Stroke Patient Education Guide

Ochsner Health

Providing the highest quality medical care

When you or a loved one has a stroke, there are questions, fears, and anxieties. While this is a difficult time, Ochsner is committed to providing the highest quality medical care so you can get back to your life as quickly and fully as possible.

Ochsner has the expertise needed to achieve your best possible recovery. One of the reasons we are successful in stroke treatment is our unique team approach. Healthcare professionals from many specialties work together to determine the best treatment plan to meet individual needs of our stroke patients.

You are the center of the Ochsner Stroke Team. You provide important information that is needed through the course of treatment. Your team includes a carefully selected group of highly trained doctors, residents, nurses, therapists, dietitians, and social workers.

The Ochsner Stroke Patient Education Guide contains information that can help you understand and be part of your care. If you have any questions, feel free to ask members of your stroke team.

In this guide, the term "stroke survivor" may be used instead of patient to refer to someone who has had a stroke. This is because people who have had a stroke are patients for only a short time, first in the hospital and then perhaps in a rehabilitation program. For the rest of their lives, they are people who have had a stroke.

Recovery works best when stroke survivors and their loved ones work together. For this reason, both stroke survivors and loved ones are encouraged to **read all parts of this guide.**

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My Stroke Worksheet

Your treatment and recovery may depend on the type of stroke you've had, where it happened in your brain, and the risk factors you have. Use this worksheet to record important information about your stroke and the medications you take.

The type of stroke I experienced is:

- ☐ Ischemic
  - ☐ Thrombotic (clot forming in vessel that feeds the brain)
  - ☐ Embolic (clot traveling to brain from another part of the body)
  - ☐ Low Blood Flow
- ☐ Hemorrhagic
- ☐ TIA

The cause of my stroke is: _____

_____

The location of my stroke is:

☐ Right sided ☐ Left sided ☐ Brain stem

My initial stroke deficits are:

☐ Right sided ☐ Left sided ☐ Other _____

To keep my blood from clotting, I take: _____

To keep my blood pressure lower, I take: _____

To keep my blood sugar within a normal range, I take: _____

To keep my cholesterol down, I take: _____

My blood pressure range: _____

My blood sugar range: _____

My current LDL is: _____ (goal < 70 mg/dL)

My current A1c is: _____ (goal < 7%)

Understanding Stroke

Each year, more than 750,000 Americans have strokes. A stroke occurs when blood flow to part of your brain suddenly stops. Your brain cells need the oxygen and nutrients carried by the blood. When blood flow to the brain is stopped, the tissue dies from lack of oxygen. When a stroke happens, brain cells begin to die within minutes.

A stroke does not affect all people the same. One person may have difficulty speaking but is able to move their arms and legs, while another person may have difficulty with thinking. The brain controls many parts and functions of your body. The effects of a stroke depend on where in the brain the stroke occurs.

Types of strokes

Ischemic

A stroke is caused by a problem with one of the blood vessels that carry blood to the brain. Most commonly, the problem is a blood clot that gets stuck in a damaged blood vessel, blocking blood flow. Clots that block an artery cause ischemic strokes. This is the most common type of stroke, accounting for 85% of all strokes.

Hemorrhagic

Blood vessels that burst cause hemorrhagic strokes, or bleeding strokes.

TIA

A transient ischemic attack (TIA or mini stroke) is a brief loss in brain function. It happens when the brain does not get enough blood because a blood vessel is blocked for a short time. It does not cause any lasting damage to the brain. Often the symptoms go away within a few minutes to 24 hours.

Whether the vessel is blocked or bleeding, the result is the same: blood can no longer reach the part of the brain that was normally fed by that vessel.

Common effects of a stroke

Although stroke is a disease of the brain, it can affect the entire body. The effects of a stroke vary from person to person. They range from mild to severe, and can be temporary or permanent. The changes you see depend on the location of your stroke, how quickly you receive treatment, and whether you have any complications. The effects of a stroke are greatest in the first days and weeks after the stroke happens.

1. Loss of movement, strength, or sensation
Weakness and paralysis, usually on one side of your body, are common after a stroke. Some common changes that result from stroke are the inability to move one side of the body (called hemiplegia) or one-sided weakness (called hemiparesis). Sometimes strokes can cause “one-sided neglect,” this is when you ignore or forget one side of your body. Trouble swallowing (dysphagia) is also common.

2. Problems thinking and remembering

Strokes can affect the ability to think clearly and to concentrate. You might have trouble making decisions or solving problems. You might become forgetful, or feel like your memory is playing tricks on you.

3. Trouble communicating

Stroke does not usually cause hearing loss, but many people have problems understanding speech and communicating. Stroke survivors often have trouble saying what they are thinking. Also, you may mix up words or have trouble understanding other people's speech. Aphasia is the general term for these kinds of problems.

Other stroke effects may also interfere with your ability to communicate. For example, if the muscles used in talking or swallowing are affected, your speech can be slurred, slow, and difficult to understand.

4. Changes in vision

Your field of vision may be smaller than normal, making vision seem not as sharp. Blurred vision is also common after a stroke. You might have trouble coordinating or controlling your eye movements. Some people have trouble judging distance between objects or how near or far an object is away (this is called depth perception).

5. Changes in your behavior, perceptions, and emotions

After a stroke, you may feel sad, angry, or depressed for a time. You may find yourself laughing or crying uncontrollably or at inappropriate times. You may even find that your emotions may change rapidly. In some cases, people feel that their basic personality has changed. You may feel fatigued, but your energy should slowly come back as you recover. If it doesn't, talk to your doctor. Together you can determine the cause of your fatigue and whether or not you need treatment.

Recovering brain function

Some of the damage done by a stroke can never be undone, but some of it can. When a stroke occurs, it kills some brain cells. Your body clears away these dead brain cells, but they can't be re-grown or replaced. The function of those brain cells affected by the stroke may be permanently lost.

Stroke limits the function of other, undamaged brain cells. Often this happens because the undamaged brain cells have lost normal communication with a damaged area of the brain. After some time, the functioning may return, as communication is "re-routed" inside your brain.

Another possibility is for undamaged areas to take on new tasks. Since most activities—like talking or walking—require a coordinated effort between different parts of the brain, there are many possible ways for the brain to make up for missing pieces.

Stroke Assessment & Treatment

When you have a stroke, time is crucial. **If you have any stroke symptoms call 911 immediately. Do not delay!**

The earlier treatment is started after symptoms begin, the more likely you are to survive and recover. Your doctor can be alerted as you are traveling to the hospital. Any relatives or friends who were with you when your symptoms started should go with you to the hospital.

Assessing your stroke

The first minutes and hours after the stroke's onset may seem like a blur. You may not remember what happened, or fully understand what your doctors did. When a stroke is suspected, doctors must work quickly to confirm this diagnosis. They'll also try to determine the type and location of the stroke—these are important factors in treatment.

In the emergency room, a doctor will assess your symptoms and when they occurred. You will also be asked about your medical history and a thorough physical exam will be completed. You'll also be asked about your health and risk factors. Loved ones can answer if you cannot. Specific tests such as blood tests, a CT scan or an MRI will be done. This will help determine what kind of stroke you had.

Stroke treatment

Treatment begins as soon as your doctor knows the type of stroke you had and where it occurred. It may involve one or more of the following.

- medication to dissolve blood clots (ischemic strokes)
- medication to prevent blood clots (ischemic strokes)
- tests to look for damage from the stroke
- procedures to stop bleeding (hemorrhagic strokes)

The goal of the first steps in stroke treatment is to minimize damage. After the first several hours, treatment turns to recovery and to preventing future strokes. A variety of treatments exist for ischemic and hemorrhagic strokes. Your physician will review with you the recommend medications and therapies.

Next you will be admitted to either the Critical Care Unit or the Stroke Unit. Your care will focus on assessing injury to the brain, preventing complications, and monitoring and treating symptoms. Here's the care you may require:

- medication given through a vein (IV), by mouth, or by other methods
- monitoring of your vital signs (blood pressure, heart rate, temperature, for example)
- monitoring of your neurological status for changes
- daily blood draws for laboratory tests
- imaging tests such as additional CT-scans, MRI's, x-ray or echocardiogram ("echo")
- bed rest, with limited bedside and self-care activities as directed by your medical team
- other equipment, monitoring, or support—for example, extra oxygen or a ventilator (breathing machine)

Preventing Recurring Stroke

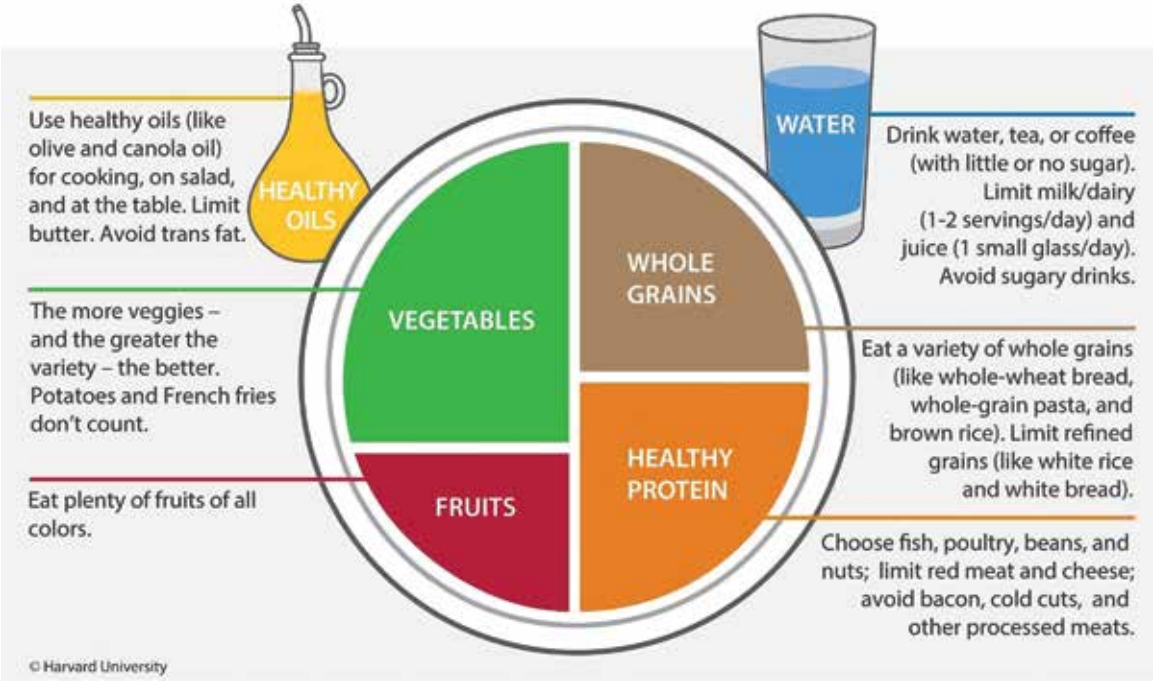
Eating healthy

Eating healthy foods helps lower cholesterol levels and reduce plaque buildup in arteries. It can also help you lose weight and keep high blood pressure under control. Eating better doesn't necessarily mean going on a special diet, unless you have diabetes or high blood pressure. Instead, the idea is to make healthier choices by limiting foods and ingredients that contribute to risk factors for stroke.

Meats to Try	Meats to Avoid
• Fish, skinless chicken, and tofu • Ground turkey • Chicken or turkey breast slices	• Beef and other red meats • Hamburger • Processed deli meats
Starches & Grains to Try	**Starches & Grains to Avoid**
• Whole-grain bread • Brown rice • Whole-grain pasta or noodles • Sweet potatoes	• White bread • White rice • Regular pasta or noodles • White potatoes
Dairy & Oils to Try	**Dairy & Oils to Avoid**
• 1% or skim milk • Low-fat cheese and mayonnaise • Low-fat yogurt • Olive oil or canola oil	• Whole milk • Regular cheese and mayonnaise • Ice cream • Butter
Drinks, Sweets & Snacks to Try	**Drinks, Sweets & Snacks to Avoid**
• Water and diet soda • Nuts, seeds, air-popped popcorn • Fresh fruit, whole-grain raisin bread	• Sugary soda and salty vegetable juices • Chips and other salty snacks • Donuts and croissants

Choose the right mix of foods

The key to good eating is having a variety of healthy foods. Try to plan meals around vegetables, fruits, lean meats, and whole grains. Limit fatty meats and high-fat dairy products. The diagram below can show you the best way to fill up your plate.



- Drink **water or low-fat (1% or fat-free skim) milk** with meals. Avoid sugary sodas and salty vegetable juices.
- At least half the plate should be **vegetables and fruits**. Limit fatty toppings, such as butter, salad dressing, and sour cream.
- No more than one-quarter of the plate should be **meat or other protein**. Fish, beans, tofu, and lean cuts of poultry are best. Bake or broil meat instead of frying.
- About one-quarter of the plate can be **starchy foods**, such as rice and potatoes. Whole grains, such as brown rice or whole-wheat bread, are best.

Try healthier options

Giving up old food habits doesn't have to be hard. Encouragement makes it easier to stick with a healthy eating plan. Here are some easy ways to choose healthier options:

Choose fats wisely

Reducing "bad" fats in your diet helps keep your arteries healthier.

- Choose unsaturated fats. These are found in foods such as fish, nuts, olive oil, canola oil, and avocados. In moderation, these fats can be good for you.
- Limit saturated fats. These are found in meat and dairy foods, such as burgers, poultry skin, milk, cheese, and butter.
- Avoid trans fats. These are often found in processed foods. Avoid any food that has the word "hydrogenated" in its ingredients.

Reduce sodium (salt)

You may be asked to eat less sodium. If you have high blood pressure, your health care provider will probably recommend that you limit your sodium intake to 1,500 mg – 2,400 mg per day.

- Look for food labels that say, "salt free" or "very low sodium." Always check for the number of servings per container on the food label, as a container of food may have more than 1 serving.
- Avoid canned and packaged foods such as canned soup, instant noodles, TV dinners, and pre-made sauces.
- Don't add salt or soy sauce to meals. Use fresh herbs or lemon juice for seasoning. Your taste buds will adjust.
- Avoid fast food. Look for "heart healthy" items on restaurant menus. These are often lower in fat and salt.

Make it a family affair!

Eating healthy is easier when everyone joins in.

- Shop together for healthy foods. Choose lots of fresh fruits and vegetables.
- It's most helpful if everyone in the family eats healthy foods.

Getting active

Being active is key to preventing stroke. It's good for your heart and lowers high blood pressure. It also helps you keep doing independent activities of daily living and helps you recover lost skills.

It's best if you're active at least 30 minutes each day. But this doesn't have to be at a gym. Find things that fit your lifestyle and abilities.

If you have trouble moving around, your doctor may prescribe physical therapy. The physical therapist can help you develop activity goals and provide an exercise prescription. Low- to moderate-intensity aerobic and muscle-strengthening activities are important parts of recovery.

Ways to get moving

After a stroke, you may not be able to do everything you used to. But there are simple ways you can stay active.

- Rake leaves or work in the garden.
- Play with children or grandchildren.
- Work on a hobby.
- Park farther away from building entrances and walk.
- Sweep or vacuum your living space.
- Use the stairs instead of the elevator. If walking up is too strenuous, you can start by walking down.
- If walking is hard, try stretching exercises or swimming.

Walk every day

Walking is great exercise. It's free, easy, and all you need is a good pair of shoes. Start with short walks. Then go a little farther each week. The tips below can help.

- Warm up. Start off with a few minutes of strolling. Then walk at a brisker pace.
- Walk every chance you get. Walk to do errands, for fun, or to visit friends. Visit a local park or explore your neighborhood.
- Take a friend along. Having company can make it more fun.
- Try walking a little farther or longer each week. You may be surprised by how fast you improve!

Stick with it

Some days it may seem hard to be active. **Plan ways to keep going anyway. Your health and life are on the line.** Make a list of things that might keep you from exercising. Then write down what you can do to get around those things.

Know when to stop

If you're new to exercising, it's normal to feel a little sore afterward. But you should stop right away if you

- have trouble breathing
- feel dizzy or extremely tired
- have sharp pain

Stroke Risk Factors

☐ **High Blood Pressure**	☐ *This does not apply to me.*

High blood pressure (also called hypertension) is known as the "silent killer." This is because most of the time it doesn't cause symptoms. In fact, many people don't know they have it until other problems develop.

In most cases, high blood pressure can't be cured. It's a disease that often requires lifelong treatment. The good news is that it can be managed.

Understanding blood pressure

The circulatory system is made up of the heart and blood vessels that carry blood through the body. Your heart is the pump for this system. With each heartbeat (contraction), the heart sends blood out through large vessels called arteries. Blood pressure is a measure of how hard the moving blood pushes against the walls of the arteries.

High blood pressure can harm your health

In a healthy blood vessel, the blood moves smoothly through the vessel and puts normal pressure on the vessel walls.

High blood pressure occurs when blood pushes too hard against artery walls. This causes damage to the artery walls and then the formation of scar tissue as it heals. This makes the arteries stiff and weak. Plaque sticks to the scarred tissue, narrowing and hardening the arteries.

High blood pressure also causes your heart to work harder to push blood through your body. High blood pressure raises your risk of heart attack, also known as acute myocardial infarction (AMI), and stroke. It can also lead to kidney disease and blindness.

Measuring blood pressure

An example of a blood pressure measurement is 120/70 (120 over 70). The top number is the pressure of blood against the artery walls during a heartbeat (systolic). The bottom number is the pressure of blood against artery walls between heartbeats (diastolic). Talk with your healthcare provider to find out what your blood pressure goals should be.

Controlling blood pressure

If your blood pressure is too high, work with your doctor on a plan for lowering it. Below are steps you can take that will help lower your blood pressure.

- **Choose heart-healthy foods.** Eating healthier meals helps you control your blood pressure. Ask your doctor about the DASH eating plan. This plan helps reduce blood pressure by limiting the amount of sodium (salt) in your diet. DASH also encourages eating plenty of fruits and vegetables, low-fat or non-fat dairy, whole grains, and foods high in fiber, and low in fat.
- **Reduce sodium.** Reducing sodium in your diet reduces fluid retention. Fluid retention caused by too much salt increases blood volume and blood pressure. The American Heart Association's (AHA) "ideal" sodium intake recommendation is 1,500 milligrams per day. However, since Americans eat so much salt, the AHA says a positive change can occur by cutting back to even 2,400 milligrams of sodium a day.
- **Maintain a healthy weight.** Being overweight makes you more likely to have high blood pressure. Losing excess weight helps lower blood pressure.
- **Exercise regularly.** Daily exercise helps your heart and blood vessels work better and stay healthier. It can help lower your blood pressure.
- **Stop smoking.** Smoking increases blood pressure and damages blood vessels.
- **Limit alcohol.** Drinking too much alcohol can raise blood pressure. Men should have no more than 2 drinks a day. Women should have no more than 1. (A drink is equal to 1 beer, or a small glass of wine, or a shot of liquor.)
- **Control stress.** Stress makes your heart work harder and beat faster. Controlling stress helps you control your blood pressure.

Facts about high blood pressure

- Feeling OK does not mean that blood pressure is under control. Likewise, feeling bad doesn't mean it's out of control. The only way to know for sure is to check your pressure regularly.
- Medicine is only one part of controlling high blood pressure. You also need to manage your weight, get regular exercise, and adjust your eating habits.
- High blood pressure is usually a lifelong problem. But it can be controlled with healthy lifestyle changes and medicine.
- Hypertension is not the same as stress. Although stress may be a factor in high blood pressure, it's only one part of the story.
- Blood pressure medicines need to be taken every day. Stopping suddenly may cause a dangerous increase in pressure.

Low-Salt Choices

Eating salt (sodium) can make your body retain too much water. Excess water makes your heart work harder. Canned, packaged, and frozen foods are easy to prepare, but they are often high in sodium. Here are some ideas for low-salt foods you can easily prepare yourself.

For Breakfast Try These	For Breakfast Stay Away From
• Fruit or 100% fruit juice • Whole-wheat bread or an English muffin (Compare sodium content on labels.) • Low-fat milk or yogurt • Unsalted eggs • Shredded wheat • Unsalted corn tortillas • Unsalted steamed rice • Regular (not instant) hot cereal, without salt	• Sausage, bacon, and ham • Flour tortillas • Packaged muffins, pancakes, and biscuits • Instant hot cereals • Cottage cheese
For Lunch & Dinner Try These	**For Lunch & Dinner Stay Away From**
• Fresh fish, chicken, turkey, or meat—baked, broiled, or roasted without salt • Dried beans, cooked without salt • Tofu, stir-fried without salt • Unsalted fresh fruit and vegetables, or frozen or canned fruit and vegetables with no added salt	• Lunch or deli meat that is cured or smoked • Cheese • Tomato juice and catchup • Canned vegetables, soups, and fish not labeled as “no salt added” or “reduced sodium” • Packaged gravies and sauces • Olives, pickles, and relish • Bottled salad dressings

☐ **Diabetes**	☐ *This does not apply to me.*

If high blood sugar is not controlled, blood vessels throughout the body become damaged. Prolonged high blood sugar affects organs, blood vessels, and nerves. As a result, the risk of damage to the heart, kidneys, eyes, and limbs increase.

Diabetes also makes other problems, such as high blood pressure and high cholesterol, more dangerous. Over time, people with uncontrolled high blood sugar have an increase in risk of dying of, or being disabled by, heart attack or stroke.

How to take your diabetes medications

- Make sure to follow your doctor's instructions when taking your diabetes medications or insulin.
- Both timing and consistency are important for your medications to work properly.
- Report any side effects that you experience.
- If you take metformin you may be asked to hold this medication for a short time after having a contrast procedure.

Blood glucose monitoring

- If you take insulin, you need to check 3 times daily.
- If you take diabetes pills only, you may need to check once or twice daily.
- Keep a blood sugar record and bring it to every diabetes check-up visit.
- Always check your blood sugar before exercise.

Healthy eating habits

The major food groups are carbohydrates (starch, fruit, milk, sweets, and starchy, vegetables), proteins (meat, fish, and poultry), and fats (oils, nuts, and gravies).

- Carbohydrates and fats should be eaten in moderation.
- Even when people make healthy food choices, they often eat too much.
- Use a small plate.
- Share a meal or dessert when eating out.
- Use dry measuring cups to observe portion sizes.
- Timing of meals can control your blood glucose.
- Space meals 4-5 hours apart.
- User small healthy snacks if meals are delayed.
- Avoid skipping meals.

Exercise is important

Exercise and physical activities are very important to help control your blood sugar. Exercise can improve blood flow, strengthen heart muscle, lower blood pressure, lower fats in blood, and give you more energy.

Set goals, pick something you enjoy, pace yourself, and start slowly.

Safety Rules for Exercise	Best Activities for Exercise
• Receive doctor's permission • Wear good shoes • Wear a medical I.D. • Carry glucose tabs, hard candy, or juice	• Walking and water walking • Swimming • Biking • Dancing

Needle Syringe Disposal

Use a laundry detergent container. Label as "Sharps Biohazard Do Not Recycle." When two-thirds full, seal tightly and place in trash.

Hypoglycemia (low blood sugar)

- Causes: Too little food or skipping a meal, more active than usual
- Onset: Often sudden
- Symptoms: Shaky, fast heartbeat, sweating, dizzy, anxious, hungry, blurry vision, weakness, headache, irritable
- Treatment: Follow the Rule of 15/15 – check blood sugar right away and treat by sick day guidelines below and emergency contact information.

Hyperglycemia (high blood sugar)

- Causes: Too much food, too little insulin or too few diabetes pills, illness or stress
- Onset: Often starts slowly
- Symptoms: Extreme thirst, frequent urination, dry skin, hunger, blurry vision, drowsiness, slow healing wounds
- Treatment: Follow sick day rules listed below.
- Notify: Call your health care provider if your blood glucose levels are higher than usual for 3 days and don't know why.

Sick Day Guidelines and Emergency Contact Information

- Always take your insulin or diabetes pills.
- Check your blood glucose often.
- Try to follow your meal plan. If you have trouble eating solid foods, try soup, applesauce, or yogurt.
- Drink plenty of water and other sugar-free fluids to stay hydrated.

Call your healthcare provider right away if

- You can't keep liquids down for more than 4 hours.
- You have vomiting or diarrhea for more than 6 hours.
- Your blood glucose stays greater than 300 or less than 70.
- You have not eaten normally for more than 24 hours.
- You have a fever greater than 100.4°.
- You have trouble breathing.
- You can't stay awake or think clearly.

Potential long-term complications of uncontrolled blood sugars

- Peripheral neuropathy (nerve damage, amputation)
- Nephropathy (kidney and/or failure)
- Retinopathy (decrease vision or blindness)

Helpful resources

- Visit www.ochsner.org/services/diabetes to view videos on how to check your blood glucose and use an insulin pen.
- Visit diabeteseducation.novocare.com or call toll-free to 1-844-861-2874 to enroll in a free diabetes support program.

☐ **High Cholesterol**	☐ *This does not apply to me.*

Cholesterol is a waxy substance. It travels in your blood through the blood vessels. When you have high cholesterol, it builds up in the walls of the blood vessels. This makes the vessels narrower. Blood flow decreases. You are then at greater risk for having a heart attack or a stroke.

Good and bad cholesterol

Lipids are fats. Blood is mostly water. Fat and water don't mix. So, our bodies need lipoproteins (lipids inside a protein shell) to carry the lipids. The protein shell carries its lipids through the bloodstream. There are two main kinds of lipoproteins.

- **LDL (low-density lipoprotein)** is known as "bad cholesterol." It mainly carries cholesterol. It delivers this cholesterol to body cells. Excess LDL cholesterol will build up in artery walls. This increases your risk for heart disease and stroke.
- **HDL (high-density lipoprotein)** is known as "good cholesterol." This protein shell collects excess cholesterol that LDLs have left behind on blood vessel walls. That's why high levels of HDL cholesterol can decrease your risk of heart disease and stroke.

Controlling cholesterol levels

Total cholesterol includes LDL and HDL cholesterol, as well as other fats in the bloodstream. If your total cholesterol is high, follow the steps below to help lower your total cholesterol level.

- **Eat less unhealthy fat.** It's not enough to just cut back on foods containing cholesterol. A diet that's high in saturated fats and trans fats (also called hydrogenated fats) increases your bad cholesterol.
  - Select lean cuts of meat, low-fat dairy, and use oils instead of solid fats.
  - Limit baked goods, processed meats, and fried foods.
  - Eat about 2 servings of fish per week. Most fish contain omega-3 fatty acids. These help lower blood cholesterol.
  - Eat more whole grains and soluble fiber (such as oat bran). These lower overall cholesterol.

- **Be active.** Start at a level where you feel comfortable. Increase your time and pace a little each week. Work up to 40 minutes of moderate to high intensity physical activity at least 3 to 4 days per week. Remember, some activity is better than none.
  - Choose an activity you enjoy. Walking, swimming, and riding a bike are some good ways to be active.
  - If you haven't been exercising regularly, start slowly. Check with your doctor to make sure the exercise plan is right for you.
- **Quit smoking.** Quitting smoking can improve your lipid levels. It also lowers your risk for heart disease and stroke.
- **Maintain a healthy weight.** If you are overweight or obese, your health care provider will work with you to lose weight and lower your BMI (body mass index) to a normal or near-normal level. Making diet changes and increasing physical activity can help.
- **Take medication as directed.** Many people need medication to get their LDL levels to a safe level. Medication to lower cholesterol levels is effective and safe. (But taking medication is not a substitute for exercise or watching your diet!) Your doctor can tell you whether you might benefit from a cholesterol-lowering medication.

☐ **Smoking**	☐ *This does not apply to me.*

Kicking the Smoking Habit

If you smoke, quitting is one of the best changes you can make for your heart and your overall health. **Your risk of heart attack and stroke goes down within one day of putting out that last cigarette.** As you go longer without smoking, your risk goes down even more. Quitting isn't easy, but millions of people have done it. You can, too. It's never too late to quit.

Getting started

Boost your chances of success by deciding on your "quit plan." Your health care provider and cardiac rehab team can help you develop this plan. Even if you've already quit, it's easy to slip back into smoking. Your plan can help you avoid and recover from relapse. In any case, start by setting a date to quit within a month, and do it.

Keys to your quit plan

- Talk to your healthcare provider about prescription medicines and nicotine replacement products that help lessen the urge to smoke.
- Join a support group or quit smoking program. Talking with others about the challenges of quitting can help you get through them.
- Ask other smokers in your household to quit with you.
- Look for the cues in your life that you associate with smoking and avoid them.

Track your triggers

What gives you that "I-need-a-cigarette" feeling? List all the situations that make you want a cigarette. Then think of other ways to deal with these situations. Here are some examples.

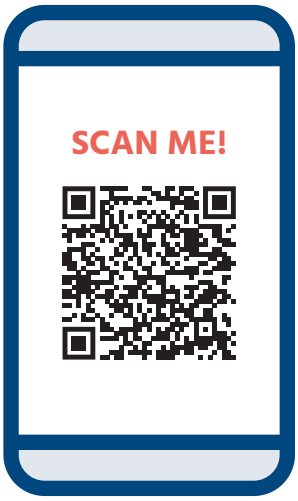
Situation	How I'll Handle It
Finishing a meal	Get up from the table and take a walk.
Having an argument	Find a quiet place and breathe deeply.
Feeling lonely or bored	Call a friend to talk.

Tips for Quitting Successfully

- List the benefits of quitting such as reducing heart risks and saving money. Keep this list and review it whenever you feel like smoking.
- Get support. Let your loved ones know you may call them to chat when you have an urge to smoke.
- If you've tried to quit before without success, this time avoid the triggers that may cause the relapse.
- Make the most of slip-ups. Try to learn from them, and then get back on track.
- Be accountable to your loved ones and your calendar so that you stay on track.

Online resources

- Smokefree.gov
- Make your quit plan at smokefree.gov/build-your-quit-plan.
- Download the free "Clearing the Air" booklet from the National Cancer Institute. Scan the code to the right with your smartphone camera or visit smokefree.gov/sites/default/files/pdf/clearing-the-air-accessible.pdf.



☐ **Atrial Fibrillation**	☐ *This does not apply to me.*

Atrial fibrillation (AFib) is the most common abnormal heart rhythm in the world. The heart has 2 upper chambers called atria and 2 lower chambers called ventricles. AFib causes the atria to quiver (fibrillate) instead of pumping normally. Blood can then pool in the heart instead of moving in and out as usual. This can cause blood clots to form inside the heart. A clot can break free, travel to the brain and cause a stroke. A stroke can cause brain damage quickly.

Taking medicine to prevent stroke

Your healthcare provider may prescribe a medicine to help prevent blood clots. This type of medicine is called a blood thinner, like the ones listed below.

- Antiplatelet medicines, such as aspirin or clopidrogrel
- Anticoagulation medicines, such as warfarin, dabigatran, rivaroxaban, apixaban, or edoxaban

Risks of blood thinner medicine

Blood thinners increase your risk of bleeding. If you take certain blood thinners, you may need to take extra steps to stay healthy. You may need regular blood tests to check the levels of medicine in your blood. You'll need to be careful not to injure yourself. And you may need to watch your diet for foods that affect blood clotting.

Taking the right dose

You'll need to make sure to take the medicine exactly as directed by your healthcare provider. Take it at the same time each day. If you miss a dose, call your provider right away to find out how much to take. Never take a double dose. If you take too much, it can cause too much bleeding. It can cause bleeding you can see, on the outside of your body. And it can cause bleeding on the inside of your body that you may not be aware of.

Watching your diet

Some foods can affect how certain blood thinners work. In particular, warfarin levels are sensitive to your diet. For example, many foods contain vitamin K. Vitamin K is a substance that helps your blood clot. You don't need to avoid foods that have vitamin K. But you do need to keep the amount of them you eat steady as possible from day to day. Examples of foods high in vitamin K are asparagus, avocado, broccoli, cabbage, kale, spinach, and some other leafy green vegetables. Oils, such as soybean, canola, and olive are also high in vitamin K.

Other foods and drinks can affect the way blood thinners work in your body. These include:

- Grapefruit and grapefruit juice
- Cranberries and cranberry juice
- Fish oil supplements
- Garlic, ginger, licorice, and turmeric
- Herbs used in herbal teas or supplements
- Alcohol

If any of these items are part of your regular diet, continue using them as you normally would. Don't make any major changes in your diet without first talking with your healthcare provider.

You may also need to limit fats in your diet to 2 to 4 tablespoons a day.

Preventing injury

Because blood thinners make you bleed more, you'll need to protect yourself from breaks in the skin. Follow these guidelines:

- Don't go barefoot – always wear shoes.
- Don't trim corns or calluses yourself.
- Consider using an electric razor instead of a manual one.
- Use a soft-bristled toothbrush and waxed dental floss.

You'll also need to avoid any activities that may cause injury. If you fall or are injured, you could be bleeding inside your body and not know it. Make sure to get medical attention right away if you fall, hit your head, or have any other kind of injury.

Other safety tips

- Tell all of your healthcare providers that you take a blood thinner for AFib. This includes all of your doctors, dental care providers, and your pharmacist.
- Ask your doctor before taking any new medicines, vitamins, or other supplements. Any of these can cause problems when you take a blood thinner.
- Wear a medical alert bracelet or carry an ID card in your wallet if you will be taking blood thinners for months or longer.
- Keep all appointments for your blood tests.

Procedures to prevent stroke

Most blood clots that form in the heart occur in a pouch of the left atrium called the appendage. This pouch can often be large and have multiple lobes which can allow blood to pool and clots to form. Left atrial appendage closure is a nonsurgical procedure in which a self-expanding plug is placed at the opening of the left atrial appendage to close it off from the rest of the heart. Once the plug has fully sealed, no blood can enter or leave the appendage. This reduces blood clot formation and stroke risk.

Ask your doctor if you qualify for this type of procedure.

Call your healthcare provider right away if you experience

- Unusual or severe headache
- Confusion, weakness, or numbness
- Loss of vision
- Difficulty with speech
- Bleeding that won't stop
- Coughing or vomiting blood
- Bright red blood in the stool
- Fall or injury to the head
- Symptoms of atrial fibrillation that are new or getting worse

☐ **Carotid Artery Disease**	☐ *This does not apply to me.*

The carotid arteries are large blood vessels that carry blood to the brain. When these arteries are healthy, the brain gets all the oxygen and nutrients it needs to function well. If the carotid arteries are damaged, however, it can greatly increase your chances of stroke. This is a sudden loss of brain function caused by a lack of blood flow and oxygen.

Small pieces of a blood clot called emboli break off and can enter the bloodstream and travel to the brain. Brain tissue is damaged when emboli block arteries in the brain.

How artery damage can lead to stroke

In a healthy carotid artery, the inside of the artery wall is smooth and open. But health problems such as high blood pressure can damage the artery wall and make it rough. This allows fatty deposits called plaque to build up in the artery wall. Blood clots called emboli may also form on the plaque. If pieces of plaque or emboli break off, they can flow in the blood until they get stuck in a small blood vessel in the brain. This blocks blood flow to a part of the brain causing a stroke.

Symptoms of stroke

Below are common symptoms of stroke. Call 911 right away if you have any of these symptoms. Prompt medical treatment for a stroke is vital. The longer you wait to get help, the more damage a stroke can do.

- Sudden numbness or weakness of the face, arm, or leg, especially on 1 side of the body
- Sudden confusion or trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden, severe headache with no known cause

Transient ischemic attack (TIA)

A transient ischemic attack or TIA is a mini-stroke. It's a serious warning sign of a larger stroke. TIAs happen when an artery to the brain is temporarily blocked. This blockage will cause symptoms identical to those that happen with stroke. The only difference is that they last a short period of time, from a few seconds to a few hours. Never ignore any stroke symptoms. Call 911 right away.

☐ **Carotid Dissection**	☐ *This does not apply to me.*

There is one carotid artery on each side of your neck. These arteries send blood to your brain. A carotid dissection is a tear in the inner layer of the carotid artery.

What happens during a tear in a carotid

The first part of each carotid artery is called the common carotid artery. Each common carotid artery has an inner (internal) and an outer (external) branch. The outer branch carries blood to your face and scalp. The inner branch carries blood to the front part of your brain.

A carotid dissection is a tear of the inner layer of the wall of the artery. The tear lets blood get in between the layers of the wall. This separates them and causes the artery wall to bulge. The bulge can slow or stop blood flow through the artery. It can also cause problems by pressing on things nearby, such as nerves.

The tear can also start the body's clotting system. A clot can then block blood flow at the site of the tear. Or pieces of the clot can break off and block blood flow in smaller branches of the artery. Blocked or decreased blood flow can lead to a mini-stroke (TIA) or stroke. These stop blood flow to the brain. A TIA does this for only a short period of time.

A carotid dissection can happen at any age. It tends to happen more often in younger adults than in older adults. It is a common cause of stroke in people under age 50.

What causes carotid dissection?

An injury to the neck can cause carotid dissection. The injury may be caused by something like a car crash. A carotid dissection can also happen with no known cause. Or it may happen after a normal activity such as:

- Swimming
- Scuba diving
- Skating
- Dancing
- Play sports such as tennis, basketball, or volleyball
- Yoga
- Riding a roller coaster or other ride
- Jumping on a trampoline
- Giving birth
- Having sex
- Sneezing or coughing
- Getting chiropractic treatment

Risks for carotid dissection

Some things may raise the risk of having a carotid dissection. But some people who get carotid dissections do not have any of those risk factors. In some cases, genes may play a part. If you have a family member who has had an artery dissection, you may have a greater risk. Other things that may raise your risk.

- Infection
- High blood pressure
- Migraine headaches
- Smoking
- Use of oral contraceptives
- Alcohol use
- An extra-long bone near the jaw (styloid process)

☐ **Sleep Apnea**	☐ *This does not apply to me.*

Obstructive sleep apnea is a condition that causes your air passages to become narrowed or blocked during sleep. As a result, breathing stops for short periods. Your body wakes up enough for breathing to begin again, though you don't remember it. The cycle of stopped breathing and brief awakenings can repeat dozens of times a night. This prevents the body from getting to the deeper stages of sleep that are needed for good rest and may cause your body's oxygen level to fall.

Sleep apnea contributes to the risk of stroke. Increasing sleep apnea severity is associated with increasing risk.

☐ **Atherosclerosis**	☐ *This does not apply to me.*

How atherosclerosis affects your arteries

A fatty material (plaque) can build up in your arteries. This makes it harder for blood to flow through them. A blood clot can then form on the plaque. This may block the artery, cutting off blood flow. This can cause conditions such as coronary artery disease (CAD) and peripheral arterial disease (PAD).

- CAD occurs when plaque builds up in the coronary artery. This artery supplies the heart with oxygen-rich blood.
- PAD occurs when plaque forms in leg arteries.

The same things that cause CAD and PAD can also cause plaque to form in other arteries in your body, such as those in the brain. When plaque occurs in any of these arteries, it raises your risk of heart attack or stroke.

What aspirin does

Aspirin is a blood-thinner (antiplatelet medicine). It helps keep blood clots from forming. This reduces the risk of blockage. Aspirin can be taken daily if you are at high risk of or have already had a heart attack or stroke. It is also used after a procedure called a stent placement. This is when a tiny wire mesh tube, or stent, is placed in an artery to keep it open. Aspirin helps prevent blood clots from forming on the stent.

☐ **Alcohol Abuse**	☐ *This does not apply to me.*

Alcohol is a central nervous system depressant. It can damage parts of the brain that affect your balance, memory, thinking, and emotions. It can cause memory loss, blackouts, depression, agitation, sleep cycle changes, and seizures. These changes may or may not be reversible.

Procedures

☐ **Angiogram/Carotid Angiography**	☐ *This does not apply to me.*

Carotid angiography is a type of X-ray test used to view the carotid arteries. These are the large blood vessels that supply your brain with blood. During the test, a thin, flexible tube called a catheter is passed into an artery leading to the carotids. Contrast fluid is then injected through the catheter. The fluid makes it easier to see the carotids on the X-rays.

After your procedure

- You'll be taken to a recovery area.
- A nurse will apply pressure to the insertion site for about 10 minutes.
- You'll then need to lie flat for a few hours.
- Your doctor will discuss the results with you soon after the procedure.

Recovering at home

- Don't drive for 24 hours.
- Avoid walking, bending, lifting, and taking stairs for 24 hours.
- Avoid lifting anything over 5 pounds for 7 days.

Be sure to follow any other instructions from your doctor.

Call your healthcare provider right away if you experience

- Fever of 100.4°F (38°C) or higher lasting for 24 to 48 hours
- Bleeding, swelling, or a lump at the insertion site
- Sharp or increasing pain at the insertion site
- Dizziness or lightheadedness
- Leg pain, numbness, or a cold leg or foot
- Severe headache, visual problems, or trouble speaking
- Any other symptoms your provider instructed you to report based on your medical condition

☐ **Thrombectomy**	☐ *This does not apply to me.*

Surgical thrombectomy is surgery to remove a blood clot from one of your blood vessels. It may block the flow of blood to your tissues or organs.

After your procedure

After the surgery, you will spend time in a recovery room. Your healthcare team will watch your vital signs, such as your heart rate and breathing. You may be able to go home the same day. Your healthcare provider will tell you more about what to expect.

Recovering at home

Make sure you follow all of your healthcare provider's instructions. This includes instructions about medicines, activity, and incision care.

After you go home, you may need to take medicines to help stop blood clots from forming. You may need to take them for a short time or take them for a longer time. You may also need to take medicines to prevent clots before any future surgery. Your healthcare provider will let you know about any other changes in your medicines. You can take pain medicine at home if you need it.

You can go back to your normal activities when you get home. But do not do any difficult activities or heavy lifting for several days. Your doctor may give you more instructions.

You may need to wear elastic (compression) stockings. The stockings help to keep your blood flowing and stop clots from forming.

If you smoke, you will need to stop. This will also help to prevent blood clots. Talk with your healthcare provider if you need help to quit smoking.

Follow-up care

Your healthcare provider may want you to have imaging tests of your blood vessels. Make sure to go to all of your follow-up visits.

Call your healthcare provider right away if you experience

- Swelling or pain that gets worse
- Weakness or numbness near the area of your surgery
- Bleeding from the incision or other places
- Fever
- Symptoms of a blood clot: swelling, pain, warmth, and redness

☐ **Carotid Artery Stent**	☐ *This does not apply to me.*

After your procedure

- Monitor the injection site for bleeding. A small bruise is normal as is an occasional drop of blood at the site.
- Monitor the limb that was used for changes in temperature, color, numbness, tingling, or loss of function.
- Take your prescribed antiplatelet medicines as directed. These medicines will help prevent blood clots from forming on the stent. However, they may cause you to bruise more easily.
- Shower instead of taking tub baths for a few days. But, **wait for your doctor's OK to get the wound wet first.**
- Avoid lifting anything over 10 pounds for a few days.
- Ask your doctor about driving, returning to work, and other activities.

Call your healthcare provider right away if you experience

- Problems at the incision site, such as swelling, redness, bleeding, warmth, leaking of fluids, or increasing pain
- A cold or painful leg or foot
- Severe headache
- Weakness or numbness in a leg or arm
- Difficulty talking, or difficulty finding the words to say what you want
- Changes in your vision
- Dizziness or imbalance

Follow-up care

Within a month after the procedure, you'll have a follow-up exam and tests. These tests may include an ultrasound and a brain function exam. Then you'll be monitored with ultrasound or another imaging test every 6 months for 1 to 2 years. After that, you'll be monitored at least every 12 months. You may also continue to take antiplatelet medication.

In some cases, the carotid can narrow again. If this happens, it can often be treated again with balloon angioplasty.

Call 911 right away if you experience signs of a stroke

- Paralysis or weakness on one side of the body
- Numbness or tingling on one side of the body
- Difficulty speaking
- Loss of vision in one eye
- Drooping on one side of the face
- Dizziness or imbalance
- Swelling or persistent pain in the groin

☐ **Carotid Artery Endarterectomy**	☐ *This does not apply to me.*

Surgery called a carotid endarterectomy is the most common way to restore normal blood flow through the vessels that carry blood to your brain. These vessels are called the carotid arteries. During the surgery, a surgeon makes a small incision in the side of your neck, just below your jaw. The artery is opened and the blockage is cleared. This procedure is done to reduce your risk of a stroke, which can occur when the carotid arteries are severely blocked or narrowed.

Recovering at home

Ask a friend or family member to help with chores, especially those that involve lifting.

- Take your medications exactly as instructed. Don't skip doses.
- Don't drive until your doctor says it's OK. This may be up to 1 to 2 weeks.
- Avoid strenuous activity for 7 to 10 days after your surgery.
- Don't lift anything heavier than 10 pounds for 2 to 3 weeks after your surgery.
- Keep the wound dry until your doctor says it's OK to shower. Don't scrub your incision.
- Shave carefully around your incision. You may want to use an electric razor.
- Gradually increase your activity. It may take some time to return to your normal activities.
- Ask your doctor when you can expect to return to work.
- Check your incision every day for signs of infection (redness, swelling, drainage, or warmth).

Don't be alarmed if you have some loss of feeling along your jaw line, the incision line, and earlobe. This is a result of the incision and usually goes away after 6 to 12 months.

Long-term changes at home

- Eat a healthy, low-fat, low cholesterol, and low-calorie diet. Ask your doctor for menus and diet information.
- Maintain your ideal body weight.
- After you have recovered from surgery, try to exercise more, especially walking.
- Ask your doctor for guidance.

! Call your healthcare provider right away if you experience

- Neck swelling
- Headache, particularly if it does not go away after a couple of hours
- Redness, pain, swelling, or drainage from your incision
- Fever above 100°
- Numbness or weakness in your face, arms, or legs
- Sudden changes in your vision
- Loss of vision in one eye
- Trouble speaking
- Trouble breathing
- Trouble swallowing

☐ **Embolization**	☐ *This does not apply to me.*

Embolization is a procedure used to treat a brain aneurysm. A brain aneurysm is a balloon-like sac or bulge in the wall of a brain artery. If the aneurysm bursts (ruptures) and bleeds, nearby brain tissue may be damaged. This can cause a stroke, which can be fatal. Embolization may be done before an aneurysm bursts, to prevent these problems. It can also be done after an aneurysm has burst.

The procedure involves putting a substance (metal coils, or specialized particles or liquid) inside the aneurysm. This helps to seal the aneurysm and stop it from bleeding or rupturing.

After your procedure

- You'll lie still for 4 to 6 hours after the procedure. Pressure may be applied to the site to help reduce the risk of bleeding.
- Once you are stable, you'll be moved to a hospital room. You may need to stay in the hospital overnight if the aneurysm was not yet ruptured. If the aneurysm ruptured and caused a stroke, you will stay in the hospital until you recover. This may be for 1 to 4 weeks. It depends on how much damage the aneurysm caused.
- While you're in the hospital, more imaging tests will be done. They will show exactly where the substance was put in the aneurysm. The tests also help check that there is no more bleeding.

Risks and possible complications

- Bruising, bleeding, or infection at the catheter insertion site
- Swelling or bleeding in the brain
- Short-term (temporary) or long-term (permanent) neurologic problems related to stroke. These may include weakness, paralysis, confusion, and loss of vision, speech, or memory.
- Problems due to X-ray dye, including allergic reaction or kidney damage
- Blood clots
- Damage to an artery
- More treatment or surgery. This may be needed if treatment is incomplete or an aneurysm occurs again.
- Seizures
- Death

☐ **Brain Aneurysm Surgery**	☐ *This does not apply to me.*

Surgery for an aneurysm is done as soon as possible if it just bled. It is usually not urgent if the aneurysm has not bled. One of 2 types of surgery is generally used. In **open surgery**, a portion of your skull is removed. In an **endovascular procedure**, your surgeon goes through the blood vessel leading toward your aneurysm.

Treatment may not reverse any damage already done if the aneurysm has ruptured. The goal is to prevent the aneurysm from bleeding.

Open surgery

Your surgeon reaches your brain through your skull. First, you receive sleep medicine (anesthesia) during the surgery. Then, after a scalp incision, small holes are made in your skull. The bone between the holes is cut and lifted away. The membrane (dura) is peeled back. Trapped blood and cerebrospinal fluid may be removed. Your surgeon closes off (clips) your aneurysm. Or the artery leading to the aneurysm is sealed off (occluded). The dura and the piece of skull are put back in place. A device that measures the pressure inside your skull or that drains your spinal fluid may be left in one of the small holes.

Clipping the aneurysm

Your surgeon may put a clip on your aneurysm where it bulges from the artery. This keeps blood from going into the aneurysm. As a result, future bleeding is stopped and nearby brain tissue is protected from more damage. Your surgeon makes sure that the clip is secure before finishing the surgery. This method is done through open surgery.

Occlusion and bypass

It may be best to stop blood flow through the artery leading to your aneurysm. This is called occlusion. In most cases, it is done as open surgery. Sometimes occlusion is combined with a bypass. A bypass reroutes blood around the occlusion. It brings the blood to the part of your brain that had been fed by the damaged artery. A small blood vessel is used for the bypass.

Risks and possible complications

- Blood clots in the brain, or stroke
- Brain swelling or bleeding
- The surgery can fail to occlude the aneurysm
- Weakness, paralysis, or loss of vision
- Confusion, loss of speech, loss of memory
- Infection
- Spasm in a blood vessel that limits blood flow which can cause you to have a stroke
- Jerking or abnormal movements, loss of consciousness (seizures)
- Swelling of the brain (hydrocephalus)
- Coma
- Death

☐ **Craniectomy**	☐ *This does not apply to me.*

A craniectomy is a surgery to remove a piece of your skull. It's done to help relieve pressure in the skull when fluid builds up and presses on the brain. This buildup of fluid is dangerous. It can lead to brain damage or even death if not treated.

After your procedure

After the surgery, you'll be in an intensive care unit (ICU). Healthcare providers will carefully watch your vital signs. You may not wake up right away. It may take some time for the brain to recover from swelling and injury.

You may need days or weeks in the hospital to recover. As you recover, your healthcare team will be able to see how well the surgery worked to prevent brain damage. They will tell you more about the results to expect from your surgery.

After you wake up, you'll be able to slowly become more active. Your healthcare team will give you instructions about what you can eat and drink. If you have pain from the scalp incision, you can take pain medicine as directed.

Recovering at home

You'll need to wear a special helmet for a while. This is to protect the area that is missing a piece of skull. It is important to wear this helmet exactly as directed to prevent injury to the area. You should not do any activities that may lead to head injury.

Follow-up care

Make sure to keep all of your follow-up appointments.

Call your healthcare provider right away if you experience

- Fever of 100.4°F (38°C) or higher
- Swelling, redness, or fluid leaking from your scalp incision
- Pain that gets worse
- Seizures
- Vomiting
- Shortness of breath

Stroke Rehabilitation

Stroke rehab is a very important part of recovery for most stroke survivors. While rehabilitation doesn't always reverse the effects of a stroke, it can help you change, relearn or redefine how you live.

Rehab therapy can build strength, endurance, and confidence so you can continue your daily activities despite the effects of your stroke.

Rehab goals

Your stroke rehabilitation program will start when your doctor decides that your condition is stable and that you can benefit from rehabilitation. Your rehab goals will depend on the effects of your stroke, what you were able to do before your stroke, and your wishes. **A joint effort by you, your loved ones and our Stroke Team will be required for you to set your rehab goals.**

Setting realistic rehab goals is necessary for achieving goals. Realistic rehab goals may include being able to

- take care of yourself with special equipment, such as tools to help with eating, grooming, bathing and dressing
- walk with a walker or a cane or use a self-propelling wheelchair
- drive a car (for some stroke survivors)
- interact with others

Your stroke rehabilitation care team

You may work with several new people in the days and weeks to come. Your care team may grow to include **doctors** specializing in vascular neurology, internal medicine, physical rehabilitation, and mental health.

Nurses who have special training to help stroke survivors will be involved in your rehab. They will teach you about strokes, risk factors, and healthy living. They may also help you relearn basic skills, such as using the toilet and bathing.

Physical, occupational and speech therapists will help you gain the skills you need for greater independence and a more satisfying life after a stroke. Which of these therapists you see depends on your condition and your goals.

- Physical Therapists (PT) work with patients to relearn motor activities such as walking, sitting, standing, lying down, and the process of switching from one type of movement to another.
- Occupational therapists (OT) help patients improve their sensory and motor abilities so they can relearn valuable skills that impact their daily roles and routines (ie: grooming, dressing, bathing, care giving).
- Speech-language pathologists (SLP) assess, diagnose, and treat disorders concerning speech, language, cognitive-communication, voice, swallowing ability, and other related issues. The goal of speech therapy is to assist patients in eating and drinking safely, and to communicate with others.

Finally, **social workers** will help you make adjustments for life at home or at work and **dietitians** will help make sure you have a healthy diet during rehab. They also educate your loved ones about proper diet after you are discharged.

Stroke Prevention

Once your health is stable, you'll enter a new phase of treatment. You'll still receive the monitoring, medication, and other medical support you need. Your Stroke Team will help you and your loved ones plan for the future.

Arranging your rehabilitation plan

There will be stroke rehab evaluation and activities for you to follow with the help of loved ones. Ochsner Rehab staff will visit you. Working with your doctors, they'll determine how the stroke has affected you and what type of rehab might help. They will begin some rehab activities with you before you go home. As they work with you, our staff will monitor your response and give feedback to your doctors. If needed, they'll also help arrange an outpatient rehab program for you.

You will also receive home instructions at small-group and one-on-one teaching from your nurses, stroke providers, your stroke rehab staff, and others. They will help you and your loved ones understand what is needed after you leave Ochsner and return home. This includes information about the immediate recovery period as well as how to lower stroke risk throughout your life.

Follow-up care

There will be follow-up appointments with your doctor and information on handling emergencies at home. **If you have a change in condition during regular office hours, call us so we can determine if a visit needs to be made.**

If you have a serious change in your symptoms call 911 immediately.

Everyone needs a little extra help after a stroke. Some people can get this extra help at home from their loved ones, or from home health nurses or aides. For other people, the best place is at a specialized facility that can provide additional assistance.

- A **skilled nursing facility** is for people who need more (or different) medical care than they can get at home. Also, a skilled nursing facility can give around-the-clock care by skilled nurses and aides.
- An **in-patient rehab facility** is for patients who need more therapy. Skilled rehabilitation nurses and therapists are on staff to help you reach your rehab goals.
- An **assisted living facility** is for people who can manage most things on their own, but still need some extra support and care. For example, an assisted living facility may offer a service to help you manage your daily medication.

Ask your medical team or social worker to help you explore what options are right for you and your loved ones.

Medications

Your doctor has given you medications to reduce the risk of a stroke. It is very important to know which medications to take, and to take them as prescribed.

Your medications can help you feel better so you can do more things you enjoy. They keep your blood from clotting, which helps to prevent stroke. Many types of medications can help prevent stroke. You may be prescribed one or more of the following.

- **Anticoagulant ("blood thinning") medications** help prevent blood clots from forming. If you take a blood thinner, you may need regular blood tests.
- **Antiplatelets**, such as aspirin, are prescribed for many stroke survivors. They make blood clots less likely to form.
- **Blood pressure medications** help lower high blood pressure. In most cases, you'll need to take several types of medications.
- **Cholesterol-lowering drugs** make plaque less likely to build up in your artery walls.
- **Heart medications** can treat certain heart problems that increase your risk of stroke.
- **Diabetes medications** adjust blood sugar levels. This can prevent problems that lead to stroke.

Keep in mind that most medications need to be taken every day—**even when you feel fine**. Ask your doctor if you need to avoid certain foods or alcohol. Also mention if you have problems affording medication.

Loved ones can provide support by helping stroke survivors know how the medications work and when to take them. Check often to ensure they're taken as directed. Know whether any medication reacts with certain foods or alcohol and watch for side effects. Call the doctor if any medication causes excess bruising, nosebleeds, dizziness, or blurred vision.

Tips for Taking Medications

- Have a routine. Take medication at the same time each day. Use reminders to help stay on track.
- Take ALL your medications. Some medications work best when used with others. Don't take one type and skip another.
- Plan ahead. Refill prescriptions before they run out. Be sure to take medications along if you travel.
- Never change your dosage or stop taking medication on your own. And if you miss a pill, don't take two the next time.
- Tell your doctor if any medication causes side effects. Your doctor may change your dose or prescribe a new medication.
- Carry a list of your medications. Bring the list to appointments with healthcare providers.

Follow-up Care

Here are a few general guidelines for stroke survivor follow-up care. Use them to help prevent another stroke and live a healthier life every day. Always follow the advice of your medical team, even if it's different from the guidelines in this guide.

Keep follow-up appointments

Your vascular neurologist, your primary care doctor, and even your rehab team may all want to see you within the first few weeks of leaving Ochsner. These appointments are important.

Take your medications

A big part of your recovery is managing your stroke risk factors. For most people, this includes taking medications. **Keep in mind that most medications need to be taken every day—even when you feel fine.** Ask your doctor if you need to avoid certain foods or alcohol. Also mention if you have problems affording medication. Always follow your doctor's instructions for taking your medications.

Monitor your health

After a stroke, you need to pay special attention to your body, how you feel—even what you do each day. In fact, your medical team may ask you to keep a record of some of these things.

- **Blood pressure:** High blood pressure is a major risk factor for stroke. If you have this problem, take your blood pressure regularly. Write down your numbers. If you can't meet your blood pressure goals, call your doctor.
- **Weight:** Are you staying at a healthy weight? Making progress on that weight loss plan? The best way to know is to step on the scale—and write it down.
- **What you eat and drink:** Your medical team may have asked you to change some of your eating habits. For example, if you have high blood pressure, you need to limit sodium (salt) in your diet. If you're taking Coumadin® (warfarin), you need to stay consistent with the amount of vitamin K-rich foods you eat.
- **Minutes of physical activity:** Daily exercise is even more important after a stroke. Set goals with your medical team, and track your progress every day.
- **Other rehab activities:** Your rehab providers may give you exercises to do on your own. For example, they may ask you to work on strengthening your weak side, practice repeating words, or work on puzzles.

Care for your mental and emotional health

Emotional changes are common after a stroke. They may be a direct effect of your stroke—a result of the injury to your brain. But they can also come from the loss and uncertainty that a stroke may bring to your life. Many people report feeling anger, sadness, and hopelessness as they adjust to the reality of life after a stroke. Often these feelings are temporary. But they can be quite painful, and they may get in the way of your rehab and recovery.

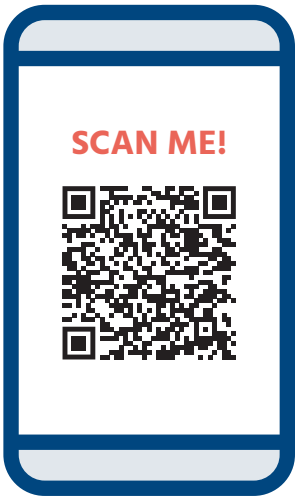
- Go easy on yourself.
- Be patient, and let the feelings come.
- Don't beat yourself up about the way you're feeling.

Quit smoking

Smokers have three times the risk of heart attack and stroke as nonsmokers. The good news is that if you quit smoking now, your risk goes down right away—even if you've smoked for many years.

Talk to your medical team. They can help you plan a way to quit smoking, and can suggest programs and methods to help you cope with the stress of quitting. They may also offer medications to help reduce your craving for cigarettes and ease your withdrawal symptoms. You can also check out the resources below.

- Smokefree.gov
- Make your quit plan at smokefree.gov/build-your-quit-plan.
- Download the free "Clearing the Air" booklet from the National Cancer Institute. Scan the code to the right with your smartphone camera or visit smokefree.gov/sites/default/files/pdf/clearing-the-air-accessible.pdf.



Be alert to signs of a stroke or TIA

Unfortunately, once you've had a stroke or transient ischemic attack (TIA), you're at higher risk for another. So besides monitoring the things on these pages, you and your loved ones must ALWAYS watch for these warning signs.

- Sudden numbness or weakness of the face, arm, or leg—especially on one side of the body
- Sudden confusion or trouble speaking or understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden severe headache with no known cause

If you notice any of the above, call 911 right away.

BE FAST to Spot a Stroke

B.E. F.A.S.T. is an easy way to remember the signs of stroke. When you see these signs, you will know that you need to call 911 fast. **Be sure to make note of the time the symptoms first appeared.**

B	E	F	A	S	T
BALANCE Watch for sudden loss of balance.	EYES Check for vision loss.	FACE Look for an uneven smile.	ARMS Check if one arm is weak.	SPEECH Listen for slurred speech.	TIME Notice these symptoms? Call 911 now!

Resources for Stroke Survivors

Online Resources

Visit these websites to learn more about the risk factors, signs, symptoms, and prevention of stroke.

- American Occupational Therapy Association (AOTA) ..... www.aota.org
- American Physical Therapy Association (APTA) ..... www.apta.org
- American Speech-Language-Hearing Association (ASHA) ..... www.asha.org
- American Stroke Association (ASA) - A Division of the American Heart Association ..... www.stroke.org
- National Aphasia Association ..... www.aphasia.org
- National Institute of Health ..... stroke.nih.gov

One-on-One Support Sessions

During your hospital stay, loved ones and caregivers may schedule one-on-one instructional time with nursing and therapy staff. The session will teach necessary skills to provide patient care at home and how to carry out these functions.

Support Groups

Ochsner offers a Rehab Stroke Patient Education Program to provide information and education about rehabilitation to our patients. Join our support group for stroke survivors, loved ones, and friends. Each session includes a brief educational presentation followed by a group discussion.

New Orleans Area

Ochsner Therapy & Wellness Stroke Support Group
Meets the first Monday of every month
5:30-6:30 pm
Ochsner Rehabilitation Hospital
2614 Jefferson Highway, Jefferson
504-464-8740

Northshore Area

Brain Stim Stroke Support Group
Meets at 6:00 pm the first Tuesday of every month
In person and on Zoom
Northshore Rehabilitation Hospital
2nd Floor Gym
64030 LA Hwy 434, Lacombe
985-218-4660

Lafayette Area

Acadiana Stroke Support Group
Meets the second Tuesday of every month
3:00-4:00 pm
Ochsner Lafayette General Orthopaedic Hospital
Medical Office Building
3rd Floor Boardroom
4212 W. Congress Street, Lafayette
337-289-7740

Lake Charles Area

Stroke Support Group
Meets the third Wednesday of every month
12:00-1:00 pm
CHRISTUS Ochsner St. Patrick Hospital
Unit 42 Conference Room
524 Dr. Michael DeBakey Dr., Lake Charles

Stroke Risk Assessment Quiz

Courtesy of the American Stroke Association

Directions

1. For each risk factor, select the box (higher risk or lower risk) that applies to you. Select only one box per risk factor.
2. Enter a 1 on the blank line next to each checked box.
3. Add up your total for each column.

Risk Factors*	Higher Risk	Lower Risk
Is your blood pressure greater than 120/80 mm/Hg?	☐ Yes or Unsure _____	☐ No _____
Have you been diagnosed with atrial fibrillation?	☐ Yes or Unsure _____	☐ No _____
Is your blood sugar greater than 100 mg/dL?	☐ Yes or Unsure _____	☐ No _____
Is your body mass index greater than 25 kg/m^2?	☐ Yes or Unsure _____	☐ No _____
Is your diet high in saturated fat, trans fat, sweetened beverages, salt, excess calories**?	☐ Yes or Unsure _____	☐ No _____
Is your total blood cholesterol greater than 160 mg/dL?	☐ Yes or Unsure _____	☐ No _____
Is your total blood cholesterol greater than 160 mg/dL?	☐ Yes or Unsure _____	☐ No _____
Have you been diagnosed with diabetes mellitus?	☐ Yes or Unsure _____	☐ No _____
Do you get less than 150 minutes of moderate to vigorous-intensity activity per week?	☐ Yes or Unsure _____	☐ No _____
Do you have a personal or family history of stroke, TIA or heart attack?	☐ Yes or Unsure _____	☐ No _____
Do you use tobacco or vape?	☐ Yes or Unsure _____	☐ No _____
TOTAL	_____	_____

**Some stroke risk factors cannot be changed such as age, family history, race, gender, and prior stroke.*
***Excess calories means eating more than your body can burn off in a day.*

If you scored higher in the "higher risk" column or you are unsure of your risk, ask your health care professional about how you can reduce your risk. Stroke is largely preventable, treatable and beatable.

Glossary of Common Stroke-related Medical Terms

- **Ambulation:** walking
- **Aneurysm:** a weak spot on the wall of the artery that balloons out from the vessel
- **Angiography:** a test with contrast to look at blood vessels in radiology
- **Anticoagulants:** medicines used to keep clots from forming and prevent ischemic stroke
- **Antihypertensives:** medicines used to lower blood pressure
- **Antiplatelets:** medicines used to keep blood clots from forming and prevent ischemic stroke
- **Aphasia:** a language deficit where there is difficulty speaking and/or understanding spoken or written words
- **Arrhythmia:** an irregular or unpredictable heart beat
- **Arteriovenous malformation (AVM):** a group of blood vessels that are not connected normally,causing a tangle of distorted blood vessels of various sizes
- **Atherosclerosis:** a build-up of plaque or "hardening" of arteries
- **Aspiration:** occurs when food or liquid is breathed into the lungs
- **Ataxia:** uncoordinated movement
- **Atrial fibrillation:** an irregular beat of the top of the heart that increases your risk of stroke
- **Brain stem:** the part of the brain that controls activities like breathing, blood pressure, and eye movement
- **Broca's aphasia:** an aphasia where the stroke survivors can understand what is said and written but have difficulty expressing them self
- **Carotid artery:** the arteries in the neck that take blood from the heart to the brain
- **Carotid endarterectomy:** a surgical procedure where plaque is removed from the carotid artery to let blood flow more freely to the brain
- **Carotid stenosis:** a build-up of plaque in the carotid arteries that narrows the vessels
- **Cerebellum:** the part of the brain that controls coordination of movement
- **Cerebrospinal fluid:** the fluid in the brain and spinal cord
- **Cholesterol:** a soft, waxy fat in the bloodstream and cells
- **Cognition:** the process of knowing, including awareness, perception, reasoning, remembering and problem solving
- **CT or "CAT" scanner:** a special x-ray that lets you see the structures of the brain precisely
- **Doppler ultrasound:** a test that looks at blood flow through your arteries and veins
- **Dysarthria:** difficulty speaking due to muscle movement difficulty
- **Dysphagia:** difficulty with swallowing
- **Edema:** swelling of tissue due to build-up of water
- **Embolic stroke:** a stroke caused by a blood clot
- **Emotional lability:** when emotions change suddenly, for no apparent reason
- **Gait:** your style of walking
- **Glasgow coma scale:** a tool used to measure responsiveness in a neurologically impaired person
- **Global aphasia:** a type of aphasia where stroke survivors have difficulty understanding others and expressing themselves
- **Hematoma:** a collection of blood in an organ, tissue or space
- **Hemianopia:** a vision loss where half of one visual field is lost in one or both eyes
- **Hemiplegia:** inability to move one side of the body

- **Hemorrhage:** bleeding from a blood vessel in surrounding tissue
- **Hypertension:** elevated blood pressure
- **Hypotonia:** a decrease in muscle tone or strength
- **Hypoxia:** a lack of oxygen that causes weakness, tremors, and speech difficulties
- **Infarct:** an area of tissue death resulting from lack of blood supply
- **Intracerebral hemorrhage:** a stroke caused by bleeding in the brain
- **Ischemia:** a blockage of blood flow to the brain
- **Left hemisphere:** the left half of the brain that controls the right side of the body, speaking, writing, and problem solving skills
- **Magnetic Resonance Imaging (MRI):** a test that looks at internal structures with magnetic and radio waves
- **Neglect:** a lack of awareness of objects or actions on one side of the body
- **Occlusion:** disruption of blood flow through the blood vessel; usually caused by atherosclerosis or a blood clot
- **Penumbra:** an area of the brain around the stroke that is in danger of dying, but is not permanently damaged
- **Plaque:** a fatty deposit in the inner lining of the artery
- **Platelets:** the part of blood that sticks together to form clots
- **Right hemisphere:** the right of half of the brain that controls the left side of the body
- **Spasticity:** abnormally increased tone in a muscle
- **Stenosis:** abnormal narrowing of a blood vessel
- **Stroke:** the sudden interruption of blood flow to a part of the brain that leads to cell death
- **Subarachnoid hemorrhage:** a stroke caused by bleeding under the membrane surrounding the brain
- **Thrombolytic agents:** medications that work to dissolve stroke-causing clots.
- **Thromboembolism:** an clot that originates in one vessel and travels through the bloodstream to be lodged in another vessel
- **Thrombosis:** the clotting of blood within a vessel
- **Thrombotic stroke:** a stroke caused by a blockage of a blood vessel from the build-up of deposits; the occlusion is complete when a clot lodges in the narrowed vessel
- **Transient Ischemic Attack (TIA):** a brief interruption of blood flow to the brain causing temporary stroke symptoms, lasting less than 24 hours
- **Unilateral neglect:** a lack of awareness of space on one side of the body
- **Vertebrobasilar arteries:** the arteries in the back of the neck that supply blood to the brain stem and cerebellum

Notes

1-866-OCHSNER | ochsner.org

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