Stroke Education Guide

For individuals & families

Scan for more information on the North Memorial Health Stroke Program.

NORTH MEMORIAL HEALTH

Five Elements of Stroke Education

After-hospital Care / Need to Know

- Call 911 if you notice any stroke symptoms
- Attend your follow up appointment
- Take all medications as prescribed
- Know your risk factors for stroke
- Understanding BEFAST

Remember: BEFAST!

North Memorial Health Stroke Program

Warning signs of a stroke

B **Balance loss**

E **Eyesight changes**

F **Facial droop**

A **Arm weakness**

S **Speech difficulties**

T **Time: Call 911 immediately if you have any of these symptoms**

Stroke is an emergency—every minute counts.

Thank you for choosing North Memorial Health for your care.

Our primary concern is to help you achieve your optimal level of health. Our staff partners with you in working towards the goals you believe are most important in maintaining your health.

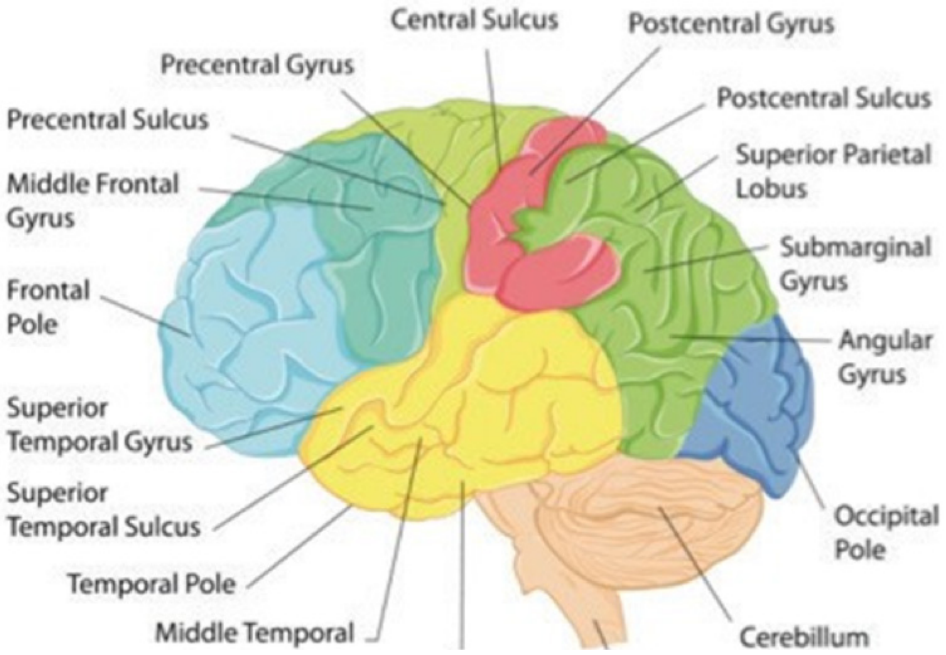
This education book is meant to help you better understand what happens when you have a stroke. You and your family may have questions about your diagnosis and how to cope with problems caused by your stroke. We hope this book will help you answer some of these questions and provide resources as you go through this journey.

The Stroke and Rehabilitation Team wishes you and your loved ones the best during your recovery.

Your Stroke Care Team

NORTH MEMORIAL HEALTH

About My Stroke and Recovery



My Type of Stroke

☐ Clot (thrombus) ☐ Traveling clot (embolus) ☐ Bleed (hemorrhage)

The Drugs I am Taking for This Stroke

Name of Drug	Why I Am Taking It

My Doctor(s) Name(s) and Phone Number(s)

Name of Doctor	Phone Number

Tests and Procedures

Listed below are explanations of tests and procedures that may be ordered for you.

Computerized Tomographic Scan (Head CT scan)
This test is used to determine whether or not a stroke has occurred, and if so, the size and location of the stroke. It also helps identify the type of stroke, the result of blockage or the result of bleeding. The CT scan uses x-rays to take a picture of the brain. A CT scan takes approximately ten minutes.

Magnetic Resonance Imaging (MRI)
This test uses a magnetic field to show a detailed picture of the brain. It is used to identify the presence, location and size of your stroke. You need to lie still during the test. People who have claustrophobia, a fear of closed spaces, may find an MRI difficult. Talk to your nurse if this is a concern for you as you can be given a drug to help with this. The test is loud and may take up to 45 minutes.

Magnetic Resonance Angiography (MRA)
This test is used to produce an image of the arteries in the brain and can determine the degree of narrowing in an artery, especially in the carotid arteries of the neck.

Angiogram
With an angiogram, a thin tube is put into the blood vessel. A special dye is injected and x-ray pictures are taken.

Carotid Ultrasound
The ultrasound uses sound waves to produce an image of the carotid artery and can tell the degree of its narrowing. This test is painless.

Echocardiogram (Echo)
An ultrasound examines the muscle and tissue of the heart. A probe is moved around the surface of the chest to see the heart. It takes about 45 minutes and is painless.

Swallow Evaluations
A nurse will perform an initial bedside swallow assessment before giving you anything to eat or drink including drugs. If further evaluation is needed you will not be given anything to eat or drink until the speech therapist does a formal swallow evaluation.

Trans-Esophageal Echocardiography (TEE)
A thin wire is passed down the throat into the food pipe. This test shows very clear pictures of the heart chambers and valves by using ultrasound.

Video Fluoroscopic Swallowing Study (VFSS)
Completed by using X-Ray techniques that photograph your swallowing actions while you eat. The speech pathologist will have you swallow different foods and drinks mixed with barium. The barium makes the food and liquid show up on the x-ray.

Interventional Procedures for Stroke

North Memorial Health Patient Information

Interventional Radiology Procedures:

- **Endovascular embolization of a brain aneurysm*:** This procedure is done in Interventional Radiology to prevent bleeding in your brain by closing off or 'embolizing' an aneurysm. An aneurysm occurs when an artery in the brain becomes weak and bulges. Occasionally, these aneurysms leak, and bleed into the brain. To embolize an aneurysm, your doctor places a device (typically a small flexible wire called a coil) to prevent blood from entering the aneurysm. These devices will help prevent the aneurysm from bleeding. You will be under general anesthesia during this procedure. The devices are permanent and do not need to be removed. You can have an MRI, CT or x-ray, and go through metal detectors with these devices in place. There are typically no issues with these devices.
- **Mechanical Embolectomy/ Thrombectomy (intra-arterial treatment)*:** This procedure is done in Interventional Radiology to open a larger artery in your brain which is blocked. There are several different devices used to accomplish this. In all cases, a long, narrow plastic tube called a catheter is inserted through a large artery in your groin and guided to the site of the blood clot. Your interventional radiologist will use the device to remove the blood clot. This will open the blood vessel and restore normal blood flow.
- **Cerebral Angiogram*:** This is a procedure done in Interventional Radiology to diagnose problems with blood vessels and blood flow in your brain. IV contrast will be used in this procedure and you will not be under anesthesia, but you may receive sedation.

Surgical Procedures:

- **Carotid endarterectomy:** This is a surgical procedure done in an operating room to help prevent a stroke by improving blood flow to your brain. It involves opening the artery and removing plaque from inside the carotid artery in your neck. It will have its' own set of post-operative instructions found in your **'After Visit Summary'** at discharge.
- **Carotid Stenting*:** This is a procedure done in Interventional Radiology to help prevent strokes by improving blood flow to your brain. It will necessitate a brief hospital stay, usually 24 hours or less. This procedure involves placing a small wire mesh tube called a stent inside the clogged carotid artery to help open the artery and keep it open. The stent is placed using a catheter which usually is inserted through an artery in the groin.
- **Craniotomy:** This is a surgical procedure done in surgery to remove part of the skull (a bone flap) to reach the brain. The location and size of the craniotomy will depend on your stroke. You will be under anesthesia during this surgery. There is no groin site involvement with this surgery. It will have its' own set of post-operative instructions found in your **'After visit summary'** at discharge.
- **Ventriculostomy:** This procedure may be done in surgery or in some cases, by the Neurosurgeon, at the bedside. It uses gravity to drain excess fluid from your brain. A catheter is inserted into one of the ventricles in your brain (chambers in your brain which hold cerebral spinal fluid) and drains into a collection bag. This helps reduce pressure on your brain. You will be in the Intensive care while this catheter is in place.

Preventing Another Stroke

Topics:

- Stroke Risk Factors and Their Impact
- Risk Factors You Cannot Control
- Risk Factors You Can Control
- Nutrition and Food Choices
  - — Stroke Nutrition Therapy
  - — Heart Healthy Eating: Cooking Tips
  - — Sodium Free Flavoring Tips
  - — Fibers Benefit
  - — Dysphagia Diets

Risk Factors and Their Impact

Preventing another stroke

After stroke, survivors tend to focus on rehabilitation and recovery. But, preventing another (or recurrent) stroke is also a key concern. Of the 795,000 Americans who have a stroke each year, 5 to 14 percent will have a second stroke within one year. Within five years, stroke will recur in 24 percent of women and 42 percent of men.

Percentage of Reoccurrence After First Stroke	
Within 30 Days	3% to 10%
Within 1 Year	15% to 24%
Within 5 Years	25% to 40%

Source: www.stroke.org

Your Lifestyle Choices

Stroke is one of the most preventable of all life-threatening illnesses. Risk factors for stroke fall into two categories: those that can be controlled through lifestyle changes or drugs and those that cannot be controlled.

It's important to remember that having one or more uncontrollable stroke risk factors does not necessarily mean a person will have a stroke. With proper attention to stroke risk factors that you can control, the impact of uncontrollable risk factors can be greatly reduced.

Risk Factors

Stroke Risk Factors You Cannot Control

Age

The chances of having a stroke increase with age. Two-thirds of all strokes happen to people over the age of 65.

Gender

Greater in males than females with the exception 35-44 years old and greater than 85 years old (women in the United States live longer than men).

Race

African Americans have a higher risk for a stroke than some other racial groups. Hispanics also have an increased risk of stroke.

Family History

Those with a family history of heart disease, high blood pressure or stroke are at a higher risk.

Personal History of Diabetes

The reason people with diabetes are at risk may be due to poor circulation. In addition, brain damage may be more severe if blood sugar is high at the time of a stroke.

Treating diabetes may help delay the onset of problems that increase stroke risk. However, even if people with diabetes are on medicines and have blood sugar under control, they still have an increased risk simply because they have diabetes.

Risk Factors You Can Control

Certain medical conditions can put you at a higher risk for stroke. It is important to control and manage these risk factors to the best of your ability.

High Blood Pressure

High blood pressure is the most common risk for stroke. A blood pressure under 120/80 is normal. Blood pressure that is consistently higher than 130/90 is considered to be high blood pressure (hypertension).

If your blood pressure is high, it is important to work with your doctor to get it to a normal level. There are many ways to help manage your blood pressure:

- Take your medications as directed
- Maintain proper weight
- Exercise regularly
- Eat a variety of foods that are low in saturated fat and salt
- Don't smoke
- Buy a blood pressure cuff and check and record your pressure daily

High Cholesterol

Cholesterol is a waxy substance that occurs naturally in all parts of the body. Your body needs cholesterol to function normally. Your body uses cholesterol to produce many hormones, vitamin D and the bile acids that help digest fat.

It takes only a small amount of cholesterol in the blood to meet these needs. Too much cholesterol in your bloodstream can build up over time and block your arteries. If you have high cholesterol, take these steps to help reduce it:

- Eat foods low in saturated fat and low in cholesterol. Meet with a dietitian for information
- Exercise regularly
- Lose weight if you are overweight
- Take cholesterol-lowering drugs ordered by your doctor

What is LDL cholesterol?

Due to its artery clogging properties, LDL cholesterol is often referred to as “bad” cholesterol. LDL cholesterol carries cholesterol into the blood stream and to your tissues where your body can store it. This type of cholesterol can cause plaque build- up, a thick, hard substance that can clog arteries. The plaque can eventually cause arteries to narrow or become blocked completely, causing a stroke.

What is HDL cholesterol?

HDL carries cholesterol away from the tissues to the liver, where it is filtered out of the body. High levels of HDL, also called good cholesterol, seem to protect against stroke and heart attack. A low HDL level may indicate a greater stroke risk.

Reference: National Stroke Association

Diabetes

If you are diabetic, it is important to control blood sugar. High blood sugar levels can damage blood vessels.

Follow these general guidelines and the advice of your doctor:

- Eat foods low in fat and cholesterol
- Exercise
- Control your weight
- Take medicines as ordered
- Manage the level of your blood sugar

Heart and Blood Conditions

Common heart problems such as heart disease, valve defects, irregular heart beat (such as Atrial Fibrillation) and an enlarged heart can cause blood clots. These clots can break loose and block vessels in or leading to the brain. Your doctor can treat and help manage your heart problem and may put you on medicine to help prevent the formation of clots.

If you are taking the drug Warfarin (Coumadin), follow these steps:

- Get regularly scheduled blood tests on time
- Know your INR number, which tells if you are getting the right amount
- Call your doctor if you forget to take your Coumadin. Never take more medicine to catch up
- Call your doctor right away if you have any unusual symptoms like bleeding
- Tell your doctor that you take Coumadin along with other medicines before you have any procedures or before you take any new medicines

Sleep apnea

Sleep apnea is a risk factor for stroke. If you had a diagnosis of sleep apnea prior to your stroke, we recommend a follow up appointment with your sleep specialist.

Use of Medicines

Follow these basic guidelines for taking your medicines:

- Take your drug at the same time each day
- Never stop taking a drug without first talking with your doctor
- Try using a pillbox that separates your pills by the day of the week
- Make sure a family member knows what drugs you are routinely taking
- Report side effects to your doctor
- Talk with your doctor if you cannot afford your drugs. There are programs in place to help if you qualify for help
- Keep a list of drugs you are taking in your wallet or purse
- While in the hospital, you will be evaluated if you can safely take drugs on your own or if you will need assistance for a while

Alcohol

If you drink alcohol, limit your intake to one serving or less per day. A serving size would be 1 ½ ounces of hard liquor, 12 ounces of beer, or a 4-ounce glass of wine. Alcohol is low in nutrients and high in calories so, if you are trying to lose weight, you should avoid it. Before you choose to drink alcohol, even in moderation, talk to your doctor and pharmacist. They can help you determine what is best for your health.

Smoking

Smoking has been linked to the build-up of fatty substances in the carotid artery, the main artery in the neck that supplies blood to the brain. Blockage of this artery is the leading cause of stroke. If you smoke, your doctor can suggest programs and medicine that may help you quit.

Stress is a natural reaction to everyday challenges and changes. No one can avoid it, but how you react to stress is important for your recovery. Here are a few tips on how to cope with stress.

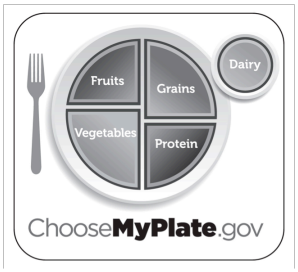
- Talk about stressful feelings. When things build up, talk with a close friend or relative.
- Listen to your body. If you are tense and your head hurts or heart pounds, slow down! Your body is telling you something.
- Get plenty of sleep. Sleep improves how you deal with stressful situations.
- Learn to relax. Find an activity that works for you.
- Consider joining the Discovery Circle or Coffee and Conversation support groups. Contact the Stroke Center for information.

Overweight

Losing weight will reduce the strain on your heart, and often, will improve your blood pressure. It is important to work with your healthcare team including a dietitian to safely and effectively lose weight.

A good weight loss program includes:

- A healthy diet
- Physical activity
- Understanding your eating patterns
- Because you may be limited to some physical abilities, work closely with a physical therapist to identify the best activity guidelines for you
- Set goals and get moving!



Nutrition and Food Choices

In 2011, the United States Department of Agriculture released MyPlate as the replacement for MyPyramid. The basic guidelines will help you incorporate the 2010 dietary guidelines daily as you are planning your meals at home or eating out.

1. Make half or your plate fruits and vegetables
2. Make at least half your grains whole; choose 100% whole-grain
3. Switch to fat free or low-fat milk
4. Vary your protein choices
5. Cut back on sodium and empty calories from solid fats and added sugars
6. Enjoy your food but eat less; watch portion sizes
7. Be physically active (exercise)
8. Get to know the information on food labels

Reference: **MyPlate.gov**

Stroke Nutrition

- This eating plan is low in sodium (which comes mostly from salt).
- Have plenty of vegetables, fruits, whole grains and fat-free or low-fat dairy products. These foods contain nutrients that can help keep blood pressure under control.
- Eat heart-healthy kinds of fat to reduce the buildup of plaque in your blood vessels.
- If you need to lose weight, following a plan that limits high-fat foods and refined carbohydrates.
- Increase fiber in your diet to help decrease cholesterol levels.
- Everyone who has had a stroke should talk to their doctor about what a healthy weight is for them.

Tips to Control Blood Pressure

- Limit the sodium that you get from food and drink
  - Your doctor or registered dietitian can tell you the limit that is right for you.
  - In general, foods with more than 300 milligrams (mg) sodium per serving may not fit into your meal plan.
  - Do not salt food at the table. Use very little salt, if any, when you cook.
  - Choose carefully when you eat away from home. Restaurant foods can be very high in sodium. Let the person taking your order know that you want low-salt or no-salt choices. Many restaurants have special menus or will prepare food with less salt.
  - Prepare foods at home so you can control the amount of salt and the sodium content.
  - Use as little salt in cooking as possible. You can cut at least half of the salt from most recipes.

Sleep Apnea

Obstructive sleep apnea (OSA) is caused by repetitive narrowing or collapse of the throat during sleep. It is estimated that 50-70% of stroke patients have OSA. Untreated sleep apnea can lead to recurrent strokes and can also limit your recovery from a stroke, but excellent treatment options are available.

The following screening questionnaire can help determine your risk for sleep apnea:

1. Have you been told that you snore loudly?
   ◯ Yes ◯ No
2. Do you often feel tired, fatigued, or sleepy during the daytime?
   ◯ Yes ◯ No
3. Do you stop breathing or has anyone witnessed you stop breathing while you sleep?
   ◯ Yes ◯ No
4. Do you have high blood pressure or on medication to control high blood pressure?
   ◯ Yes ◯ No
5. Is your body mass index greater than 35?
   ◯ Yes ◯ No
6. Are you 50 years old or older?
   ◯ Yes ◯ No
7. Is your neck circumference greater than 40 cm (or shirt collar larger than 15.5 inch)?
   ◯ Yes ◯ No
8. Are you a male?
   ◯ Yes ◯ No

If you answered YES to 3 or more questions, you are at increased risk for sleep apnea and should talk with her healthcare provider about visiting with a sleep specialist. A score of 5 or more is highly associated with moderate to severe OSA, and immediate attention should be considered.

For more information, please contact: North Memorial Health Sleep Health Centers at (763) 581-5050 or visit northmemorial.com/sleep

Aphasia Support Group

Coffee and Conversation

Join us for an open conversation for stroke survivors with aphasia and/or other communication difficulties. Interact with others experiencing communication difficulties and practice your communication techniques.

When: **Every Monday**

Time: **10 – 11:30 a.m.**

Location: **North Memorial Health**
North Memorial Health - Robbinsdale Hospital
3300 Oakdale Ave. N, Robbinsdale, MN 55422

Also available Online. Contact the stroke program via phone or email to find out how to join.

No cost. For more information call (763) 581-3656 or email **stroke.program@northmemorial.com**

Stroke is an emergency...every minute counts.

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Stroke Support Group

Discovery Circle

Discovery circle explores issues related to family life and friends, including response to disability, social and leisure activities and returning to work/retirement.

When: **Second Monday of each month (September – May)**

Time: **12 – 1 p.m.**

Location: **North Memorial Health**
North Memorial Health - Robbinsdale Hospital
3300 Oakdale Ave. N, Robbinsdale, MN 55422

No cost. No preregistration required.

For more information call (763) 581-3656
or email **stroke.program@northmemorial.com**

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Resource Facilitation: Free Support after Brain Injury or Stroke

Who are the Minnesota Brain Injury Alliance and Minnesota Stroke Association

The Minnesota Brain Injury Alliance and the Minnesota Stroke Association are the only two nonprofits dedicated to enhancing the quality of life for all Minnesotans affected by brain injury or stroke and who cope with their sudden and long-term effects.

The Alliance and Association offer support to each of the 100,000 Minnesotans living with brain injury and the more than 90,000 Minnesotans who have reported having had a stroke in their lifetime. The goal is to help people get back to life.

MINNESOTA Brain Injury Alliance

Minnesota Stroke Association

MDH Minnesota Department *of* Health

"Resource Facilitations showed me that I was not completely alone, that there were others who faced the same difficulties." – Mark Jaworski

What is Resource Facilitation

Resource Facilitation is a confidential service that connects individuals and those caring for them with the services, resources and answers they need to navigate life after brain injury or stroke.

YOU HAVE QUESTIONS
LET US HELP YOU
FIND THE ANSWERS
612-378-2742 • 800-669-6442
www.braininjurymn.org
www.strokemn.org

What does Resource Facilitation offer?

- Two years of FREE phone-based support
- Regularly scheduled calls designed to offer support and check in on progress
- Help with identifying and solving issues
- Referrals to services that can help you
- Access to education, information and events that connect individuals touched by brain injury or stroke
- A Resource Facilitator assigned to your specific region of the state, so they are familiar with resources where you live
- Accessible support in all languages through interpreters

2277 Highway 36 West, Suite 200 | Roseville, MN | 55113
612-378-2742 | 800-669-6442 | 763-553-0088
www.braininjurymn.org | info@braininjurymn.org

July 2016

2277 Highway 36 West, Ste 200 | Roseville, MN | 55113-3830
612-378-2742 | 800-669-6442

Authorization to Participate in Resource Facilitation

As part of your rehabilitation, we offer follow-up services through the Minnesota Brain Injury Alliance/Minnesota Stroke Association Resource Facilitation Program. This confidential and voluntary telephone follow-up service DOES NOT REPLACE any medical or rehabilitation follow-up care that you may need. It is intended to provide you and your family with information about brain injury or stroke and assistance in accessing services and supports. Participation begins on the date signed. A Resource Facilitator will contact you by telephone approximately six (6) weeks from the time you return this form. If you prefer contact sooner, please call the number listed above.

I, _____, give permission for myself or my child to be part of the Resource Facilitation Follow-Up Program with the Minnesota Brain Injury Alliance/Minnesota Stroke Association.

Name: _____ Telephone: _____

Address: _____ Email: _____

City: _____ State: _____ Zip: _____ Best Time to Call: _____

Date of Birth:_____ Gender: Male ☐ Female ☐ Language Spoken _____

☐ Brain Injury Cause:_____
☐ Stroke

Date of Incident:_____ Date of Hospital Discharge: _____

Caregiver or Guardian of Patient/Individual:_____ Relationship:_____

Address (if different then Patient/Individual): _____

Email: _____ Telephone: _____

_____

Signature of Patient/Individual or Guardian **Date**

Professional Completing this Referral (Social Worker, Discharge Planner, Health Care/Rehabilitation Professional, etc):

_____

Name/Title of Professional **Organization** **Email/Phone**

Send Completed Form to: Minnesota Brain Injury Alliance / Minnesota Stroke Association
Attn: Resource Facilitation
2277 Highway 36 West, Suite 200
Roseville, MN 55113-3830

Fax to: 612-378-2789 or Scan and E-mail to: info@braininjurymn.org [subject line: RF Referral]

April 2014

Stroke is an emergency
Every minute counts — Call 911

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North Memorial Health Stroke Center
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Robbinsdale, MN 55422
(763) 581-3656
stroke.program@northmemorial.com