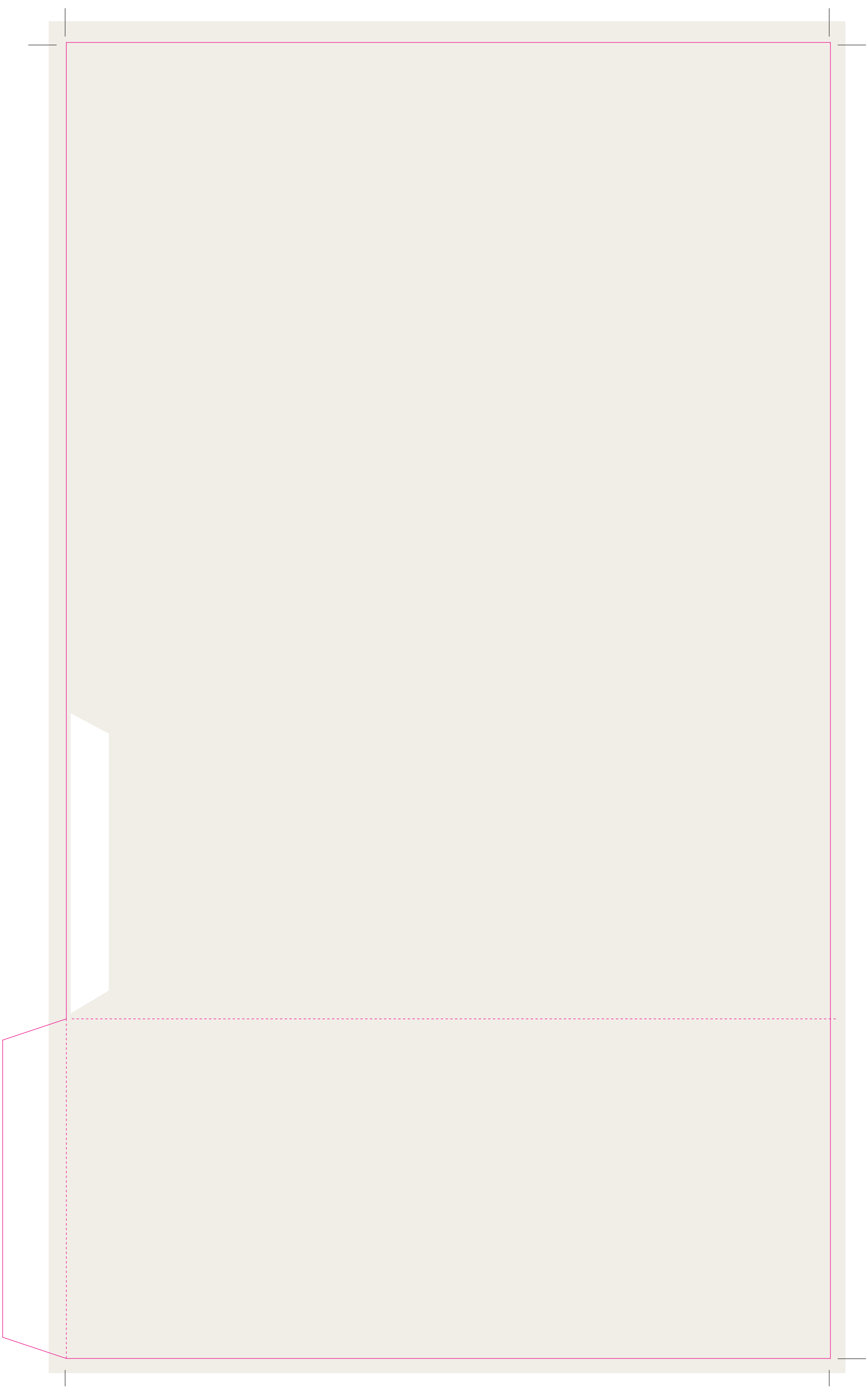
Surviving and Thriving After a Stroke or TIA

Patient and Family Information

Peace Health



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We believe you or your loved one has had a stroke. This can be life changing. A stroke occurs when a blood vessel is blocked or bursts in the brain. Stroke affects people in different ways based on the part of the brain that was injured. We recognize that no two journeys are the same. The Stroke Team and this patient education guide are here to help you on your journey.

What is a stroke?

A stroke is a sudden event that affects the delivery of blood to the brain due to blocked or broken blood vessels. The problems caused by a stroke depends on the location of the brain injury.

Is this serious?

A stroke is a medical emergency. Early treatment may help to restore or improve blood flow to the brain. This may decrease the damage to the brain.

What are the different types of stroke?

- **Transient Ischemic attack (TIA)** is when blood flow to part of your brain is blocked for a short time. This is a warning sign. People who have a TIA may have a stroke in the future causing lasting damage to the brain. The risk factors and symptoms of a TIA are the same as stroke.

- **Ischemic Stroke** is when there is some type of blockage that keeps blood from reaching all areas of your brain. **An embolic** stroke occurs when a blood clot or plaque fragment forms and moves to the brain. The clot blocks a blood vessel and leads to a stroke. **Thrombotic stroke** is a blood clot that forms inside an artery that supplies blood to the brain. The clot interrupts blood flow and causes a stroke.

- **Hemorrhagic Stroke** is a stroke that happens when a blood vessel leading to the brain ruptures (bursts). When this happens, blood flows into the surrounding tissue. The part of your brain that is normally fed by the burst blood vessel no longer gets the blood it needs. The bleeding can cause dangerous swelling in your brain. Ruptures tend to happen at a weakened spot (aneurysm) in the wall of one of the arteries leading to the brain.

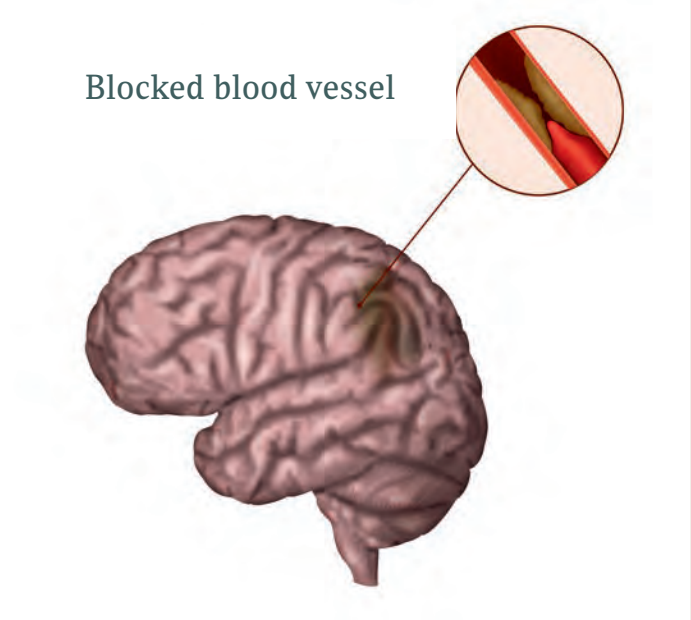
There are two types of hemorrhagic stroke. They are named by where they happen in your brain:

- **Intracerebral hemorrhage (ICH)** happens when a blood vessel breaks deep inside your brain. This is often caused by chronic high blood pressure.

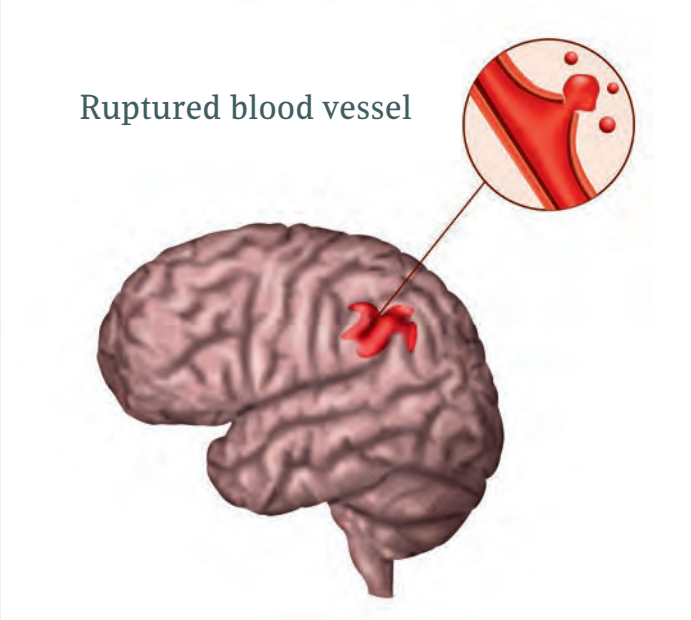
- **Subarachnoid hemorrhage (SAH)** is caused by a ruptured aneurysm or other vessel abnormality. This causes blood to build up on the brain's surface.

Types of Stroke

Ischemic Stroke



Hemorrhagic Stroke



What are the treatments for Ischemic stroke?

Clot busting medication – Intravenous Thrombolytics

Thrombolytics work by dissolving a blood clot and restoring blood flow to the part of the brain that is being deprived of oxygen rich blood.

The stroke team determines whether a patient is a candidate to receive this medication. One of the most important factors in determining whether someone can receive this medication is how long it has been since they were last known well. This is why it is very important to recognize signs of stroke and call 9-1-1 immediately.

Removal of the clot - Mechanical Thrombectomy

When the clot is in a large blood vessel, the stroke team determines if a patient is a candidate for a procedure to physically remove it. Strokes caused by blockage of a large blood vessel account for 15-30% of strokes.

If the patient is a candidate for this procedure, a specially trained doctor will attempt to remove the blood clot to restore blood to the brain tissues.

What are the treatments for Hemorrhagic stroke?

Intracerebral hemorrhage (ICH)

Within the first few hours after ICH, some patients may worsen and require intubation (placement of breathing tube). Many people with ICH will require an extended stay in the Intensive Care Unit (ICU). Most people who have an ICH have acute high blood pressure in reaction to the bleeding. Initial treatment may include:

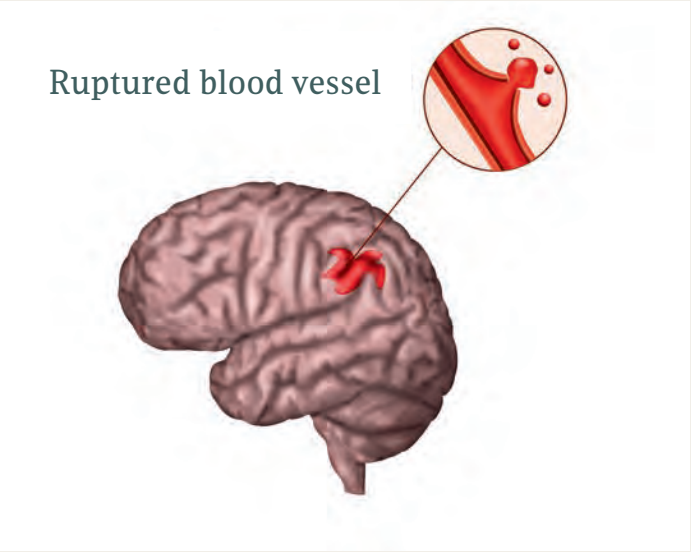
- Intravenous medications to control blood pressure.
- Intravenous medications to reverse any medication that may worsen bleeding (anticoagulant).
- Medications and treatment to reduce increased pressure in the brain.
- Surgical procedures may be necessary to remove the blood within the stroke area of the brain or reduce the increased pressure on the brain.

Commonly related conditions:

Hydrocephalus - This condition occurs when the blood from stroke blocks the flow of the cerebrospinal fluid (CSF) within the brain resulting in high pressures within the brain. This condition may require a bedside procedure called External Ventricular Drain (EVD). This procedure involves drilling a small hole in the skull and placing a small drain to divert the blood and CSF out of the body and reduce the pressure.

Pneumonia - After a stroke, swallowing and coughing reflexes may be impaired, and bacteria can slip down into swallowing and coughing reflexes are impaired and bacteria slips down into the lung (aspiration). This may lead to pneumonia which requires oxygen and antibiotics.

Hemorrhagic Stroke



Ruptured Brain Aneurysm

Subarachnoid hemorrhage (SAH)

Subarachnoid hemorrhage happens when an abnormal artery in the brain bursts causing the blood to settle at the base of the brain. This may be due to ruptured aneurysm or arteriovenous malformation (AVM). This type of stroke is the rarest but also the deadliest. Most people who have this type of stroke go to the Intensive Care Unit (ICU). Patients are closely monitored in the ICU, and treatment may include:

Endovascular repair - A catheter is inserted in an artery in the arm or leg and a special dye is injected into the blood vessels leading to the brain. These images can identify artery abnormality in great detail. A variety of devices are available to place within the vessel to secure the aneurysm or AVM. This may require more than one treatment over time.

Surgical repair – Sometimes the vessel abnormality is best treated with open brain surgery in the operating room. The skull will be open, the abnormality located, and a specialized clip placed across the base of the aneurysm.

Common related conditions

Re-bleeding – Unless the source of the bleeding can be treated and completely secured, the artery may burst again. To prevent re-bleeding, you will be kept in a quiet environment and you will receive IV blood pressure medications and stool softeners (to prevent bearing down).

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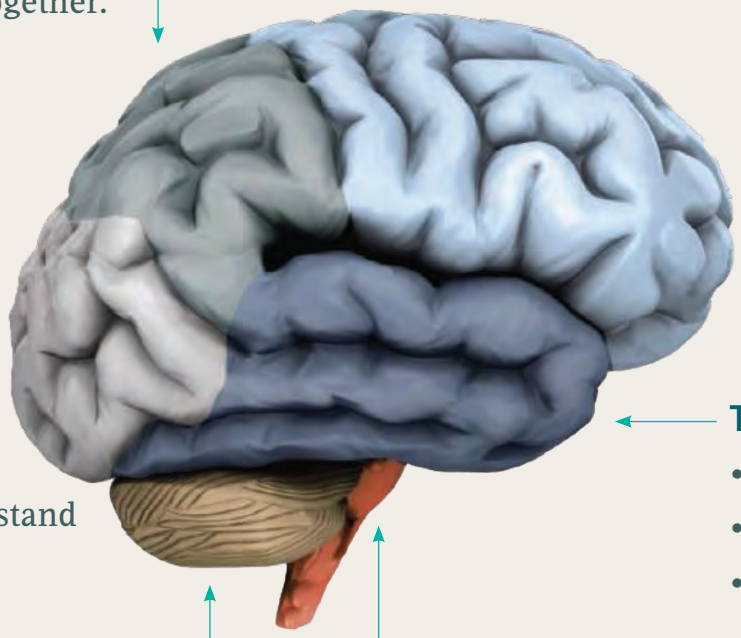
Vasospasm - This condition occurs between 4-21 days after the onset of SAH. In vasospasm, the major blood vessels of the brain progressively narrow and the vessel opening becomes smaller. This can cause brain damage. You will be given a medication every 4 hours for 21 days to lessen the chance of brain injury. You will be monitored for this condition closely with daily transcranial dopplers (TCD) or cerebral angiograms. You may require medication placed directly in the CSF drain to relax the vessels.

Hyponatremia (low sodium levels) – The blood in the base of the brain sends a signal to the kidneys to get rid of sodium (salt). Low levels of sodium in the blood can lead to confusion, seizures, and fatigue. Treatment may include IV concentrated saline or salt tablets taken by mouth.

Brain Image

Frontal Lobe
- Movement such as lifting your arm.
- Able to focus your attention.
- Social and sexual control.
- Ability to speak.
- Decision-making.

Parietal Lobe
- Awareness of body parts.
- Math skills.
- Naming objects.
- Eye/hand working together.



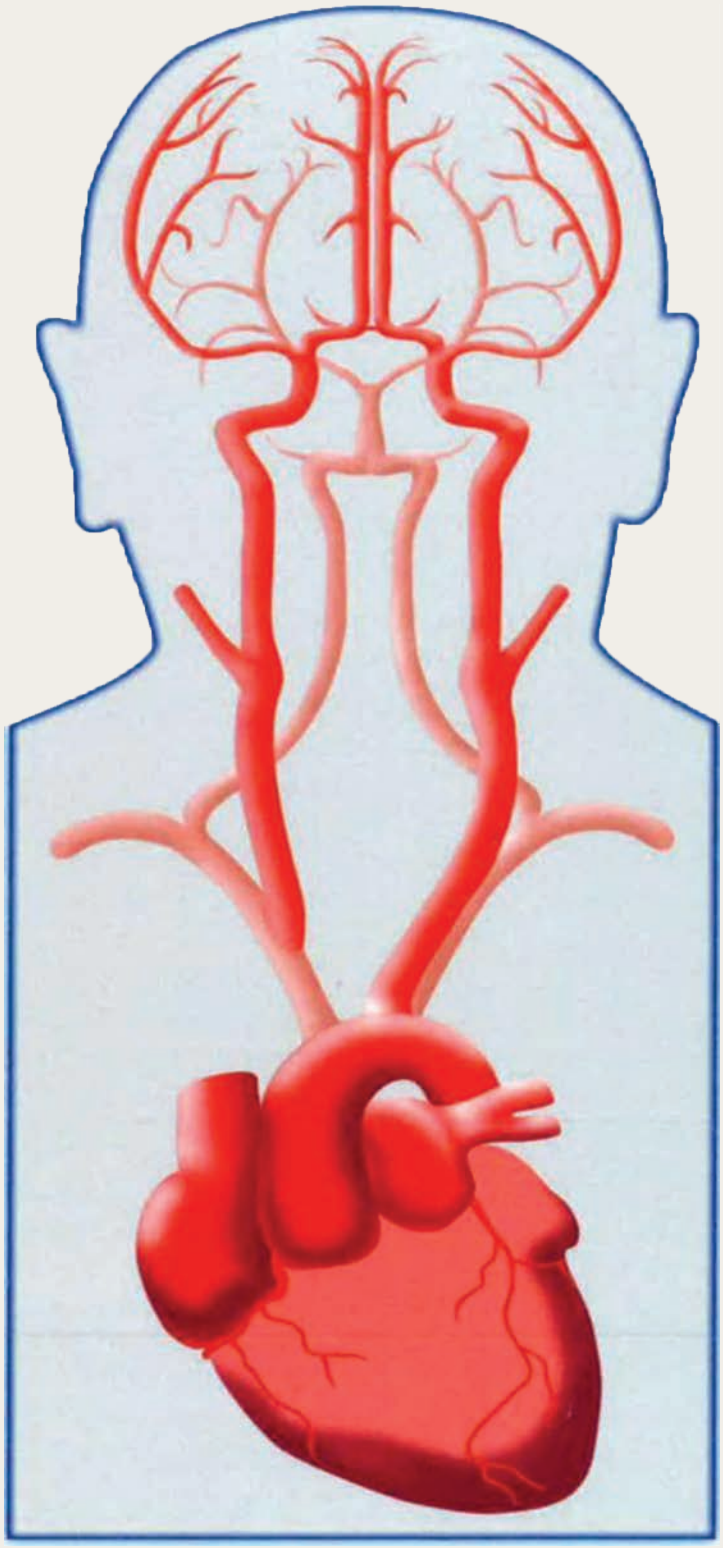
Occipital Lobe
- Able to see and understand what you are seeing.
- Reading

Temporal Lobe
- Short-term memory.
- Understand speech.
- Recognize faces.

Brain Stem
- Eye movement.
- Message relay center.
- Heart and breathing center.

Cerebellum
- Movement
- Balance
- Body parts working together.

Vessel Image



Know the Signs of Stroke

Stroke patients who receive medical attention right away are more likely to qualify for clot busting medication or clot retrieval and have a better recovery.

STROKE SYMPTOMS (BE FAST)

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Balance

Sudden dizziness or loss of balance

Eye

Sudden vision changes in one or both eyes

Face

Weakness, numbness, or drooping on one side of the face

Arm Weakness

Arm or leg weakness

Speech Difficulty

Slurred speech or trouble forming words

Time

If experiencing BE FAST symptoms, call 9-1-1.
Quick intervention is key to survival.

Stroke is an emergency! Call 9-1-1

Personal Notes:

Personal Notes:

What is a risk factor?

A risk factor is anything that increases your chance of a specific illness. There are a number of risk factors that increase the chances of having a stroke. Some you cannot change, but most you can. Up to 80 percent of strokes can be prevented through managing and lowering risk factors.

Risk factors you cannot change:

You cannot change the following risk factors for stroke. It is important that you know how these risk factors apply to you:

- **Age** – your risk of stroke increases with age.
- **Gender** – Men are more likely than women to have a stroke at a younger age. Women have a higher lifetime risk of stroke related to hormonal and reproductive factors.
- **Ethnicity** – The risk of stroke is higher among African Americans, Hispanics, Native Americans, and Alaskan Natives than among whites.
- **Past stroke** – Once you have had a stroke, you are at increased risk of having another.
- **Family history** – If someone in your family has had a stroke, your risk of having a stroke is higher.
- **Blood clotting condition** - Although this is often genetic, there are steps you can take to lower your risk of stroke.

Risk factors you can change:

You can lower your risk of stroke when you reduce these risk factors:

- Hypertension (high blood pressure)
- Arial Fibrillation (A FIB), a type of irregular heartbeat
- Diabetes or prediabetes
- High cholesterol
- Heart disease (carotid artery disease, coronary artery disease, atherosclerosis)
- Obesity
- Lack of Exercise
- Sleep Apnea
- Smoking
- Excessive alcohol use
- Recreational drug use

High blood pressure

High blood pressure (BP), also known as hypertension, is a lifelong condition. It is the most common cause of both hemorrhagic and ischemic stroke. If uncontrolled, your risk of stroke is high. Keeping your BP normal will lower your risk of stroke. You and your primary care provider will need to work together to meet your blood pressure goal.

Things you can do:

- Take your medications every day as directed.
- Don't stop or change the dose of your medications without talking to your primary care provider.
- See your primary care provider regularly.
- Check your blood pressure on a regular basis, such as every Monday, Wednesday, and Friday.
- Track your blood pressure readings and bring recordings to your primary care provider appointments.
- Follow a low salt diet.
- Limit alcohol
- Quit smoking
- Don't use recreational drugs.
- Exercise daily
- Maintain a healthy weight.

How to check your blood pressure at home:

- Purchase a blood pressure machine that measures blood pressure at your upper arm (not the wrist).
- Ensure proper cuff size (ask a health care professional for help if needed).
- Measure your blood pressure at the same time each day.
- Sit for 5-10 minutes prior to measuring blood pressure.
- Rest arm on table at heart level with legs uncrossed.
- Take blood pressure according to instructions found with your machine.
- Remain still and do not talk as your blood pressure machine operates.
- Record reading

CATEGORY	SYSTOLIC mm Hg (TOP NUMBER)		DIASTOLIC mm Hg (BOTTOM NUMBER)
Normal	Less than 120	and	Less than 80
Elevated	120-129	and	Less than 80
High Blood Pressure STAGE 1	130-139	or	80-89
High Blood Pressure STAGE 2	140 or higher	or	90 or higher
Hypertensive Crisis	Higher than 180	and/or	Higher than 120

Safety tip for home:

Don't worry about any one blood pressure reading, either too low or too high, unless you also aren't feeling well. Your primary care provider is interested in trends, not a single reading.

High blood pressure – Medications

During your hospital stay, we will be checking your blood pressure routinely. Often after an ischemic stroke, the physician will allow your blood pressure to remain elevated for the first 48 hours. We call this "permissive hypertension." This allows adequate blood supply to the brain after a stroke. After 48 hours, the physician will restart your home blood pressure medication(s) or may prescribe a new medication or a new dosage.

Medications may include:

ACE Inhibitors: ***Captopril, Enalapril, Lisinopril, Fosinopril, Ramipril, Trandolapril, Benazepril***

Purpose: Lowers blood pressure
Side Effects (possible): Persistent dry cough, swelling of the tongue, mouth, or face. Swelling of the tongue, mouth, or face. If this occurs, call 9-1-1
General Information: Overuse of NSAIDS (ibuprofen, Advil, Aleve, Motrin) can decrease the effectiveness of ACE inhibitors

Angiotensin II Receptor Blockers: ***Valsartan, Losartan, Irbesartan***

Purpose: Lowers blood pressure
Side Effects (possible): Dizziness, headache, nausea, vomiting
General Information: May increase potassium levels in blood. Limit the use of salt substitutes.

Beta Blockers: ***Atenolol, Carvedilol, Metoprolol***

Purpose: Lowers blood pressure, slows heart rate, regulates heart rhythm
Side Effects (possible): Dizziness, wheezing or increased shortness of breath, fatigue
General Information: If you have diabetes, your blood sugar may go up or down. This medicine may cover up symptoms of low blood sugar.

Calcium Channel Blockers: ***Amlodipine, Diltiazem, Verapamil, Nifedipine***

Purpose: Lowers blood pressure, may treat irregular heart rhythms and/or angina (chest pain or discomfort)
Side Effects (possible): Headache, lightheadedness, flushing, swelling of hands and feet, slow heart rate
General information: Most side effects are dose-dependent, meaning a decrease in dose may relieve side effects. Alert your doctor to any side effects. Avoid taking medication with grapefruit or grapefruit juice.

Atrial Fibrillation

Atrial fibrillation is an irregular heartbeat. Your heart may also race. During atrial fibrillation, blood pools inside your heart and blood clots may form. These clots can break loose, travel to the brain and cause an ischemic stroke.

During your hospital stay:

We will monitor your heart with a small device called telemetry.

After discharge:

Your physician may recommend a heart monitoring device after discharge.

Safety tip for home:

If you have a racing heart (palpitations), shortness of breath, or chest pain, call 9-1-1.

Atrial Fibrillation: Medication

Treatment often includes medicine to make your blood less likely to clot. These medicines are called anticoagulants. There are different types of anticoagulants. Your primary care provider will discuss this with you.

Anticoagulants: ***Coumadin (warfarin), Eliquis (apixaban), Pradaxa (dabigatran), Xarelto (rivaroxaban)***

Purpose: Prevents blood clots from forming
Side Effects (possible): Easy bruising and bleeding
General Information: Avoid using aspirin-containing products and anti-inflammatory medicines (ibuprofen, Advil or Aleve) for pain.

Safety tips for home:

- Inform primary care provider if you notice prolonged bleeding, red urine or tarry black stools or have a serious fall.
- Obtain an alert bracelet/ necklace showing that you are on a blood thinner.
- If you are asked to stop using a blood thinner, ask your primary care provider if you need a different medication while off the blood thinner.

Bridging

When you start Coumadin (warfarin), your primary care provider may need to boost the Coumadin with another medication. This is done until your Coumadin is at the "correct level" and usually takes a few days. This is called bridging. This boosting blood thinner is given by shot into the fat of your belly. This is done once or twice a day.

Bridging can be used anytime the Coumadin is not at the correct level or when Coumadin is being stopped or restarted. This ensures that the blood is thinned properly at all times.

Your bridging appointment and plan will be:

- Set up for you prior to leaving the hospital.
- Discussed with you prior to discharge.
- Written on your discharge instructions sheet.

NOTE: **Keep scheduled appointments. Anticoagulant medication is important in preventing another stroke.**

Safety Tip for Home:

Obtain an alert bracelet showing you are diabetic.

Diabetes

When you have diabetes, your body has trouble using the energy from the food you eat. This problem is tied to how your body makes and uses insulin. Insulin is made in the pancreas. Insulin keeps your blood sugar in normal range. Diabetes increases your risk for ischemic stroke. Improving blood sugar can decrease your risk for another stroke.

Managing your diabetes every day:

- Test blood sugar as instructed by your primary care provider and keep a record of it.
- Check feet for sores.
- Follow a healthy meal plan.
- Brush teeth
- Take medicines as directed.
- Exercise regularly

Scan the QR code to learn more
or visit www.diabetes.org

Diabetes wellness checks:

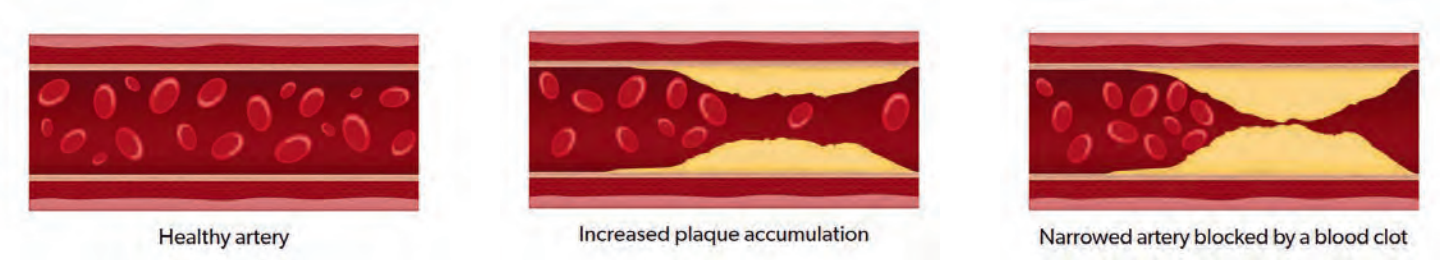
- Check with your primary care provider on the frequency of diabetes wellness checks.
- Take glucose meter and blood sugar logbook.
- Ask about your A1C level.
- Take your shoes and socks off so your primary care provider can check your feet.
- Have your blood pressure checked.
- Ask about eye exams.
- Ask about cholesterol level and urine protein.
- If you think you need help with your diabetes, ask about diabetes and diet teaching.

Long term plan

Diabetes can cause problems for your eyes, kidneys, nerves, heart and brain. To avoid these problems, avoid high blood sugar.

High Cholesterol

High cholesterol causes plaque to build up in the arteries, a condition called atherosclerosis. Plaques can rupture, causing a clot to form over the top of the plaques. The clot can break away from the wall of the artery and travel to the brain, causing an ischemic stroke. Cholesterol-lowering medications help to decrease your risk of stroke by reducing the cholesterol levels in your blood and reducing the risk of plaque rupture.



Statins:

- Lower cholesterol and reduces risk of stroke or heart attack.
- Common names for statins include: Lipitor (atorvastatin), Crestor (rosuvastatin), Zocor (simvastatin), Pravachol (pravastatin), Mevacor (lovastatin)

Possible side effects:

- Nausea, stomach upset, or discomfort
- Constipation, diarrhea, or gas
- Muscle aches
- Fatigue

Call your primary care provider if you have muscle aches, yellow skin or eyes.

Medication Information

An antiplatelet medication may be prescribed to reduce the risk of a future ischemic stroke. Antiplatelet medications decrease platelet clumping and the formation of clots. It is important to take your medicines as directed to prevent another stroke. When you leave the hospital, it is likely that your medicines will change. Your hospital provider will give you prescriptions for all of your new medicines. Your primary care provider will continue to manage your medicines after you leave the hospital.

Antiplatelet agents: ***aspirin, Plavix (clopidogrel)***

Side Effects (possible):

- Bleeding
- Bruising
- Stomach upset

General Information:

- Enteric-coated aspirin may decrease stomach upset.
- Taking with food may help decrease stomach upset.
- Generic aspirin is acceptable to take.

Safety tips for home medicines:

- Take them even when you feel good.
- Store in original bottles and in a cool place.
- Carry a current medicine list with you at all times. Include medicine name, dose and how often each is taken.
- If you are having trouble paying for medicines, tell your primary care provider.
- Choose a method to help you remember to take your medicines, such as a pillbox, checklist, chart, friend or family member.
- Call your primary care provider if you think you are having a reaction to a medicine.
- If you miss a dose of medicine, take it as soon as possible. **Do not take double doses.**
- Do not stop taking medicines without telling your primary care provider.

Lifestyle Related Risk Factors

Lifestyle related risk factors are risk factors you can change by modifying your behavior. These include dietary choices, physical activity, sleep habits, smoking, alcohol, and drug use. Avoiding harmful habits and choosing healthy options can reduce the risk of stroke.

Overweight/Obesity

Being overweight or obese is a risk factor for ischemic and hemorrhagic stroke. Lack of physical activity and poor diet lead to being overweight and obese. Abdominal adiposity is the buildup of fat around the belly area. This type of fat is also called “belly fat” and can be harmful to your health. Unlike fat stored in other areas of the body, abdominal fat is related to a higher risk for stroke. Waist size and BMI (body mass index) are two ways to find out if you are at a healthy weight.

BMI (BODY MASS INDEX)

- Normal 18.5-24.9
- Overweight 25-29.9
- Obesity 30 or greater

Waist Size

- Men: Greater than 40 inches is higher risk for stroke
- Women: greater than 35 inches is higher risk for stroke

Your nurse can tell you what your current BMI is.

You can measure your waist size by wrapping a tape measure around your waist at the level of your belly button.

Sedentary Lifestyle

Prolonged inactivity is associated with higher blood pressure, poor cholesterol levels, and insulin resistance, all of which are risk factors for stroke.

How a sedentary lifestyle can impact health:

- Increased Risk of Cardiovascular Disease: Sitting for long periods can lead to poor circulation, which contributes to the buildup of fatty deposits in the arteries (atherosclerosis).
- Higher Blood Pressure: Inactivity contributes to elevated blood pressure, which is a risk factor for both ischemic and hemorrhagic strokes.
- Obesity and Metabolic Issues: Prolonged sitting is linked to weight gain and obesity, which increase the risk of stroke.
- Reduced Insulin Sensitivity: Lack of physical activity can result in insulin resistance, which increases the risk of developing Type 2 diabetes.
- Unhealthy Cholesterol Levels: Physical inactivity tends to decrease HDL (good cholesterol) and increase LDL (bad cholesterol).

Safe ways to be active:

- No matter what level of function you have, you can be active.
- Physical limitations can be managed with exercises targeted to your needs.
- Work with your physical therapist, occupational therapist, and other members of your healthcare team.

Tips for increasing daily physical activity:

- Play with your kids or grandkids.
- Play music and move to the beat.
- When you watch tv, move around during commercials.

The more you move the stronger and healthier your body will be. As you get stronger and if you are able:

- Take a walk outside.
- Park farther away from the entrance.
- Join a garden group and dig in the dirt.
- Use the stairs.

Sleep-Disorders

Sleeping problems are common. When sleeping problems go on for a long time, they are considered sleep disorders. Having a sleep-disorder can be frustrating. It can make you feel tired and cranky. One serious condition, sleep-disordered breathing, increases your risk for both ischemic and hemorrhagic stroke.

Daytime symptoms of sleep-disordered breathing:

- Daytime sleepiness
- Memory or attention problems.
- Headaches
- Fatigue (low energy level).
- Crankiness
- Depression or extreme sadness.

Nighttime symptoms of sleep-disordered breathing:

- Loud snoring.
- Waking up often during the night.
- Gasping for breath.
- Increased sweating.
- Shortness of breath.
- Unable to fall asleep or remain asleep throughout the night.

Diagnosing sleep-disordered breathing:

During your hospital stay you will be screened for your risk of sleep apnea. The screen consists of eight questions. If you are at increased risk, your primary care provider may arrange a sleep test called a polysomnogram.

A polysomnogram shows if you have sleep disordered breathing. This painless, all-night test will study your sleep patterns. It is done in a special sleep center.

Treatment:

Treatment varies. Some options may be:

- Losing weight if overweight.
- Avoiding alcohol and sleep medicines.
- Wearing a special dental piece at night.
- Sleeping on your side instead of your back.
- Surgery
- Using a continuous positive airway pressure (CPAP) machine during sleep. CPAP is a form of breathing assistance. CPAP uses air pressure to open up your airways.

Smoking

Smoking is a risk for all types of stroke. Smoking is one of the hardest habits to break but one of the most important habits to stop.

Tips to stop smoking:

- Make your quit date the day you had your stroke.
- Ask others for their support.
- Make a quit smoking contract with a friend.
- List your smoking triggers and plan how to cope with them.
- Talk to your primary care provider about using "quit-smoking" products, such as gum and patches.

You can do it:

- Set your goals. Write down all the reasons for quitting, and what you want to accomplish once you have quit.
- Envision yourself as tobacco-free.
- Set your quit date and stick to it.

Tips for when you are home:

- Remove cigarettes, ashtrays, lighters from your home, car or any other place where you keep them.
- Avoid places that you link with smoking.
- Make a survival kit. Ideas for the kit include gum, mints and carrot sticks.
- Take a walk outside when the urge becomes strong.
- Post your quit-smoking contract where you can see it.
- Ask people not to smoke near you.

Scan the QR code to learn more
or visit www.smokefree.gov

DID YOU KNOW?

- The urge to use tobacco only lasts from a few seconds to five minutes. It will go away whether or not you give in to it.
- 50% of current smokers report having quit for one day or longer in the past year.
- Millions of others have quit tobacco before you. You can do it. You can become tobacco-free.

Too Much Alcohol

Too much alcohol can increase your risk for all types of stroke. Alcohol contributes to several medical conditions that are risk factors for stroke.

Alcohol-related risk factors include:

- High blood pressure.
- Diabetes
- Being overweight
- Liver damage - when liver is unable to form blood clots correctly.

Recreational Drugs

Drug use, such as methamphetamine, cocaine and other street drugs, increases your risk of ischemic and hemorrhagic stroke. Continued use of these types of drugs can cause permanent damage to the blood vessels supplying your heart and brain, increasing the risk of stroke for the rest of your life.

Recreational drugs include:

- Methamphetamine
- Amphetamine (Adderall, Dexedrine, Ritalin)
- Any injectable recreational drug.
- Daily marijuana (THC) use.
- Cocaine
- Ecstasy

NOTE: **If you need help with quitting alcohol or recreational drug use, let your nurse or physician know.**

Personal Notes:

Team Members

Many staff are involved in your care. The stroke team works together to help in your recovery. You may not see all the listed staff. This is dependent on your needs and deficits.

- **Care Management** includes a registered nurse (RNCC) and social worker (MSW) who help plan a safe discharge.
- **Certified Nursing Assistant** assists the RN/LPN with your care during a shift.
- **Charge Nurse** is the nurse in charge of the unit during a shift.
- **Hospitalist** is a physician who cares only for hospitalized patients.
- **Interventional Physician** removes clots within the brain.
- **Neuro-hospitalist** is a neurologist who sees only hospitalized patients.
- **Neurosurgeon** is a surgeon who specializes in brain and spine conditions.
- **Nurse Manager** is in charge of the unit.
- **Nurse Practitioner (NP)** is an Advanced Practice nurse who partners with the physician to care for you.
- **Occupational Therapist (OT/OTA)** helps with rebuilding motor skills and assesses thinking ability.
- **Pharmacist** reviews your medicines.
- **Phlebotomist** draws blood needed for lab tests.
- **Physical Therapist (PT/PTA)** works with your strength and movement.
- **Registered Nurse (RN)** and **Licensed Practical Nurse (LPN)** are in charge of your care during a shift.
- **Respiratory Therapist (RT)** helps with your breathing.
- **Speech Language Pathologist (SLP)** checks your swallowing ability and orders a safe diet for you. They also work with you on your speech.

Post-Stroke: Possible Problems

After having a stroke, you are at risk for problems. These can occur because you are less active, may have trouble swallowing, may have a catheter in place to drain your urine, or you may be impulsive or unsteady.

The Stroke Team works to help prevent these problems:

- Blood clots in your legs.
- Urinary Tract Infection (UTI).
- Falls
- Pneumonia

Blood clots:

To prevent blood clots from forming in your legs, you will wear sequential compression devices (SCDs) on your legs and receive a low dose blood thinner. The SCDs cause a mild squeezing sensation followed by a release. Once you are walking often by yourself, these can be removed.

Urinary Tract Infection:

Sometimes a catheter is placed to help drain your urine. The nurse will remove it as soon as possible. Even though you may like the ease of having a catheter, it is important to remove it to prevent an infection.

Fall prevention:

- Always use your call light before getting up.
- Report dizziness or loss of balance to stroke team.
- Wear non-skid footwear, glasses, hearing aids and use a walker or cane if needed.
- Keep high-use items between eye level and hip height to prevent reaching and bending.
- Follow the activity level given to you by the stroke team.

What families can do to help:

- Keep bed and chair alarms turned on.
- If your family member is confused, try to stay with them as much as possible.
- Let the nurse know when you are leaving the room.

We are here to help, so please let us know of any safety concerns.

Swallowing

After a stroke, swallowing can be affected. The nurse will do a short test to see if you can swallow pills. A speech language pathologist (SLP) may do an in-depth test to see if you can safely eat. Your swallow ability may be assessed several times during your hospital stay.

Dysphagia means trouble swallowing.

Aspiration means food or liquid enters the airway and lungs. This can lead to pneumonia.

A person with Dysphagia may:

- Cough or choke on liquids or solid foods.
- Have a gurgle or wet sounding voice after swallowing.
- Have trouble holding food in his/her mouth.
- Retain food in mouth, called "pocketing".
- Get food or drink in their airway when swallowing.
- Feel like food is caught in their throat.

To protect you from Aspiration and Pneumonia:

- A nurse will check to make sure you are safe to swallow pills.
- A Speech Language Pathologist will check your swallow to make sure you are safe for a diet.
- Someone may help you with eating and drinking.
- Someone may help you with oral care.
- You may receive a special rinse for your mouth. This helps prevent pneumonia.
- A sign with swallowing safety tips will be posted.

You may need:

- A change in food texture or liquid thickness.
- To learn how to eat in a special way.
- To learn signs of trouble swallowing.
- To do exercises to improve swallowing.

What family members can do:

- Check with staff before giving food or drink to your family member. Special training may be needed prior to feeding your loved one.
- Do not eat or drink in front of the patient who is not allowed to eat or drink.
- Watch for signs of trouble with swallowing and let the staff know.
- Follow the safety tips posted in the patient's room.

Lab Tests, Imaging and Procedures

During your hospital stay the physician will order lab tests, imaging tests, and procedures to help determine the cause of your stroke. Determining the cause will help the team to educate you about prevention of another stroke.

Lab Tests

- **Lipid panel:** Detects cholesterol levels in the blood.
- **HbA1c:** Determines 3-month average blood glucose level. If you are diabetic, it will indicate how well your blood sugars have been controlled.

Imaging Tests

- **EKG:** Electrodes are attached to the chest and electrical activity is transcribed on a printed page. It takes less than 5 minutes to complete.
- **CT scan:** X-rays produce a 3-D image of your brain. It takes less than 10 minutes to complete.
- **CT Angiography:** During the CT scan, contrast (dye) is given to provide visual images of how blood flows through the blood vessels of the brain. It takes 15-30 minutes to complete.
- **Magnetic Resonance Imaging (MRI):** Magnetic fields produce 3-D images of the brain in more detail than a CT scan. It takes 45-60 minutes to complete.
- **Carotid Ultrasound:** Ultrasound waves are used to take a picture of the arteries in the neck to show blood flowing to the brain. It takes 15-30 minutes to complete.
- **Chest X-ray:** X-rays produce an image of the heart and lungs. It takes less than 5 minutes to complete.
- **Transthoracic Echocardiogram:** Ultrasound waves are used to take a picture of the heart and circulating blood. It can take up to 30 minutes.
- **Transcranial Doppler:** Ultrasound waves are used to measure the rate and direction of blood flow inside the blood vessels of the brain.

Minor Procedures

- **Modified Barium Swallow (MBS):** Special x-rays examine swallow function. A Speech Language Pathologist (SLP) will be present during the test to evaluate swallowing ability. It can take 30-60 minutes to complete.
- **Fiber Endoscopic Evaluation of Swallowing (FEES):** FEES checks swallowing ability. An anesthetic is sprayed into the nose and throat. A thin flexible tube is passed through the nose and views the throat as food and liquid are swallowed. It takes 20-30 minutes to complete.
- **Transesophageal Echocardiogram (TEE):** A specially trained cardiologist guides a thin, flexible tube down the esophagus and into the heart to create high-quality, moving pictures of the heart's structures. This test is performed under sedation and takes up to an hour to complete.
- **External Ventricular Device:** Involves drilling a small hole in the skull and placing a small drain to divert blood and cerebrospinal fluid (CSF) out of the body to reduce the pressure in the brain.
- **Lumbar Drain:** A thin flexible tube is inserted into the lower back to drain cerebrospinal fluid (CSF) from the brain and spinal cord.

Major Procedures

- **Cerebral Angiogram:** A catheter is inserted in an artery into the arm or leg and a special dye is injected into the blood vessels leading to the brain. X-ray images show any abnormalities including narrowing, blockage, or malformations of the blood vessels and the brain. Procedures done using this technique include:
    - » **Embolization:** Stops blood flow to an aneurysm or abnormal blood vessel by placing an occluding device or substance in the vessel to prevent blood from flowing through it.
    - » **Mechanical Thrombectomy:** Uses specialized catheters to remove blood clots from arteries to restore blood flow.
    - » **Carotid Angioplasty and Stent Placement:** Uses a small, specialized balloon to open a vessel followed by placement of a stent into a narrowed artery to reopen and improve blood flow.
- **Surgical Decompression:** Emergent surgical procedure to remove part of the skull to relieve pressure caused by brain injuries or swelling. This is completed under general anesthesia.

PeaceHealth Sacred Heart Medical Center Endovascular Lab

Goals of Care Discussion

When someone has a serious stroke, it is important to reflect on their values regarding quality of life. This reflection can affect desired medical treatment. The stroke team only wants to give treatments that align with the patient's values. We often need help to clarify those values to determine treatment. There are times when it is best to provide comfort and supportive care and allow natural death.

Questions to consider:

- Has the patient ever discussed what he/she would or wouldn't want done in case of a serious illness?
- Does your loved one have a Provider Orders for Life-Sustaining Treatment (POLST), advance directive, or living will? Do you have a copy of it?
- Did you ever talk about tube feedings if food couldn't be eaten?
- What did the patient enjoy doing?

Frequently asked questions:

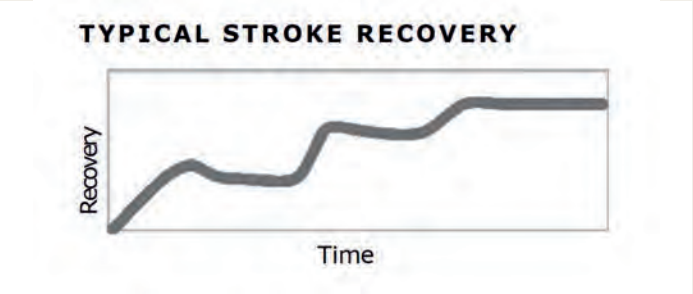
- Will my loved one be in pain? No, the stroke team will provide pain medicines.
- Will they be afraid? Anxiety medicines are given as needed. You may also ask for spiritual care to visit.
- Will they starve to death? It is natural for patients to lose the desire to eat when they are very near the end of life.

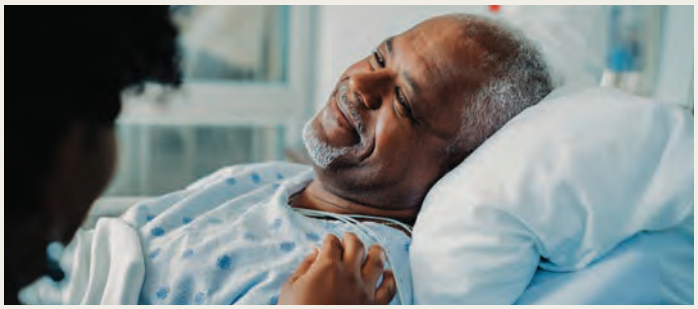
Personal Notes:

Personal Notes:

Recovery After a Stroke

Recovery after a stroke is unique for each person. It depends on the area of the brain injured, the size of the injury, and how healthy you were prior to the stroke. Even if you had a small stroke, you may notice problems with energy, thinking, and emotions. Feelings of sadness, anger, and anxiety are common and expected. Many stroke survivors experience fatigue as their brain heals.





Things you can do:

- Remember you are not alone in having these feelings.
- Bathe and dress to maintain a positive self-image.
- Build time into your day to rest your mind and body.
- Give yourself time to recover.
- Follow through on your therapies; the more you recover the better you will feel.
- Stay active doing things you enjoy.
- Exercise regularly.
- Spend time with friends and family.
- Get enough sleep.
- Eat a healthy diet.
- Speak openly and honestly to your primary care provider and family about your feelings.
- Maintain intimacy.
- Join a support group.

Things family can do:

- Offer two options instead of open-ended or multiple choice answers.
- Encourage leisure and physical activities; start small and build up.
- Encourage them to do what they can.
- Listen to the survivor's feelings.
- Ask friends to visit.
- Seek help if signs of depression occur.

Safety tips for home:

- If you feel sad or empty most of the time or have thoughts of death or suicide, contact your primary care provider, or 9-1-1 in an emergency.
- If you think your mood is affecting your recovery, contact your primary care provider.

NOTE: See *"Emotional and Personality Changes"* in the Special Care section of this guide.

Rehabilitation Options After a Stroke

Rehabilitation, often called rehab, is tailored to the stroke survivor and may include:

- Re-learning basic skills, such as walking, talking, eating, and dressing.
- Increasing your strength and endurance.
- Improving memory and thinking.
- Regaining as much independence as possible.

Most stroke patients will need some kind of rehab. Rehab programs differ in the following ways:

- Type of services provided.
- Frequency of services.
- Setting where the treatment occurs.

Rehab need is based on:

- Degree of disability
- Energy level
- Where you live
- Home support
- Other medical needs.
- Insurance/funding

Safety Tip for Home:

If you feel your home plan isn't working, contact your primary care provider.

Home Safety

Managing life at home is a part of stroke recovery. To live well after a stroke, you may need to make some changes to your home and daily routine.

Prepare for going home:

- Perform a safety check:
- Remove throw rugs or replace with non-skid rugs or mats.
- Create clear pathways by moving furniture and cords.
- Ensure that rooms are well-lit.
- Put in night lights.
- Install grab bars by toilet and in bathtub or shower.
- Ensure stairways have secure rails.
- Arrange for help to come into the home.
- Consider a home fall alert system.
- Your therapist will talk to you about other home safety and equipment needs.

After you are home:

- Use grab bars or handrails.
- Have important contact numbers available.
- Accept or arrange for help.
- Wear non-skid shoes.
- Pace yourself to conserve energy.
- Sit during showering and dressing.
- Avoid bathing alone until you are safe to do so.

Exercise

You will recover from your stroke more quickly and be less likely to have another stroke if you get active early and stay active. The American Stroke Association recommends moderate exercise three to four times a week. Some examples of exercise include walking, biking, swimming, and exercise videos. Remember you just had a stroke. Start slowly and use your stroke team's guidance.

Tips for staying active:

- Follow exercise guidelines given to you by your therapist.
- Involve a friend/family in your exercise.
- Be active as much as possible: do yard work, take the stairs, park farther away from building entrances.
- Track your exercise in a log or diary.
- Use shopping malls for walking when weather is too hot, cold or rainy.
- Don't exercise on a full stomach.
- Follow the 'talk test' - your walking speed should allow you to talk.
- Depending on your stroke deficits, consider joining a supervised exercise program or a fitness center.
- Obtain an exercise tracker.

Tips for improving balanced:

- Following a stroke your balance may be "off" which puts you at risk for falling.
- Walk with your feet wider apart.
- Take shorter steps.
- Slow down your walking speed.
- Use assistive device or braces as prescribed by your therapist.
- Wear supportive shoes.
- Do the exercises prescribed by your therapist.

Safety tips for home:

- If you have chest pain, pressure, or trouble breathing that doesn't go away with rest - stop exercising and call 9-1-1.
- If you have long-lasting fatigue, nausea and vomiting, or dizziness, call your primary care provider.
- Exercise with someone until you regain strength, balance and endurance.
- Avoid walking with pets until you are safe to do so alone.

Driving After a Stroke

Driving a car carries the duty of maintaining your safety and the safety of everyone on the road. We understand that driving is often deeply connected with feelings of usefulness and control. It gives us freedom. However, your driving skills may change after a stroke. Here are a few things to consider:

Changes after a stroke that affect driving skill:

Loss of or decrease in:

- Strength
- Sensation
- Flexibility
- Mobility
- Vision
- Thinking and/or reaction time.
- Memory
- Awareness of only one side of the body.
- Judgment/decision making.

How family members can help:

- Have a friend or family member drive with the stroke survivor until driving safety is known.
- Allow for open and honest talk regarding mutual concerns.
- Inform primary care provider if you notice any driving safety concerns.
- Talk with your therapist or primary care provider about driving.
- Explore options: public transport systems.
- Schedule appointments and outdoor activities when a ride is available.
- Contact the local Department of Motor Vehicles (DMV) for information and laws related to driving with a disability.
- Have your driving assessed by a professional certified driver rehabilitation specialist.

Simply Good

A cookbook for stroke survivors

Scan the QR code to download your free copy.

Stroke Healthy Diet

Eating well can help reduce your risk of having another stroke. As you make daily food choices, base your eating pattern on the general tips below and the American Heart Association Diet and Lifestyle Recommendations.

General Tips:

- Eat more fruits and vegetables.
- Limit meats, sweets and sugary drinks.
- Exercise daily
- Eat nuts, fruits, and vegetables for snacks.
- Avoid "white starches" such as potatoes, white rice, white bread, and white flour.

Tips for Limiting Salt (sodium):

- Aim for 2000 mg or less of sodium per day.
- Avoid processed foods or cured meats such as lunch meats, ham, bacon, sausage, hot dogs, and corned beef.
- Avoid sauces and seasonings such as Worcestershire sauce, teriyaki sauce, meat tenderizers, etc.
- Do not use salt at the table or when cooking.
- Read labels and avoid high sodium foods, (more than 400 mg per serving).

Tips for Losing Weight:

- Eat less food (calories).
- Keep track of the calories you eat over a number of days.
- Use a smaller plate for meals.
- Weigh yourself regularly.

Tips for Eating Out:

- Eat a fruit or vegetable before going out.
- Avoid soups, gravies, and sauces (high in salt).
- Avoid high sodium foods.
- Select meat that is baked, broiled, grilled, our boiled.
- Select baked or boiled potatoes instead of mashed, fried, or creamed.
- Choose fresh fruit, gelatin, or sherbert for dessert.
- Ask for your salad dressing on the side or try a vinaigrette.
- Ask to have half of your meal boxed before it's served to you.

The American Heart Association Diet and Lifestyle Recommendations

To Learn More
Scan the QR Code

Safety Tip for Home:
If you feel sad, empty, or overwhelmed most of the time, contact your primary care provider for help.

Caregiver Support

Being a caregiver of a stroke survivor can be rewarding, and at times, overwhelming. Once the stroke survivor leaves the hospital, skilled nursing facility, or inpatient rehabilitation center, you may become the primary caregiver in charge of charge of the stroke survivor's everyday care.

You can't pull water from an empty well. Taking care of yourself must be a priority in order to be able to care for your stroke survivor.

Role of a caregiver may include:

- Taking part in informed decision making and treatment planning.
- Making appointments and taking them to appointments.
- Ensuring that medicines are refilled and taken as directed.
- Assisting with daily living needs: bathing, walking, toileting, etc.
- Tracking the stroke survivor's health.
- Managing finances.
- Being a good listener.
- Encouraging stroke survivor's independence.

Caregiver survival tips:

- Ask for and accept help from others.
- Take care of yourself: eat healthy, exercise daily, get enough rest.
- Schedule breaks: get a massage, have your hair done, visit friends.
- Allow yourself to grieve.
- Educate yourself about stroke.
- Take things one day at a time.
- Take pictures or maintain a journal to track progress.
- Set realistic goals.
- Check with your senior or community center to see if relief or day care is available.

Stroke Resources

Websites

- **American Stroke Association**
  www.stroke.org
- **Brain Aneurysm Foundation**
  www.bafound.org
- **Mayo Clinic**
  www.mayoclinic.org
- **National Alliance for Caregiving**
  www.caregiving.org
- **National Institute of Neurological Disorder and Strokes**
  www.ninds.nih.gov
- **NIH StrokeNet**
  www.nihstrokenet.org

Books

- *After a Stroke: 500 Tips for Living Well, 2nd Ed.,* by Cleo Hutton
- *Healing the Broken Brain: Leading Experts Answer 100 Questions about Stroke Recovery,* by Dr. Mike Dow and David Dow
- *Living with Stroke: A Guide for Patients and Their Families,* by Richard C. Senelick, MD
- *My Stroke of Insight: A Brain Scientist's Personal Journey,* by Jill Bolte Taylor, PhD
- *Stronger After Stroke: Your Roadmap to Recovery, 3rd Ed.,* by Peter G. Levine
- *When Your Spouse Has a Stroke: Caring for Your Partner, Yourself, and Your Relationship,* by Sara Palmer PhD and Jeffrey B. Palmer, MD

Other Resources

Aging and Disability Resources Connection of Oregon (ADRC)
855-673-2372
www.adrcoforegon.org

Provides information on transportation, legal assistance, housing, community living, financial and nutritional assistance, caregiver support, and many other resources.

Aging and Long-Term Support Administration - Washington State
360-725-2300
www.dshs.wa.gov/altsa

Seniors and people with disabilities living with good health, independence, dignity, and control over decisions that affect their lives.

Southeast Alaska Independent Living
855-565-2017
www.sailinc.org/aging-and-disability-resource-center

Resource center where seniors, people with disabilities, and their caregivers can get complete information about long-term services and supports to live as independently as possible in the community and setting of their choice.

Suggested Videos

Visit peacehealth.org/video-library

PeaceHealth video library contains short, educational videos on stroke symptoms, risk factors, medications, recovery, and support for stroke survivors and their families. You can follow along in this educational handout as you watch these short videos.

Stroke:
What is a Stroke (01:51)
Stroke: Fast Facts (00:25)
What is Clot-Busting (Thrombolytic) Treatment? (01:42)

Stroke Signs and Symptoms:
Stroke: Understanding the Symptoms (02:12)
Stroke: Know the Signs and BE FAST (02:13)

Stroke Risk Factors:
Learning About Risk for Heart Attack and Stroke (01:56)
Stroke: What's Your Risk? (01:52)
Heart Attack and Stroke: A Woman's Risk (02:41)

High Blood Pressure:
What is High Blood Pressure (01:55)
High Blood Pressure: Make the Most of Home Monitoring (02:13)
The Effects of High Blood Pressure (01:55)
Medicines for High Blood Pressure (02:11)

Atrial Fibrillation:
What is Atrial Fibrillation? (02:29)
After a Stroke: Taking a Blood Thinner for A-Fib (02:07)
Safe use of Non-Warfarin Blood Thinners (03:09)
Warfarin: 5 Things You can do to Take it Safely (02:38)

Diabetes:
Diabetes: Taking Care of Your Heart (01:48)
Diabetes: How Others Stay Motivated (02:17)
Diabetes: Making and Using an Action Plan (03:00)
Diabetes: How to Build Your Plate (02:15)

High Cholesterol:
Cholesterol: How it Raises Your Risk (01:53)
Statins: Overcoming Barriers to Taking Them (02:03)

Medications:
After a Stroke: Taking an Antiplatelet (02:34)
Managing Your Medicines (01:14)

Overweight/Obesity:
Healthy Weight: Make Your Plan (02:22)
Healthy Weight: What Works (02:04)

Sleep Disorders:
Sleep Apnea: What is it? (01:33)
Sleep Apnea: Time to Get Checked (02:14)

Smoking:
Quitting Smoking: The Rewards Start Now (02:02)
Quitting Tobacco: Managing a Slip-up (01:30)

Alcohol:
Alcohol: The Space it Takes Up in Your Life (01:58)
Alcohol: Taking Action (02:24)

Recreational Drugs:
Drug Withdrawal: What to Expect (02:09)
Substance Use Disorder: Treatment Options (03:05)

Post-Stroke: Possible Problems:
Preventing Deep Vein Thrombosis (DVT) in the Hospital (01:52)
Preventing Falls in the Hospital (02:42)
Care in the Hospital: Preventing a Urinary Catheter Infection (02:47)

Goals of Care:
Advance Care Planning: The Need for Ongoing Conversations (03:30)
Advance Directives (02:51)

Stroke Recovery:
After a Stroke: Your Self-Care Plan (02:18)
Stroke Recovery: Finding What Inspires You (02:30)

Rehabilitation Options:
Stroke: What is Stroke Rehab? (01:50)

Home Safety:
Preventing Falls in Older Adults (02:11)
Preventing Falls: Make Your Home Safe (01:08)
Preventing Falls: Use a Home Safety Checklist (01:07)

Stroke Healthy Diet:
Healthy Eating: Make it Work for You (01:36)
Five Ingredients for Healthy Eating (01:24)
Heart Healthy Diet (01:47)
Prediabetes: Healthy Changes You Can Make (02:19)

Caregiver Support:
Caregiving: Take Care of Yourself Too (01:29)
Caregiving: How to Prepare (02:27)

Emotional and Personality Changes:
Stroke: Understanding Your Emotions (02:00)
Stroke Recovery: Using Support to Stay Positive (02:10)
A Good Support System is Important (02:04)

Personal Notes:

Special Care

Aphasia

Aphasia is a condition in which a person has trouble with speaking, reading, writing, and/or understanding.

A person with Aphasia may not:

- Understand words when spoken to.
- Speak in complete sentences.
- Read or write.
- Understand the meaning of numbers.

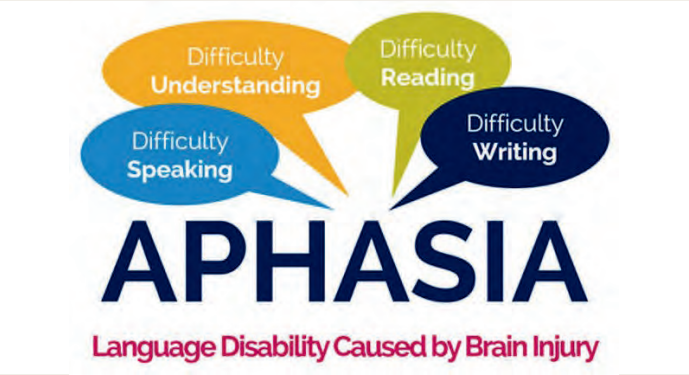
A person with Aphasia may:

- Speak using only 1 or 2 words.
- Mix up the order of words in a sentence.
- Use the wrong words or make words up.
- Have trouble working with numbers or be unable to balance a checkbook.

To Learn More

Scan the QR Code

or visit www.aphasia.org



How can family members help?

If a person has trouble talking:

- Allow enough time for the person to speak.
- Provide two or three choices instead of open-ended questions. For example, "Do you want water or juice?" instead of "What do you want to drink?"
- Encourage the use of gestures, such as pointing.

If a person has trouble understanding:

- Get their attention prior to speaking.
- Use gestures and facial expressions.
- Allow extra time for them to respond.
- Use simple yes or no questions.
- Reduce distractions, such as turn the TV and radio off.
- Ensure that only one person talks at a time.

Safety Tip for Home:

- Order an ID bracelet or necklace with emergency contact info
- Consider obtaining a fall alert system.

Dysarthria

Dysarthria is a speech problem caused by a lack of control over muscles in the face and mouth. A person who has dysarthria knows which words to use, but may not be able to make the right sounds.

A person with Dysarthria may not:

- Make certain sounds correctly.
- Speak words or sentences clearly.
- Control tone, volume or speed of speech.
- Realize their speech is hard to understand.

A person with Dysarthria may:

- Pause for breath in the wrong places.
- Drop or slur parts of words.
- Speak without moving their mouth.
- Seem confused.

Safety tips for home:

- Obtain ID bracelet or necklace with emergency contact information.
- Consider obtaining a fall alert system that can notify emergency services/contacts.

If a person has Dysarthria:

- Allow extra time for them to speak.
- Be face-to-face when talking.
- Reduce background noise.
- Repeat messages to confirm what you understood.
- Give feedback when you don't understand.
- Encourage use of gestures, drawing, or writing to help them "talk".

Speech tips for the person with Dysarthria:

- Take a deep breath prior to speaking.
- Use the SLOP way:
  - » Slow – speak slowly.
  - » Louder – speak loudly.
  - » Over pronounce – say words clearly.
  - » Pause – use breaks between your words.
- Do your speech exercises.

Dysphagia

Dysphagia is the medical term for difficulty swallowing. This condition can make eating, drinking, taking medicine, and breathing difficult. Many stroke survivors experience varying degrees of dysphagia at some point after a stroke.

Symptoms of Dysphagia:

- Difficulty starting to swallow.
- Choking when food gets stuck.
- Coughing or gagging while swallowing.
- Liquid coming our of nose after trying to swallow.
- Food getting caught in lungs.
- Weak voice
- Drooling
- Poor tongue control.
- Loss of gag reflex.

The most common treatment for difficulty swallowing is swallow therapy done with the help of a Speech Language Pathologist (SLP).

Tips for living with Dysphagia:

Exercising the tongue, lips, throat, and mouth can help relax and strengthen the muscles as well as increase their flexibility (examples include tucking the chin or rotating the head).

Other tips include:

- Sit up straight any time you eat or drink.
- Reduce distractions at mealtime.
- Eat slowly with smaller amounts of food.
- Change food and/or drink texture (consult with your stroke team).
- Make sure you have cleared all the food from your mouth.

Special advice from your therapist:

Emotional and Personality Changes

Depression, fatigue, changes in emotions, and concerns about intimacy are some of the struggles you may face after stroke. Knowing and dealing with these issues is just as important as facing the physical challenges that come with stroke recovery.

Depression:

Depression, mild or major, is the most common emotional change faced by survivors. Depression can keep you from moving forward in your recovery.

Symptoms of depression:

- Feeling sad or "empty" most of the time.
- Loss of interest or pleasure in usual things.
- Sudden trouble sleeping or oversleeping.
- Weight loss or gain.
- More moody or angry.
- Feeling worthless or helpless.
- Feelings of guilt.
- Crying all the time.
- Ongoing thoughts of death or suicide (please seek medical help right away).

What can help:

- Make the most of rehab. The more you recover, the better you will feel.
- Spend time with family and friends.
- Give yourself credit. Celebrate the large and small gains.
- Learn to "talk" to yourself in a positive way
- Do things you enjoy.

How loved ones can help:

- Keep them active: play games, watch TV or listen to music together.
- Ask friends to visit if the survivor is willing.
- Do not discount depression by telling the survivor to "cheer up" or "smile".

If you think you are depressed, talk with your primary care provider. If depression is not treated, it can cause needless suffering and may slow your recovery. You may be screened for depression while you are in the hospital.

Fatigue:

Feeling tired is a common complaint after stroke. It can also affect those who are doing well after a stroke.

Tasks that were once simple now require more physical and mental effort. Working with physical and occupational therapists may help.

They can teach you:

- Ways to conserve energy.
- Exercises to build stamina.
- How to move more efficiently.

Things you can do:

- Do something you enjoy each day. A positive attitude can boost energy levels.
- Learn to relax; being relaxed uses less energy.
- Try taking naps or resting during the day.

Sex and intimacy:

Sex is a sensitive subject for many stroke survivors and their loved ones. Stroke-related changes may affect sexual desire and performance.

What can help:

- Talking is key. Speak openly about your fears or concerns.
- Start slowly, perhaps with being close or cuddling.
- Create a loving atmosphere.
- Find a comfortable position.
- Be patient, loving and keep humor in your relationship.

Changes in emotions

Changes in emotion, feelings, and behavior are very common after a stroke. These can include anger, anxiety, mood swings, impulsive actions, memory problems and confusion. Be sure to discuss any concerns regarding these emotions with your primary health care provider.

- Stay active and involved in your hobbies.
- Set goals and measure progress.
- Plan daily activities to promote structure and sense of purpose.
- Stay involved with people and activities you enjoy.
- Talk to a counselor.
- Join a stroke survivor support group.
- Speak openly and honestly to your caregivers about your emotional changes.

To Learn More

Scan the QR Code

or visit www.stroke.org

Vision Impairment

Many types of vision loss can occur after a stroke. The type of visual problem depends on the area of the brain that was injured.

Types of visual problems:

- **Cortical blindness:** total blindness but stroke survivor doesn't realize he/she is blind.
- **Diplopia**: double vision.
- **Hemianopia:** decreased or loss of vision in half of the visual field.
- **Quadrantanopia:** decreased or loss of vision in a quarter of the visual field.
- **Scotoma**: an island-like blind spot.
- Total blindness

Common Symptoms:

- Seeing only part of the visual field.
- Tripping or bumping into objects.
- Feeling unbalanced or veering towards one side while walking.
- Missing parts of sentences when reading.
- Seeing double images.
- Trouble recognizing visual images.
- Seeing moving objects in your vision that aren't there or aren't actually moving.
- Blurry vision

Helpful Tips:

- Ask if you need to see a neurologist who specializes in eye problems.
- Make sure your home has plenty of good lighting.
- Organize a place for everything and keep everything in its place.
- Mark stairs and slopes with brightly colored tape or markers that contrast with flooring.
- Place mealtime utensils and hygiene items on the side where eyesight is best.
- Allow extra time to complete a task.
- Use caution with stairs and curbs.
- Arrange for help in your home and for transportation.
- Do vision exercises given to you.

Special advice from your therapist:

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Weakness and Spasticity

Spasticity means tight or stiff muscles due to brain injury.

Hemi means one side of the body or one limb.

Paresis means weakness.

Things you can do for weakness:

- Follow your home exercise plan given to you by your therapist.
- Take part in your therapy sessions.
- Use devices or tools as prescribed by your therapist.
- Maintain rest and hydration.
- Ask your therapist about safety equipment for home.
- Do not use furniture for support while walking.
- Support and protect your weakened limb during rest and activity.

Things you can do for Spasticity:

- Follow your daily stretching program as given to you by your therapist.
- Wash the spastic limb daily.
- Take medicines as prescribed.
- Wear braces and splints as prescribed.
- Check spastic limb daily for skin breakdown.
- Follow precautions for range of motion exercises.

Safety tips for home:

- Don't allow caregivers to move you by pulling on weakened or spastic limb.
- Limit walking while distracted.

Special advice from your therapist:

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Personal Notes:

Personal Notes:

Peace Health

peacehealth.org