American Stroke Association®
A division of the American Heart Association.
Together to End Stroke®

A GUIDE FOR PATIENTS AND CAREGIVERS

LIFE AFTER STROKE

Our Path Forward

Encompass Health is a national sponsor of *Together* to End Stroke.

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TABLE OF CONTENTS

04 What is a stroke?

06 About my stroke

07 Diagnosis and early treatment

10 Common physical changes after a stroke

13 Common communication and cognitive changes after stroke

18 Common emotional and personality changes after stroke

22 Why rehabilitation is important

24 Rehabilitation setting options

25 Tips for choosing a rehabilitation facility

26 What to expect in rehabilitation

29 My rehabilitation goals

30 Preventing another stroke

33 Signs and symptoms of stroke

34 Resources

INTRODUCTION

THERE IS LIFE – AND HOPE – AFTER STROKE. WITH TIME, NEW ROUTINES WILL BECOME SECOND NATURE. REHABILITATION CAN BUILD YOUR STRENGTH, CAPABILITY AND CONFIDENCE. IT CAN HELP YOU CONTINUE YOUR DAILY ACTIVITIES DESPITE THE EFFECTS OF YOUR STROKE.

If you are the caregiver, family member or friend of a stroke survivor, your role is vital. You should know the prevention plan and help your loved one to comply with the plan. With a committed health care team and a rehabilitation plan specific to their needs, most stroke survivors can prevent another stroke and thrive.

We hope this guide will help you and your loved ones understand the effects of stroke and how to maximize your rehabilitation and recovery.

WHAT IS A STROKE?

Stroke is an event that affects the arteries of the brain. A stroke occurs when a blood vessel bringing blood to the brain gets blocked or **ruptures** (bursts). This means that the area of the brain the blocked or ruptured blood vessel supplies can't get the oxygen and nutrients it needs. Without oxygen, nerve cells can't function.

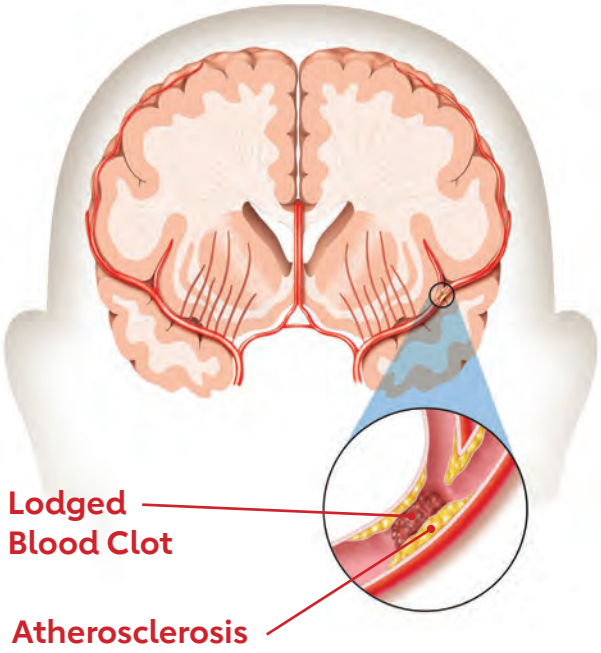
Your brain controls your ability to move, feel, think and behave. Brain injury from a stroke may affect any of these functions. Several factors affect the ways people experience a stroke. They include:

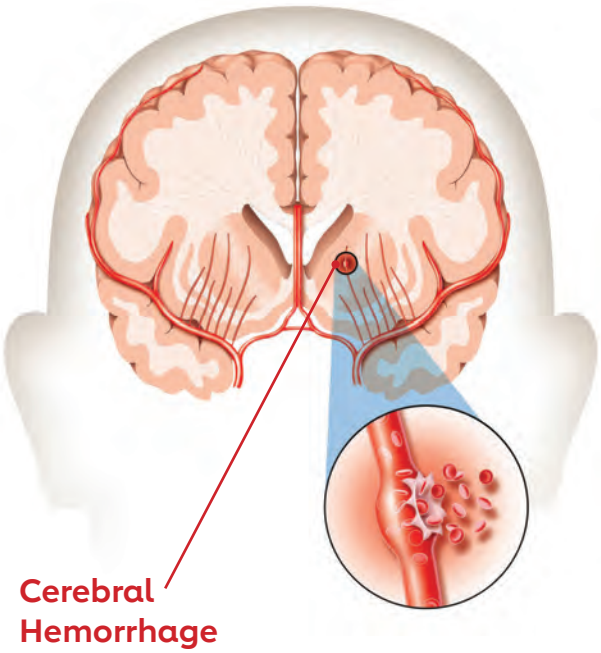
- **THE LOCATION OF THE BLOOD VESSEL THAT IS AFFECTED**
- **THE AREA AND EXTENT OF THE BRAIN INJURY**
- **THE TYPE OF STROKE (ISCHEMIC VS. HEMORRHAGIC)**

TYPES OF STROKE

Ischemic stroke occurs when a clot blocks a vessel supplying blood to the brain. The artery becomes narrowed or clogged, cutting off blood flow to brain cells. Ischemic strokes are the most common type of stroke.

Hemorrhagic stroke happens when a blood vessel bursts (ruptures) in the brain. This type of stroke may affect large arteries in the brain or the small blood vessels deep within the brain. The rupture keeps the surrounding areas of the brain from getting needed oxygen. Hemorrhagic strokes are less common than ischemic strokes.



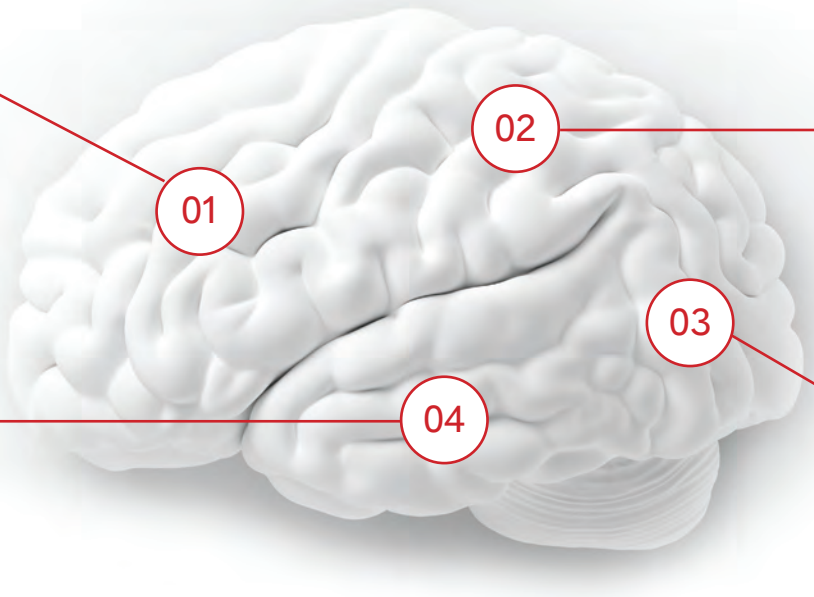


Transient ischemic attacks (TIAs) are often called "warning strokes." TIAs produce symptoms just like stroke, but typically last a shorter amount of time. They don't usually cause lasting damage. But they are major predictors of future stroke. If you suspect you've had or are having a TIA, don't ignore it! **Call 9-1-1.** Get immediate medical attention, even if the symptoms go away.

ABOUT MY STROKE

Talk with your health care team to learn where in the brain your stroke happened and mark it on the image below.

You can learn how stroke in different areas of the brain may affect the survivor at *strokeconnection.org/about-our-brains.*



Frontal Lobe
controls personality, reasoning, parts of speech, and muscle movement

Temporal Lobe
controls hearing, speech, and short-term memory

Parietal Lobe
controls speech and sensation (touch and pressure)

Occipital Lobe
controls vision

My stroke was:

- ☐ Right side of the brain
- ☐ Left side of the brain
- ☐ Due to blockage in a blood vessel (ischemic)
- ☐ Due to a damaged blood vessel bleeding into brain tissue (intracerebral hemorrhage)
- ☐ Due to a damaged blood vessel bleeding into the area between the brain and its lining (subarachnoid hemorrhage)
- ☐ The cause of my stroke was:

  _____

  _____

  _____
- ☐ The exact cause of my stroke isn't known, but it may have been because of:

  _____

  _____

  _____

DIAGNOSIS AND EARLY TREATMENT

When someone has symptoms of a stroke or a TIA, a doctor will gather information and make a diagnosis. They will review the events that have occurred and will:

- Take a medical history
- Do a physical and neurological examination
- Have certain laboratory (blood) tests done
- Order a CT and/or MRI scan of the patient's brain
- Study the results of other diagnostic tests that might be needed

Diagnostic tests examine how the brain looks, works and gets its blood supply. They can identify the injured brain area. Most of them are safe and painless.

Diagnostic tests you may have fall into three categories.

Imaging tests give a picture of the brain like X-rays (CT scan or MRI).

Electrical tests record the electrical impulses of the brain.

Blood flow tests show any problem that may cause changes in blood flow to the brain.

Early treatment of ischemic stroke

Ischemic stroke happens when a blood clot blocks a vessel supplying blood to the brain. It's the most common type, accounting for 87% of all strokes. The treatment goal is to dissolve or remove the clot.

To *dissolve* a clot, a medicine called alteplase (tPA) is given through an IV (intravenous line). It works by dissolving the clot so blood can flow again. Alteplase can save lives and reduce the long-term effects of stroke. It needs to be given within three hours of the start of stroke symptoms (up to 4.5 hours for some eligible patients).

To *remove* a clot involves a procedure called mechanical thrombectomy. Doctors use a wire-cage device called a stent retriever to remove a large blood clot. They thread a catheter through an artery in the groin up to the blocked artery in the brain. The stent opens and grabs the clot, allowing doctors to remove the stent with the trapped clot. Special suction tubes may also be used to remove the clot.

This procedure must be done within up to six to 24 hours of stroke symptom onset and after the patient has received alteplase, if eligible. Patients must meet certain criteria to be eligible for this procedure.

Early treatment of hemorrhagic stroke

Hemorrhagic stroke happens when a blood vessel bursts (ruptures) and bleeds within or around the brain.

Blood vessels can become weak due to a ballooning of part of the vessel (aneurysm). Other times there may be a tangle of blood vessels within the brain that didn't form normally, making them weak (arteriovenous malformation or AVM). When high blood pressure isn't controlled, it puts strain on weakened blood vessels that can lead to the ruptures that cause stroke. The treatment goal is to stop the bleeding.

For some patients, a small tube (catheter) with a camera is threaded through a major artery in an arm or leg and guided to the area of the bleed in the brain. The camera gives the surgeon a detailed view of the area to help fix the problem. Once the catheter is guided to the source of the bleeding, it leaves a mechanism, such as a coil, to prevent further rupture. This type of procedure is less invasive than standard surgical treatment.

Sometimes surgery is required to secure a blood vessel at the base of the aneurysm.

Talk with your health care team to learn about the diagnosis methods used and the early treatment you received for your stroke:

About my diagnosis

My health care team ran these tests to diagnose my stroke (note specific tests):

- ☐ Imaging tests
- ☐ Electrical impulse tests
- ☐ Blood flow tests

About my early treatment

I received these treatments for my stroke (note specific treatment names):

- ☐ Clot-busting medication
- ☐ Clot removal procedure
- ☐ Bleed-stopping procedure

COMMON PHYSICAL CHANGES AFTER A STROKE

Physical changes that follow a stroke are the result of injury to the brain and may include one or more effects.

Weakness or paralysis on one side of the body

If the stroke occurs on the brain's right side, the left side of the body and face will be affected. It's the opposite for a stroke that occurs on the left side of the brain.

Fatigue

After a stroke, it's common to feel tired at some point. This is known as fatigue. Fatigue often starts to lessen a few months after the stroke. But for some people, tiredness may continue for years. If you're experiencing post-stroke fatigue, talk to your health care team about ways to reduce it.

Spasticity

When you try to move a limb, the muscles contract (shorten or flex). This creates stiffness and tightness, which is referred to as "spasticity." Spasticity also causes the tendons and soft tissue around the muscle to become tight or stiff. This makes stretching the muscle much more difficult. If not treated, the muscle can freeze into an abnormal and often painful position. If you have spasticity, talk to your doctor about the best treatments for you. Physical therapy and medications can help.

Seizures

Seizures are brain malfunctions that alter a person's awareness. A seizure may last only a few seconds or minutes. It may trigger involuntary body movements, strange sensations or blackouts. Studies vary greatly about how often seizures happen after stroke. Seizures are painless. But they can be upsetting and disorienting. Often, seizures can be treated with medications. If you think you may have had a seizure, let your health care team know.

PATIENT PERSPECTIVE

"EVEN IF YOU'RE TAKING BABY STEPS, YOU'RE MOVING TOWARD YOUR GOAL OF GETTING HEALTHY"

Stephen Bishop began rehabilitation in the hospital using a walker, which he nicknamed "Cordell" — after Chuck Norris' character on Walker, Texas Ranger.

"I use humor to get through pain," Stephen said. When his one-year-old grandson, Carter, visited him in the hospital, he practiced walking in tandem with Stephen down the hospital halls.

Once he returned home, Stephen's recovery and rehabilitation were slow but steady. He graduated from "Cordell" to his cane, which he referred to jokingly as "Horatio" after David Caruso's character on CSI: Miami.

He hopes to inspire other survivors to stay focused and take charge of their recovery. "Even if you're taking baby steps, you're moving toward your goal of getting healthy," he said.

STEPHEN BISHOP

Excerpted and adapted from "Take Baby Steps Toward Your Goals," *Stroke Connection*® Winter 2018.

How my stroke is affecting me physically:

Take time to talk with your health care team about the specific physical effects you're having now. Also watch for those that may come up later. Make notes of things the team tells you that you'll want to remember:

(Circle "L" for left side or "R" for right side)

	FACE	LIPS	TONGUE	ARM	HAND	LEG	FOOT
☐ **PARALYSIS**	L R	L R	L R	L R	L R	L R	L R
☐ **WEAKNESS**	L R	L R	L R	L R	L R	L R	L R

☐ Fatigue

☐ Incontinence

☐ Seizure

☐ Foot drop

☐ Spasticity (might arise later)

☐ Swallowing difficulty (dysphagia)

☐ Trouble with balance

☐ One-side neglect

☐ Pain (might arise later)

☐ Trouble with vision

COMMON COMMUNICATION AND COGNITIVE CHANGES AFTER STROKE

The brain controls your ability to use language. Speaking, listening and understanding are complex processes. Each involves different parts of the brain. The location of the stroke injury controls the type of communication problem.

Aphasia

Aphasia is a common communication problem after a stroke. There are three types: expressive, receptive and global.

- People with **expressive (non-fluent) aphasia** know what they want to say but have trouble saying it. They can't find the right words or have trouble "getting the words out." Or, they may use the wrong words or leave out words without knowing it.
- People with **receptive (fluent) aphasia** have trouble understanding words other people speak. They may not understand the order of the words or the relationship between the words.
- People with **global aphasia** may be unable to speak, name objects, repeat phrases or follow commands. They also have a hard time understanding what others are saying.

Dysarthria

Dysarthria affects control of the muscles in the face, tongue and mouth. People with dysarthria may know exactly what they want to say. But they may speak slowly. Their speech may sound slurred, muffled, hoarse or nasal.

Apraxia

Apraxia of speech affects the ability to speak. People with apraxia have trouble connecting speech messages from their brain to their mouth. Apraxia of speech may affect more than the power to speak. It often affects reading and writing as well.

Aphasia, dysarthria and apraxia do not cause a loss of intellect. Even though it's difficult for a survivor to speak, it's not because of a lack of intelligence.

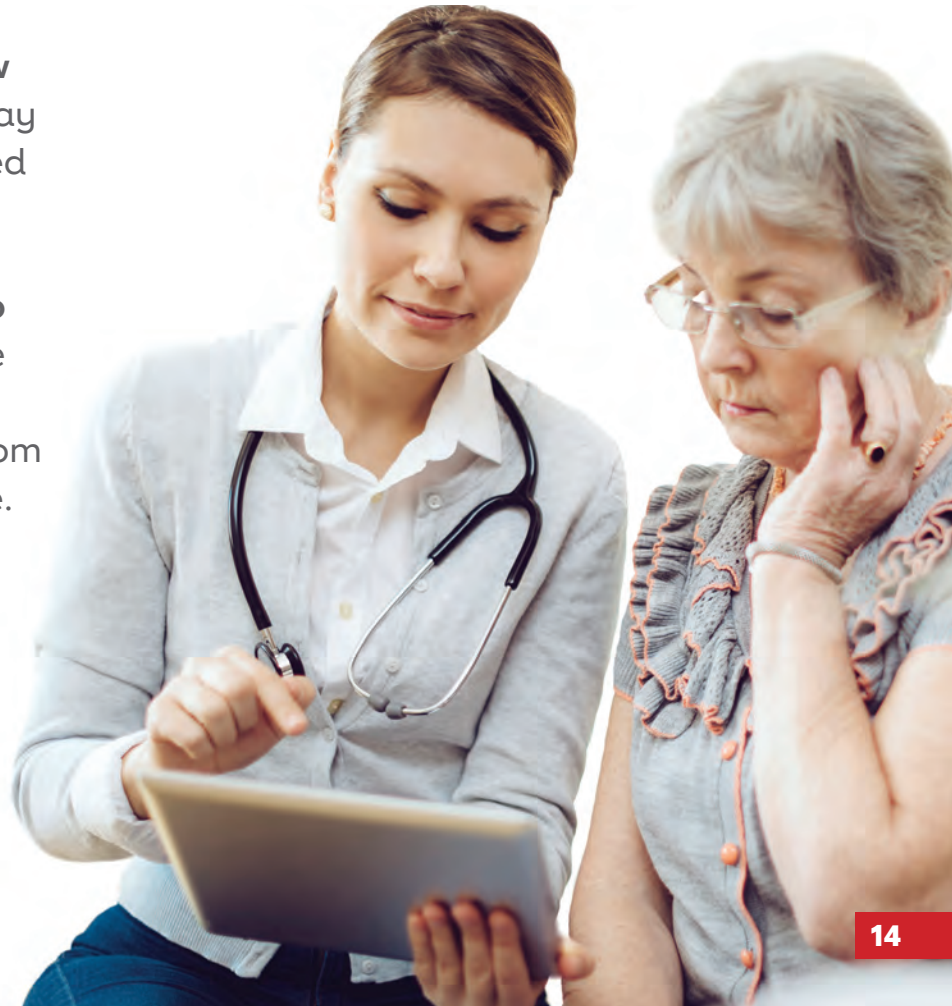
MEMORY AND COGNITIVE CHALLENGES

Different parts of the brain control specific types of thinking. Depending on where stroke happens in the brain, problems with certain types of thought may occur. Stroke survivors can have trouble with memory. Planning, organizing ideas or making decisions can also be hard after stroke.

How stroke affects memory

Many stroke survivors face memory challenges. But not all memory problems are the same. A stroke survivor may:

- **Remember for only a short span of time.** For instance, they might remember only two or three steps in a set of instructions. Or, the person might forget whether they have taken their medications or eaten a meal.
- **Have trouble absorbing new information.** The survivor may need to have things repeated over and over.
- **Have problems transferring learning from one setting to another.** For example, in the hospital the survivor might be able to safely transfer from a wheelchair to a bed alone. But at home, the change in setting may make the person unable to do the same task.
- **Mix up the details of an event.** A stroke survivor might confuse when things happened or who was there. For example, he or she might think a family member visited in the morning instead of the evening before.



PATIENT PERSPECTIVE

HELPFUL TIPS FROM REED AND MARY HARRIS

When Reed Harris had a stroke at the age of 50, it left him almost completely unable to communicate verbally or understand what others were saying. He also had partial paralysis on his right side, profound apraxia, and anomia, the inability to recall or say the correct words. Reed also had some auditory processing issues, causing difficulty with how his brain processed what he heard. Reed and his wife, Mary, worked together on Reed's stroke recovery and they share some of the most helpful things they've learned along the way:

Patience is a virtue

The Harrises emphasize that it's important to be PATIENT with all of the ATTEMPTS (successful or not). And remember, lack of speech does not mean there is a lack of hearing.

Act with patience

- Demonstrate: Show how to perform the task.
- Break all actions into smaller steps.
- Clarify the next step.
- Repetition - Approach the 20th time as if it were the first.

Communicate with patience

- SLOW it down.
- E-NUN-CI-ATE.
- Come close/make eye contact/touch.
- Do NOT finish sentences unless asked to.
- When questioning: MULTIPLE CHOICE is better than YES/ NO.
- BE specific. Allow time to respond.

Long-haul tips

For couples new to stroke recovery and aphasia, Mary says, "Reed and I resoundingly respond together with the words, 'Never give up!'" Through their own experience and that of so many people they have come to know, it's critical to:

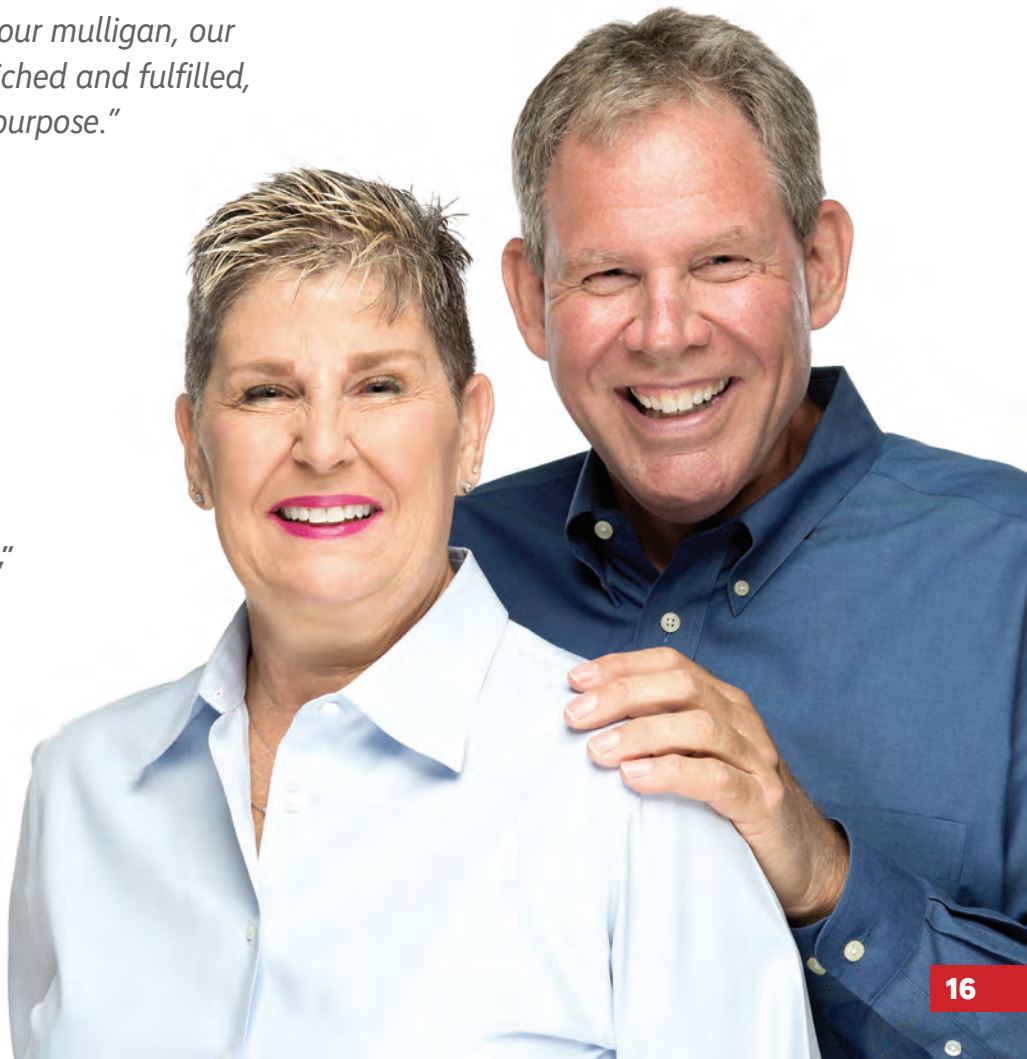
- Be creative and customize the plan for recovery. Everyone is different. Remember that even a conversation with a pharmacist can be a source of motivation and speech therapy!
- Be persistent in the endeavor to recover.
- Celebrate the tiny steps of progress.
- Life is the best therapy, so live it!

"THE EXPERIENCE OF STROKE AND RECOVERY HAS ENRICHED US AS INDIVIDUALS AND AS A COUPLE"

Lastly, Mary shares that the day of Reed's stroke, "…changed the entire course and purpose of our lives. But we go on. We have learned to adapt. While our lives are forever changed, we feel that the experience of stroke and recovery has enriched us as individuals and as a couple. The stroke was our mulligan, our second chance. Our lives are enriched and fulfilled, and we have a greater sense of purpose."

REED AND MARY HARRIS

Excerpted and adapted from "Caring for a Survivor with Aphasia," *Stroke Connection*® Fall 2016.



How my stroke is affecting my communication and thought processes

Take time to talk with your health care team about the specific communication issues you're having. Make notes of things the team tells you that you'll want to remember:

Aphasia

My aphasia is:

- ☐ Expressive, it makes it difficult for me to speak
- ☐ Receptive, it makes it difficult to understand what others say
- ☐ Global, it makes it difficult to speak and to understand others

Apraxia of speech

When I know what I want to say but can't get the words out

Anomia

When I have a hard time coming up with the word I want to say

Dysarthria

Difficulty moving the lips and tongue to make clear sounds

Trouble with numbers

Trouble reading

Trouble writing what I want to say

Auditory overload

When sounds and noise become too much for my brain to process

Memory challenges

- ☐ Short-term
- ☐ Long-term
- ☐ Remembering the steps to get something done
- ☐ Remembering how to do things

COMMON EMOTIONAL AND PERSONALITY CHANGES AFTER STROKE

After a stroke, people often experience emotional and behavioral changes. This is because the brain controls our behavior and emotions. A stroke may make a person forgetful, careless, annoyed or confused. Stroke survivors may also feel anxiety, anger or depression. Their behavior depends on which part of the brain is affected and how extensive the injury is.

Depression

Depression is common after stroke, affecting about one-third to two-thirds of all survivors. The symptoms can be mild or severe, often starting in the early stages of stroke recovery. Stroke survivors should be assessed for depression and treated when it occurs. It's important to identify and treat post-stroke depression (PSD) as soon as possible. Untreated, it can lead to being in the hospital longer and can limit a survivor's functional recovery.

The symptoms of PSD may vary and change over time, but patients and families should watch for:

- Persistent sad, anxious or "empty" mood
- Depressed mood; loss of interest/pleasure
- Sleeping problems
- Decreased motivation
- Responding with little or no emotion
- Feelings of hopelessness
- Feelings of guilt, worthlessness, helplessness (feeling like a burden)
- Decreased energy, fatigue, being "slowed down"
- Difficulty focusing, remembering, making decisions
- Appetite changes
- Thoughts of death or suicide

When five or more of the above symptoms last for two or more weeks, a survivor may be having PSD.

Anxiety

Changes related to stroke can lead to worry and anxiety. Getting around may be harder. There may be financial strains. Other sources of anxiety after stroke may be fear of falling because of balance problems or being anxious about speaking because of aphasia. Counseling can be helpful for anxiety. Sometimes anxiety and depression are both in play. If you're anxious, talk with your health care team about potential treatments.

Pseudobulbar affect (PBA)

When parts of the brain that control emotions are injured, PBA (also called emotional lability or reflex crying) occurs. Most often, people cry easily. Some may laugh uncontrollably or have sudden mood swings. These are physical effects of the stroke. Telling the person not to cry won't help. Instead, ask them how they want to be treated during an episode. Many people prefer that it be treated as a reflex, such as hiccups, and that conversation continue. Lability often lessens over time. If PBA is a problem for you, ask your health care provider about available treatments.

PATIENT PERSPECTIVE

"WHILE MY BODY AND MIND WERE HEALING, I WAS LEARNING TO BE A NEW PERSON."

Before I had my stroke at age 33 in 2012, I thought of myself as the ideal mom. I had a job, one child in daycare and one in kindergarten, and was a wife. I thought I could do everything. I tried to keep the house clean; be the ideal teacher, who never brought any work home; and be devoted 100 percent to my husband, Curtis. You know, essentially, be Superwoman. I had everything under control. Or so I thought.

On June 6, 2012, all this came to a screeching halt. I had a massive brainstem stroke that robbed me of the ability to talk, walk and swallow. I was locked-in with no movement except my eyelids. I was trapped in my body, and the only thing to do was think.

I had six months of intensive speech, occupational and physical therapy. I gained back most of the physical abilities I had lost. I was prepared for the physical part. I was not prepared for the emotional part. While I was in the hospital, the doctors put me on antidepressants, expecting a little depression after what I had been through.

But once I was home, I knew I was experiencing more than depression. Uncontrollable crying and laughter were taking over my brain daily. It was an emotional struggle to make it through the day. I talked to my neurologist about the issue and was finally diagnosed with pseudobulbar affect (PBA). A combination of antidepressants and other medication brought the PBA somewhat under control.

While my body and mind were healing, I was learning to be a new person.

Life is not better or worse than it was, just different. Not only does my family have to accept that, but I do, too.

This may sound weird, but I'm kind of glad I had my stroke. It has helped me and my family to slow down and appreciate the little things in life like spending time together and being thankful for each and every day.

DELANIE STEPHENSON

Excerpted and adapted from "Learning to Be a New Person," *Stroke Connection*® Winter 2017.

How my stroke may be affecting my emotions and behavior

Take time to talk with your health care team about the specific emotional and personality effects the stroke may be causing now, or that may come up later. Make notes of things the team tells you that you'll want to remember:

Depression

Anxiety

Uncontrolled crying or laughing

(PBA, pseudobulbar affect)

WHY REHABILITATION IS IMPORTANT

The rehabilitation and support a survivor receives can greatly influence health outcomes and recovery. Stroke affects so many different functions — paralysis and weakness; gross motor skills; fine motor skills; speech and language; cognition; vision; and emotions. Appropriate, quality rehabilitation with a strong team specially trained to meet your needs improves the chances for the best possible recovery.

For the first three months after a stroke, the brain is much like a new brain. It's ready to learn, ready to make new connections. This ability for our brains to adjust is known as **neuroplasticity** and it plays a vital role in recovery. It takes about three months after the stroke for neuroplasticity to return to a more normal state. After that, a survivor can still work on regaining function and practice for improvement, but those improvements may come at a slower pace.

Picture:
Hocoma, Switzerland

American Stroke Association recommendations for rehabilitation

In May 2016 the American Stroke Association published its Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Health Care Professionals. This guideline outlines the ideal situation of what a post-stroke rehabilitation program should address. This includes what facilities can offer in terms of care of the post-stroke patient and the following recommendations:

- It's recommended that stroke survivors who are able to participate in three hours of therapy five days a week and who are medically stable should receive care from an inpatient rehabilitation facility (IRF).
- When a stroke patient has a loss of function, a functional assessment by a clinician with expertise in rehabilitation is recommended.
- Stroke patients who have poor balance, low balance confidence, fear of falls, and/or are at risk for falls should be provided with a balance training program.

Stroke rehabilitation includes a sustained and coordinated effort from a large team, including the patient and their family and friends, other caregivers, physicians, neurologists, nurses, physiatrists, physical and occupational therapists, speech-language pathologists, recreation therapists, psychologists, nutritionists, social workers, and others.

Communication and coordination among all these team members while working toward achieving the patient's goals are key to success in post-stroke rehabilitation and recovery.

REHABILITATION SETTING OPTIONS

Stroke survivors who qualify should receive treatment in an Inpatient Rehabilitation Facility (IRF) in preference to a Skilled Nursing Facility (SNF). Patients may receive care in one or more settings during their recovery.

WHERE?	WHO IS IT FOR?	WHAT DO PATIENTS GET?
Inpatient rehabilitation facility (IRF)	Patients who are expected to benefit from intensive, 24 hour-a-day rehabilitation care under the direct supervision of a rehabilitation physician and will receive rehabilitation therapy (physical, occupational and speech therapies) at least three hours per day, five days a week	Hospital level of care that is physician directed with 24-hour specialized nursing care. A comprehensive team of specialty trained physicians, therapists, nurses and case managers who develop a personalized plan of care. Daily physician visits are typical.
Skilled nursing facility (SNF)	Patients who need daily skilled nursing or rehabilitative care and will not tolerate the intensity of an Inpatient Rehabilitation Facility.	Skilled nursing and/or therapy services with no minimum therapy requirement. Services are commonly performed by or under the supervision of a registered nurse. Periodic physician visits but no minimum number of physician visits is required.
Long-term acute care facility	Patients with multiple complex chronic medical conditions.	Hospital level of care with highly specialized medical care and rehabilitative services.
Nursing home	Patients who don't require skilled nursing.	Long-term care for patients who can't live independently.
Outpatient clinic	Patients who don't require inpatient care and are able to leave home for therapy.	Hospital-based or free-standing sites; care transitioned to primary care provider; occupational, speech and/or physical therapy, and possibly other services.
Home health agency	Patient must be homebound, except for medical appointments or occasional personal outings.	Care transitioned to primary care provider; skilled nursing; speech, physical and occupational therapy; health aide; and social services as needed.

TIPS FOR CHOOSING A REHABILITATION FACILITY

Not all types of facilities are available everywhere. Depending on where you live, you may have lots of choices, few choices or no choice without traveling some distance.

Insurance may limit what facilities are available, e.g. a specific facility may not be "in-network" on your health plan. If there are multiple options in your area, ask the health care team for a recommendation.

Your rehabilitation team approach is vital, and you and your family need to be at the center of the rehabilitation equation. When deciding on a facility, you and your family will want to verify:

- *'Are we involved in patient-care plan discussions?'*
- *'Are you going to ask my loved one what they want?'*
- *'Are you going to consider my loved one's wishes and goals in putting together the rehabilitation program?'*

So ultimately, the question is: 'Is your program patient-centered and if so, what are the ways in which it is?'

Questions for selecting the type of post-acute setting(s)

- Is the rehabilitation facility certified to care for people with a stroke?
- What is the maximum amount of rehabilitation services my loved one can receive?
- How intense will it be?
- What medical services are available?
- What special clinical training do the nurses, social workers and dietitians have?
- How does the setting measure functional recovery, and what outcomes are typical for stroke patients?

Questions to ask potential rehabilitation providers

- What types of rehabilitation care will my insurance cover?
- How often will I see a doctor?
- Do you have a stroke rehabilitation program? If so, how many patients are in it?
- How do you assure high-quality care?
- What do you measure in terms of a patient's progress, and how often do you evaluate it?
- Where does rehabilitation occur?
- What therapy programs are available?
- How do you help caregivers?
- Do you have a program that addresses balance issues and fall prevention?

WHAT TO EXPECT IN REHABILITATION

Once medically stable, survivors needing close medical supervision who can participate in at least three hours of therapy five days a week (but are not expected to need institutional care) should be discharged to an inpatient rehabilitation facility (IRF).

Determining what's needed

Once admitted to the IRF, a physician who specializes in rehabilitation (physiatrist) makes sure the survivor is ready for rehabilitation and does a general assessment of the survivor's abilities. This is when the physician writes therapy and other medical orders.

Once the orders are written, actual therapy begins the next day. Each type of therapist seeing the survivor does their own thorough assessment of specific functions such as motor skills and communication. These assessments measure how much the survivor can already do on their own. A wide variety of activities are evaluated: dressing, going to the toilet, walking, climbing stairs, communication, problem solving and memory.

Physicians and therapists also discuss with the patient and their loved ones what their own goals for rehabilitation are. These assessments and discussions provide the baseline for the kind of therapy the survivor receives and setting goals they can achieve by the time their rehabilitation is finished.

A program may include:

- Rehabilitation Nursing
- Physical Therapy
- Occupational Therapy
- Speech-Language Therapy
- Hearing Therapy
- Recreational Therapy
- Nutritional Care
- Counseling
- Social Work
- Psychiatry/Psychology
- Spiritual Support
- Patient/Family Education
- Support Groups

Working toward goals

After assessments are done, the rehabilitation team meets to discuss the results. The rehabilitation team then works closely with the patient and family to develop a mutually agreeable rehabilitation plan and set goals. They set a target date for achieving those goals.

The team meets weekly to evaluate progress. If the target date no longer seems possible, a new plan is proposed. If a survivor's progress seems slow, the team works to determine why and adjusts the plan accordingly. There is communication all along the way and plenty of opportunities to assess readiness for discharge and come up with next steps.

Time may be scheduled for the family to come in and learn to assist the patient. It's important for family and friends who will be helping the survivor at home to offer the right level of help and to understand how to help safely so that neither the survivor nor their helper gets injured. When a caregiver is educated, this also eases their anxiety about being able to care for the patient once home.

What to expect of therapy

IRF stroke programs have elements to support the many aspects of stroke recovery. These may include:

- Individual therapies
- Group therapies
- Teaching strategies to make up for functions that aren't fully recovered
- Psychological and emotional support
- Establishing daily and weekly routines
- Goal setting
- Education on: cause of stroke; preventing another stroke; medications; diet; skin protection; management of spasticity; stretching; caregiver training; and community resources after discharge

There is a balance of recovery and learning to compensate for deficits that may not recover. In IRFs, the goal is to work on recovery first. The focus is on strengthening arms and legs and using whatever strength is regained to help perform functional tasks. When survivors are unable to regain functional tasks, the focus may shift to helping them find new ways to get things done as independently as possible and may involve special equipment or adaptation.

When it's time to leave

Discharge processes differ from facility to facility but often involve a home assessment, caregiver education, family involvement, and home therapy referrals as well as information on driving and community resources.

Inpatient rehabilitation helps a patient be safe to return home, but it doesn't address all the functional and rehabilitation needs a patient has. Every patient's recovery is different, but often stroke recovery takes three to 12 months and beyond. To maintain gains and work on evolving needs, patients must continue to work at their recovery.

My rehabilitation motivators

Stroke rehabilitation can be hard work. But survivors who've been there will tell you it's well worth it. Think about some things that will help keep you motivated and make the most of your rehabilitation time. Motivators are the reasons you push to achieve your goals. (Examples: I want to attend my daughter's wedding. I want to work in my garden.)

MY REHABILITATION GOALS

Note the goals you have and what your rehabilitation team wants you to achieve before leaving rehabilitation. All survivors may not have goals for all the categories listed. *Fill in only those that apply to you.*

Mobility goals

_____

_____

_____

Cognitive goals

_____

_____

_____

Self-care goals

_____

_____

_____

Social skills goals

_____

_____

_____

Communication goals

_____

_____

_____

PREVENTING ANOTHER STROKE

Each stroke survivor has their own unique set of risk factors that contributed to their stroke. Knowing the underlying cause of your stroke is important to preventing another one.

Certain traits and lifestyle choices increase the chance of having a stroke. Although some risk factors can't be controlled, most can be managed.

Risk factors you can't control

- Increasing age
- Gender
- Race
- Family and personal medical history
- Prior stroke, TIA or heart attack

Risk factors you can manage or control

- High blood pressure
- Smoking
- Diabetes
- High cholesterol
- Physical inactivity
- Obesity and being overweight
- Carotid or other artery disease
- Atrial fibrillation (AFib) or other heart disease
- Excessive alcohol intake
- Illegal drug use
- Sleep apnea

You can greatly reduce your risk of another stroke with the right lifestyle choices and a good medical management plan.

Lifestyle choices

You can modify many of the risk factors you may have by the personal choices you make each day.

- Don't smoke or use other forms of tobacco and avoid second-hand smoke.
- Adults with chronic conditions or disabilities, who are able, should do at least 150 minutes a week of moderate-intensity aerobic activity, preferably spread throughout the week. Regular physical activity can help control cholesterol, diabetes and weight. It can also help lower blood pressure and reduce your stroke risk.
- Try to reach and maintain a healthy weight. To lose weight, you need to take in less calories than you burn.
- Follow a heart-healthy diet that includes fruits and vegetables, whole-grains, fat-free or low-fat dairy products, skinless poultry, fish, nontropical vegetable oils, legumes (dried beans and peas), and unsalted nuts and seeds. And limit your intake of saturated and trans fats, red meat, sodium and added sugars.
- If you drink alcohol, limit it to one drink a day for women or two drinks a day for men.

Medications

Every stroke survivor is unique. In order to prevent another stroke, work with your health care provider and rehabilitation team. They'll tailor a medication program that's best for you.

Be sure to take your medications as directed. Never stop taking them without talking with your health care provider. And, don't be afraid to ask questions.

The following are some of the common reasons medications are prescribed after stroke.

Preventing blood clots

The two main types of stroke-prevention medicines are anti-platelets agents, such as aspirin, and anticoagulants. Both prevent blood clots from forming.

Reducing blood pressure and cholesterol

High blood pressure (HBP) damages arteries so they may burst (hemorrhagic stroke) or clog (ischemic stroke) more easily. High cholesterol can cause clogged arteries, which increases the potential for a blood clot to form. That's why your health care provider may prescribe medicines to help lower your blood pressure or cholesterol, in addition to lifestyle changes.

Managing diabetes

People with poorly controlled blood sugar are at increased risk of stroke. If you have diabetes and have been prescribed insulin or any other medications, follow your health care provider's advice closely. This will help lower your chances of having another stroke.

Managing atrial fibrillation (AFib)

People with AFib have a five times greater risk of stroke. Medications are often prescribed to prevent and treat blood clots which can lead to a stroke. Additional drugs may be prescribed to control heart rate and rhythm. These medications may also be used in conjunction with other treatments.

Preventing seizure

After having a stroke, some patients are at risk of having seizures. Your health care provider or rehabilitation team can tell you if anti-seizure medications are right for you.

Managing depression

Depression is common after a stroke. Left untreated, it can have long-term impact on your recovery and life. The good news is that there are very effective medications for depression. If you or a family member think you may be depressed, talk to your health care provider about how medications may help.

SIGNS & SYMPTOMS OF STROKE

Stroke survivors are at an increased risk for another stroke. Knowing the warning signs for stroke may help save your life or the life of someone you love. And, getting quick treatment may improve the chances of survival and getting better faster.

The signs or symptoms of a stroke can appear suddenly. Not every person has all of them. When you see ANY of them, act quickly.

The signs or symptoms of a stroke are:

- Sudden numbness or weakness 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

If stroke warning signs occur:

- Do not ignore them, even if they go away! Some people may have only one or two signs. Other people may have more.
- Check the time when the symptoms first started. You will be asked this important question later.
- Act fast. **Call 911** or your emergency response number right away.

Stroke is a medical emergency. Every second counts!

F.A.S.T. is an easy way to remember how to recognize a stroke and what to do.

SPOT A STROKE F.A.S.T.

F.A.S.T.

Face Drooping	Arm Weakness	Speech Difficulty	Time to Call 911

RESOURCES

STROKE CONNECTION® MAGAZINE

Stroke Connection is a free digital magazine for stroke survivors and their family caregivers that brings information and inspiration directly to you quarterly. When you sign up with your email, you'll also receive the SC e-Extra monthly newsletter between quarterly issues. Sign up today by visiting *strokeconnection.org*.

SUPPORT NETWORK

Recovering from a stroke, or caring for someone who is, can be an emotional and isolating experience. Being there for each other is why we created a virtual support community for stroke and heart disease survivors and their families. Join our Support Network today at *strokeassociation.org/supportnetwork*.

NATIONAL STROKE GROUP REGISTRY

Support groups can be a very useful service for stroke survivors and their families. Tap into our registry of support groups. Go to *strokeassociation.org/strokegroup* and enter your zip code and a mileage radius to find registered stroke groups near you. Or call *1-888-4-STROKE (888-478-7653)* to find a group near you.

TIPS FOR DAILY LIVING LIBRARY

A stroke can make everyday activities challenging. Our volunteer-powered library gathers tips and ideas from stroke survivors, caregivers and health care professionals who have created or discovered adaptive ways to get things done! Visit *strokeassociation.org/tips*.

AMERICAN STROKE ASSOCIATION WARMLINE

Stroke survivors and caregivers can get support and ask questions of others who have been affected by stroke by calling the Stroke Family Warmline at *1-888-4-STROKE (888-478-7653)*. The Warmline is staffed by specially trained stroke survivors and caregivers who can answer questions, just listen or provide information on local support groups.

Notes

American Stroke Association®
A division of the American Heart Association.
Together to End Stroke®

The American Stroke Association is dedicated to providing education and resources to stroke survivors and their families. You can find out more about these and other offerings by calling 1-888-4-STROKE (888-478-7653) or visiting strokeassociation.org.

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