to classes to learn how to exercise her leg more, and use a walker.

Jack and his parents encouraged Grandma Lily to use her new walker, the way a nurse had shown them.

The nurse explained Grandma had to exercise as much as she could, even though it was hard.

"You're doing much better than yesterday," said Jack's Mom.

"Let's see if you can get across the room," his Dad said.

"I can't. This is very difficult," said Grandma Lily. She sounded grumpy and looked like she might cry. It was hard for her to do her exercises, and she wasn't very strong. She got tired easily, even though she knew she had to keep exercising as much as she was able.

"I'll walk with you," Jack said. Grandma Lily looked at Jack and gave him one of her half smiles.

"OK, Jack. We'll walk together." Jack's Dad stayed close to Grandma, ready to help so she wouldn't fall.



It was now six weeks since Grandma Lily's stroke had happened. Jack and his parents dropped in on a Saturday when Grandma was eating lunch.

There was salad, a roll, a piece of chicken and yogurt with fruit on her tray. Dad cut the chicken into bite-sized pieces for her.

"I do miss ice cream," Grandma said poking at the yogurt with a spoon.

Because of her stroke, Grandma Lily had to change her diet. No more cookies, ice cream or salt. She had to eat healthier foods from now on.

By changing what she ate, she would be less likely to have another stroke. She also had to take pills now to help stop other strokes from happening.

"Yogurt is good," Jack said. "It comes in lots of flavours," he giggled. Yogurt was one of his favourite desserts. There were lots of good desserts Grandma could still eat.



A few weeks later, Grandma Lily moved out of the hospital and into a nursing home. Jack helped his parents pack up her old apartment. They moved some of her things into the new room she lived in, including a lamp, her potted plants, a television set, and some paintings she had at the old place. This was now her new home.

Jack knew Grandma Lily was sad about leaving her apartment. He wished she could stay there, and didn't really know why she had to leave.

"Because Grandma has trouble getting around on her own," his mother explained. "With her weak arm, she can't cook for herself. Some days, she has trouble getting around with the walker," she said.

"Here, Grandma has people who can take care of her. There's a nurse just down the hall in case there's an emergency," explained his dad. "Plus,

she has people here to help her with her special exercises."

"Besides, there's lots of fun things to do here with other people," Grandma said, trying to be positive. "There's a nice man in the room across the hall. He uses the same type of walker as I do. Sometimes we have races to the Bingo games down the hall," she said with her half smile.

Jack giggled. At least Grandma Lily still had her sense of humour.

"Grandma, can you come visit our place sometime?" Jack asked.

"Of course I can, Jack," Grandma Lily said with her half smile.



Grandma Lily was coming for a visit in two weeks. Jack and his parents cleaned the house and moved things around to make her visit easier. They had to make sure there wasn't anything she would trip over.

Jack's dad moved some of the furniture around to give Grandma Lily more room. Jack's mom rolled up and put away the little rug in the guestroom so Grandma's walker wouldn't catch on the end.

Jack made sure none of his toys were on the floor, too.

Jack was looking out the living room window when he saw his parents' green car pull into the driveway.

"Yippee! Yeah! Grandma Lily's here to stay!" Jack was looking forward to her visit for the long weekend and all the fun things they were going to do together.

Jack and his mom watched through the window as dad got out of the car, then got Grandma Lily's walker out from the back.

He walked to the side of the car and helped Grandma out. Even from here, Jack could tell Grandma looked happy about her visit. They were all going to have a wonderful time.



Facts about Stroke.

Information for parents and teachers to discuss with kids

WHY IS THE BRAIN IMPORTANT?

Your brain is like the command-central for your body. Everything you do, think and say depends on your brain. The brain is divided into regions that control various functions, such as movement, speech and balance. Damage to a region may affect the functions it controls, causing symptoms such as loss of movement, difficulty speaking, or loss of coordination.

WHAT DO THE DIFFERENT PARTS OF YOUR BRAIN DO?

The left side of the brain controls the motor and sensory function of the right side of the body. The left side is responsible for scientific function, such as understanding written and spoken language, number skills and reasoning.

The right side of the brain controls the motor and sensory function of the left side of the body. The right side of the brain controls artistic functions, such as music, art awareness and insight.

WHAT IS A STROKE?

A stroke is an injury to part of the brain. There are two types of stroke. One type happens when a blood vessel, carrying blood to the brain is blocked. This is called an *ischemic stroke*. The other type happens when a blood vessel carrying blood to the brain bursts. This is called a *hemorrhagic stroke*. In both types of stroke, blood flow is interrupted and part of the brain does not get enough oxygen. The brain cells, which are normally fed by that vessel, will die. A stroke is the result.

WHAT HAPPENS WHEN SOMEONE GETS A STROKE?

When a stroke happens, the blood that feeds part of the brain is cut off. This means damage can happen to the brain tissue in that area. A person's symptoms will depend what part of the brain the stroke has occurred. With some people, memory will be affected, while in others, speech or the ability to move an arm will be affected.

WILL THE PROBLEMS GO AWAY?

Generally, when someone has had a major stroke, there will be permanent changes. But, with special exercises (rehabilitation) and lots of encouragement, many people can relearn to do some of the things they have lost the ability to do.

Tips for kids

WHAT CAN KIDS DO TO HELP SOMEONE WHO HAS HAD A STROKE?

People who have a stroke find they can no longer do many of the things they used to do. Perhaps they can't see or remember things as well as they used to. Perhaps they can't use an arm or a leg. Maybe they can't talk normally, or have trouble swallowing food. It all depends on which part of the brain is affected. Family and friends can be a great help to make them feel better.

Encouragement

Many people get depressed or feel frustrated after stroke. Give them encouragement. This goes a long way in helping out.

Visit or Phone

Many people who have had stroke feel lonely or isolated. Visiting them several times can cheer them up.

Good Cheer

Remember what made grandma or grandpa smile before the stroke? Try the same things now. It just might cheer her or him up.

Respect

People with stroke are intelligent, even if they have trouble talking clearly, moving or remembering things. Treat them the same way you did before their stroke.

WHERE CAN KIDS GET MORE INFORMATION?

If you are upset and need someone to talk to, here is what you can do:

- Tell an adult at your school what happened. Try talking to your teacher, the guidance counselor, the school nurse, or whoever makes you most comfortable.
- Call the Kids Help Phone at 1-800-668-6868. Trained people will listen to your worries and can answer some of your questions.
- Write in a journal. You can keep track of how well your loved one is doing over time.
- Don't keep your feelings all bottled up. Talk to your parents about it. You can also talk to your family doctor or nurse.
- Adults at your school can help too. Ask your teacher, the school nurse, or the school guidance counselor.

Facts about Stroke.

Information for adults

CAN A STROKE BE PREVENTED?

A risk factor is something in a person's physical condition or lifestyle which increases the threat of developing an illness, such as a stroke. There are some risk factors for stroke that cannot be controlled such as age, gender, race, or family history. However, there are some risk factors that you can do something about. Here are some things you can do to lower your risk of stroke.

- Know and control your blood pressure
- Manage your diabetes
- Be smoke-free
- Eat a healthy, low-fat diet
- Maintain a healthy weight
- Be physically active
- Limit alcohol use
- Reduce stress
- See your doctor regularly and follow your doctor's advice

WHAT ARE THE WARNING SIGNS OF A STROKE?

Stroke is a medical emergency. Know these five common warning signs of stroke and what you should do.

Sudden Weakness

Sudden weakness, numbness or tingling in the face, arm or leg, particularly on one side.

Sudden Trouble Speaking

Sudden, temporary loss of speech, or trouble understanding speech.

Sudden Vision Problems

Sudden loss of vision, particularly in one eye, or double vision.

Sudden Headache

Sudden, severe, and unusual headache.

Sudden Dizziness

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

If you think you or someone you know may be having a stroke, **call 911** or your local emergency number immediately, or get someone to do it for you.

TRANSIENT ISCHEMIC ATTACKS (TIAs).

Don't ignore them. TIAs are also called mini-strokes, and cause the warning signs listed above. About 10% of strokes are preceded by TIAs. A TIA has the same symptoms as a stroke, but usually lasts only a few minutes. TIAs are an important warning sign of a stroke and should never be ignored. Seek medical attention immediately.

RESOURCES

The Heart and Stroke Foundation of Canada has numerous resources, including booklets and pamphlets to help you understand stroke. Topics addressed include descriptions of specific types of stroke, family issues, rehabilitation and coping with emotional changes in the stroke patient. To get copies, contact your local Heart and Stroke Foundation office or call toll-free at 1-888-HSF-INFO (1-888-473-4636) or visit www.heartandstroke.ca. Most publications are available in both English and French. Check with your local Heart and Stroke Foundation office for any new stroke resources that are available.

