

Surviving and Thriving After Stroke





Stroke

Patient Education Guide

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.

USING THE GUIDEBOOK

This book will help guide you through your recovery. We encourage you to read more about strokes and how they affect you or your loved one.

The book is divided into the following sections:

- Manage Your Risk
- During Your Hospital Stay
- After Your Hospital Stay
- Special Care

Feel free to make notes in the guide.

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FAQ

FREQUENTLY ASKED QUESTIONS BY FAMILY MEMBERS:

What is a stroke?

A stroke occurs when a blood vessel is blocked or bursts in the brain. During a stroke, oxygen-rich blood supply to part of the brain is decreased. Brain cells become damaged and may die.

Is this serious?

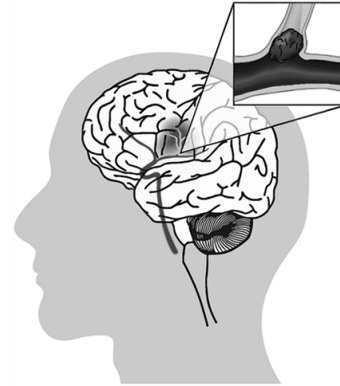
A stroke is a medical emergency. Early treatment may help to restore or improve blood flow to the brain. This may decrease the damage to the brain.

Are there different types of stroke?

There are 3 different types of stroke:

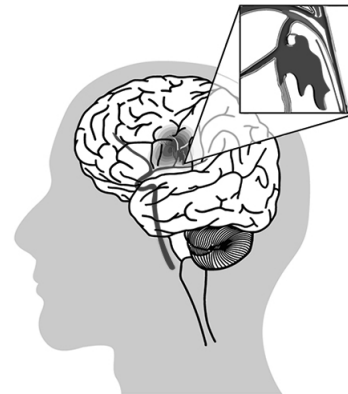
- Transient ischemic attack (TIA) is when blood flow to part of your brain is blocked for a short time. This is a warning sign. People who have a TIA may have a stroke in the future causing lasting damage to the brain. The risk factors and symptoms of a TIA are the same as a stroke
- An ischemic stroke is the most common stroke. It is caused by a blood clot that blocks blood flow to the brain
- A brain bleed (hemorrhagic stroke) is the third type of stroke. There are two types of brain bleeds:
 - Intracerebral hemorrhage (ICH) which is often caused by high blood pressure
 - Subarachnoid hemorrhage (SAH) which is often caused by a ruptured aneurysm

Block



Ischemic Stroke

Bleed



Hemorrhagic Stroke
(subarachnoid & intracerebral)

FAQ (Continued)

What can be done?

It depends on the type of stroke:

- For an ischemic stroke some people may benefit from clot busting medicine or clot removal
- For a brain bleed controlling the blood pressure is very important

What caused this?

There are many causes of stroke. During your hospital stay, the stroke team will be running tests to determine the likely cause.

Will my family member get better?

Stroke can be a life-changing event. Fortunately, most people get better. The road to getting better can be short or long, and often bumpy. The stroke team is here to help your family member.

Why can't my family member eat or drink?

Swallowing can be affected by a stroke. To prevent liquids and food going into the lungs, your family member should not eat or drink. In time, the nurse will do a short test to see if your family member may have pills. A speech therapist will do a test to see if your family member can safely eat.

My family member is better. Why can't we go home?

After an event like this, they may get worse again. The stroke team may feel it is safer to stay for more testing and assessment.

Who will answer my questions?

Talk to your nurse. Other members of the stroke team are also open to answering questions.

We understand that this can be a stressful time and it may be hard to think and focus. As time goes on, we will provide more information.



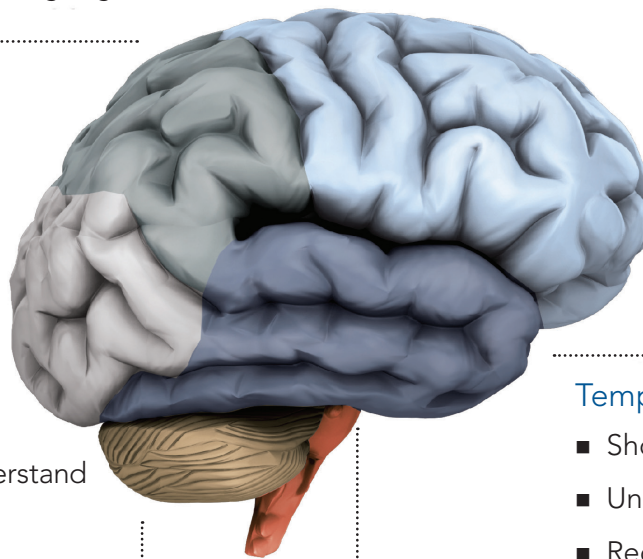
Brain Images

Parietal Lobe

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

Frontal Lobe

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



Occipital Lobe

- Able to see and understand what you are seeing
- Reading

Temporal Lobe

- Short-term memory
- Understand speech
- Recognize faces

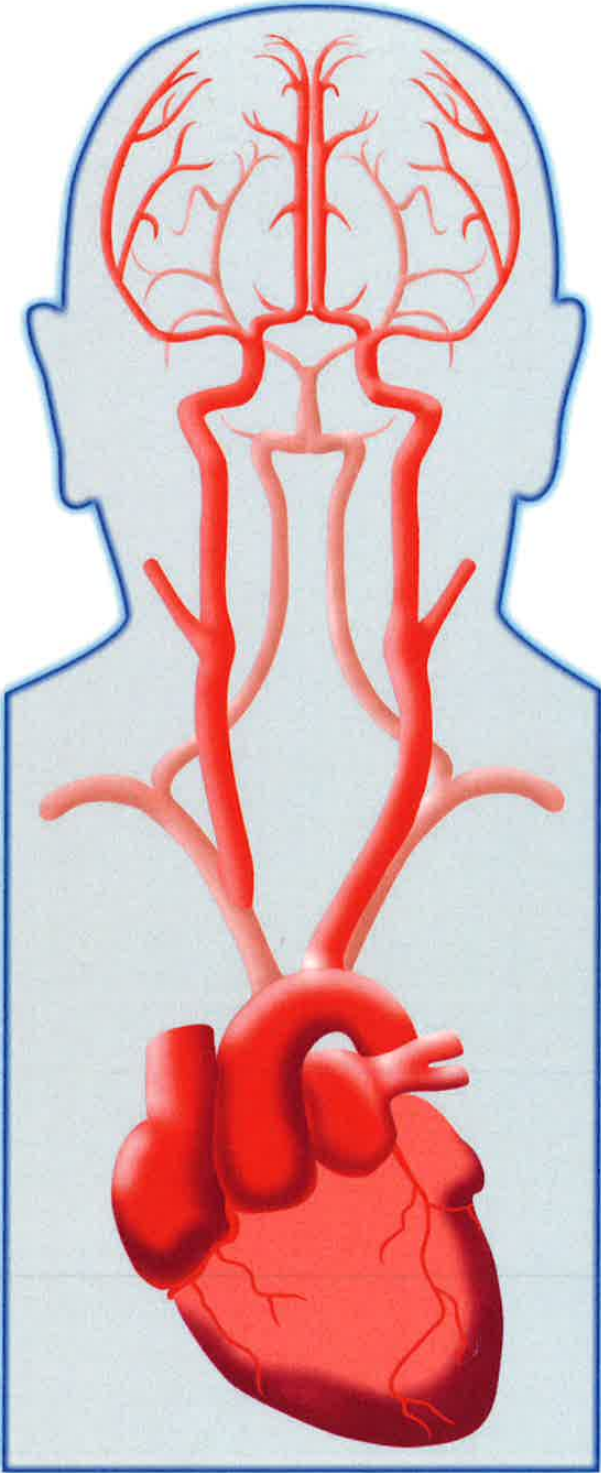
Brain Stem

- Eye movement
- Message relay center
- Heart & breathing center

Cerebellum

- Movement
- Balance
- Body parts working together

Brain Images (Continued)



Know the Signs of Stroke - Act FAST!

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.

Remember, **TIME IS BRAIN.**

BALANCE: Does the person have a sudden loss of balance?

EYES: Does the person have sudden blurred, double or loss of vision, in one or both eyes?

FACE: Ask the person to smile. Does one side of the face droop?

ARM: Ask the person to raise both arms. Does one arm drift downward?

SPEECH: Ask the person to repeat a simple phrase. Is their speech slurred or strange?

TIME: If you observe any of these signs, CALL 911 FAST!



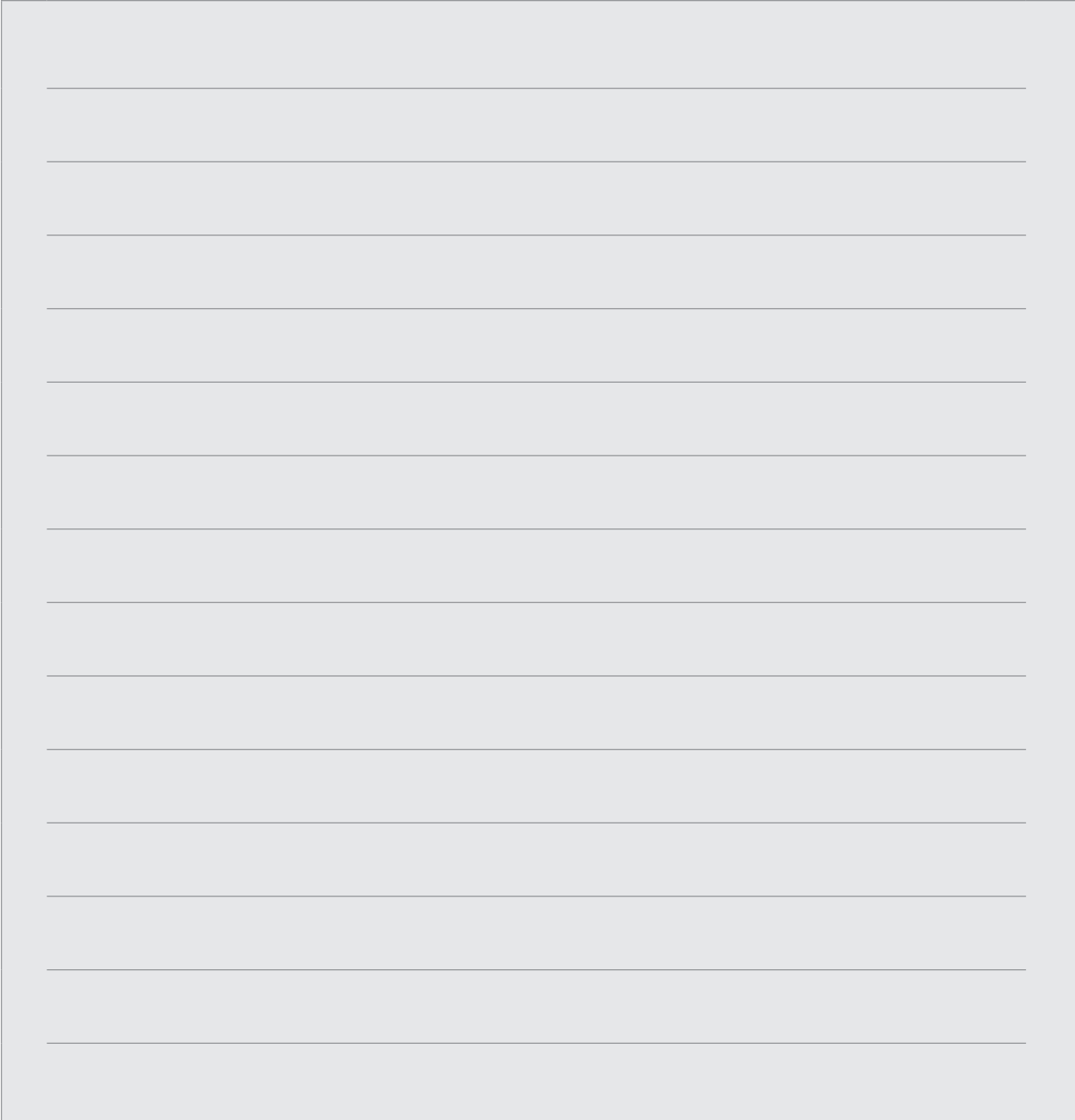
Suggested Videos:

Stroke Symptoms (01:46)

Stroke: Know the Signs and Act FAST (01:50)

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Personal Notes



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Manage Your Risk

Stroke Risk Factors

A stroke can be prevented by controlling your risk factors. The following are common risk factors for a stroke:

- High blood pressure
- Atrial fibrillation
- Diabetes
- High cholesterol
- Overweight/obesity
- Obstructive sleep apnea
- Smoking
- Too much alcohol
- Street drugs

YOUR STROKE RISK FACTORS:

Suggested Videos:

Learning About Risk for Heart Attack and Stroke (01:56)

Stroke: What's Your Risk (01:29)

Visit www.peacehealth.org/video-library

During your stay, lab and imaging tests will be done to determine your risk factors. We will provide treatment and education for managing your risks.

High Blood Pressure

High blood pressure (BP), also known as hypertension, is a lifelong condition. It is the most common cause of 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 this goal.

THINGS YOU CAN DO

- Take your medicines every day as directed
- Don't stop medicines 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 to your primary care provider appointments
- Follow a low salt diet
- Limit alcohol
- Quit smoking
- Don't use street drugs
- Exercise daily
- Maintain a healthy weight

SAFETY TIP FOR HOME

Don't worry about any one BP 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.



HOW TO CHECK YOUR BLOOD PRESSURE

- Purchase a blood pressure machine that measures the upper arm blood pressure and not the wrist or thumb. Also it should be certified for accuracy
- Obtain the right size cuff. The pharmacist can help you
- Sit quietly for 10 minutes
- Rest arm on table at heart level with legs uncrossed
- Apply cuff to same arm every time
- Take your blood pressure according to directions found with your machine
- Record 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. If this occurs, call 911

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 sugars

Suggested Videos:

High Blood Pressure: Make the Most of Home Monitoring (02:42)

The Effects of High Blood Pressure (01:46)

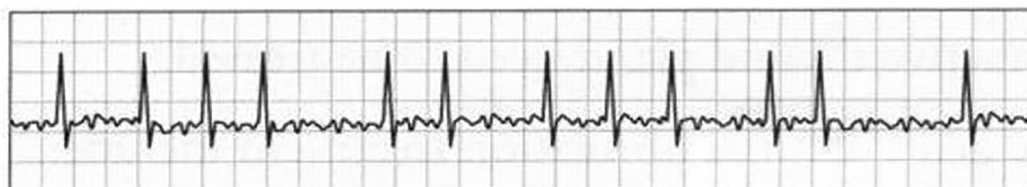
Lifestyle Changes to Lower Blood Pressure (01:44)

Visit www.peacehealth.org/video-library

Atrial Fibrillation

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

Atrial fibrillation



Normal heart rhythm



DURING YOUR HOSPITAL STAY

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

AFTER DISCHARGE

Your physician may recommend a loop recorder which will monitor your heart for an extended length of time (6 months to 3 years).

SAFETY TIP FOR HOME

If you have a racing heart (palpitations), shortness of breath, or chest pain, call 911.

Suggested Videos:

What is Atrial Fibrillation? (01:46)

After a Stroke: Taking a Blood Thinner for A-Fib (02:07)

Visit www.peacehealth.org/video-library

Helpful Website:

myafibexperience.org

Atrial Fibrillation - Medications

Treatment often includes medicine to make your blood less likely to clot. These medicines are called anticoagulants. There are different types. 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
- 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 warfarin (Coumadin), your primary care provider may need to boost the warfarin with another medication. This is done until your warfarin is at the "correct level" and usually takes a few days. This is called **bridging**. The boosting blood thinner is given into the fat of your belly by shot. This is done once or twice a day. Bridging can be used anytime the warfarin is not at the correct level or when warfarin 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. This is a very important medicine in preventing another stroke

Suggested Videos:

Taking Warfarin Safely (02:36)

Warfarin: Why Taking It is Worth It (02:01)

Visit www.peacehealth.org/video-library

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 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 track
- Check feet for sores
- Follow your meal plan
- Brush teeth
- Take medicines as ordered
- Exercise

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

SAFETY TIP FOR HOME

Obtain an alert bracelet showing you are diabetic.

LONG TERM PLAN

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

Suggested Videos:

Diabetes and Your Heart (01:38)

Diabetes: How Others Stay Motivated (02:50)

Diabetes: Planning Your Next Steps (02:31)

Prediabetes: Healthy Changes You Can Make (02:25)

Visit www.peacehealth.org/video-library

Helpful Websites:

The American Diabetes Association
www.diabetes.org

It's Your Diabetes Life
www.dlife.com

CornerStones4Care
www.cornerstones4care.com

High Cholesterol

High cholesterol causes plaque to build up in the arteries, a condition called atherosclerosis. Plaque can break away from the wall of the artery and travel to the brain, causing a 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 breaking off from the walls of your arteries.

STATINS

Atorvastatin, Simvastatin, Pravastatin, Rosuvastatin, Lovastatin

Purpose: lowers cholesterol and reduces the risk of stroke and heart attack

Side Effects (possible):

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

General Information:

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

Suggested Videos:

Cholesterol: How it Raises Your Risk (01:53)

Statins: Overcoming Barriers to Taking Them (02:03)

Visit www.peacehealth.org/video-library

Overweight/Obesity

Being overweight or obese is a risk factor for stroke. Lack of physical activity and poor diet lead to being overweight and obese. BMI (body mass index) is one way to determine if you are at a healthy weight.

BMI (BODY MASS INDEX)

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

Your nurse can tell you what your current BMI is: _____

Suggested Videos:

BMI, Waist Size, and Your Health (01:23)

Healthy Weight: Make Your Plan (02:22)

Visit www.peacehealth.org/video-library

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 disorder breathing**, increases your risk for another stroke.

DAYTIME SYMPTOMS OF SLEEP DISORDER BREATHING

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

NIGHTTIME SYMPTOMS OF SLEEP DISORDER 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

Suggested Videos:

Sleep Apnea: What Is It? (01:33)

Sleep Apnea: Time to Get Checked (02:14)

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DIAGNOSING SLEEP DISORDER 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. This tests 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
- 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. (If you are unhappy with your CPAP mask or machine, talk to your primary care provider.)
- Surgery

Smoking

Smoking is a risk for 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.

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

YOU CAN DO IT

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



Suggested Videos:

Quitting Smoking: The Rewards Start Now (02:02)

Quitting Smoking: Dealing with a Slip-Up (02:52)

Visit www.peacehealth.org/video-library

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 stroke. Alcohol contributes to several medical conditions that are risk factors for stroke.

ALCOHOL RELATED RISK FACTORS:

- High blood pressure
- Diabetes
- Being overweight
- Liver damage - unable to form blood clots correctly

Suggested Videos:

Alcohol: The Space it Takes Up in Your Life (01:58)

Alcohol: Taking Action (02:24)

Alcohol: Treatment Options (02:33)

Visit www.peacehealth.org/video-library

Street Drugs

Drug use, such as cocaine and other street drugs, increase your risk of stroke. Cocaine and other stimulant drugs increase your heart rate and blood pressure causing damage to your blood vessels. Over time these damaged blood vessels may leak or burst and cause bleeding inside the brain (hemorrhagic stroke).

STREET DRUGS INCLUDE:

- Cocaine
- Methamphetamine/amphetamine
- Opiates
- Ecstasy

Suggested Videos:

Drug Withdrawal: What to Expect (02:09)

Drug Addiction: Treatment Options (03:05)

Visit www.peacehealth.org/video-library

If you need help with quitting alcohol or street drugs, let your nurse or physician know. We have social workers available to help locate a treatment option for you.

Personal Notes

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During Your Stay

During Your Stay

Team Members



Many staff are involved in your care. The stroke team works together to help in your recovery. You may not see all of 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 unit during a shift
- **Interventional Physician** removes clots within the brain
- **Hospitalist** is a physician who cares only for hospitalized patients
- **Neurohospitalist** 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 advance practice nurse who partners with the physician to care for you
- **Occupational Therapist (OT)** helps with rebuilding skills and assesses thinking ability
- **Pharmacist** reviews your medicines
- **Phlebotomist** draws blood needed for lab tests
- **Physical Therapist (PT)** works with you on your strength and movement
- **Register 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 swallow and orders a safe diet for you. They also will 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 also 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 often used items between eye level and hip height to prevent reaching and bending
- Follow activity level your stroke team gives to you

What families can do to help:

- Keep bed and chair alarms turned on
- Try to stay with your confused family member 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.

Suggested Video:

Preventing Falls in the Hospital (01:36)

Visit www.peacehealth.org/video-library

Helpful Website:

Falls and Older Adults from Centers for Disease Control and Prevention:

www.cdc.gov. Once on website, enter **Falls** into search engine.

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) will 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 gurgly or wet sounding voice after swallowing
- Have trouble holding food in his/her mouth
- Retain food in mouth, called “pocketing”
- Get food or drink into their airway when swallowing
- Feel like food is caught in their throat

TO PROTECT YOU FROM ASPIRATION AND PNEUMONIA:

- A nurse checks to make sure you are safe to swallow pills
- You will be given no food or drink until SLP checks your swallow. This is called NPO (nothing by mouth)
- 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
- Do not eat or drink in front of the patient who is not allowed to eat or drink
- Watch for signs of trouble swallowing and let the staff know
- Follow the posted safety tips

Lab Tests, Imaging and Procedures

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

COMMON LAB TESTS

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

OTHER TESTS

- **EKG:** This test shows the pattern of electrical activity in the heart. Electrodes are attached to the chest and electrical activity is transcribed on a printed page. It takes less than 5 minutes to complete.

- **Modified Barium Swallow (MBS):** Uses special x-rays to 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 the swallowing ability. This test is done by a SLP. 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. The test takes 20-30 minutes to complete.



EKG

Lab Tests, Imaging and Procedures

IMAGING

- **CT Scan:** Used to rule out brain bleed on arrival to hospital. Uses x-rays to produce a 3-D image of your brain. Will show ischemic stroke after 24 hours. It takes less than 10 minutes to complete.
- **CT Angiography:** Similar to the CT scan. An injection of 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):** Used to diagnose location of ischemic stroke and other problems involving the brain, brain stem, and spinal cord. Uses magnetic fields to produce 3-D images of the brain in more detail than a CT scan. IT can take 45-60 minutes to complete.
- **Carotid Ultrasound:** Shows if the carotid artery is narrowed due to atherosclerosis. 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:** Alerts the physician to problems such as pneumonia or heart failure. Uses x-rays to produce an image of the heart and lungs. It takes less than 5 minutes to complete.
- **Echocardiogram:** Helps identify problems with the heart. Ultrasound waves are used to take a picture of the heart and circulating blood. Transthoracic echocardiogram (TTE), a non-invasive procedure is done first and can take up to 30 minutes. Transesophageal echocardiogram (TEE), a more invasive procedure is done if indicated and can take up to an hour. Moderate sedation is often used.
- **Diagnostic Cerebral Angiogram:** X-ray images show any abnormalities including narrowing, blockage, or malformations of the blood vessels and the brain. 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. This is an invasive procedure and can take 1-3 hours to complete. Conscious sedations will be used.



Carotid Ultrasound



Transthoracic Echocardiogram (TTE)

Medication Information



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.

Suggested Video:

After a Stroke: Taking an Antiplatelet
(02:11)

Visit www.peacehealth.org/video-library

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

ANTIPLATELET AGENTS

Aspirin, clopidogrel (Plavix)

Purpose:

- Decreases platelet clumping and clot formation
- Reduces the risk of stroke

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

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 when patients are dying that they lose the desire to eat.

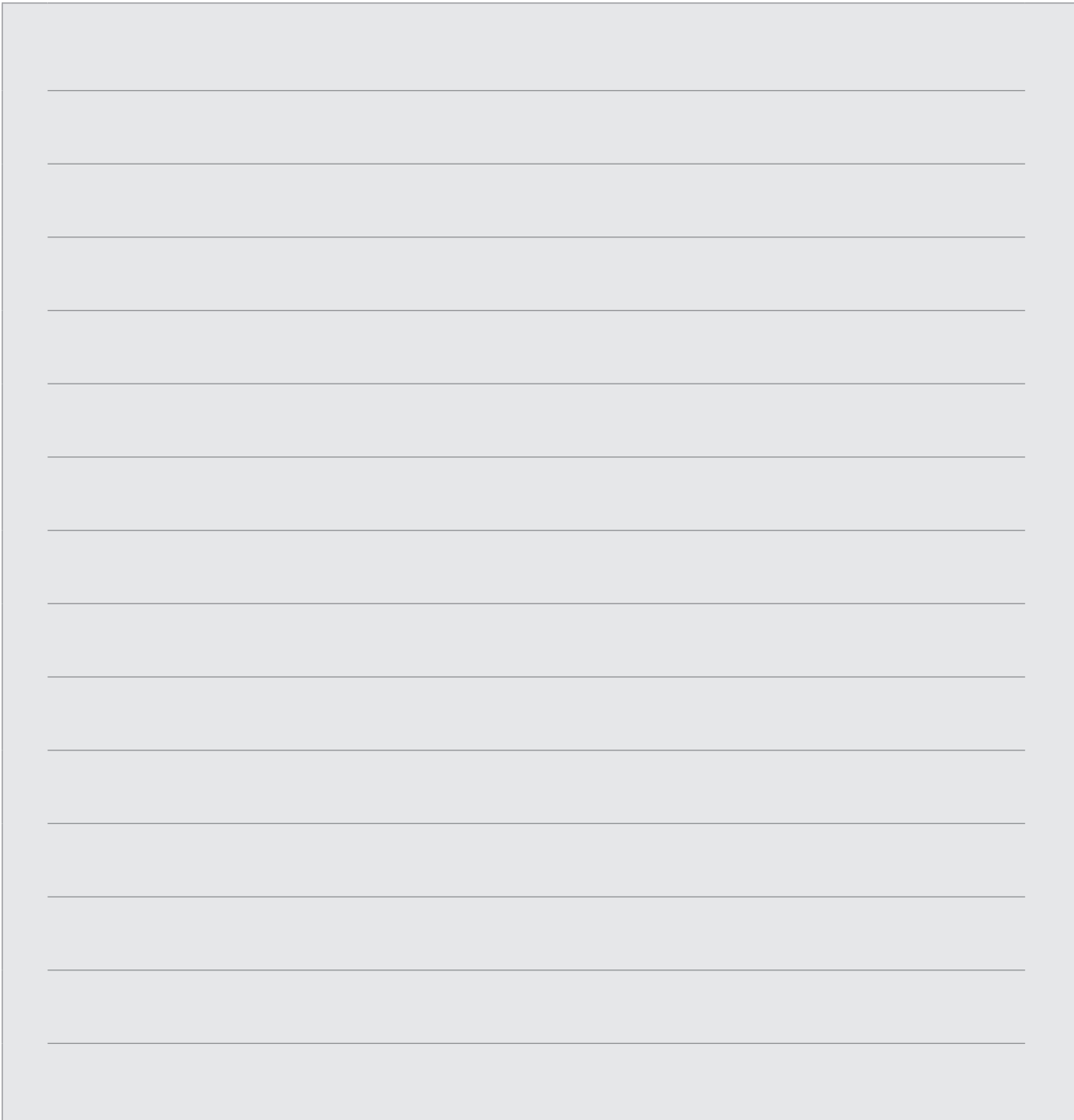


Suggested Video:

Advance Care Planning: The Need for Ongoing Conversations (03:30)

Visit www.peacehealth.org/video-library

Personal Notes



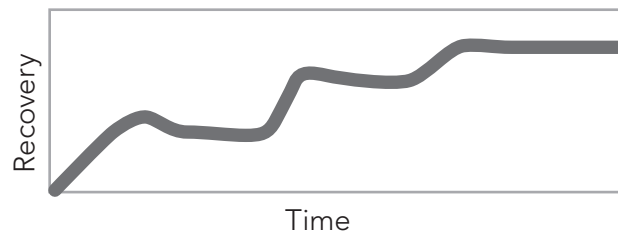
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After Your Stay

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.

TYPICAL STROKE RECOVERY



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 healthy
- 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.
- 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.

Suggested Video:

After a Stroke: Your Self-Care Plan
(02:18)

Visit www.peacehealth.org/video-library

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

NEED FOR REHAB 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.



Your stroke team will guide you to the best rehab option.

Suggested Video:

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

Visit www.peacehealth.org/video-library

Helpful Website:

To see the Medicare inspection results of skilled nursing facilities:

www.medicare.gov/nursinghomecompare/search

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
- 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 hand rails
- 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

Suggested Videos

Preventing Falls in Older Adults (02:11)

Preventing Falls: Make Your Home Safe (01:08)

Preventing Falls: Use a Home Safety Checklist (01:07)

Visit www.peacehealth.org/video-library

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. Examples of exercise include walking, biking, swimming, exercise video programs, etc.

Remember you just had a stroke. Start slowly.

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 BALANCE

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 or pressure or trouble breathing that doesn't go away with rest, stop exercising and call 911
- If you have long-lasting fatigue, nausea and vomiting, or dizziness, call your primary care provider
- Exercise with someone until you gain 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 or decreased:

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

Helpful Websites:

Disability Parking Permits:

Oregon: www.oregon.gov/odot/dmv/pages/driverid/disparking

Washington: www.dol.wa.gov/vehicleregistration/parking

Alaska: <http://doa.alaska.gov/dmv/plates/type-disability.htm>

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 systems, local community services
- 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

Stroke Healthy Diet

Following a healthy diet after a stroke will help you avoid another stroke by:

- Controlling your cholesterol
- Losing weight or maintaining your ideal weight
- Limiting salt (sodium) intake

GENERAL TIPS

- Eat more fruits and vegetables
- Limit meats, sweets, and sweet drinks
- Exercise daily
- Eat nuts, fruits, and vegetables for snacks
- Avoid “white starches” such as potatoes, white rice, white bread, etc.

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 daily

TIPS FOR EATING OUT

- Eat a fruit or vegetable before going out
- Avoid soups, gravies, and sauces (high in salt)
- Ask for your food to be made without salt
- Ask for your meat to be baked, broiled, grilled, or boiled
- Choose fresh fruit, gelatin, or sherbet for dessert
- Ask to have half of your meal boxed before it's served to you
- Select baked or boiled potatoes instead of mashed, fried, or creamed
- Ask for your salad dressing on the side or try a vinaigrette

Suggested Videos:

Healthy Eating: What Will Work for You (02:21)

Five Ingredients for Healthy Eating (01:15)

Heart Healthy Diet (01:52)

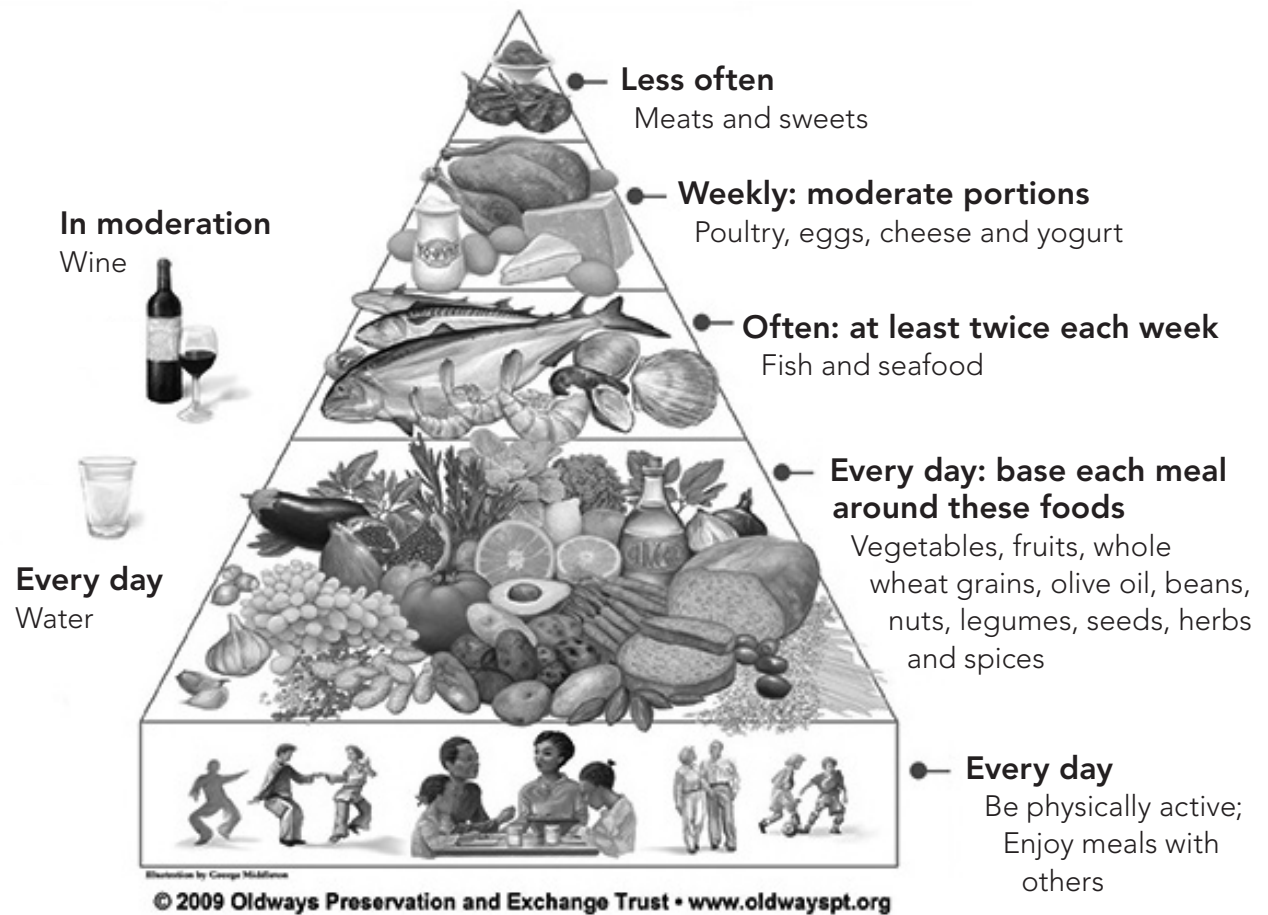
Diabetes: How to Build Your Plate (01:52)

Visit www.peacehealth.org/video-library

Stroke Healthy Diet (Continued)

MEDITERRANEAN DIET PYRAMID

A contemporary approach to delicious, healthy eating



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 primarily in 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 and taking 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

SAFETY TIP FOR HOME

If you feel sad, empty, or overwhelmed most of the time, contact your primary care for help.

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

Suggested Video:

Caregiving: Take Care of Yourself Too (01:29)

Visit www.peacehealth.org/video-library

Helpful Websites:

Caregiver Action Network
www.caregiveraction.org

Family Caregiver Alliance
www.caregiver.org

Empowering Caregivers
www.care-givers.com

National Alliance for Caregiving
www.caregiving.org

Today's Caregiver
www.caregiver.com

Stroke Resources

WEBSITES

- American Heart Association
www.heart.org
- American Stroke Association
www.strokeassociation.org
- Brain Aneurysm Foundation
www.bafound.org
- Brain Attack Coalition
www.brainattackcoalition.org
- Healthwise - www.healthwise.org
- The Internet Stroke Center
www.strokecenter.org
- Mayo Clinic - www.mayoclinic.org
- National Alliance for Caregiving
www.caregiving.org
- National Institute of Neurological Disorders and Strokes - www.ninds.nih.gov
- The Stroke Network - www.strokenetwork.org

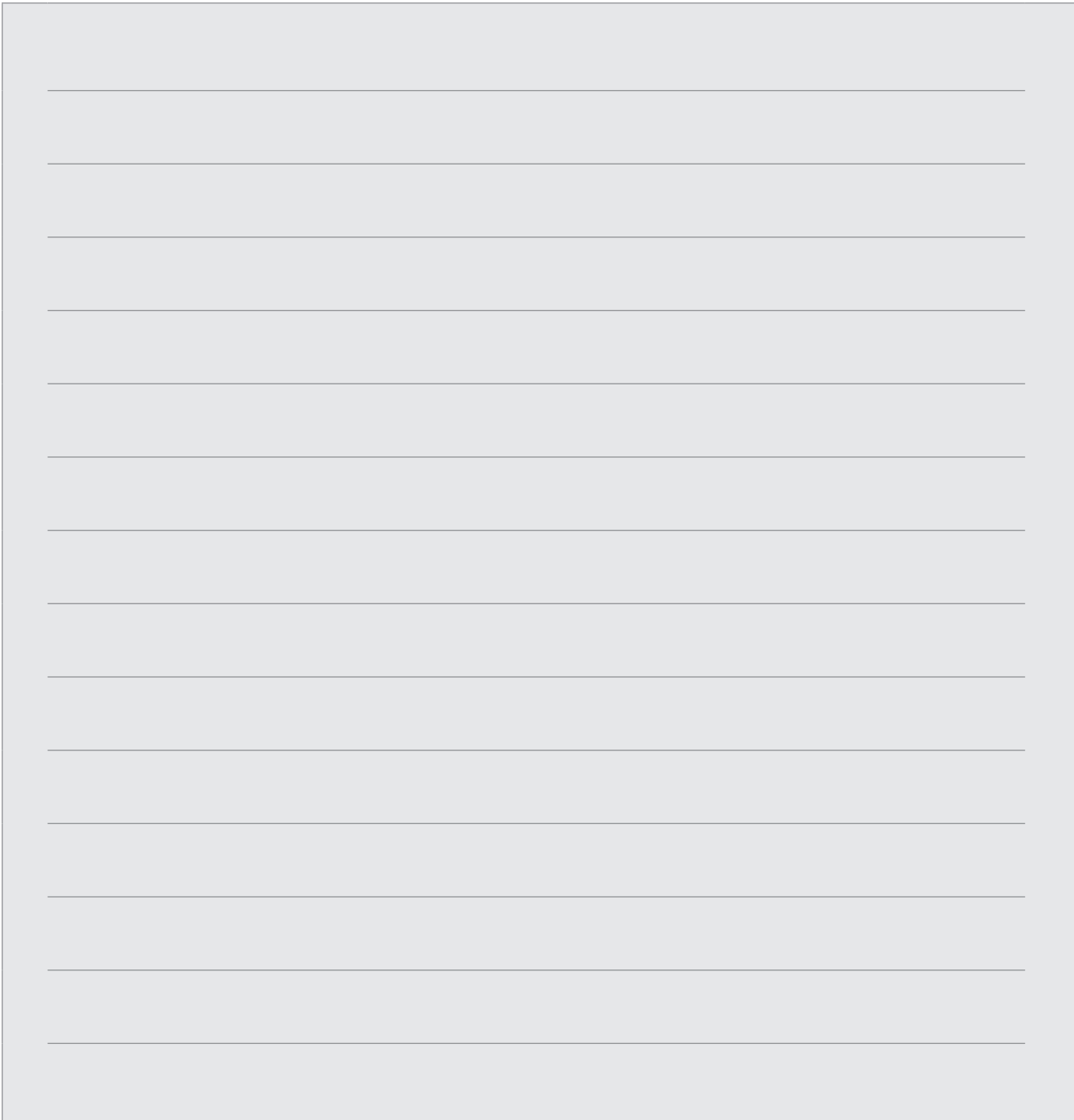
BOOKS

- *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
Oregon based agency 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/stakeholders/aging-disability-resource-centers-adrcs
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
- Lifeline - Medical Alert System 855-332-7799
- YouTube - www.youtube.com
Search for stroke related videos on a wide choice of topics

Personal Notes

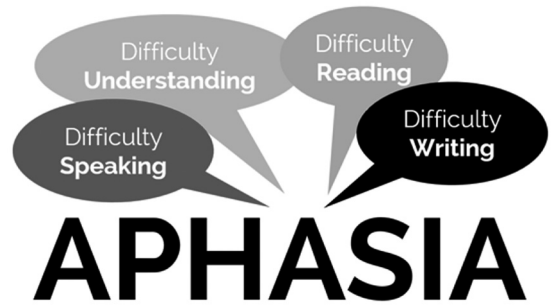


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Special Care

Aphasia

Aphasia is a condition in which a person has trouble with one or more of the following: speaking, reading, writing 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-up words
- Have trouble working with numbers, such as balancing a checkbook

SAFETY TIPS FOR HOME

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

Helpful Websites:

Aphasia Network
www.aphasianetwork.org
National Aphasia Association
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

Special advice from your therapist:

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 the mouth
- Seem confused

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"

SAFETY TIPS FOR HOME

- Obtain ID bracelet or necklace with emergency contact information.
- Consider obtaining a fall alert system

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

Special advice from your therapist:

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 out 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 slower with smaller amounts of food
- Change food texture
- 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 are as important as facing physical challenges during recovery.

DEPRESSION

Depression, mild or major, is the most common change in emotion 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 can loved ones 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 causes needless suffering and may slow your recovery. You may be screened for depression while you are in the hospital.

Suggested Videos:

Stroke: Understanding Your Emotions
(02:00)

Stroke Recovery: Using Support to Stay Positive (02:10)

Visit www.peacehealth.org/video-library

Emotional and Personality Changes

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:

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

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:

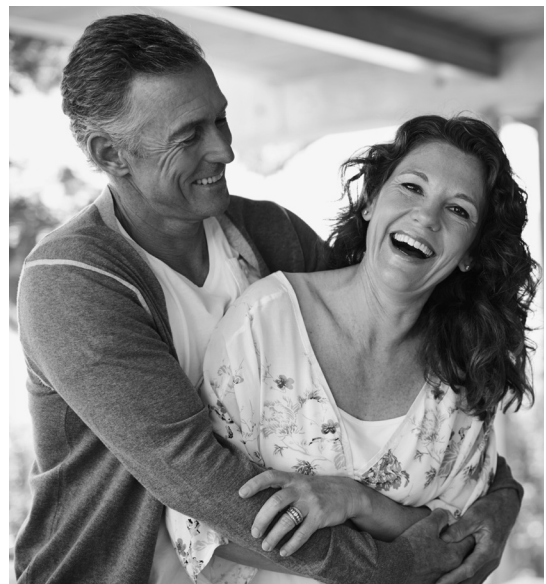
- Talking is key. Speak openly about your fears or concerns
- Start slowly, perhaps with being close or cuddling
- Create a loving atmosphere
- Find a comfortable position
- Be patient, loving and keep humor in your relationship

CHANGES IN EMOTION

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.

What can help:

- Ask your doctor about personality changes early on
- 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.



For more information on these topics and more, visit www.stroke.org

Vision Impairment

Many types of vision loss can occur after a stroke. Type of visual problems depend on the area of brain injured.

TYPES OF VISUAL PROBLEMS

- Cortical blindness: totally blind but stroke survivor doesn't realize he/she is blind
- Diplopia: double vision
- Hemianopia: decreased or lost vision in half of the visual field
- Quadrantopia: 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 during walking
- Missing parts of sentences when reading
- Seeing double images
- Trouble knowing visual images
- Seeing moving objects in front of your eyes
- Blurry vision

HELPFUL TIPS

- Ask if you need to see a neurologist who specializes in eye problems
- Make sure your home is well lit
- 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:

Weakness and Spasticity

Spasticity means tight or stiff muscles of a limb 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:



t-PA (alteplase)

The stroke team may feel your family member could benefit from a clot busting medicine called t-PA. This medicine may dissolve the clot and help restore blood flow. This may increase your family member's chance of having a good recovery, with little or no disability.

IS THIS EXPERIMENTAL?

No, t-PA has been FDA approved since 1996 to treat strokes.

HOW OFTEN DOES IT WORK?

t-PA works best if given soon after stroke symptoms begin. If given promptly, 1 in 3 patients who receive t-PA show improvement in their stroke symptoms. If given too late, it can do more harm than good.

HOW IS IT GIVEN?

It is given in a vein (intravenously or IV). It is given as a single loading dose over one minute and followed by an infusion over one hour.

CAN IT HURT MY FAMILY MEMBER?

Bleeding (hemorrhage) into the brain is the most serious risk that can occur. This may result in further injury or death. An allergic reaction is a rare life-threatening possible side effect. The stroke team will watch your family member closely and respond quickly to any problems.

WHY DO I NEED TO GIVE PERMISSION?

When a person has a stroke, they aren't able to think clearly. You are part of the stroke team and together we will make the best choice.

HOW LONG BEFORE WE KNOW IF IT WORKS?

It may begin to work right away but it may take 24 hours for us to see all the benefits.

WHY IS MY FAMILY MEMBER IN INTENSIVE CARE UNIT?

We need to watch closely for any side effects to t-PA.

I HAD A STROKE BEFORE, WHY WASN'T I GIVEN T-PA?

For each person, the stroke team must weigh the benefits and risks to decide who should receive t-PA.

Clot Retrieval

Stroke caused by blockage of a large blood vessel in the brain accounts for 15-30% of all ischemic strokes. This is the most devastating type of stroke. If caught early enough, it may be treated with clot busting drugs, clot retrieval procedure (thrombectomy), or both. The stroke team will decide if this procedure is right for you.

HOW IS THROMBECTOMY DONE?

This procedure is done in the catheterization laboratory (cath lab). A tiny tube (catheter) is placed into a large leg artery and steered to the vessels of the brain. X-ray and dye will be used so that the doctor can see the vessels and clot.

WHAT IS CLOT REMOVAL?

Once the clot is reached, tiny devices are delivered through the catheter and used to trap and remove the clot. At times, the doctor may use clot busting drugs directly into the clot to dissolve it.

WILL THE PATIENT BE AWAKE?

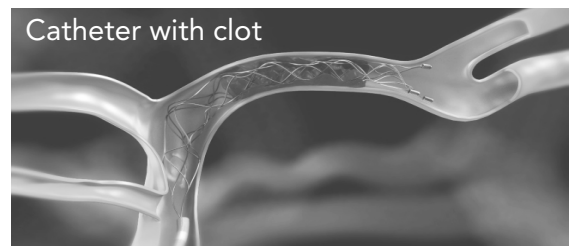
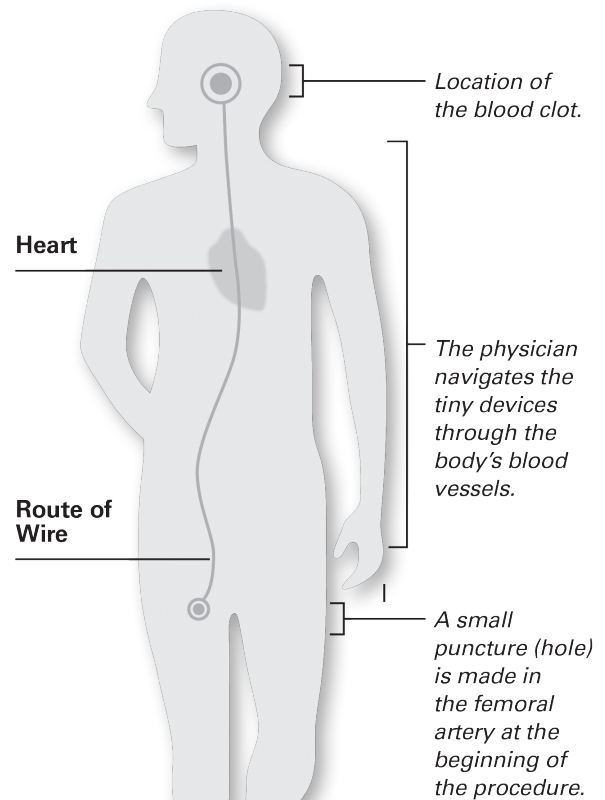
Usually, the patient is under sedation and very sleepy, but sometimes it is necessary to use general anesthesia.

IS THIS PROCEDURE EXPERIMENTAL?

No. These procedures have been done for many years and have been shown to improve outcomes.

WHAT IS THE EXPECTED RESULT FOR THIS PROCEDURE?

The thrombectomy procedure will give more than half of treated patients a good outcome (able to care for themselves unassisted). If untreated, less than a quarter of patients may have a good recovery.



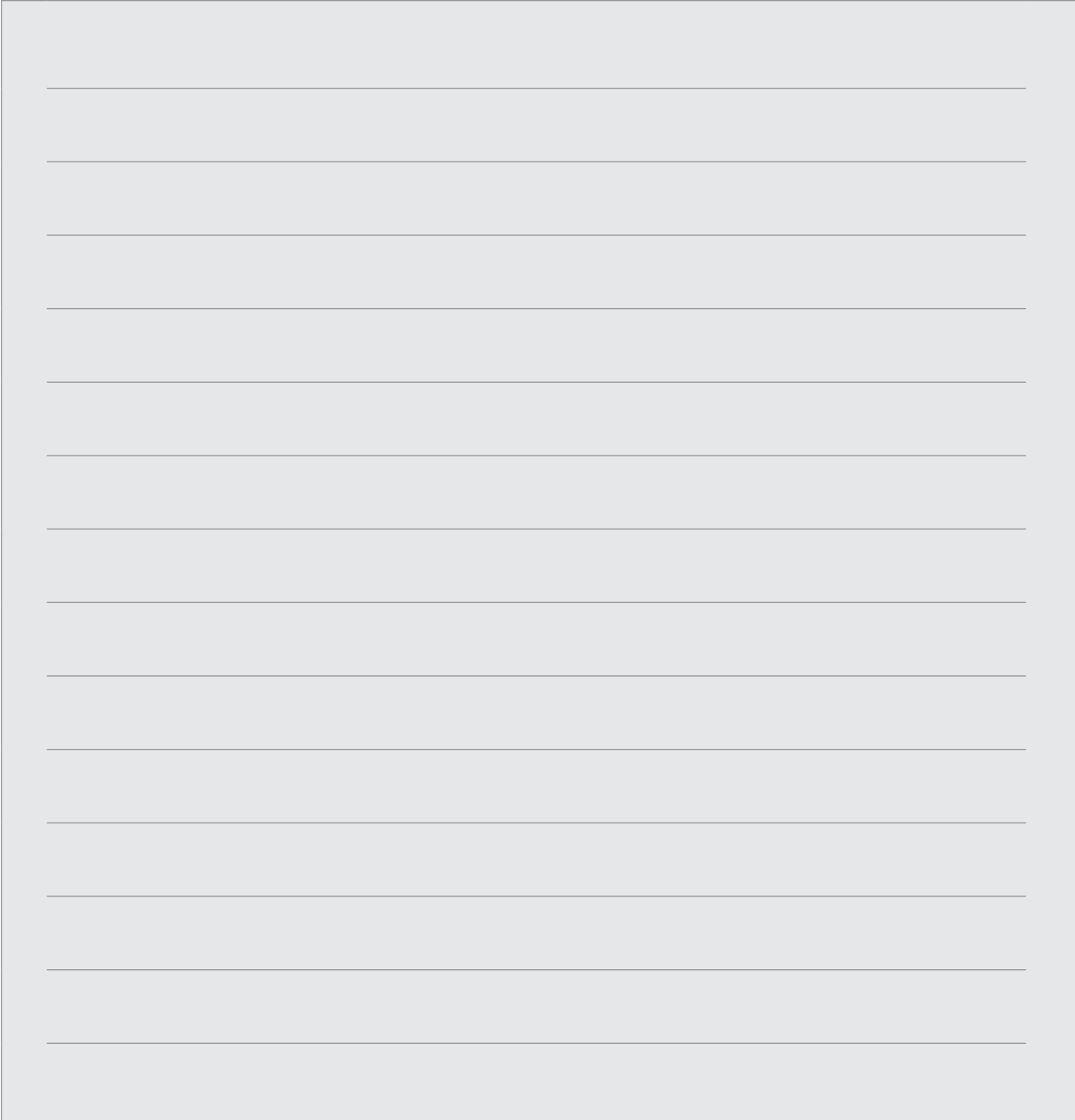
WHAT HARM COULD OCCUR?

There is a similar risk of bleeding and death between the clot-busting drug and the catheter procedure. About 15% of patients will die despite the treatment. However, this is much less than if no treatment is provided. If no treatment is provided, over half of patients will die.

WHAT WILL HAPPEN AFTER THE PROCEDURE?

The patient will be admitted to the intensive care unit. The stroke team will provide updates on the care plan.

Personal Notes



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