

WHAT YOU NEED TO KNOW ABOUT A STROKE

Stroke Guide




POMONA VALLEY HOSPITAL
MEDICAL CENTER

TABLE OF CONTENTS

WHAT IS A STROKE.....	1
WHAT CAUSES AN ISCHEMIC STROKE?	1
WHAT CAUSES A HEMORRHAGIC STROKE?	2
WHAT IS A TRANSIENT ISCHEMIC ATTACK (TIA)	2
WHAT ARE THE RISK FACTORS OF STROKE?	3
WHAT ARE THE WARNING SIGNS OF A STROKE?.....	5
HOW IS A STROKE DIAGNOSED?.....	6
HOW IS A STROKE TREATED?	7
CHANGES AND COMPLICATIONS CAUSED BY STROKE	9
WILL I GET BETTER?	11
WHAT IS STROKE REHABILITATION?	12
WHO WILL BE A PART OF MY REHABILITATION PROGRAM?	12
WHAT WILL I DO IN REHABILITATION?	13
STROKE REHAB SETTING	13
GOING HOME	15
A HEALTHY LIFE.....	17
MESSAGE FOR THE FAMILY AND CAREGIVER	19
STROKE RISK ASSESSMENT	21
GLOSSARY OF TERMS	22



WHAT IS A STROKE

A stroke is serious – just like a heart attack. A stroke is sometimes called a “brain attack.” Stroke is a disease that affects the arteries of the brain. A stroke occurs when a blood vessel bringing blood and oxygen to the brain gets blocked or ruptures so brain cells don’t get the flow of blood that they need. Deprived of oxygen and nutrients, nerve cells can’t function and die within minutes. And when nerve cells don’t function, the part of the body they control can’t function either. The devastating effects of stroke are often permanent because brain cells can’t be replaced.

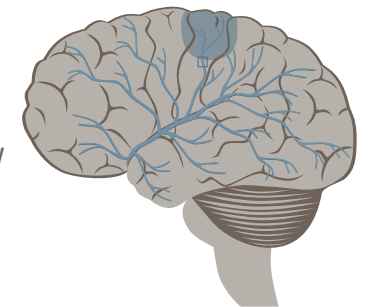
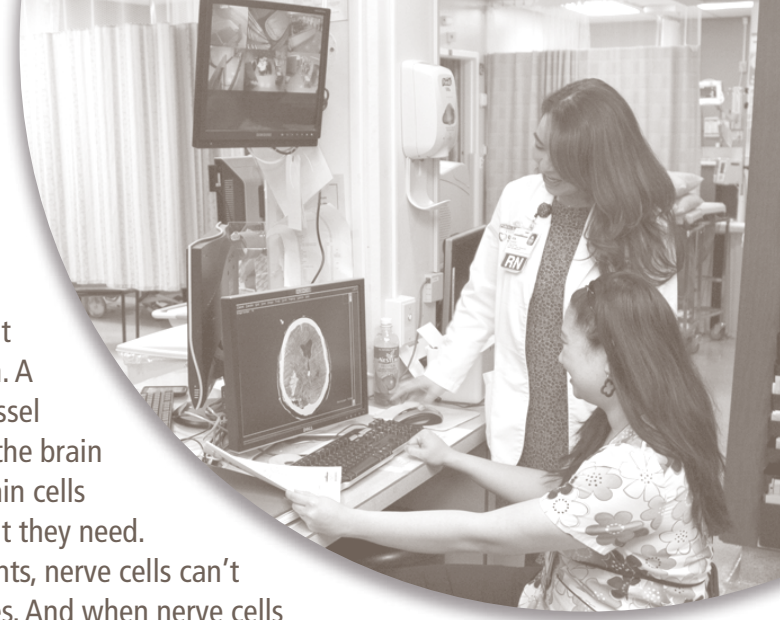
There are two types of stroke. The more common type, called ISCHEMIC STROKE, is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other type, called HEMORRHAGIC STROKE, is caused by a blood vessel that breaks and bleeds into the brain. A “mini-stroke” or TRANSIENT ISCHEMIC ATTACK (TIA), occurs when a blood clot blocks an artery for a short time. About 10% of strokes are preceded by TIAs.

WHAT CAUSES AN ISCHEMIC STROKE?

An ischemic stroke occurs when the blood vessels to the brain become narrowed or clogged, cutting off blood flow to brain cells of a part of the brain.

There are 2 major types of ischemic stroke:

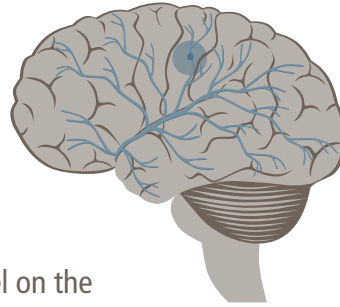
1. **Thrombotic strokes** are caused by a blood clot (thrombus) in an artery going to the brain. The clot blocks blood flow to part of the brain. Blood clots usually form in arteries damaged by arteriosclerosis.
2. **Embolic strokes** are caused by a wandering clot (embolus) that’s formed elsewhere (usually in the heart or neck arteries). Clots are carried in the bloodstream and clog a blood vessel in or leading to the brain.



Ischemic strokes are the most common type of stroke and account for 87% of all stroke. Ischemic strokes are typically preceded by symptoms or warning signs that may include loss of strength or sensation on one side of the body, problems with speech and language or changes in vision or balance. Symptoms usually can develop over few minutes or worsen over hours. Often a transient ischemic attack (TIA) or a “mini stroke” may give some warning of a major ischemic stroke.

WHAT CAUSES A HEMORRHAGIC STROKE?

Not all strokes are caused by blood clots that block an artery. About 10% happen when a blood vessel ruptures in or near the brain. This is called hemorrhagic stroke.



There are 2 types of hemorrhagic stroke:

1. **Subarachnoid hemorrhage** occurs when a blood vessel on the surface of the brain ruptures and bleeds into the space between the brain and the skull. Or, when a ruptured aneurysm, often caused by high blood pressure, is the most common cause. An aneurysm is a blood-filled pouch that balloons out from an artery wall.
2. **Intracerebral hemorrhage** occurs when a blood vessel bleeds into the tissue deep within the brain. Chronically high blood pressure or aging blood vessels are the main causes of this type of stroke. Other common causes are congenital brain vascular malformation or illegal drugs that cause acute blood pressure changes.

People who have hemorrhagic strokes are typically younger and experience a combination of the following symptoms severe headache, nausea, and vomiting. Usually the symptoms appear suddenly. A transient ischemic attack (TIA) or other stroke warning sign may not precede this type of stroke. The fatality rate is higher for those who suffer a hemorrhagic stroke than for those who suffer and ischemic stroke.

WHAT IS A TRANSIENT ISCHEMIC ATTACK (TIA)

A TIA occurs when a person briefly experience stroke symptoms that last from several seconds to minutes, and then go away. There is usually no permanent brain damage. However, a person experiencing a TIA should be examined immediately, because a TIA is often a sign that a major stroke will occur. Never ignore the warning signs of a stroke.

*A TIA is a very important warning sign!
Call 9-1-1 or seek emergency medical attention immediately!*

WHAT ARE THE RISK FACTORS OF STROKE?

Knowing your risk of stroke is the first step in preventing stroke. You can change or treat some risk factors, but others you cannot. By knowing your risks, you can focus on what you can change and lower your risk of stroke.

Risk factors you cannot control:

- **Increasing age** – Stroke affects people of all ages, but the older are the higher your stroke risks.
- **Gender** – In most age groups, more men than women have a stroke, but more women die from stroke.
- **Heredity and race** – People whose close blood relations have had a stroke have a higher risk of stroke themselves. African Americans have a higher risk of death and disability from stroke than Caucasians, because they have higher blood pressure more often. Hispanic Americans are also at higher risk of stroke.
- **Prior Stroke** – Someone who has had a stroke is at a higher risk of having another one.



Risk factors you can change or treat:

- **High blood pressure** – This is the single most important risk factor of stroke because it is the No. 1 cause of stroke. Know your blood pressure and having it checked frequently and on a regular basis. If it is consistently 140/90 or above, it is high. Talk to your doctor about how to control it.
- **Tobacco use** – Do not smoke cigarettes or use other forms of tobacco. Tobacco use damages blood vessels.
- **Diabetes mellitus** – Having diabetes increases your risk of stroke because it can cause disease of blood vessels in the brain. Work with your doctor to manage diabetes and reduce other risk factors.
- **Carotid or other artery disease** – The carotid arteries in your neck supply most of the blood to your brain. A carotid artery damaged by a fatty buildup of plaque inside the artery wall may become blocked by a blood clot, causing stroke.
- **TIA's** – Transient ischemic attacks (TIAs) are “mini strokes” that produce stroke like symptoms but no lasting effects. Recognizing and treating TIAs can reduce the risk of a major stroke. Know the warning signs of a TIA and seek emergency medical treatment immediately.
- **Atrial fibrillation or other heart disease** – In atrial fibrillation the heart’s upper chambers quiver rather than beating effectively. This causes the blood to pool and clot, increasing the risk of stroke. People with other types of heart disease also have higher risk of stroke, too.
- **Certain blood disorders** – A high red blood cell count makes clots more likely, increasing the risk of stroke. Sickle cell anemia increases stroke risk because the “sickled” cells stick to blood vessel walls and may block arteries.
- **High blood cholesterol** – High blood cholesterol increases the risk of clogged arteries. If an artery leading to the brain becomes blocked, a stroke can result.
- **Physical inactivity and obesity** – Being inactive, obese or both can increase your risk of cardiovascular disease.
- **Excessive alcohol intake** – Drinking an average of more than one drink per day for women or more than two drinks a day for men raises blood pressure. Binge drinking can lead to stroke.
- **Illegal drug use** – Intravenous drug use carries a high risk of stroke. Cocaine use has also been linked to stroke.

WHAT ARE THE WARNING SIGNS OF A STROKE?

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

Call 9-1-1 immediately and get to the nearest Stroke Center if you experience these warning signs!

STROKE is an emergency.
ACT F.A.S.T.
Know The Symptoms, Know The Signs

F ACE	–	Facial droop Uneven smile
A RM	–	Arm numbness Arm weakness
S PEECH	–	Slurred speech Difficulty speaking or understanding
T IME	–	In community setting CALL 911 QUICKLY. Get to PVHMC/ hospital immediately

For more information, Visit
STEAD HEART AND VASCULAR CENTER AT PVHMC
(909) 865-9858 **www.steadheart.org**

Learn to recognize a stroke. Because time lost is brain lost.

Today there are treatments that can reduce the risk of damage from the most common type of stroke, but only if you get help quickly – within 3 hours of your first symptoms.



HOW IS A STROKE DIAGNOSED?

It's critical to diagnose a stroke in progress because the treatment for stroke depends on the type, source, and in some cases, the location of the injury to the brain.

A doctor may use many different tests, besides taking your medical history, physical and neurological exam, and laboratory (blood) tests. Diagnostic tests examine how the brain looks, works and gets its blood supply. Most are safe and painless.

- **COMPUTED TOMOGRAPHY (CT) BRAIN SCAN.** This test involves taking a series of images of the brain to determine if bleeding may be a cause of stroke. The brain tissue is also examined to see if irreversible brain damage has occurred. This test takes 15-20 minutes with only slight amount of X-ray exposure. It is non-invasive and does not hurt.
- **COMPUTED TOMOGRAPHY ANGIOGRAM (CTA).** This test is done in the CT scanner. Intravenous contrast material (dye) is given and pictures are taken of the major blood vessels in and around the brain. This test is used to detect large blood vessels that may be blocked. It takes 15-20 minutes to perform.
- **MAGNETIC RESONANCE IMAGING (MRI) / MAGNETIC RESONANCE ANGIOGRAPHY (MRA).** This test uses the body's own magnetic properties to look at the brain tissue and the blood vessels. In some cases, an MRI can also be used to evaluate how much damage has already occurred to the brain tissue and brain function. This test takes 20-30 minutes to perform.
- **LUMBAR PUNCTURE (SPINAL TAP).** This test involves placing a very small needle into the back and into the lumbar subarachnoid space and withdrawing a small amount of cerebrospinal fluid (CSF). It is the most accurate test to find out if a small amount of bleeding has occurred around the brain that may have resulted in a hemorrhagic stroke.
- **ULTRASOUND OR "DOPPLER" SCAN.** This test involves placing a small transducer probe over the neck or forehead. Ultrasound waves are then used to look at the blood flow in the neck and the larger blood vessels of the brain. This painless test allows rapid evaluation of the relative amount of blood flowing to the brain.

HOW IS A STROKE TREATED?

Treatments are different for an ischemic stroke and a hemorrhagic stroke.

Ischemic Stroke: Ischemic strokes are caused by blood clots that block normal flow in brain blood vessels. If a person can be treated within three hours of their first symptoms, they may benefit from given Intra-venous Tissue plasminogen activator (tPA) or other clot-busting drugs to dissolve the blood clot.

In some cases, the blood clot can be treated with intra-arterial tPA inside the blood vessel, or the blood clot can be retrieved from inside the blood vessels. Both procedures are performed under angiogram guidance by an interventional neuroradiologist.

If a stroke is caused by an atherosclerotic plaque blocking a blood vessel, the patient may need a procedure to open up the vessel. If the blocked blood vessel is in the neck, they may need surgery (carotid endarterectomy) to open it. However, if the blood vessel is not in an area suitable for surgery, a procedure called balloon angioplasty and stent placement may be more appropriate. This procedure involves going inside the blood vessel with a small balloon, and inflating the balloon to open and dilate the blocked artery. In some cases, a small metallic tube called a "stent" is inserted to help keep the blood vessel open.

Acute hospital care for stroke management and monitoring is essential. Medication may also be used to treat brain swelling that sometimes occurs after stroke.





Hemorrhage Stroke: Many hemorrhage strokes are caused by bleeding from a ruptured intracranial aneurysm. An aneurysm should be treated as quickly as possible, since there is a very high chance of repeated bleeding. More bleedings result in further brain injury or possible death.

An aneurysm can be treated either by direct surgical clipping by a neurosurgeon or by treatment from inside the blood vessels (similar to an angiogram) by an interventional neuroradiologist.

Using X-ray guidance, the interventional neuroradiologist threads a catheter through the brain blood vessels directly into an aneurysm. Very soft, tiny platinum coils can then be carefully placed into the aneurysm to prevent more bleeding. Depending upon the size and location of the aneurysm, the patient's condition, either surgical or clipping and/or this endovascular coil treatment may be recommended.

Sometimes bleeding may be due to other causes, such as a arteriovenous malformation, high blood pressure, or weakness of smaller blood vessels. A diagnostic cerebral angiogram is usually performed to identify the cause of bleeding into the brain.

Acute hospital care is required in an Intensive Care Unit. Medication can control further bleeding as well as control high blood pressure. Other medicine may be prescribed to reduce the brain swelling that follows a stroke. Surgery may be needed depending on the cause of the hemorrhage. Surgery could be done to repair an aneurysm, remove a blood clot, or relieve the pressure inside the brain.

CHANGES AND COMPLICATIONS CAUSED BY STROKE

Changes

Your brain controls how you move, feel, think and act. Brain injury from a stroke may affect any of these abilities. You may experience some of these effects of stroke:

Common effects

- Hemiparesis (weakness on one side of the body) or hemiplegia (paralysis on one side of the body)
- One-sided neglect (ignoring or forgetting your affected side), as result of hemiparesis, hemiplegia, motor impairment and loss of sensation on one side of the body. This usually occurs with a stroke on the right side of the brain.
- Dysarthria (difficulty speaking or slurred speech), aphasia (difficulty getting your words out or understanding what is being said) or dysphagia (trouble swallowing).
- Decreased field of vision and trouble with visual perception
- Loss of emotional control and changes in mood
- Cognitive changes (problems with memory, judgment, problem-solving or combination of these)
- Behavior changes (personality changes, improper language or actions)

Emotional Effects

- Depression
- Apathy and lack of motivation
- Tiredness
- Frustration, anger and sadness
- Reflex crying (emotions may change rapidly and sometimes not match the mood)
- Denial of the changes caused by the brain injury

Complications

The most common complications are:

- **Brain edema** – swelling of the brain after stroke.
- **Seizures** – abnormal electrical activity in the brain causing convulsions.
- **Clinical depression** – a treatable illness that often occurs with stroke and causes unwanted emotional and physical reactions to changes and losses.
- **Bedsore** – pressure ulcers that result from decreased ability to move and pressure on areas of the body because of immobility.
- **Limb contractures** – shortened muscles in an arm or leg from reduced range of motion or lack of exercise.
- **Shoulder pain** – stems from lack of support of an arm due to hemiplegia or exercise of an arm. This usually is caused when the affected arm hangs resulting on pulling of the arm on the shoulder.
- **Deep venous thrombosis** – blood clots form in veins of the legs because of immobility from stroke.
- **Urinary tract infection and bladder control** – urgency and incontinence.
- **Pneumonia** – from aspiration or immobility, causes breathing problems, a complication of many major illnesses.

What can be done to prevent or treat complications from stroke?

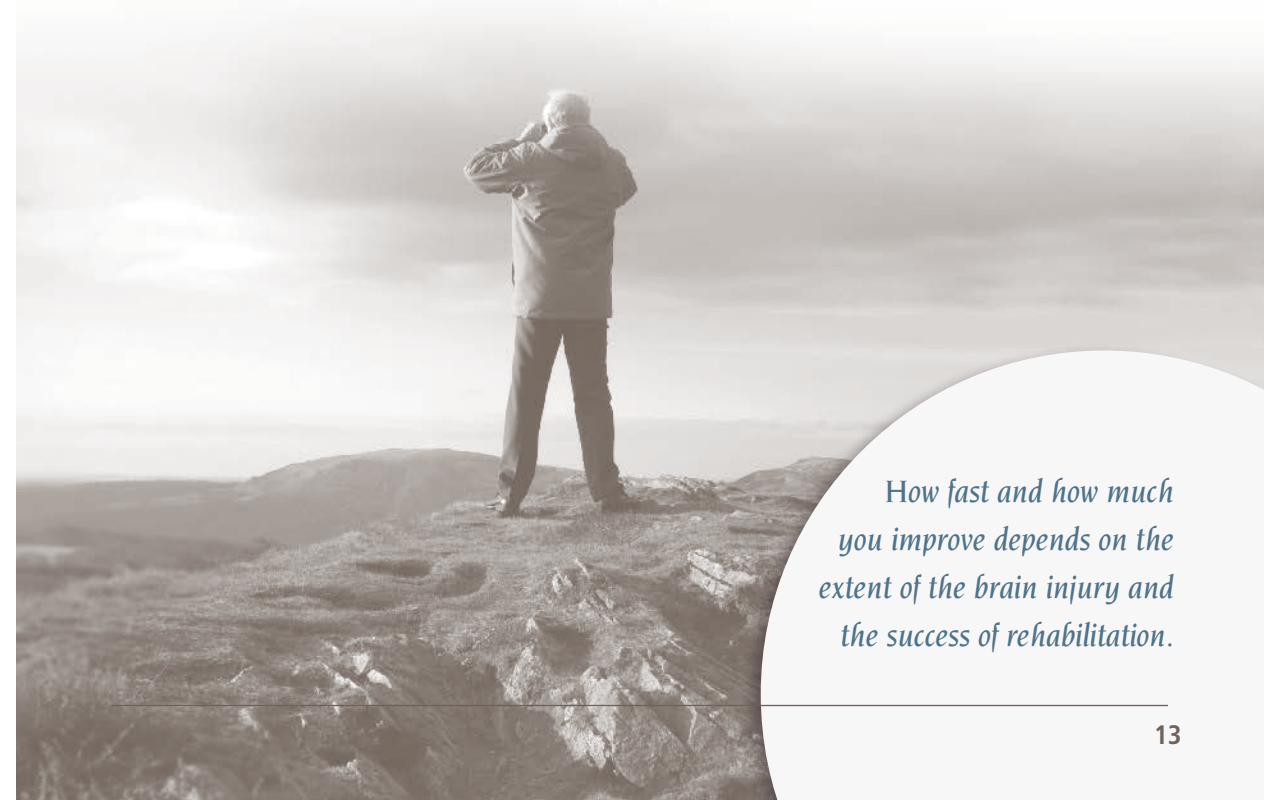
- **Medical treatment** often involves medical supervision, monitoring and drug therapies.
- **Physical treatment** usually involves some type of activity that may be done by you or a healthcare professional or by both of you working together. Types of treatment may include:
 - Range of motion exercises and physical therapy to avoid limb contracture and shoulder pain and blood vessel problems.
 - Frequent turning, good nutrition and skin care to avoid bedsores.
 - Swallowing and respiratory therapy, and deep-breathing exercises, all of which help to decrease the risk of pneumonia.

- **Psychological treatment** can include counseling or supportive therapy for feelings that result from clinical depression. Types of treatment may include antidepressant medication, psychotherapy or a combination of both. You may also be referred to a local stroke support group.

WILL I GET BETTER?

In most cases people do get better. The effects of a stroke are greatest immediately after the stroke occurs. From then on, you may start to get better.

- Recovering your abilities begins after the stroke is over and you are medically stable.
- Some improvement occurs spontaneously and relates to how the brain works again after it has been injured.
- Stroke rehabilitation programs help you improve your abilities and learn new skills and coping techniques.
- Depression after stroke can interfere with rehabilitation. It is important to treat depression.
- Improvement often occurs most quickly in the first months after a stroke, then continues over years with your continued efforts.



How fast and how much you improve depends on the extent of the brain injury and the success of rehabilitation.



WHAT IS STROKE REHABILITATION?

When the immediate crisis of a stroke has passed and you've been stabilized medically, it's time to consider rehabilitation therapy. After a stroke, you may have to change or relearn how you live day to day. Rehabilitation may reverse some of the effects of stroke.

WHO WILL BE A PART OF MY REHABILITATION PROGRAM?

Your rehabilitation team may include:

- **Physiatrist** – A medical doctor who specializes in rehabilitation.
- **Physical therapist** – A healthcare provider who specializes in maximizing a stroke survivor's mobility and independence to improve major motor and sensory impairments, such as walking, balance and coordination.
- **Occupational therapist** – A therapist who focuses on helping stroke survivors rebuild skills in daily living activities such as bathing, toileting, and dressing.
- **Rehabilitation nurse** – A nurse who coordinates the medical support needs of stroke survivors throughout rehabilitation.
- **Speech therapist** – A specialist who helps to restore language skills and also treats swallowing disorders.
- **Recreational therapist** – A therapist who helps to modify activities that the survivor enjoyed before the stroke or introduces new ones.
- **Psychiatrist or psychologist** – A specialist who helps stroke survivors adjust to the emotional challenges and new circumstances of their lives.
- **Vocational rehabilitation counselor** – A specialist who evaluates work-related abilities of people with disabilities. They can help stroke survivors make the most of their skills to return to work.

WHAT WILL I DO IN REHABILITATION?

Rehabilitation programs often focus on:

- Activities of daily living such as eating, bathing and dressing.
- Mobility skills such as transferring, walking or self-propelling a wheelchair.
- Communication skills in speech and language.
- Cognitive skills in interacting with other people.
- Social skills in interacting with other people.
- Psychological functioning to improve coping skills and treatment to overcome depression, if needed.

STROKE REHAB SETTING

Stroke rehab programs can be found in many different settings. Your doctors will usually suggest the most rigorous program you can handle. They will decide what you can handle based on your age, overall health and degree of disability.

Some stroke rehab programs are inpatient programs and others are outpatient programs. An inpatient program will assign you a room to live in while you are being treated. An outpatient program will provide treatment to you but not admit you to stay overnight.



PROGRAMS	SERVICES	SETTINGS	FREQUENCY	LIKELY CANDIDATES
Acute care (inpatient) and rehab hospitals	24-hour medical care and a full range of rehab services	Hospital or special rehab unit of a hospital	Several hours each day (most demanding)	Survivors who have many medical issues and may develop problems without continued medical treatment
Sub-acute facilities	Provide daily nursing care and a fairly wide range of rehab	Rehab center, rehab unit of a hospital, skilled nursing facility (short-term nursing care) or skilled nursing home (long-term) skilled services	Less demanding than acute programs, but continue for longer periods of time	Survivors who have serious disabilities but are able to handle the demands of acute programs
Long-term care facilities	One or more treatment areas	Nursing home, skilled nursing facility	2-3 days per week	Survivors who have their medical problems under control but still need 24-hour nursing care
Outpatient facilities	One or more treatment areas	Doctor's office, outpatient center of a hospital, other outpatient centers	2-3 days per week	Survivors who have their medical problems under control enough to live in their own homes and can travel to get to treatment
Home health agencies	Specific rehab services in one or more treatment areas	In the home	As needed	Survivors who live at home but are unable to travel to get to their treatment

GOING HOME

Going home poses few problems for people who have had a minor stroke and have few lingering effects. For those who suffered a more severe stroke, going home depends on these four factors:

- Ability to care for yourself. Rehabilitation should be focused on daily activities.
- Ability to follow medical advice. It is important to take medication as prescribed and follow medical advice.
- A caregiver. Someone who is willing and able to help when needed should be available.
- Ability to move around and communicate. If stroke survivors are not independent in these areas, they may be at risk in an emergency or feel isolated.

Modifications At Home

Living at home successfully also depends on how well your home can be adapted to meet your needs.

- **Safety.** Take a good look around and eliminate anything that might be dangerous. This might be as simple as taking up throw rugs, testing the temperature of bath water or wearing rubber-soled shoes. Or it may be more involved, like installing handrails in your bathroom or other areas.
- **Accessibility.** You need to be able to move freely within the house. Modifications can be as simple as rearranging the furniture or as involved as building a ramp.
- **Independence.** Your home should be modified so you can be as independent as possible. Often this means adding adaptive equipment like grab bars or transfer benches.



Driving After Stroke

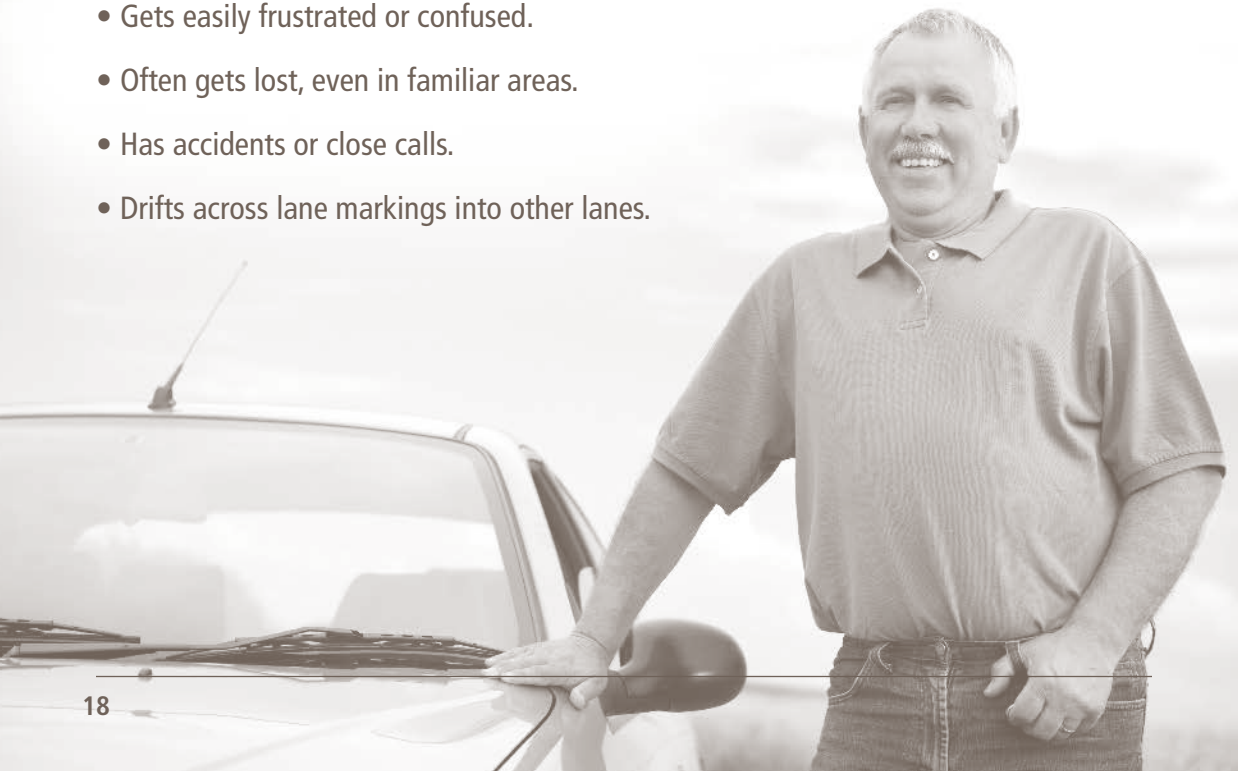
Driving is often a major concern after a stroke. It is not unusual for stroke survivors to want to drive. Getting around after a stroke is important – but safety is even more important. Injury to the brain may change how you do things so before you drive again, think carefully about how these changes may affect safety for you, your family and others.

Warning Signs of Unsafe Driving

Often survivors are unaware of the difficulties in driving that they might have. Some may not realize all of the effects of their stroke. They may feel that they're able to drive, when it's a bad idea. Driving against a doctor's advice can be dangerous and may be illegal. In some cases, your doctor may have the legal responsibility to notify your state that you've been advised not to drive.

If you or someone you know has experienced some of these warning signs of unsafe driving, please consider having your driving tested:

- Drives too fast or too slow for road condition or posted speeds.
- Needs help or instructions from passengers.
- Does not observe signs or signals.
- Makes slow or poor distance decisions.
- Gets easily frustrated or confused.
- Often gets lost, even in familiar areas.
- Has accidents or close calls.
- Drifts across lane markings into other lanes.



A HEALTHY LIFE

You can do plenty to make your heart and blood vessels healthy, even if you've had a stroke. A healthy lifestyle plays a big part in decreasing disability and death from a stroke and heart attack. Here are the steps to take:

- Don't smoke.
- Improve your eating habits.
- Be physically active. Exercise regularly.
- Take your medicine as directed.
- Get your blood pressure checked and control it if it's high.
- Reach and maintain a healthy weight.
- Decrease your stress level.
- Seek emotional support when it's needed.
- Have regular medical checkups.

Quit smoking. Smoking reduces the amount of oxygen in your blood, damages artery walls and raises your blood pressure. You may need help to stop smoking. Talk to your doctor about the various available options and programs that may help.

Control your blood pressure. High blood pressure damages artery walls and makes your heart work too hard. A healthy blood pressure is below 130/80. Have your blood pressure checked frequently and keep a record of it.

Control your weight. If you are carrying around extra pounds, especially around your waist, you have a greater chance of having heart problems. Being overweight also tends to increase your cholesterol level, your blood pressure and your risk for developing diabetes – all of which spell trouble for your heart. Eating a heart-healthy diet and exercising daily can help you lose weight.





Control your cholesterol.

Cholesterol is a fatty substance that is made in the same liver. It travels in your bloodstream. Some of it, called LDL or bad cholesterol, sticks to the inside of your artery walls. This forms plaque. Plaque damages artery walls and makes it harder for blood to flow through them, which puts a strain on your heart. The more LDL you have, the greater your

chance of getting heart and vessel diseases. Having a healthy diet – high in fiber, low in fat, low in cholesterol – and

exercising can help you control your cholesterol. Discuss with your doctor if diet and exercise are unable to bring down your cholesterol level. A cholesterol lowering agent may be needed to help you control your cholesterol level.

Eat a healthy diet. What you choose to eat affects your overall health as well as your heart. Eat more heart-healthy foods, like whole grains, fruits, vegetables and fish, and less-heart unhealthy foods, like fatty meats and high-fat snacks. Eating 20 to 30 grams of fiber a day can lower your blood cholesterol, triglycerides and blood pressure and help prevent constipation. Fiber-rich foods also make you feel full longer, which means you'll be less likely to overeat, especially between meals.

Exercise. Physical activity reduces your risk of heart attack and stroke and makes your heart stronger. It also helps control your weight and blood pressure, helps you relax and can improve your mood. The best gift you can give your body is to commit to exercising 5 or more days of the week. Make sure you choose something you enjoy. In most cases, walking or jogging, swimming, or warm water exercise are good activities to begin with. The key is to choose activities that involve large muscle groups (especially your legs) and that you can do for at least 30 minutes at a time. Look for even small chances to be more active. Take the stairs instead of an elevator and park farther from your destination.

Following up with your physician. It is important that you follow up with your family doctor after discharge from the hospital. You should work with your doctor to manage your health and help reduce your risk of having another stroke.

- Follow up with your family doctor within 1-2 weeks of discharge.
- Follow up with neurologist or neurosurgeon as instructed or per your family doctor.
- If you need rehabilitation services, rehabilitation plan of care should be arranged and in place upon discharge. Continue to follow up with your rehabilitation professional and continuously re-evaluate your rehabilitation needs as you progress with your recovery.

Doing what your doctor asks. One key to reducing your risk of another stroke is simple. Follow your doctor's recommendations. Your doctor will develop a treatment plan specifically for your needs. It is also very important that you follow your doctor's suggestions about diet, exercise, and weight loss and take all medicines as directed. Together, you can work to help the best decisions for your health.

MESSAGE FOR THE FAMILY AND CAREGIVER

People who provided help for stroke survivors are often called caregivers. Everyone involved in helping a stroke survivor is a caregiver – the spouse, family members and friends. Often one person, generally a spouse, will provide most of the care. It's important that caregivers and stroke survivors strive to be "care partners" in their efforts. It's often a challenge for both to adjust to their changed roles. The adjustment may be easier if the caregiver and stroke survivor share in decision making as much as possible and try to share their feelings honestly.

There is no one "job description" that explains what all caregivers do. Each caregiver's responsibilities vary according to the needs of the stroke survivor. This may require several adjustments. Role changes and new skills may need to be learned. Common responsibilities of care giving include:

- Providing physical help with personal care and transportation.
- Managing financial, legal and business affairs.
- Monitoring behavior to ensure safety.
- Managing housework and meal preparation.
- Coordinating health care and monitoring medications.

- Helping the survivor maintain learned rehab skills and work to improve them.
- Providing emotional support for the stroke survivor and family members.
- Encouraging the stroke survivor to be as independent as possible.

Assistance for Caregivers

- Adult day care.
- Adult foster homes – supervised care in approved private homes.
- Home health aide service – in-home personal care assistance.
- Homemaker assistance – supervised, trained personnel who help with household duties.
- Respite care – people come into the home for a limited time to give caregivers a break.



STROKE RISK ASSESSMENT

Please complete the information below by checking all that applies to you. We recommend consulting with your healthcare provider if you have checked two or more to learn how to lower your risk of **Stroke** and **Heart Disease**

Age

— You are a man over 45 or a woman over 55 years old

Family History

— Your father or brother had a heart attack before age 55 or your mother or sister had one before age 65

Medical History

— You have coronary artery disease, or you have had a heart attack

— You had a stroke

— You have an abnormal heartbeat

Tabacco Use

— You smoke/smoked or live, work with people who smoke everyday

— You use or have used chewing tobacco

Diabetes

— You have diabetes or take medicine to control your blood sugar

Physical Inactivity

— You don't accumulate at least 30 minutes of physical activity on most days of the week

Total Cholesterol and Hdl Cholesterol

— Your total cholesterol level is 240 mg/dl or higher

— Your HDL ("Happy") cholesterol level is less than 40 mg/dl if you're a man or less than 50 mg/dl if you're a woman

— You don't know your total cholesterol or HDL levels

Blood Pressure

— Your blood pressure is 140/90 mm or higher or you've been told that your blood pressure is too high

— You don't know what your blood pressure is

Excess Body Weight

— You are 20 pounds or more overweight

GLOSSARY OF TERMS

1. **Aneurysm**- an abnormal bulge or “ballooning” in the wall of an artery.
2. **Aneurysm clipping**- a surgical procedure performed to treat an aneurysm.
3. **Aneurysm endovascular treatment**- Endovascular treatment involves inserting a catheter into a large artery, usually above the leg, that is threaded through the vessels to the site of the aneurysm. Detachable platinum coils are then dispensed through the catheter and placed carefully inside the aneurysm.
4. **Anticoagulant**- an agent used to prevent the formation of blood clots.
5. **Antihypertensive drugs**- medicines that help lower blood pressure.
6. **Antioxidants**- substances that protect the body from damage caused by harmful molecules called free radicals.
7. **Antiplatelet drugs**- a group of powerful medications that prevent the formation of blood clots.
8. **Arteries**- vessels that carry blood away from the heart to the rest of the body, including the brain.
9. **Atherosclerosis**- a disease in which the arteries are hardened and narrowed as a result of plaque that has built up along the inside of the artery walls. Also known as “hardening of the arteries.”
10. **Atrial fibrillation**- abnormal heart rhythm in which the atria, (upper thin walled chambers of the heart) are beating irregularly.
11. **Blood clot**- a mass of blood cells and blood components that form to stop the bleeding that occurs when a blood vessel is injured.
12. **Blood Pressure**- the pressure exerted by the blood against the walls of the blood vessels, especially the arteries.
13. **Blood vessels**- an elastic tubular channel, such as an artery, a vein, or a capillary, through which the blood circulates.
14. **Cardiovascular disease**- disease of the heart and blood vessels.
15. **Carotid artery**- principle arteries on both sides of the neck that supply blood to the head and neck.
16. **Carotid endarterectomy**- a surgical procedure used to treat narrowing of the carotid artery caused by atherosclerotic plaque formation.
17. **Cerebral angioplasty**- a procedure where a surgeon inserts a small balloon into one of the blood vessels supplying the brain. The balloon enlarges the vessel and increases blood flow.
18. **Cholesterol**- a soft, fat-like, substance founding the bloodstream.
19. **Computerized axial tomography scan (CT or CAT scan)**- a radiology imaging technique that produces images (slices) of the anatomy.
20. **Denial**- a defense mechanism in which a person is faced with a fact that is too painful to accept and rejects it. The act of saying, “No” or “Not true” to something.
21. **Depression**- condition characterized by an inability to concentrate, insomnia, changes of appetite, feelings of extreme sadness, guilt helplessness and hopelessness, and thoughts of death.
22. **Diabetes**- a disorder characterized by an increased blood sugar level. This may be due to the body’s inability to produce enough insulin.
23. **Doppler ultrasound**- a noninvasive that can be used to evaluate blood flow and pressure by bouncing high-frequency sound waves (ultrasound) off red blood cells in blood vessels.
24. **Electroencephalogram (EEG)**- a diagnostic test which measures the electrical activity of the brain (brain waves) using highly sensitive recording equipment attached to the scalp by fine electrodes.
25. **Embolic stroke**- occurs when a blood clot travels from other parts of the body (for example, the heart) to the neck or the brain blocking a blood vessel.
26. **Epilepsy**- a condition characterized by recurrent seizures that may include repetitive muscle jerking called convulsions.
27. **Evoked response test**- measures the time it takes for nerves to respond to stimulation
28. **Hemorrhagic stroke**- bleeding into the brain due to a blood vessel bursting which damages nearby brain tissue.
29. **Hypertension**- high blood pressure.
30. **Ischemic stroke**- death of an area of brain tissue resulting from an inadequate supply of blood and oxygen due to a blockage of an artery.
31. **Magnetic resonance imaging scanning (MRI)** - a medical device that uses a magnetic field and the natural resonance of atoms in the body to obtain images of human tissues.
32. **Occupational therapy**- the therapeutic use of work, self-care, and play activities to increase development and prevent disability. It may include adaptation of task or environment to achieve maximum independence and to enhance the quality of life.

33. **Physical therapy**- the treatment of physical dysfunction or injury by the use of therapeutic exercise and the application of modalities intended to restore or facilitate normal function or development.
34. **Rehabilitation**- a treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease to as normal a condition as possible.
35. **Saturated fat**- a fat, most often of animal origin. An excess of these fats in the diet raises the cholesterol level in the bloodstream.
36. **Seizures**- a sudden change in behavior characterized by changes in sensory perception (sense of feeling) or motor activity (movement) due to an abnormal firing of nerve cells in the brain.
37. **Sleep apnea**- a condition that causes a person to temporarily stop breathing during sleep.
38. **Speech therapy**- treatment of speech defects and disorders, especially through use of exercises and audio-visual aids that develop new speech habits.
39. **Stroke**- a type of cerebrovascular disease. It affects the arteries leading to and within the brain. A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or bursts. When that happens, part of the brain cannot get the blood (and oxygen) it needs, so it starts to die.
40. **Subarachnoid hemorrhage**- bleeding in the area between the brain and the thin tissues that cover the brain. This area is called the subarachnoid space.
41. **Thrombus**- a blood clot that forms inside one of the brain's arteries and blocks blood flow to part of the brain.
42. **Tissue Plasminogen Activators (tPA)**- clot busting drug (otherwise known as "thrombolytics"), which work to dissolve blood clots that can block arteries, decreasing the disability caused by a stroke.
43. **Trans fat**- an unhealthy substance, also known as trans fatty acid, made through the chemical process of hydrogenation of oils. Hydrogenation solidifies liquid oils and foods that contain them. Trans fat is found in vegetable shortenings and in some margarines, crackers, cookies, snack foods, and other foods.
44. **Transient Ischemic Attack (TIA)**- a temporary interruption of the blood supply to an area of the brain; sometimes called a "mini-stroke," it usually lasts only a few minutes and causes no permanent damage or disability.

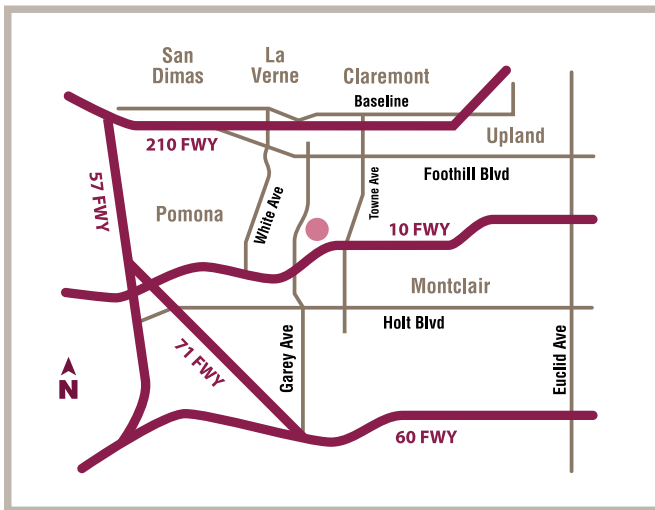


For more information about Stroke

- Call 909.865.9858
- Contact the American Stroke Association at 1.888.4-STROKE (1888-478-7653) or online at StrokeAssociation.org
- Visit our website at pvhmc.org/steadheart

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