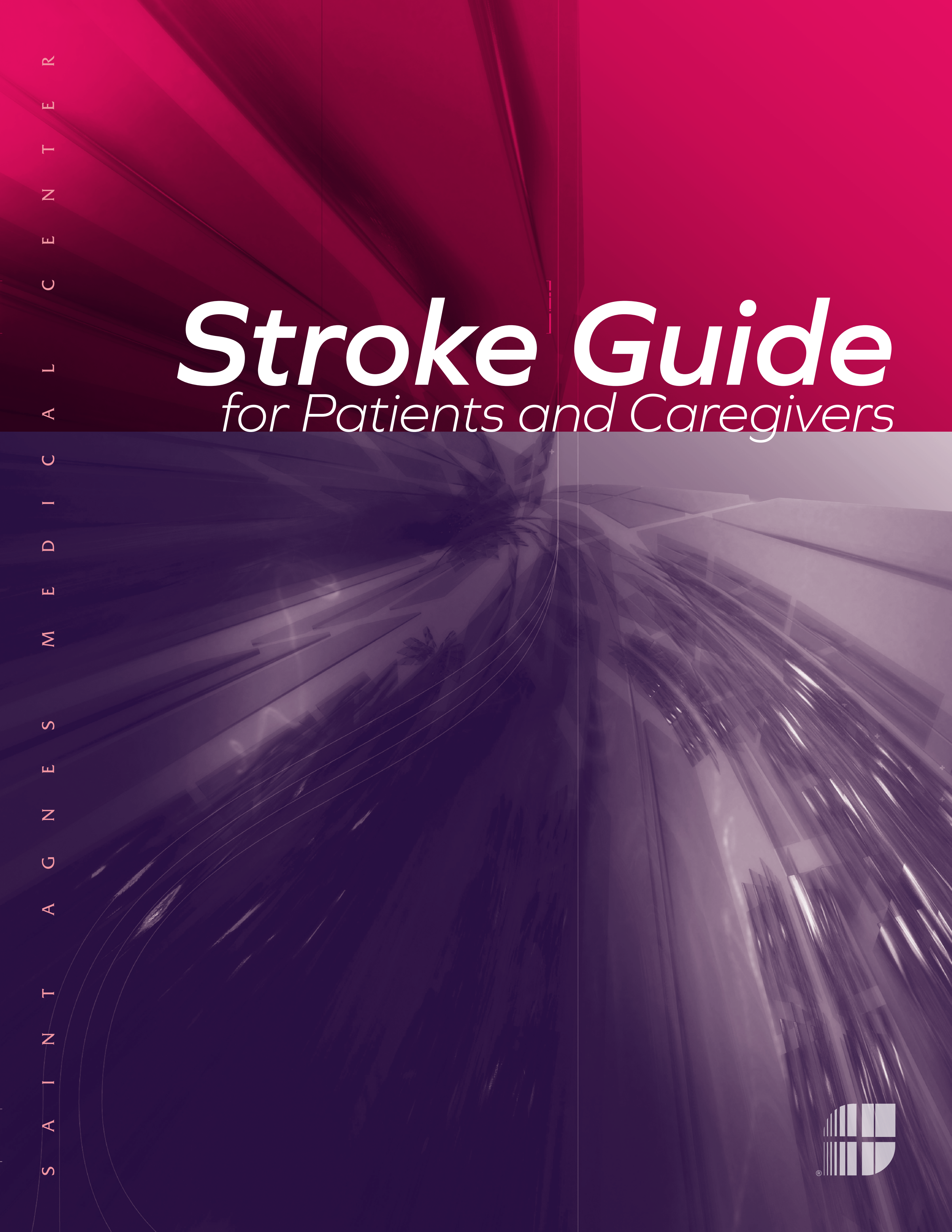

Stroke Guide

for Patients and Caregivers

SAINT AGNES MEDICAL CENTER

Stroke Program

Stroke is the fifth-leading cause of death in the United States and the leading cause of serious, long-term disability. The innovation of diagnostic technologies, advanced treatment techniques and improved management of stroke risk factors have created new hope for persons who have had a stroke or who are at risk of having a stroke.

The Stroke Program at Saint Agnes is dedicated to preventing, diagnosing and treating strokes, offering expertise and leading-edge technology. Care is managed through evidence-based stroke protocols to ensure that from the first point of contact you receive high quality care.

While many centers are concerned mainly with managing acute stroke, members of the Stroke Program at Saint Agnes place a strong emphasis on prevention of future strokes. Ensuring that you are placed on the proper medications and receive the necessary education on healthy lifestyle changes will decrease your risk for stroke. Our No.1 objective is to help you improve your quality of life.

You, as the patient, play a vital role in your healthcare decisions. Become an active, involved and informed member of your healthcare team. Knowing your stroke risk is important, and steps can be taken to reduce your risk when you work with your doctor and become involved in improving your health. Please take a moment to learn about the risk factors, symptoms and treatment of stroke – knowing may help to save your life or the life of someone you love.

Produced by the Communications Department at Saint Agnes

Stroke Guide

for Patients and Caregivers

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What Is a Stroke?

A stroke is a medical emergency that has led some experts to call it a "brain attack." A stroke or "brain attack" occurs when a blood clot blocks an artery in the brain. These blood vessels can also burst from a weakened vessel in the brain. This interruption of flow will cause brain cells to die and brain damage begins to occur.

When brain cells die during a stroke, certain functions controlled by the brain may be affected. How a stroke patient is affected depends on where the stroke occurs. For example, someone who has a small stroke may experience only minor problems such as weakness of an arm or leg. People who have larger strokes may be paralyzed on one side or lose their ability to speak or process language. Some people recover completely from strokes, but it is estimated that 50 percent of people will live with permanent or chronic disability.

Warning signs and symptoms of a stroke and TIA

The key word to signs and symptoms is ***SUDDEN***.

Common stroke symptoms

- Sudden numbness or weakness of face, arm or leg – especially on one side of 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 if you or anyone else is having these symptoms.

Most common consequences of a stroke

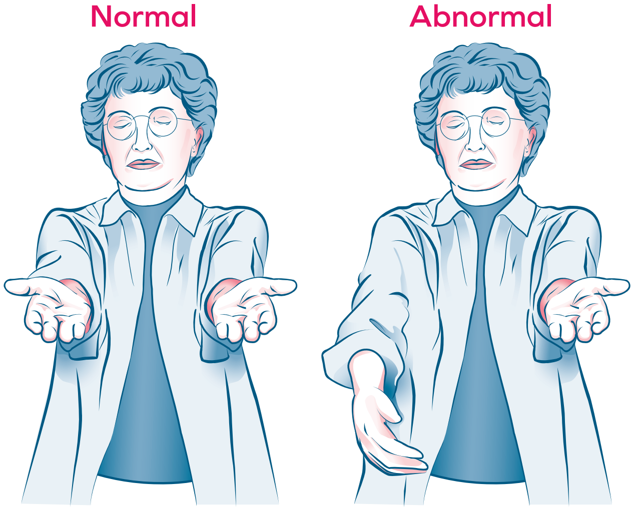
- Motor impairment and loss of sensation, usually on one side of body.
- Difficulty with speech and language.
- Limited field of vision and trouble with visual perception.
- Loss of emotional control and changes in personality.
- Cognitive deficits *(problems with memory, judgment, problem-solving, or a combination of these)*.

Recognizing and responding to stroke symptoms

The key word to assessing a stroke is ***BEFAST***.

B	= **Balance**	Watch for sudden loss of balance
E	= Eyes	Check for vision loss
F	= Face	Look for an uneven smile
A	= Arm	Check if one arm is weak
S	= Speech	Listen for slurred speech
T	= Time	Call **911** right away

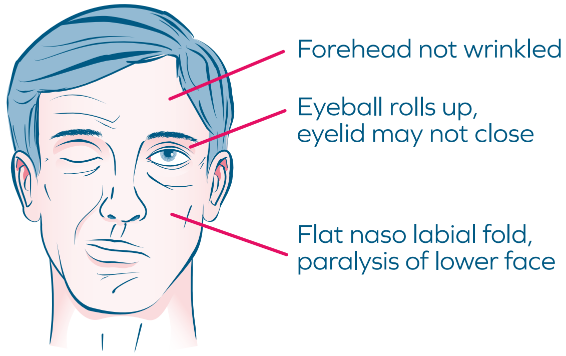
Arm drift



Both arms move equally or not at all.

One arm drifts compared to the other.

Face droop



Types of strokes

Ischemic strokes

About 85 percent of strokes are ischemic strokes. Atherosclerosis plays an important role by causing cholesterol and debris buildup within the walls of our blood vessels. This potentially dangerous buildup causes reduction of blood flow and deprives the brain cells of vital oxygen and nourishment to the brain.

When a blood clot forms at the site of the narrowing vessel, it is called a ***thrombus***. When a blood clot forms somewhere else *(i.e., in the heart or in the carotid arteries)*, it can travel through the blood stream until it lodges in the vessel. This traveling clot is called an ***embolus***.

Transient Ischemic Attacks *(TIAs)*

A ***TIA*** or "mini-stroke" results from a temporary interruption in the blood flow to the brain. Symptoms appear like a stroke, but disappear within one hour. New studies have shown that up to 24 percent of TIAs whose symptoms lasted more than one hour were shown to actually be a stroke. This has led experts to redefine TIA as an event that should not be taken lightly, and immediate evaluation in the emergency department is warranted.

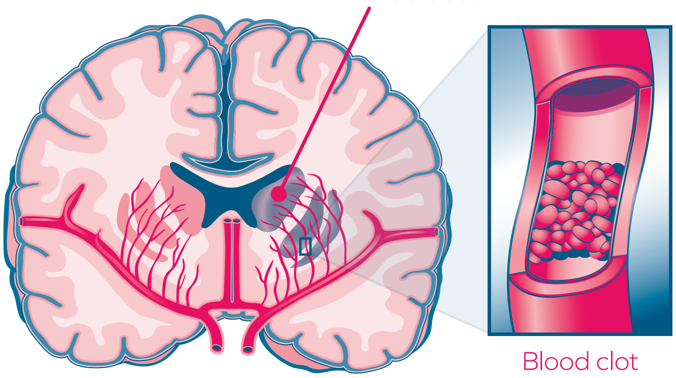
Hemorrhagic strokes

About 13 percent of all strokes are hemorrhagic or bleed strokes. Hemorrhagic strokes involve rupture of a blood vessel in or around the brain. This is most likely to happen in people who suffer from uncontrolled high blood pressure, which causes the walls of the blood vessels to weaken. Although every stroke is serious, hemorrhagic events are often devastating because they are more likely to cause death.

Hemorrhagic strokes may occur in either two places. A bleed can occur within the brain tissue, which is called an intracerebral hemorrhage. High blood pressure, also called hypertension, is the most common cause of this type of stroke.

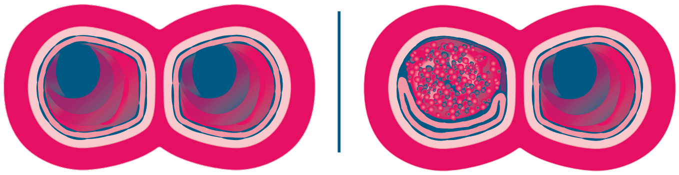
When a vessel on the surface of the brain bleeds, it is most commonly caused by a burst aneurysm. An aneurysm is a weakened area on the wall of an artery that may balloon out forming a thin-walled bubble. As it gets bigger, the aneurysm gets weaker and can burst, leaking blood into and surrounding the brain. This stroke is classified as a ***subarachnoid hemorrhage.***

Clot-induced stroke



Frontal cut-section of brain

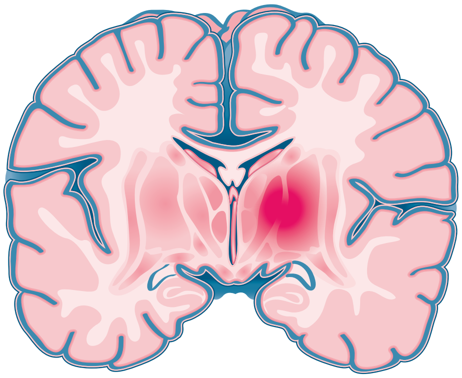
Plaque accumulation



Clear arteries

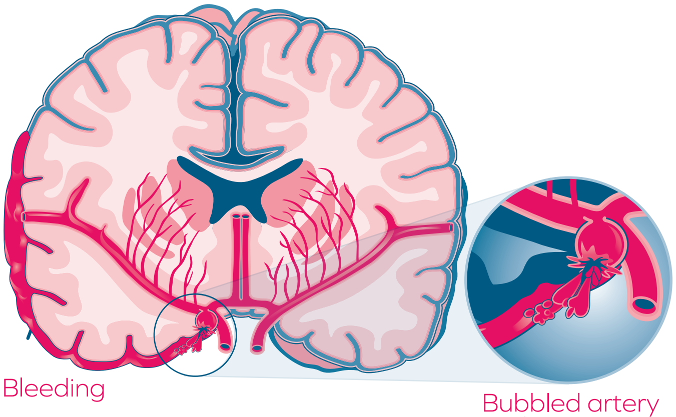
Obstruction in arteries

Hemorrhagic stroke



Frontal cut-section of brain

Subarachnoid hemorrhage



Frontal cut-section of brain

Risk Factors and Stroke Prevention

Risk factors are behavioral or medical conditions that make you more prone to having a stroke. Some factors can't be changed, while others can be changed by medical treatment or behavior modification and lifestyle changes.

Uncontrollable risk factors

- **Age –** The chance of stroke doubles every 10 years after age 55.
- **Gender –** Stroke is more commonly experienced by women than men, which pregnancy and birth control posing special risks.
- **Family history –** People with a family history of a stroke or TIA tend to have a greater risk. If you have had a stroke, there is a 1 in 4 chance you will have another one.
- **Race –** African Americans, Hispanics and Asian/Pacific Islanders are at a higher risk of stroke than people of other races.

Modifiable and preventable risk factors

- **High blood pressure –** This is the leading cause of stroke. Hypertension increases stroke risk by four to six times. If your blood pressure is regularly 130/90 or higher, you may need to reduce your salt intake, lose weight, stop smoking and/or exercise regularly, as well as begin medication to lower your blood pressure.
- **Heart disease –** Having heart disease can increase stroke risk. One major risk factor is atrial fibrillation (AF), which affects more than 1 million Americans. It causes blood to pool in the heart, increasing the chance of a dangerous clot traveling to the brain. Medication can be prescribed to treat AF.
- **High Cholesterol –** If you have high cholesterol, you can reduce it through exercise and changes in diet or you may need medication.
- **Diabetes –** People with diabetes have a greater risk of stroke. Even if the blood sugar levels are controlled, you may still have an increased stroke risk simply because of the circulation problems that diabetes can cause.
- **Smoking –** Smoking can damage the heart and blood vessels, which increases the risk for stroke.
- **Alcohol –** To reduce risk of stroke, men should not consume more than two alcoholic drinks per day and women should not consume more than one alcoholic drink per day.
- **Weight –** Excess weight strains the entire circulatory system and the heart.
- **Stress –** Because stress may increase blood pressure, it is linked indirectly to stroke. A one-time stressful event rarely causes a stroke, but long-term unresolved stress can contribute to high blood pressure.
- **Oral contraceptives –** Oral contraceptives, especially those with high estrogen content, appear to increase the risk of blood clots, including clots that cause a stroke.

Source: U.S. Centers for Disease Control and Prevention, Risk Factors for Stroke – Updated 2024

How can you reduce stroke risk?

Risk factors such as heart disease, high blood pressure, elevated blood cholesterol and lipids must be monitored by your physician on a regular basis. These risk factors can be changed or, at a minimum, controlled by proper medical treatment and appropriate diet and lifestyle modifications.

Here are other ways you can reduce your risk of stroke and even heart disease.

Improve diet. The American Heart Association recommends a Mediterranean Diet, which includes fresh fruits and vegetables, nuts, beans, whole grains, olive oil, fish and seafood while limiting red meat.

Avoid excess sodium. Table salt is the primary source of dietary sodium. However, it is estimated that 75 percent of our sodium content comes from process foods. Hidden salt is in most canned and packaged foods. Disodium phosphate, monosodium glutamate, sodium nitrate or similar compounds in the list of ingredients indicates high sodium content. Excess sodium is linked to hypertension. Remember to taste your food before you salt it. Try to eat fresh foods whenever possible. Experiment with salt-free seasonings and spices to taste.

Limit alcohol intake. Men should not consume more than two alcoholic drinks per day and women should not consume more than one alcoholic drink per day.

Avoid excess sugar. To cut down on sugars, try these:

- Use less of all sugars including white, brown and raw sugars, honey and syrups.
- Eat less foods containing large amounts of sugars such as candy, soft drinks, cakes and ice cream.
- Substitute fresh fruits or canned fruit in water or its own juices.

Watch for hidden sugar. Read labels. If sucrose, glucose, maltose, dextrose, lactose, fructose or syrups are listed first among the ingredients, then a large amount of sugar is in that product.

Maintain a healthy weight. Excess weight strains the heart and blood vessels and is associated with high blood pressure. Excess weight will decrease mobility and interfere with daily activities. To lose weight, you must decrease calories without sacrificing essential nutrients, and start or maintain an exercise program.

Treat diabetes. The association between diabetes and stroke seems to be related to circulatory problems caused by diabetes. Good control of diabetes appears to reduce the cardiovascular complications of the disease.

Reduce stress. Because stress may increase blood pressure, it is linked indirectly to stroke risk. A one-time stressful event rarely causes a stroke, but long-term unresolved stress can contribute to high blood pressure.

Exercise regularly. Moving your body in a way that feels good helps reduce your stroke risk and is important for your physical and mental health. The American Heart Association recommends at least 150 minutes of exercise per week of moderate-intensity aerobic activity. This can be broken into several sessions (e.g, 30-minute session x 5 sessions per week). Examples include brisk walking, water aerobics, biking and gardening.

How is cause of a stroke determined?

If you are evaluated for a stroke, it is likely that your doctor will order some blood tests, radiological tests and ultrasounds. Stroke cannot be diagnosed by a blood test alone. However, these tests can provide information about stroke risk factors and other medical problems that may be present.

The first set of tests are commonly used for routine or emergency evaluation of stroke, while others are used only in specific situations.

Medication treatments for a stroke

Thrombolytic Treatment Tenecteplase (TNK)

TNK is an FDA approved treatment for dissolving clots in the brain. It cannot be used until the doctor can confidently diagnose the patient as suffering from an ischemic stroke with onset less than 4.5 hours from time of diagnosis. Bleeding in the brain is a risk factor of TNK which is why strict exclusion criteria are followed.

Endovascular Therapy

Surgical mechanical retrieval of a blood clot with a clot remover is an option for some patients.

Antithrombotics

(Antithrombotics include antiplatelet and anticoagulant medications.)

You may be discharged home on an antithrombotic. If you do not have a prescription, be sure to discuss this with your doctor. Plaque can become large enough to reduce blood flow through an artery. However, one of the biggest risks is that it can rupture and break off to clot off an artery, or open an area in the vessel wall where a blood clot can form. Antithrombotics help prevent clot formation by stabilizing the plaque and preventing platelets from starting to make a blood clot.

Antiplatelet agents

Examples of Antiplatelet agents include:

Aspirin, Plavix® *(Clopidogrel), and* Aggrenox® *(Dipyridamole with Aspirin),* Cilostazol® *(Pletal),* Prasugrel® *(Effient),* Ticagrelor® *(Brilinta) and* Vorapaxar® *(Zontivity),*

All of these medications help to prevent strokes by stopping platelets from sticking together and starting a clot. Make sure your doctor knows if you are also using any blood thinners *(such as warfarin, Coumadin®, aspirin or any other type of pain or arthritis medicine such as ibuprofen, indomethacin, Advil®)*. Taking an antithrombotic with these medicines increases your risk of bleeding.

Anticoagulants

Anticoagulants are medications that delay the clotting of the blood. They make it harder for clots to form or keep clots from enlarging. Coumadin® *(Warfarin)*, Edoxaban® *(Savaysa)*, Eliquis®, Pradaxa®, Xarelto® and are examples of oral anticoagulants. You will receive special instructions from your nurse about taking this medication. You will need to have your blood checked regularly so your doctor can tell how the medication is working. You may have some changes in your doses based on the results of the blood tests. Some foods and medications can interfere with the action of this drug.

Watch for adverse symptoms

The nature of antithrombotic medications are to prevent clot formation, therefore they carry some risk of bleeding. Although as a group these medications do increase your risk for bleeding, there are some diseases for which the doctor may order one or more of antithrombotic medications for you. If this is the case, do not start or stop taking any of these medications without discussing it first with your doctor.

While taking antithrombotics, watch for signs of bleeding. For any of the symptoms described below, contact your doctor immediately.

- Urine turns red or pink
- Stools are red, black
- Gums bleed easily
- Period *(menstruation)* is more significant
- Very bad headache or stomach pain that won't go away
- Feel sick, weak, dizzy or faint
- Have bruises or blisters more often
- Have an accident of any kind
- Any falls *(regardless of how minor the fall appears)*

While using these medications, it may take longer than usual to stop any kind of bleeding, especially if you hurt yourself. Stay away from rough sports or other situations where you could be bruised, cut or injured.

Know your medication risk

Several medications have been studied and shown to improve the health of stroke survivors and help to prevent a secondary stroke. It is important that you take these medications, even if you do not feel you are having any symptoms.

Medication tips at home

- Set an alarm if needed to help remind you to take medications.
- Keep pills in divided trays with days of the week or have someone help you divide your medications.
- Know which foods or liquids you should stay away from while taking the medication.
- Have a routine.
- Take all your medications. Some work best when they are used with others.
- Don't change the dosage or stop taking the medications without consulting your doctor first.
- Tell your doctor of any side effects.
- Make sure your prescriptions will not run out – be sure to plan ahead.
- Carry a list of your medications – bring it with you to the hospital. When you come to the hospital, you will be asked for this information. Give a copy of this list to your family or caregiver so they know what medications you are on.

Complications From a Stroke

The effects of a brain attack or stroke appear soon after it occurs. Besides the direct effects of stroke, complications may develop. Some happen as a direct result of brain injury *(e.g., seizures, edema)*. Others occur because of the inability to move freely, which can result in bedsores. Still other complications occur as reactions to the stroke *(e.g., depression)*. It is important to know about these potential complications. Some are preventable and treatable.

Common physical complications of a stroke

The severity of stroke complications vary with each person. The most common are:

- **Edema –** brain swelling after injury *(stroke)*
- **Seizures –** abrupt electrical discharges in brain
- **Bedsores –** also called pressure ulcers
- **Limb contractures and shoulder pain –** stems from lack of support or exercise of an arm or leg
- **Blood vessel problems –** blood clots that form in leg
- **Urinary tract infection and bladder control problems –** urgency and incontinence
- **Pneumonia –** a complication that could arise from swallowing liquid or food into the lungs *(aspiration pneumonia)*, or from complications of many other illnesses

Common emotional changes after a stroke

Emotional lability

Behaviors that may not fit a person's mood, may be inappropriate or last longer than seems appropriate, such as laughing or crying.

Sensory deprivation

Sensory deprivation results when survivors are confined to bed for a long time and deprived of the sensations of touch, pressure, position or pain. The loss of sensory stimulation and human interaction can contribute to behavioral changes such as irritability, confusion and even delusions.

Depression

Depression is common after stroke, affecting up to one third of stroke survivors with symptoms most frequently developing within the first year following a stroke.

Characteristics of depression

Depression is a pattern of behavior that is disruptive and persists for more than two weeks. It is not just "having a bad day." It affects thoughts, feelings, and the ability to function each day. Some common characteristics of depression include:

- A persistent low or sad mood
- Feelings of hopelessness or pessimism, such as being unable to see themselves making any progress
- Feelings of guilt, worthlessness or helplessness
- Loss of interest or pleasure in hobbies and activities that were once enjoyed
- Lack of interest in self or others
- Avoiding going out
- Fatigue, or decreased energy, in excess of what can be expected after stroke
- Difficulty concentrating, remembering or making decisions
- Changes in sleep pattern with no obvious cause
- Appetite and/or weight changes with no obvious cause
- Thoughts of death or suicide
- Restlessness, irritability, angry outbursts or exaggerated sense of frustration
- Chronic aches and pains that do not improve with treatment
- Sudden outburst of tears or crying

Source: Towfighi, et al., Poststroke Depression: A Scientific Statement for Healthcare Professionals, American Heart Association Journals, 2016.

What can be done?

In most cases, stroke complications can be treated. Physical treatment can be done by you and members of your healthcare team. If you need medical treatment, it will be prescribed by your doctor.

- Range of motion exercises and physical therapy to avoid limb contracture and shoulder pain, blood vessel problems and pneumonia.
- Frequent turning, good nutrition and skin care to avoid skin breakdown and bedsores.
- Bladder training programs for incontinence.
- Swallowing and respiratory therapy, and deep breathing exercises, all of which help to decrease risk of pneumonia.
- Counseling or supportive therapy for depression or emotional reactions. Due to chemical changes that may be occurring in the brain and frustration that can arise from physical changes the patient is experiencing, it is not uncommon to see depression and emotional reactions. It is not uncommon for your doctor to prescribe mild antidepressants to assist with this.

Swallowing Deficits and Treatment following a Stroke

Imagine that you have the strong desire to eat food at a family party but can't because you know that if you do, you are at risk of developing a severe and possibly life-threatening pneumonia. Or you now suffer from the inability to communicate basic needs and wants such as hunger, pain and frustration. What if you realize that you have serious memory loss and can no longer carry out your daily activities without help? Any and all of these issues are possible for a person who has had a stroke.

In the pages that follow, you will learn the various communication and swallowing issues that may arise following a stroke. **Dysphagia** *(swallowing disorder)*, **aphasia** *(language disorder)*, **apraxia** *(motor speech disorder)*, **dysarthria** *(slurred speech)* and **cognitive deficits** *(memory, safety and orientation)* are some of the disorders that people experience to some degree and in many different combinations following a stroke.

For these reasons, it is important that a stroke patient seek an evaluation by a speech-language pathologist as part of a multidisciplinary team to determine a patient's deficits, as well as strengths, to help improve function and quality of life. The speech pathologist will evaluate each issue as needed and assist in creating an appropriate treatment plan/exercise program, including strategies to increase functional skills for daily life.

Dysphagia

Impaired swallowing

For someone without a swallowing problem, eating and drinking are simple activities, the mechanics of which are taken for granted. When normal swallowing occurs, many muscles in the mouth, throat and esophagus work together to ensure that the initial steps of the digestive process are safe and efficient.

Dysphagia is present when weakness, sensation, timing and/or coordination problems impair any part of the swallowing process. Weakness of the lips and the tongue make it difficult for the stroke patient to chew and properly manipulate food. Food may fall out of the mouth on the weak side, pocket in the cheek or scatter all over the mouth after the patient swallowed most of the food. If sensation is impaired, a person may frequently bite his or her tongue, lip or cheek while eating or may be completely unaware of the significant residue in the mouth after swallowing.

Once food enters the throat, weakness, timing, coordination and sensation play a different role in the safety of swallowing. A stroke patient may have weakness in the throat that can result in food residue left in throat after patient swallows. This contributes to residue falling into the windpipe and lungs *(aspiration)*. Coordination and timing deficits may result in a delay of swallowing when food or liquid enters the throat, leading to aspiration of the food/liquid before or during the swallow. Frequent aspiration can lead to pneumonia.

Symptoms of dysphagia

- Poor saliva management *(drooling or frequent coughing on saliva)*.
- Collection of food/liquid in the weak cheek during meals that may remain for long periods if not detected and removed.
- Wet, gurgling vocal quality.
- Coughing while eating food and/or drinking liquids.
- Throat-clearing while eating food and/or drinking liquids.
- Feeling of food "stuck" in throat during or after meals.
- Frequently recurring pneumonia.

Dysphagia evaluation

This is done before attempting any food to assess the strength, rate, coordination and range of motion of the lips, tongue, cheeks and larynx. If trials of food/liquid are deemed safe, the speech-language pathologist will proceed with a drop of liquid or an ice chip. The assessment continues with trials of different consistencies of liquids and textures of food until the diet *(appropriate liquid consistency and food texture)* is determined.

Sometimes a safe diet cannot be determined at bedside with the various food/liquids presented due to numerous factors. Unclear symptoms of aspiration, patient's poor communication or cognitive status, or suspected silent aspiration are the most common reasons that further assessment is recommended. A Video Fluoroscopic Swallow Evaluation may be requested in these circumstances.

Recommended diets for dysphagia

A diet is recommended based on evaluation results. Liquid consistencies and food textures are modified to meet patient's particular needs. Risk of aspiration can be dramatically decreased by simply modifying the food and liquids that a person consumes. Here are diet options *(from normal to most modified)*.

Liquid consistencies

- Thin liquids
- Nectar-thick liquids
- Honey-thick liquids
- Pudding-thick liquids

Liquids are thickened with a special powder or gel substance similar to food starch. The amount of thickener required depends on the level of thickness that is recommended. Liquids are often thickened for people who suffer from a delay in their swallow or possibly poor control of liquids in the mouth.

Food textures

- Regular textures
- Dysphagia advanced textures *(chopped and soft)*
- Mechanically altered textures *(ground meats; very soft foods; no bread, rice or other like items)*
- Pureed textures *(all food is smooth and the consistency of pudding)*

Recommendation for modified food textures benefits people with poor control of food in mouth, residue left in throat after swallow, or poor dentition to name a few.

Strategies for dysphagia

Many strategies are available depending on the particular issues that a patient is experiencing. These strategies are meant to further increase swallow safety and decrease risk of aspiration. Strategies will also be determined following a dysphagia evaluation. Here are a few of the most frequently utilized strategies.

- No straws to decrease size, rate and placement of sip.
- Liquids from a spoon only to decrease size of sip.
- Alternate liquids and solids to clear any residue left in mouth and throat.
- Drink honey-thick and pudding-thick liquids.
- Proper positioning preferably in a chair or up 90 degrees in bed.
- Chin down to swallow, which will help in protecting trachea during swallow.
- Chew only on nonaffected side of mouth.
- Check mouth regularly for residue.
- Sit up for at least 30 minutes after each meal.

Severe dysphagia

Some people experience severe dysphagia. This means that, during the evaluation processes, it was clear that no food textures or consistencies are deemed safe. In this case, a recommendation for a nasogastric tube *(NG Tube)* for very short term or Precutaneous Endoscopic Gastrostomy Tube *(PEG)* for longer term use may be made. These tube-feeding options are for people who cannot swallow any food or liquids safely. All nutrition, hydration and medication will be given through the tube until swallow function improves following continued dysphagia treatment.

Treatment for dysphagia

Treatment will vary depending on patient's level of function and environment. In the acute hospital, choosing a safe diet and monitoring the continued safety of diet are the priority. Changing the diet based on patient's improvement or decline, as well as family education and strategies to increase safety, is paramount.

Rehabilitation facilities continue to modify and change the diet as appropriate, but also implement rigorous exercise programs to increase strength, range of motion, coordination, and rate of all structures required for swallowing.

Nursing homes continue to provide diet safety monitoring; however, specific exercises and intensive treatment are based on a patient's condition and may be less frequent.

Home health agencies provide treatment in the home and continue all services mentioned above, but may also be less frequent.

Specific exercises are chosen by clinician based on patient's needs. These may vary from oral exercises for movement of lips, tongue and cheek to specific exercises for throat area.

Communication and Cognitive Deficits following a Stroke

Aphasia

Language disorder

Simply defined, aphasia is a language disorder resulting from damage to the left hemisphere of the brain. It may affect any combination of these four areas of language centers in the brain:

1. ***Verbal expression* –** ability to remember words, saying the correct words, putting words in the correct order.
2. ***Written expression* –** ability to spell, form letters into words, and write words in the correct order.
3. ***Auditory comprehension* –** ability to understand what is being said.
4. ***Reading comprehension* –** ability to understand what is read. Aphasia also affects a patient's ability to express and comprehend numbers, as well as calculate numbers or do basic math.

The stroke survivor may have the ability to form coherent ideas, but patient has limited ability to express them. No two people with aphasia are alike. Some may struggle more with finding the words he/she wants to use (*anomia*) and is unable to write these words. Others may have significant difficulties comprehending what is said and are unable to read. Many experience a combination of these, as well as coexisting problems, such as dysarthria (*slurred speech due to weakened oral muscles*) and/or apraxia (*a motor speech disorder*). It is important to remember that intelligence and memories are intact in people with aphasia.

Expressive Aphasia

- **Verbal expression**
  A person struggling with verbal expression following a stroke may have difficulties naming objects or people ***(anomia)***. The patient knows what to say but has significant difficulties finding the right word. A patient who is having trouble finding the right word may often describe the desired object "well, it is a … a … liquid to drink" for the desired word *water*. Sometimes a wrong response persists after much effort, even when the person realizes the mistake. A patient who wants the cup of water on the table and says, "the hat… no … the hat … no! no! no! I want the hat!"

  A word or sound substitution problem ***(paraphasia)*** is another issue found in people with expressive aphasia. A person who wants to talk to his wife may mistakenly ask for his daughter. A person may also substitute the wrong sound such as "fife" for "wife" or "tar" for "car."

- **Written expression**
  Some patients with expressive aphasia cannot write at all. Other patients write some words/phrases but it closely resembles their speech. Letters are often poorly formed and spelling is inaccurate. Often patient's writing is meaningless scribble even when dominant hand is not affected by weakness.

Receptive Aphasia

- **Auditory comprehension**
  A patient with auditory comprehension problems has difficulties understanding speech despite focusing intently during a conversation. Often patient with receptive aphasia responds seemingly appropriately with "yeah," "uh huh," and "yes, sure," but message was not completely understood. When asked to clarify, patient may respond with something completely irrelevant and off topic. If a patient with comprehension problems is asked, "Are you hungry?" he/she may respond with "I have always wanted to do that!" or "Try it. You'll like it."

- **Reading comprehension**
  To some degree, reading comprehension problems are often present with people who suffer from receptive aphasia. Some people with receptive aphasia do not recognize single letters or numbers. Others may understand single written words, phrases or simple paragraphs. The level of comprehension varies dramatically depending on severity and location of stroke in the brain.

Communication strategies

It is important to remember that a full evaluation by a speech-language pathologist, as part of a multidisciplinary team, would benefit a person with aphasia greatly. Once assessed, goals are determined based on a patient's strengths, weaknesses, severity and personal preferences. Treatment will involve practice, repetition and strategies for improved communication and family education/training.

Developing strategies that allow the person to communicate in a comfortable, stress-free environment is important. Minimizing loud, stressful places and managing fatigue will benefit the person with aphasia and decrease frustration.

- Keep background noise to a minimum when attempting to communicate. Turn off television or radio, or leave the room where other people are talking.
- Do not shout *(unless person is actually hard of hearing)*.
- Speak in short phrases, allowing extra time for patient to process.
- Take breaks when you sense the person is overwhelmed, overstimulated or fatigued.
- Provide a basic set of pictures *(communication board)* with items related to daily needs such as bathroom, hunger, thirst and pain.
- Provide person with the first sound of the word that he or she is struggling with *(provided that you know what it is)*. For example, "w" or "wa" if the word is "water." This strategy may help the person "find" the word he or she is trying to say. If this is not working or increases his or her frustration, STOP, take a short break and attempt to communicate again.
- Use gestures that you and the survivor agree upon, use consistently for basic daily needs.

Apraxia

Motor speech disorder

A person affected with apraxia knows what he or she wants to say but cannot sequence the commands sent from the brain to the mouth, tongue and lips (*the articulators*) to smoothly move them from one position to another for speech. Apraxia is not a language or cognitive disorder. Called a motor speech disorder, apraxia is nearly always associated with damage in the left hemisphere of the brain. However, since apraxia (*motor speech disorder*) and aphasia (*language disorder*) may occur with damage in the left hemisphere of the brain, aphasia and apraxia often coexist to various degrees.

A person with apraxia may verbalize a single phrase such as "good morning" perfectly one minute but when asked to repeat it 10 times, "good morning" will likely come out in 10 different or unintelligible ways. Spontaneous utterances such as "hello" when a family member enters the room, or words yelled out in frustration, will be entirely intelligible, but the person will likely be unable to correctly repeat these words when asked. Person is aware of the error and may become very frustrated.

Communication strategies

Consider the suggestions below, but remember that speech disorders vary greatly from person to person, so choose accordingly. Some patients may have difficulties verbalizing an occasional word while others cannot initiate voice. Some patients string together a few unintelligible words yet may halt and stop throughout speaking. Avoid finishing patient's sentences. Instead, provide one that leaves out the key word for him or her to complete. Example: "I am _______."

- When patient begins to struggle, ask him or her to STOP, take a breath, and slowly start again.
- Try singing the words with the person "good morning," "I'm hungry," "I'm tired," etc.
- Some people with apraxia are more successful when an exaggerated intonation or melody is applied to everyday phrases.
- Utilize a basic set of picture/word boards for basic needs, especially if patient has difficulty speaking. Present patient with a sheet filled with numerous pictures depicting activities of daily living *(bathroom, food, drink, etc.)*. Allow person to choose the picture that corresponds to his or her need.
- Don't pretend to understand if you don't. Simply show patience and allow person to try again.

Dysarthria

Slurred speech

Dysarthria is a speech production problem that changes the quality of a person's speech. Dysarthria can affect one or all of the speech components required for producing speech. Components for speech are:

- Respiration (*control of breath*)
- Phonation (*making voice sounds*)
- Resonance (*tone created by nose and mouth*)
- Articulation (*movement of lips and tongue to make specific sounds*)
- Prosody (*the melody of speech*)

A person with dysarthria knows which words to use but cannot make the right sounds. There are many different types of dysarthria and all affect the person's ability to speak clearly. One or all of the speech components may be affected, resulting in slurred, slowed, overly quiet, or monotone speech. Some have described dysarthric speech as having a quality that sounds like a person consumed too much alcohol.

Weakness of the tongue and lips on the affected side is often the primary cause of dysarthria in people who have had a stroke.

Communication strategies

Improving a patient's speech clarity is the primary rehabilitation goal for people with dysarthria. Oral motor exercises to increase muscle strength, range of motion and rate of movement in the tongue and lips are often completed in therapy. Through therapy, practicing drills at the syllable, word, phrase, paragraph and conversational level may be used.

Speech strategies will be taught to increase person's clarity and therefore improve communication with family and caregivers. For example, strategies may include:

- Exaggerated articulation (*use big, exaggerated mouth movements with tongue/lips*).
- Slowed and controlled rate.
- Speak in short simple phrases.
- Be sure to intentionally say all the sounds in each word spoken.

Right Hemisphere Syndrome

Language and thought process

A stroke will not affect all areas of the brain equally. It is a mistake to speak of stroke patients as if they are all alike. They will behave differently depending upon the area of the brain that has been injured, severity of the stroke, type of injury, and how recently it occurred. A stroke that occurs on the right side of the brain *(right hemisphere)* will likely present differently than if the stroke occurred on the left side of the brain *(left hemisphere)*. However, dysarthria *(slurred speech due to weak oral muscles)* and dysphagia *(swallowing disorder)* often coexist.

In speech therapy, a person with a stroke on the right side of the brain may be diagnosed with ***right hemisphere syndrome*** or may be treated for a ***cognitive/ linguistic*** *(language/thought)* impairment. These phrases are often used interchangeably. Many areas are assessed and treated to assist stroke patient in returning to his or her normal daily activities in the safest and most successful way possible.

Here is a short list and descriptions of the most common areas of cognition assessed and treated in speech therapy.

- ***Orientation***
  Orientation refers to patient's ability to understand and recall person, place, time and circumstance. ***Person*** refers to the stroke patient's ability to give or know his or her name, ***place*** refers to patient's ability to tell you where he or she is *(related to actual location)*, ***time*** refers to patient's ability to give date and time of day, ***circumstance*** refers to patient's ability to understand and verbalize why he or she is in this predicament and what happened *("I had a stroke.")*.
- ***Memory***
  Memory is very commonly affected following a right hemisphere stroke. Three major parts of memory include:

  Immediate memory **–** refers to patient's ability to recall a string of numbers or words after a short pause.

  Short-term memory **–** refers to patient's ability to recall recent activities such as who came to visit today, recent treatment activities, and when he or she took the last dose of medication. This is the most frequent memory loss following a right hemisphere stroke.

  Long-term memory **–** recalling spouse's name or hometown is usually left intact.

- **Attention**
  Any person who has suffered a stroke may experience issues with attention. Signs of inattention can include:
  - Person's mind wanders constantly, making it very difficult to learn new tasks or recall information.
  - Person becomes easily distracted, and he or she may only be able to attend or focus on one task from seconds to a few minutes.
  - Person's attention to detail may be affected, e.g., writing wrong decimal points while balancing a checkbook or writing out his or her medication schedule incorrectly.

Lack of awareness

Safety issues

Often a person with a right hemisphere stroke will have issues with awareness and impulsivity. Deficits in these areas directly affect a patient's safety. A person with a right hemisphere stroke may not be aware of the physical deficits resulting from the stroke. He or she may actually become argumentative and deny a problem if confronted. He or she is unable to grasp the fact that a stroke has occurred and thus need to work toward recovery.

Some patients experience decreased safety awareness. For example, a patient may not fully comprehend why it is important to not get up from a chair without assistance, putting him or her at risk for falls. A patient with poor balance may tell you that transferring to the chair without assistance is not safe, but does so anyway.

Impulsivity

Impulsivity is another significant safety issue that some stroke survivors experience. Patient may again verbalize safety issues related to his or her particular deficits but impulsively moves, gets up or gets started on a task before thinking or considering the consequences. Impulsivity is also noted during times when patient is being instructed about a new task. For example, a physical therapist may be instructing patient about use of a walker or cane but before therapist is done with explanation, patient is already starting the task.

Although these issues are all slightly different, they are discussed together because they often occur together. Many patients suffer falls and injuries due to poor safety, judgment and impulsivity following right hemisphere strokes.

Sequencing *(tasks done in step-by-step routine)*
Sequencing basic daily tasks, such as getting dressed or making a telephone call, may become a significant obstacle for a right hemisphere stroke patient. Or patient may follow the basic steps of getting dressed or making calls. but struggles with high level tasks such as following a recipe or balancing a checkbook. Patient has difficulties following all the required steps in the correct order to complete a task effectively.

Family members may realize these problems exist when patient is sitting next to a pile of clean clothes for a hour, but he or she may not know where to begin to dress him/herself. Patient may put his or her shoes on, but realizes the socks are still folded on the table rather than on the feet.

Reasoning

A patient may also have difficulties reasoning through minor or major situations depending on severity. Patient may become argumentative when confronted about need to follow a healthy diet plan recommended by doctor. He or she may become angry and frustrated during a treatment session or with a family member about a decision that needs to be made.

Strategies for right hemisphere syndrome/cognitive deficits

It is important to seek an evaluation by a speech-language pathologist as part of the multidisciplinary team to assess for specific areas of deficit and severity, as well as assist in providing treatment and education

for stroke patient and family. The speech-language pathologist will provide strategies that can assist in setting up the environment at home, provide intensive treatment to increase level of function, and educate family/caregivers in the issues related to cognition.

Strategies include:

- Provide patient with an easily accessible calendar with all important dates and appointments added. Request that patient refer to it regularly. Ask him or her to tell you the date and what is scheduled for that day. This can be set up in a month-in-view, week-in-view or also a day-in-view, depending on patient's abilities.
- Provide a "memory book" or a journal to assist in recall of daily activities. Use this book to document information received during a medical appointment, a family visit, instructions for particular medications and the like.
- Utilize a medication schedule as well as a pill box to increase memory for medications. Medication should be closely supervised until patient has demonstrated that he or she is capable of managing medication safely. The goal is to increase patient's participation and responsibility. This list may be added to the memory book or may be placed near the posted calendar. Placement of this list is a personal choice.
- Follow a regular routine and keep the environment consistent if at all possible.
- Repetition is important for any new learning due to decreased memory and attention.
- Decrease distractions and noise during important conversation.
- Plenty of rest is very important. Take a break if patient becomes frustrated or overloaded.
- If patient becomes argumentative and has difficulties reasoning during a conversation, STOP, take a break and return to subject at a later time.
- Very closely supervise a person who struggles with awareness of deficits and impulsivity. These people are at a very high risk of falls and other accidents.
- Repeating the routine increases his or her ability to recall information. The stroke survivor benefits from rehearsing the task numerous times to himself or herself to increase recall.

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Rehabilitation Care of the Patient in the Home

Balance and dysfunction after a stroke

Balance is the ability of the body to remain upright. People who have had strokes can no longer take balance for granted. They may have what is called a "static balance problem," which means they have trouble balancing when they stand still. Or they may have a "dynamic balance problem," which means they have trouble maintaining their balance while moving – reaching, walking, turning, etc. Both balance problems may be a result of a stroke.

The body's balance system

Understanding what can happen to a person's balance after a stroke requires some knowledge of the mechanisms that function if the body is to maintain balance.

- First, the sensory system must be able to inform the central nervous system *(the brain and spinal cord)* about the body's position in space.
- Second, the central nervous system must be able to perceive or interpret this information.
- Thirdly, the body must be able to respond quickly and effectively when balance is affected. The central nervous system controls these balance responses.
- Finally, there must be enough strength and motion to perform the balance response.

Problems with sensory system messages

Sensory information is provided from sight, from the feelings in the skin, and from the inner ear. A stroke may affect any of these sensory systems. If sight is affected, the stroke survivors may see double, lose depth perception *(judging distance)*, or be unable to see in part of their visual field. If the legs and feet are numb or lose feeling, survivors may have trouble orienting themselves to the ground.

Certain types of strokes affect the system in the brain that controls balance. When this happens, information is not processed quickly. Patients with this problem may have trouble telling where they are in space or resolving conflicts in sensory information. They may become dizzy when they move because their eyes are not stabilized during movement. They may have a sensation of moving when it is actually the object next to them that is in motion. People standing on a bus stopped in traffic will have this sensation briefly when the bus next to them starts to move. Most people quickly adjust to this, but the stroke survivor with this problem may have trouble adjusting quickly and could be at risk for falling.

Problems interpreting messages

Severe problems with balance may often be the result of stroke-related perceptual problems. With perceptual problems, stroke survivors may have normal sensation, vision or inner ear balance inputs, yet the nervous system cannot interpret sensory information correctly. Thus, a vertical line may appear skewed, a flat surface may appear to tilt upward, and an object may be perceived as much nearer or farther away than it actually is. Stroke survivors with severe perceptual problems will have difficulty with basic functions such as sitting or walking.

Problems responding to messages

When the central nervous system detects a threat to balance, it programs a quick and effective balance response. A group of muscles are signaled to respond quickly and in a particular order. A stroke often affects the timing of these responses as well as the sequence, thus contributing to the balance problems.

Problems with strength and range of motion

Probably the most common reason for experiencing balance problems following a stroke is weakness on one side of the body, which results from the inability of the central nervous system to control muscle activity. In some cases, the body may not have enough strength in the appropriate muscles to provide adequate support. These problems are not caused by muscle impairment, but rather by the stroke-induced problems of the central nervous system.

Treatment for balance problems

Despite the complexity and severity of balance problems following stroke, treatment is possible. The first step in treating balance is to identify what is causing the problems. Each person should be evaluated by a multidisciplinary team that includes physicians and therapists. Once factors contributing to the problem are identified, appropriate therapy can be selected.

Balance problems due to weakness are probably the easiest to treat

Balance difficulties resulting from specific sensory loss *(e.g., visual field losses or numbness)* may not respond.

For these cases, therapy may include the use of bracing and good shoe support to try and strengthen the weakened area. As strength improves, a variety of balance activities should be practiced during functional tasks *(e.g., sitting, standing, walking, turning, reaching, etc.)* and in different environments *(e.g., inside, on carpets, outside on grass, etc.)*. The therapist will supervise and may challenge the stroke survivor's balance to help improve it. If given as a home program, these tasks should be supervised by a family member who is instructed by the therapist. In this case, the survivor may need to learn to compensate with other sensory functions.

Rehabilitation after a stroke

After a stroke, survivors may have difficulty doing things previously done with ease, depending on the area of the brain that was injured. They may have trouble thinking, walking, talking and carrying out basic tasks such as hygiene, eating, and using the toilet. Rehabilitation is an important factor in helping to gain back lost abilities such as these.

Rehabilitation services

The goals of therapy are to improve function and gain as much independence as possible. Types of therapy services needed differ from person to person. One person may need only speech therapy, while another may require physical and occupational therapy.

Rehabilitation is a team effort and can include speech, physical, occupational and recreational therapies; group activities; and education. Specialists who provide these services help regain function in talking, walking and other skills. They also help survivors learn new ways to do things to compensate for abilities that have been lost. Medicare, Medi-Cal and private insurance may cover some of the costs of rehab.

When people are hospitalized for strokes, the hospital staff helps patients and families develop care and rehab plans. Rehab programs are available in many communities.

Rehabilitation hospitals, **units** in acute care hospitals, and **nursing home programs** provide rehabilitation while the individual stays in the facility.

Outpatient programs provide rehabilitation services during the day to patients living at home.

Home-based programs provide services in the survivor's home.

Community-based programs provide services in a variety of settings. They may include home health agencies, groups or centers, Adult Day Health Care, Agencies on Aging, state or county health and/or social service departments,nonprofit health organizations *(National Stroke Association)*, stroke clubs, stroke support groups, and other volunteer organizations.

Rehabilitation specialists

Here is a brief description of the major rehab specialists and services they provide.

Physicians, such as neurologists, who specialize in the brain and nervous system, and **physiatrists**, who specialize in physical medicine and rehab, oversee rehab plans. **Family physicians, internists** and **geriatricians** are also involved in continuing care.

Hospital Discharge Planners arrange for community services. **Physical Therapists** train survivors who have problems with walking and other types of movement, balance and coordination.

Occupational Therapists train survivors who have problems with such activities as eating, bathing, dressing, writing and cooking.

Social Workers help stroke survivors develop rehab plans, and provide or arrange family counseling.

Speech-Language Pathologists train people in language and other communication skills and swallowing problems.

Psychologists and **psychiatrists** help stroke survivors with their mental and emotional health.

Therapeutic Recreation Specialists help survivors return to hobbies, sports and other activities they enjoyed before the stroke.

Other professionals also provide important rehab services. For example, **neuropsychologists** specialize in the connection between the nervous system and mental state, **neuro-ophthalmologists** specialize in the connection between the nervous system and vision, **orthotists** make braces that support ankles and feet, **urologists** help with bladder problems, **dietitians** help plan diets to prevent future strokes and aid in rehab, and **vocational counselors** help patients return to work or school.

Tips for stroke survivors

If you are a stroke survivor, ***you are the most important member of your rehab team***. Make sure that others understand that you want to help make decisions about your care.

Often the rehab process is hard work, work requiring a great deal of time, energy and patience. Progress toward recovery will differ for every stroke survivor. Although a lot of improvement may happen right away, recovery continues throughout various services, and re-evaluation may be needed at many points along the way.

Physical therapy for a stroke survivor at home

Following stroke rehab in a hospital, most stroke survivors are able to return home. Physical therapy plays an integral role in stroke recovery by teaching the survivor and the family how to function in the home setting as safely and independently as possible. For some people, this may include adapting the home for wheelchair accessibility. For most, it may mean learning to perform daily exercises to increase strength, flexibility and stamina so that they can eventually walk with as little assistance as possible.

A physical therapy program has five distinct phases that include evaluation, goalsetting, therapeutic program, home exercise and discharge planning.

Evaluation

A functional evaluation of present physical abilities and limitations is ideally begun while the patient is in the hospital. The initial assessment may include:

Muscle function and range of mobility **–** The degree of sensory loss, movement loss in joints, muscle tone *(spasticity or lack of it)* and strength. A painful shoulder or swelling in the hand or foot are common after stroke and should also be examined.

Balance **–** ability to maintain head, neck and trunk control while sitting, standing and walking. Perceptual losses, safety awareness, and ability to control movements are taken into account.

Bed mobility **–** ability to roll to each side, sit up and lie down in bed.

Transfers **–** ability to move on and off the bed; the wheelchair; the toilet, tub or shower; the floor; or the car.

Endurance **–** length of time it takes to become fatigued while doing activities.

As function improves, the physical therapist will also assess:

Wheelchair handling **–** ability to adjust the brakes, footrests, etc.

Ambulation **–** ability to walk, with or without assistance on various surfaces including steps and outside terrain. The quality of walking is observed, noting for abnormal posture, step length balance of the affected hip, knee and ankle.

If a stroke survivor is wearing a leg brace, the therapist checks to make sure it is fitting properly.

If there is no brace, but one is needed, the physical therapist will determine the type of brace needed.

Home environment **–** For the stroke survivor, access outside and within the home is observed. Potential barriers for safety hazards will be corrected.

Family support **–** Caregivers are a key element in determining the potential benefits and participation in a therapy program at home. Following hospitalization, many adjustments need to be made by both the stroke survivor and the family.

Goalsetting

One of the most important aspects of adjustment and recovery is setting realistic goals. Is working in the garden again a goal that is realistic? Is getting out of a favorite chair without help important? What about returning to work?

These kinds of specific questions will help the stroke survivor, the family and the physical therapist determine the best exercise program and activities to ensure continued motivation and eventual achievement of these goals.

Therapeutic program

Depending on the severity of impaired function and insurance coverage, a physical therapist may visit a stroke survivor two to three days a week in their home. The program may consist of family instruction, transfer training, strengthening, mobility training and exercises to increase motion in the joints and to build endurance.

The therapist may also make suggestions for ways to reduce pain or swelling to help promote better function. In addition, speech and occupational therapy may also be ongoing during the first few months. Each will set goals to help improve function in several areas.

Home exercise program

A home exercise program begins with the first therapy session and is continually reinforced and upgraded as function improves. A family member should be trained to assist in all the exercises and should encourage standing, walking and bed mobility activities each day. Consistency in performing an exercise program will have a positive impact on the fate of progress toward the desired functional goals. The therapist should provide a clear written copy of the home program with instructions and illustrations to be reinforced by frequent re-reading. A written program is a helpful reference to others involved in the recovery process.

Tips for the family

- Attend some rehab sessions. This is a good way to learn how to promote and continue the tasks at home and to get tips on how you can help.
- Make sure that rehab staff suggests activities that fit patient’s needs and interests.
- Find out what patient can do alone, what tasks he or she needs help with, and what is not doable. Do not assist with what he or she is able to do already. Each time the survivor does a task well, his or her ability and confidence will grow.
- Make sure you take time for yourself. Resting, maintaining a healthy diet, and exercise not only help the survivor, but the caregiver as well.
- The return to a satisfying and independent lifestyle is a worthy goal for the survivor. It is rarely achieved quickly. Stroke survivors who receive physical therapy at home may not achieve complete independence by the end of this therapy. In most cases, discharge from physical therapy is determined when goals set by the stroke survivor and the therapist have been met. Family support and continuation of the home excercise program remain very important.
- Homebound physical therapy is an important phase of a survivor’s rehab program. A physical therapist is a highly skilled health professional with special training in analyzing and correcting body movement after disease and injury. The therapist can assist in helping patient learn how to change and improve mobility.

Personal safety

If your movement is impaired or you've lost strength, be very careful so you don't have an accident. Here are some suggestions.

General safety precautions

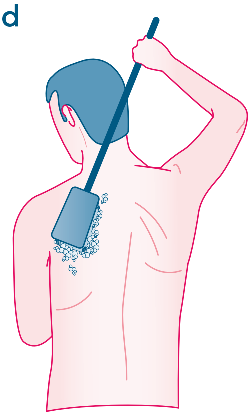
- Wear shoes with slip-proof rubber soles and strong, solid, low heels.
- Use adequate lighting to see clearly.
- Remove loose scatter rugs and make sure all carpets and rugs won't slip.
- Don't overload electrical circuits.
- Don't leave electrical cords out where you could trip over them.
- Install smoke and fire alarms.
- Call for help immediately if a fire breaks out.
- Add telephone extensions in as many rooms as you can. Keep emergency numbers next to each extension.
- If you live alone, arrange for someone to visit or telephone you at least once a day. Set up a signal system to alert neighbors when you're in trouble, particularly if it's hard for you to talk. The telephone company can also provide adapters for your phones.
- Tell your local fire department that you're disabled.
- If you use a walker or cane, fit it with rubber tips.
- If you use crutches, clean bottom regularly with an abrasive, such as steel wool.
- If working, follow the safety regulations for your job carefully.
- Work slowly and carefully, and use your other senses to make up for your loss of sensation.
- If you've lost some sensitivity to heat on your affected side, test water temperature on your stronger side or have someone test it for you. Bathe and wash dishes with lukewarm water. Turn down water heater to below 120 degrees. You can also use a thermometer.
- Discuss sharp or persistent pain in your arms or legs with your doctor or therapist.

In the kitchen

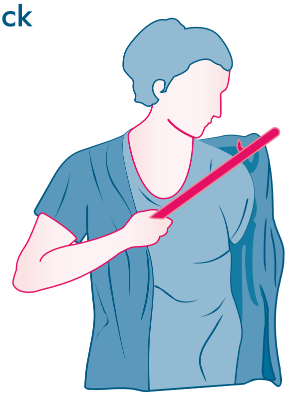
- Wear nonflammable clothes when you work near a stove, and don't wear clothes with long sleeves or ruffles that could get caught in an appliance. Don't use plastic aprons.
- Keep curtains, venetian blinds or paper towels away from stove.
- Safe, nonflammable potholders are a necessity. Wear long mitts to prevent your forearms from getting burned on the stove or oven. If you've lost feeling in your hands, you may need to take additional precautions to protect yourself from burns.
- When oil or fat catches fire, the only way to put out the blaze is to smother the flames. If fire is small, try to cover it with a pot lid or smother it with big handfuls of salt or baking soda. Never throw water on flames; this will only increase the danger. If fire is in the oven, turn off heat immediately, and keep oven door closed until fire runs out of oxygen and dies. Probably the best solution for kitchen fires is to hang a small fire extinguisher on the wall near your range or countertop oven.
- When you're going to light the oven, use long matches and light a match before you turn on gas jets.
- Turn handles of pots on the stove so they don't hang over the edge.
- Turn off oven and other appliances when you're through using them. A timer or other reminder can help you remember to do this.
- Whenever possible, push or roll items; don't carry them.
- Quickly clean up all spills *(dry or wet, large or small)*. Even a small spill could cause you to fall. To clean up spills, use a mop or a long-handled dustpan and brush while standing or sitting.
- Keep your hands dry and free from oil so you won't drop things.
- Don't store kitchen items in high cabinets; store them within easy reach. If you must reach, using a pair of tongs or clasps is a good idea.
- Cover frying pans with mesh screen guards to prevent fat from splattering.
- Use cooking utensils that have long handles, which don't conduct heat.
- Keep sharp utensils separate from other tools; store knives in a covered rack.
- Lay a rubber floor mat in front of sink to keep from slipping.
- Don't use electrical appliances near water – you could be shocked.

Reacher

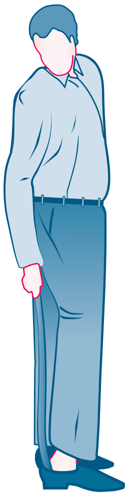
Long-handled sponge



Dressing stick



Shoe horn



Doing familiar tasks in a new way

After a stroke, performing even routine activities can be difficult. And this can be frustrating. Problems speaking, seeing or coordinating your movements can be very upsetting. To cope, you'll need patience and the support of those around you. You may need a speech therapist, physical therapist or occupational therapist to help you relearn the skills you've lost.

There may be some tasks you want to do but can only partially complete. It's not unusual for stroke survivors to get a sequence of steps mixed up or be unable to coordinate their movements well enough to do something they want to do. Another common problem among people who've recently had a brain attack is trying to rush a familiar activity such as walking. After you've had a stroke, you can't move as quickly as you once could.

While you're relearning skills, you may need reminders to start tasks slowly. Instructions should be simple, listed one step at a time. Relax and keep a positive outlook. You may have to do a task many times before you relearn how to do it.

Personal care

After a stroke, you may forget or ignore the affected side of your body. This is called "neglect." This problem develops when you've lost feeling in an arm or leg, or you can't see as well out of one eye as you could before. As a result, you may not notice food on one side of your plate, or you may bump into things.

To guard yourself against this, make an effort to look at, move and touch your affected side. If you can't feel your limbs, you may forget you have them, so touch and move them often so you'll remember. Don't just ignore your affected arm or leg – place it in a natural position. Your family and friends can help you increase your body awareness by sitting next to your affected side when they talk to you and by passing objects and food to you from that side. If people sit on your affected side, you'll naturally turn your head toward that side – and become more aware of it.

Recognizing body parts on your right or left side also may be hard for you. If this is a problem, ask someone to quiz you. You can have someone say:

- *"Show me your right ear, your left hand, your right knee, etc."*
- *"Which side is the object on?"*
- *"Where am I touching you?"*

If coordinating physical movements and managing other aspects of daily life are difficult, occupational or physical therapy may help you.

Grooming and skin care

Your stroke may affect yourself image. You may not feel like a whole person, or you may not be aware of – or take care of – your affected side.

Keeping your body clean will help you feel more attractive. In fact, taking extra care of yourself will help you feel more complete. Wearing pajamas or a hospital gown in the daytime may make you think that you're a "sick" person, so wear your regular street clothes when you get home. Dressing up will help your self-image: you'll start thinking of yourself as "well" and "like yourself."

Some other grooming tips

- If you wore makeup or jewelry before your stroke, continue to do so.
- Use an electric shaver if you have to shave with one hand.
- Brushing your teeth or your dentures once or twice a day may make your food taste better.
- If you can't shower, but want to shampoo your hair, lean over a basin held on your lap and have someone pour water on your head from a pitcher. Comb or set your hair in a special way if doing so makes you feel more attractive.
- You may need to use underarm deodorant now, especially on your affected side, even if you didn't have to use it before.
- Keep your body clean, soft and dry to prevent damage to your skin and to protect it from cuts. If your skin gets irritated or sore, give it special treatment immediately with a cream, lotion or petroleum jelly.
- People who clench their fists after a stroke should keep their fingernails short and smooth so they won't cut themselves. If you have this problem, soaking your hands daily will help keep them clean.
- Cut and file your toenails straight across after softening them in warm water. Clean and dry the area between your toes carefully, and wear clean socks or stockings every day. If you're diabetic, consult your doctor or nurse about special foot care, and **don't cut your own toenails!**
- Clean your genital area and the area between your buttocks daily. Clean these areas more often if you have diarrhea or have trouble controlling your urine or stool. You may find cleaning yourself is easier when you're lying down.

Some advice for preventing bedsores

- Try to avoid sitting or lying in the same position for more than one or two hours. If your backside or lower back is red or sore, avoid sitting or lying on these areas.
- Sit on pillows or foam pads to relieve pressure on bony areas. Don't be afraid to lay on your stomach at night if it's more comfortable.
- Small amounts of urinary dribbling can cause bedsores. To prevent them, use small disposable pads such as "mini pads" or "maxi pads" that you can change when they become wet.
- Using small amounts of cornstarch as a body powder may help prevent skin irritation, but don't overdo it. Too much cornstarch will hold moisture in body creases and create more problems. **Don't use talcum powder**. It can aggravate skin irritations. Consult a doctor or nurse right away about special treatments if an open sore develops.

Bathing

When you bathe, take soap, washcloths and towels to the tub or shower area. Set the temperature of the water so it's not too hot or cold. You may need to set your water heater temperature below 120 degrees. Before you get in, test the water's temperature on your wrist. *(If one wrist lacks feeling, use the other one.)* You can also ask someone to test the temperature for you.

Getting in and out of a wet, slippery tub can be dangerous, so be careful. It's a good idea to put *non-skid tape* on the bottom of the tub or shower and install *grab bars* to make movement easier. Attaching a *hand-held shower head* to the faucet will make bathing underarms and private areas easier. Other aids, such as *long-handled brushes* and *mittens with straps*, also can help you bathe yourself. Don't leave wet washcloths, towels, soap or lotions on the edge of the tub or in the shower; you could slip and hurt yourself.

You shouldn't be left alone in the shower or bathtub until you're fully recovered. Even when you can bathe alone, someone should be nearby to help you if you need it. Keep a bell handy or have another means of calling for help.

Showers are safer than tub baths because you're less likely to fall when getting in. If standing in a shower makes you tired, try sitting on a chair.

If you don't have a shower and must use a tub, be very careful. Stores selling medical equipment have special chairs and benches; consider buying one.

When you're climbing into the tub, *step in, weaker side first*. When you're getting out of the tub, *step out, stronger side first*. Before you climb out of the tub, dry your stronger arm and the tub edge so you won't lose your grip. Leaving water in the tub until after you've climbed out is also a good idea – the buoyancy will help you get out.

Once you get out of the tub or shower, dry yourself completely and gently rub on a lotion to prevent your skin from drying out.

Dressing

The first thing to do is to relearn how to undress. To take off your shirt or pants, first pull your stronger arm or leg out of the garment, then remove your weaker arm or leg. Clothing that must be pulled off over your head *(undershirts, nightgowns or pullover sweaters, for example)* may be hard to get off. Try not to panic or get confused when your head is covered.

As soon as possible, return to your normal habit of getting dressed in the morning. If you can't do this yourself, have someone help you. Wear loose-fitting clothes that open easily in the front. Silky fabrics that slip are better than fabrics such as flannel, velvet or polyester, which may bind.

When you're dressing, lay out your clothes in the order you'll put them on. Place those you'll put on first on the top of the pile.

When you're getting dressed, start by putting your weaker arm or leg into the proper opening. Next, pull your clothing into place and insert your stronger leg or arm or your head where it's supposed to go. By rolling, twisting and shifting your weight, you can gently pull your clothing into its proper position. It's easier to put clothes on when you are sitting than when you are lying down.

Some things you can make or buy will make dressing easier

- rings or strings on zipper pulls
- velcro closures
- elastic waistbands
- snaps and grippers
- elastic shoelaces or other simple shoe closures
- stocking/sock spreaders
- buttonhooks

Other articles besides those listed also can make your life easier. Pre-tied ties and elastic, front-hook brassieres are just two examples. Several companies now make clothes that are designed to be easy to put on.

Buttoning buttons, snapping snaps or tying shoelaces can be hard. You'll have to relearn how to do these things a step at a time. You might, for example, practice buttoning a piece of clothing while it's on your lap. After you've learned how to do that, buttoning clothing you're wearing will be easier. You may find it's easier to put on your socks or shoes or tie your shoelaces if you put your foot on a footstool or box first.

For suggestions, consult a physical or occupational therapist.

Eating

Chewing and swallowing food may be a problem for some people after they've had a stroke. Difficulty in swallowing is called dysphagia *(dis-FAY-gee-uh)*. It isn't uncommon for one or both sides of a person's mouth to lack feeling. If swallowing is hard for you or you sometimes begin choking, tell your doctor or therapist.

Some advice if eating is a problem for you

Put only a small amount of food in your mouth at a time, and put it on the stronger side of your mouth. This will make swallowing easier and help prevent choking. Also, clear your mouth and throat after each bite of food. *(Food will tend to become lodged in the affected side of your mouth.)* You can check for trapped food with a mirror

and remove it with your tongue or fingers. Clearing your throat after each bite of food also helps prevent choking.

Some foods are easier to eat than others. For example, soft foods such as applesauce, hot cereal and sherbet are easier to swallow than liquids.

Breaking down foods in a blender is another way to make them easier to swallow. Many department stores and health food stores sell small, portable blenders that work very well. A staff dietitian at your local health department can suggest healthful, easy-to-eat foods.

Some people who've had a stroke may have problems reaching for and spilling food, cutting meat, buttering bread or opening containers. If you have these problems, don't get discouraged. It takes time, patience and practice to master these activities. An occupational therapist may be able to suggest other useful items.

As you recover, you can gradually return to a regular diet low in animal fat and cholesterol. Some people may have to reduce calorie intake, sodium, or both.

Perception

Perception is the ability to recognize and understand familiar objects through your senses. Because seeing, hearing, touching, moving and thinking can all be affected by a stroke, it's possible that your perception of everyday objects may also be altered. In fact, several problems may occur together, depending on the areas of the brain affected by the stroke.

To deal with perceptual difficulties

- Keep your home neat and free from hazards.
- Set a daily routine.
- Eliminate distractions such as radio or television when you're performing difficult tasks.
- Get help if you're working on a task that seems too hard for you.
- Slow down and focus all your attention on one task.
- Consult your doctor or get occupational or other appropriate therapy if perceptual problems persist.

Hearing

Usually a stroke doesn't cause a hearing loss. It may make it hard to understand what others are saying. If you have trouble hearing on the telephone, try switching the receiver to your other ear. Turning down the television or radio, or asking people in the room to speak more softly, also may help you hear.

If you wore a hearing aid before you had your stroke, continue to do so. And be sure to keep it clean and operating properly.

If, after your brain attack, you find that you do have hearing problems, get a hearing test – your doctor can recommend a professional who can help you. If you need a hearing aid, try to rent one or get one on loan so you can return it if it doesn't work for you.

Seeing

Several visual problems commonly occur after a brain attack. Any of them may make it hard for you to do daily tasks. You may have to practice tasks over and over before you can do them properly.

With a loss of visual field, when you're looking straight ahead you may be unable to see things on your affected side. And if you've lost feeling on that side, too, you may lose awareness of that side of your body. As a result, you may ignore objects placed on that side, have trouble reading, or dress only one side of your body and think you're completely dressed. As you move around, you also may bump into furniture or door frames. So you won't neglect affected side, train yourself to turn your head and look toward this side. Your friends can also remind you to turn your head toward affected side.

Look toward affected side when you walk to avoid bumping into things.

If your stroke has affected your vision, some objects may look closer or farther away than they really are. This problem will probably be most apparent when you're trying to eat or dress, because you may over or under reach for an object. It also may cause you to bump into objects while walking.

Some ways to learn to judge distance more accurately

- At meals, consciously think about which foods and objects are close, far away or middle-distance. Also think about "what's next to what."
- Fold small laundered items and put in a pile next to your affected side.
- When going up and down stairs, feel the height of the step with your foot before you shift your weight. Have someone with you to support you on your affected side.

To help find an object in a cluttered drawer, or to see a white button on a white shirt

- Sort laundry and stack things neatly in drawers.
- Find sleeve and neck openings on your clothing.

- Play simple card games or do puzzles that will help you remember what you see.
- Have someone sew buttons on your clothing that contrast with color of fabric. Also use contrasting dishes on table, etc.
- Place items you use a lot where they're easy to reach. Keep them in uncluttered storage areas.

Thinking

A stroke may affect your ability to think clearly, so planning and carrying out even simple activities may be hard. You may not know how to start a task or have trouble sorting out the steps required to do something. Sometimes you won't remember how to do a particular task, even if you've done it before.

Problems in thinking can be frustrating, even discouraging, since they affect your problem-solving and decision-making abilities. Still, with help from an aide, family member or therapist, you'll learn to cope.

Some helpful suggestions

- Simple step-by-step directions will make it easier for you to complete a task.
- Be patient and practice an activity many times to learn how to do it correctly.
- For your own safety, slow down and accept that routine tasks will take longer.
- Your physician can prescribe occupational and speech therapy to help you learn new skills.

Sensation

After a brain attack, you may not feel temperature, touch, pain or degrees of sharpness on affected side. For example, you may feel numbness, tingling or painful reactions to touch or temperature, or you may not be able to tell if objects are sharp.

This loss of sensation can be a real safety hazard. Be alert to injuries from sharp utensils, electrical appliances, machinery, stoves or hot water.

Some safety hints to follow if you can't feel heat

- Test temperature of water on your stronger side or have someone do it for you.
- Bathe and do dishes with lukewarm water.
- Use potholders whenever you work near the stove.
- Stabilize pots and pans to avoid spills.

Safety

Safety is a major consideration when readying the household for the return of a stroke patient who has physical limitations. Safety in the home can involve something as simple as picking up scatter rugs and bathmats, which may prove hazardous to those who have trouble walking, to establishing a readily accessible exit from the house in case of emergency.

Outside the home

Let's begin outside the home. An essential consideration is an easy exit. Steps can pose a hazard to the stroke survivor, whether or not he or she can walk without assistance. Consideration should be given to replacing steps with a ramp. The size ratio for a ramp should ideally be one inch high for every 12 inches in length. For an area with several steps, it may require a ramp that goes up a partial distance, with a landing at the top, and then double back with more ramping, similar to a Z formation. Securely fastened handrails can also be installed along ramp for further safety.

For those who have attached garages, it may be desirable to put ramp inside garage in order to avoid the weather and changing any landscaping at front entrance.

If stroke survivor is able to walk, handrails should be on all steps. If steps are not cement, it is recommended that nonskid tread tape be put on each step.

It is important to keep porches, steps, sidewalks and any other outdoor areas that individual may use clear of stones, debris, snow and ice.

Inside the home

Inside the home, a variety of household adjustments need to be made. Scatter rugs and bathmats should be taken up to avoid falls. Area rugs should be secured, especially on edges to prevent curling. Long telephone cords should be tacked along wall, wound up and/or placed under carpet to prevent tripping.

It may be necessary to rearrange furniture in traffic pathways to accommodate canes, walkers and wheelchairs.

Making bathrooms safe

Bathrooms are a major problem area for stroke survivors. The first hurdle is the doorway, which many times is too small to accommodate a wheelchair or a patient with a walking device. Some options include removing the door and replacing it with a tension rod with a curtain for privacy. It may even be necessary to remove parts of doorjamb, widen entire entrance to bathroom, or use a commode in bedroom.

Many stroke survivors will require special equipment in bathroom. It is recommended that a therapist first visit the home and evaluate person's individual needs. If a therapist is unavailable, numerous home health agencies in most communities can provide this service. It is important that the home be viewed *before* equipment is purchased. Therapists have reported that, on several occasions, patients they visited had been sent home with equipment from the hospital without the home first being checked out, only to find that equipment was totally unsuitable for patient's situation.

If it is impossible to have the home checked out, you can find the appropriate equipment on your own with a little extra effort. Usually, the most needed piece of equipment is a raised toilet seat. There are numerous raised toilet seats from which to choose. Try to get one that is adjustable so patient has a choice of heights.

Often commodes with the bucket removed can be placed over the toilet and used that way. Sometimes all that is necessary are handrails to help patient up from the seat.

There are a variety of handrails to choose from, ranging from those that screw on between toilet and seat, to others that attach to vanity, walls and/or floors. The type chosen will depend on the situation. If you live in rental property, or even in your own home, you may not want to attach anything permanent to walls or floors. In this case, you will want to opt for those items that are not permanently attached.

Consideration should also be given to handrails in the bathtub. There are both permanent or screw-on types. The screw-on type is safe, and does not damage the tub.

Other items necessary in the tub or shower include a tub seat or chair with nonskid rubber tips to sit on, making bathing easier and safer. A rubber mat for the shower stall floor or tub bottom is essential. Soap enclosed in a washcloth pouch is less likely to slip from the hands. Also helpful is a hand grasp on the wall and a hand-held showerhead, especially if patient requires assistance with bathing.

Ideally, the best bathing situation is a walk-in shower with no step but a gently inclined floor, which carries water to the drain. This shower can have either a built-in seat or a shower chair. Handrails around shower walls to aid individual in movement, but not placed where they will interfere with transfers and the shower facilities.

It is recommended that stroke patients not get all the way down into bathtub. Getting in may be easy, but the problem is getting out. More than one person has had to summon police, fire department or neighbors to assist in getting out of tub.

Special arrangements for bed-bound

The patient who must spend a good deal of time in bed usually will not require a special hospital bed – most standard beds are easy to get in and out of. If a bed is too low, this can be remedied by simply placing bricks or 2x4s under the legs of bed. Occasionally, older beds are too high for patient to get into. Usually this problem can be solved by removing the wheels or rollers. If there are no rollers, the best solution, short of cutting off the legs, is to purchase an inexpensive, standard metal bed frame.

The mattress itself should not be too soft. This may require purchasing a firmer mattress, but first try placing a board between the box spring and mattress for extra firmness.

The least amount of furniture and clutter in the bedroom the better. This is especially true if a wheelchair or other equipment, like a commode, is in use. For those patients who spend a lot of time in bed, it is advisable to have a bedside table with toilet articles within easy reach and a bell for summoning members of the household. A light switch should also be within reach of the bed-bound patient.

Making living room livable

Living rooms also present special problems for the stroke survivor with physical limitations. Soft and overstuffed furniture, which many people have trouble getting out of, can be adjusted for ease in getting up, by again placing boards under the cushions. The recliner, due to the angle of the seat, may have to be given up completely because of the difficulty in getting up from it. Some patients can manage with a recliner that is elevated. Instead of blocks under recliner, it is recommended that a platform be built with a lip around the top to keep chair from sliding.

Barriers in kitchen

Barriers in kitchen will vary depending upon how mobile the stroke survivor is. As mentioned before, eliminate any objects that are not absolutely necessary and remove scatter rugs. Place items in cupboards and refrigerator within easy reach. Better yet, leave glasses *(plastic is recommended)* and plates that will be used out on kitchen counter. Mop up spills immediately to avoid slipping. Stroke survivors can still carry on many kitchen duties with the help of such devices as nonskid mixing bowls and lap boards.

Home adaptations

You may need to make some changes in your home to make moving around and doing daily activities easier. Change entrances to your house, doorways, stairs, bathrooms and the kitchen, bedroom and living room as needed.

Possible changes for entrances

- Install handrails.
- Buy a wheelchair ramp.
- Remove thresholds *(if you use a walking aid or a wheelchair)*.

Possible changes for doorways

- Widen doorways.
- Buy a device to reduce width of your wheelchair.

Possible changes for stairs

- Install a chairlift or elevator.
- Build a ramp with four stairs or fewer.
- Install handrails.

Possible changes for kitchen

- Buy faucets you can turn on and off with your wrists.
- Use a hot plate on a table if you can't reach stove.
- Install no-wax linoleum.
- Use long reachers or tongs.
- Put casters or wheels on utility carts for stove and refrigerator.
- Drive rustproof nails into a board to make spikes to hold fruits and vegetables for easy peeling.
- Use a chair to work at a high counter if you can't stand for very long.
- Put kitchen items on low shelves or in places where they can be easily reached so you won't have to stretch or open and close doors.

Possible changes for bathroom

- Tie soap on a cord for shower.
- Use a suction pad to hold soap in tub or basin.
- Use suction cups to hold your nailbrush.
- Put your toothbrush and toothpaste or toothpowder in a holder.
- Put a suction tub mat or nonskid tape in bathtub or shower.
- Use soft brushes for washing if using a washcloth is hard for you.
- Make or buy a chair the same height as bathtub to help you transfer into and out of tub.
- Raise toilet seat by loosening the bolts and placing a "shim" under the regular seat, or buy a raised seat.
- Use a commode, or a chemical toilet, if necessary.
- Install grab bars around the toilet and tub or shower.

Possible changes for bedroom

- Use a low bed.
- Raise bed on large wooden blocks with holes drilled for bed legs.
- Put a commode in bedroom, if necessary.

Possible changes for living room

- Remove scatter rugs.
- Raise height of chairs by using wooden platforms.
- Raise height of chair seats by using double cushions.
- Nail down borders of all rugs, carpeting and other floor coverings, or secure edges with carpet tape.

General recommendations

- Clip paper to a clipboard when you're writing to keep it from slipping.
- Put thermostats, plugs and switches where you can reach them easily.
- Put wet washcloths or paper towels under dinner plates to keep them in place.
- Arrange furniture for safe transfers and easy movement.

Nutrition Guidelines

Stroke nutrition therapy

According to the American Heart Association, a low-salt and mediterranean diet is recommended. This diet pattern has been shown to reduce the risk of stroke. This diet includes:

- Fresh fruits and vegetables
- Nuts, beans, and whole grains
- Olive oil as the principal source of fats, as opposed to butter or margarine
- Fish and other seafood
- Limiting consumption of red/processed meat, sugary sweets, processed foods and some dairy

Tips to control blood pressure

Tips to control blood pressure

- Eat a well-balanced diet like the Mediterranean Diet.
- Limit alcohol intake to two drinks per day for men and one drink per day for women.
- Get at least 150 minutes of moderate-intensity physical activity each week.
- Manage your stress levels.
- Maintain a healthy weight.
- Quit smoking.
- Take medications as prescribed by your physician(s).

Tips to control blood cholesterol levels

Tips to control blood cholesterol levels

- Eat a healthy diet of vegetables, fruit, whole grains, beans and lean proteins like fish.
- Consume healthy fats like olive oil, fatty fish, nuts and eggs.
- Limit the consumption of sugary drinks, red meats and processed foods.
- Get at least 150 minutes of moderate-intensity physical activity each week.
- Take medications as prescribed by your physician(s).

Vitamin K and medications

What Do I Need to Know?

If your doctor has prescribed coumadin or Warfarin to "thin" your blood, you need to watch how much vitamin K you get from food and dietary supplements.

Why Was Warfarin *(Coumadin)* Prescribed?

Coumadin or Warfarin interferes with vitamin K so that your blood clots more slowly. The doctor uses a test called INR to make sure that your blood will not clot too quickly or too slowly. Changing how much vitamin K you get can change your INR. This change could result in bleeding or an unwanted blood clot.

How Does Warfarin Work?

- Take your medicine exactly as your doctor directed.
- Keep your vitamin K intake about the same. It is as simple as 1-2-3:
  1. Keep your intake of high vitamin K foods consistent. You might plan to eat no more than 1/2 cup of these foods per day. If you like these foods and eat them often, you can eat more, but you should be consistent. For example, you could eat about a cup of one of these foods on most days.
  2. Do not have large changes in the medium vitamin K foods you eat. For instance, it would not be wise to eat coleslaw at every meal and then stop eating it entirely.
  3. Make careful decisions about dietary supplements.
- You can take a daily multivitamin (many contain 25 micrograms of vitamin K/tablet).
- If you do not regularly eat green vegetables, a multivitamin can be helpful. Remember to do it every day.
- Do not take supplements that contain large amounts of vitamin K (more than 100 micrograms/day).

Supplements

Dietary supplements can affect how your blood clots. Use only supplements approved by your physician or registered dietitian.

- Generally, it is not wise to take vitamin E or fish oil supplements.
- Herbal supplements to avoid include alfalfa, arnica, bilberry, butchers broom, cat's claw, dong quai, feverfew, forskolin, garlic, ginger, ginkgo, horse chestnut, inositol hexaphosphate, licorice, meililot *(sweet clover)*, pau d'arco, red clover, St. John's wort, sweet woodruff, turmeric, willow bark, and wheat grass.

Your registered dietitian may restrict cranberry and grapefruit juice to no more than one to two servings per day since some studies have reported an increase in the effect of Warfarin. One serving equals 4 ounces juice or 1/2 grapefruit.

High Vitamin K *(more than 100 mcg)*

Food	Serving	Vitamin K *(mcg)*
Broccoli, cooked	1/2 cup	110
Brussels sprouts	1/2 cup	109
Endive, raw	1 cup	116
Greens, beet	1/2 cup	350
Greens, collard	1/2 cup	418
Greens, collard, frozen	1/2 cup	530
Greens, mustard	1/2 cup	210
Greens, turnip	1/2 cup	265
Greens, turnip, frozen	1/2 cup	425
Kale, fresh or frozen	1/2 cup	531
Kale, raw	1/2 cup	274
Onions, green or scallion	1/2 cup	105
Parsley, raw	10 sprigs	164
Spinach	1/2 cup	444
Spinach, raw	1 cup	145
Swiss chard	1/2 cup	287

Moderate Vitamin K *(25-100 mcg)*

Asparagus	5 spears	38
Asparagus, frozen	1/2 cup	72
Broccoli, raw	1/2 cup	45
Cabbage	1/2 cup	37
Cabbage, green	1/2 cup	82
Dried peas, black-eyed	1/2 cup	32
Kiwi fruit	1 medium	31
Lettuce, green leaf	1 cup	63
Lettuce, romaine	1 cup	57
Noodles, spinach	1/2 cup	81
Okra, frozen	1/2 cup	44
Prunes, dried	5 each	25
Watercress, raw	1 cup	85

Discharge Planning

Community resources

The return to a satisfying and independent lifestyle is a worthy goal for the stroke survivor, but one rarely achieved quickly. Stroke survivors who receive physical therapy at home may not achieve complete independence by the end of this therapy. In most cases, discharge from physical therapy is determined when goals set by the stroke survivor and the therapist have been met. Family support and the continuation of the home exercise program remain very important.

During discharge planning, the discharge planner can provide information about resources to help the stroke survivor and family achieve an optimal recovery. Examples are: home health services, outpatient and inpatient rehabilitation services, stroke support groups, aquatic programs, medical supply facilities, and so forth.

Caregiver strategies

Caregiving can be a very satisfying experience, but there is no denying that it can also be strenuous. Caring for a stroke survivor can be very demanding emotionally and physically. When you find yourself frustrated, try to distinguish between what you can change and cannot change. Before frustration worsens, try an activity to help you calm down. This may be something as simple as counting to 10 or taking a few deep breaths. Go out for a walk, call a friend, pray, meditate, sing, listening to music or take a bath or shower.

Finding opportunity to break the routine and leave your caregiving responsibilities in other competent hands is essential. This is called respite care, and it is essential so that you do not “burn out” and can continue to sustain and care for your stroke survivor.

You may feel like you have a duty to take total care of your family member, especially if they cannot do it for themselves. Certainly a disabled person requires special attention and care, but a balance between time for yourself and the person you care for will make your efforts more rewarding and will not feel like a burden.

If you don’t allow others to help, your friends may drift away and your social contacts may shrink. Feelings of loneliness, sadness, resentment or grief may follow. You can become angry at the disabled person and later may feel guilty for having felt that way. This cycle is not a healthy state for your relationship with the stroke survivor.

Don’t be afraid to ask for help

Don’t worry about repaying favors. Accept help when it is offered. Often just saying thank you is more than enough. People are often willing to help with such things as laundry, cutting the lawn, pulling weeds, shoveling snow, or filling the car with gas.

- Try naps or rest periods scheduled throughout the day.
- Do something you enjoy daily.
- While in the hospital, you will be taught how to work with the stroke survivor.
- Have people visit, so you can have a day or some time off to do things for yourself.

Be sure you stay organized. Know what type of help you want and what you need.

Well-meaning friends and neighbors would be glad to help if asked, but may be hesitant to offer, as they may not know what to do to help or how to help without interfering. You may be unintentionally discouraging them by appearing to have everything under control when you are really overwhelmed.

Palliative Care

Palliative care is the special care given to patients with a serious illness and to their families. Nurses, physicians, social workers, chaplains and others work together to decrease physical, emotional and spiritual suffering. This approach may be used whether the goal of care is to cure, control the illness or provide comfort. Palliative care can also be given to patients at the end of life.

Palliative care services

Symptom management

For patients with a serious illness, it is common to experience pain, nausea, anxiety, shortness of breath and other distressing symptoms. Palliative care uses medications and other types of therapy to treat pain and other distressing symptoms.

Emotional and spiritual support

Palliative care provides support to patients who are looking at quality of life, adjusting to new physical limitations, finding meaning and hope during illness, and understanding and coping with family issues.

Information and communication

The Saint Agnes Palliative Care team may facilitate conferences and conversations with members of the healthcare team. Patients and families receive information about the current medical situation and what to expect in the future. Advanced directives are reviewed and the signatures of two qualified witnesses or a notary is needed.

Patients may designate whom they would want to make decisions about their care if they could no longer speak for themselves. Discussions can take place to determine what setting is best for patient and family *(e.g., hospice or home care, nursing facility or transfer from Intensive Care Unit)*.

Connections to family and loved ones

It is important to consider both the patient and family in planning care. Palliative Care team members help families find needed resources to assist in caring for their loved one. When a patient is dying, the team supports connections with family and friends to help make this time as meaningful as possible.

How does palliative care differ from hospice?

Hospice care follows the guidelines of the Medicare hospital benefit, and is provided in the home or in a residential nursing facility. It is available to patients during the last six months of their life.

Palliative care may begin much earlier than the last six months of life, often while a patient continues to receive treatment for a disease. Patients may receive palliative care while in the hospital or in a home care program.

The Palliative Care team may consult with patients, families and other healthcare team members to treat pain and other symptoms, help with discussion of goals and wishes, or provide extra support.

Many patients may choose to transition to a hospice program at a later date. You can ask the Palliative Care team for information about hospice agencies in your area.

How to Quit Smoking

TOBACCO FREE

Creating a healthy, **TOBACCO-FREE** Saint Agnes

Saint Agnes Medical Center is a tobacco-free organization. This tobacco-free designation means that everyone – employees, physicians, volunteers, patients, visitors and vendors – are strictly prohibited from using tobacco products inside or outside Saint Agnes, including outlying facilities. As such, Saint Agnes encourages and supports all efforts to quit smoking.

Guide for dealing with sudden urges

When the urge starts, if possible, stop what you are doing.

- Remove yourself from the environment: go to another room or setting.
- Breathe deeply *(see deep breathing exercise on next page)*.
- Walk around for about two minutes.
- Freshen your mouth with a breath freshener, a mint or mint chewing gum. If possible, brush your teeth and use mouthwash.
- If you can't freshen your breath or still feel an urge, get a low-fat or nonfat snack to chew on.
- Time the urge and keep track of how often they happen. They only last a couple of minutes and as time goes on, they will happen less and less.
- Find or call a supportive friend to chat. Write numbers here:

Friend 1: ______________________________

Friend 2: ______________________________

Friend 3: ______________________________

Dealing with urges

Emergency urge control

What to do when you get a sudden urge to smoke …

After you leave the hospital and over the next few weeks, you will probably have strong urges to smoke. Some of these urges will develop over time and others will be sudden or unexpected. It is important for you to prepare for these emergency urges.

Preventing urges before they start

The best way to deal with an urge is to stop it before it even starts. Urges usually happen at times when someone "feels" like a cigarette. These can be times where it is a habit to smoke, like with coffee or when you are stressed. Here are some ways to prevent urges from happening.

- Try not to get too hungry. Maintain a balanced diet of three meals a day. If you are hungry between meals, try a low- or nonfat snack item.
- Try not to get too tired – you might want to smoke if you are too tired. Try to get enough sleep at night during reasonable hours.
- To help with your sleep at night and to stay motivated, make sure you exercise regularly. Read more about exercise later in this section.
- If you usually smoke when drinking coffee and tea, try to cut back on those drinks for a few weeks. Even if you don't normally smoke with coffee and tea, try cutting back; the caffeine can prevent you from relaxing.
- Relax! Try the deep breathing exercises on the next page.

Exercise and urges

Exercise is an important part of your quit plan. Make it part of your routine everyday. Talk with your doctor. Discuss what exercises are appropriate for you.

Why should you exercise?

- Exercise is a good way to pass time. It keeps your mind off smoking. It also helps to add structure to your daily routine.
- Exercise is calming. When you exercise, your body releases chemicals into your blood that help you relax. This helps in dealing with urges.

- It is also important if you are concerned about gaining weight after you quit smoking. Exercise is a great way to maintain your health and body. Exercise burns calories and helps control appetite.

Suggestions for exercising

It is helpful to discuss the type and level of exercise with your doctor. If you are unsure of what to do, a simple and very relaxing exercise is walking. Try walking in your neighborhood or at a local park. Try to do light stretching and breathing exercises, too.

Deep Breathing Exercise

Try this exercise to deal with urges and to relax:

- Take a deep breath in through your nose slowly, counting from 1 to 5 in your head.
- Breathe out just as slowly through your mouth, counting down from 5 to 1 in your head.
- Repeat about 10 times.
- You can close your eyes if it helps.

Medications that help with urges

Your Smoking Cessation Advisor or your doctor might suggest that you use medications in your quit effort. If you choose to use a medication, follow your doctor's advice and the instructions carefully. Also, remember that medications are not guaranteed to keep you from having urges – you will have to use other strategies in this workbook.

How to support someone who is quitting

As a close friend to someone quitting smoking, your role is vital to their effort. It is important to remember that your job is not to be a watchdog or nag. Your friend or family member is aware that they need to stay off cigarettes and doesn't need nagging.

Nagging can also hurt their efforts to stay smoke free.

Here are a few ways you can help your friend or family member:

- Help them with substitutes to smoking. Give your friend or family member distractions from smoking: go for a walk, garden, or do other enjoyable things. Have low-fat and low-calorie snacks on hand for your friend or family member to chew on.
- Be aware of the anger, irritation and frustration that can come from someone quitting smoking. Behavior changes in people quitting can range from sadness to being plain obnoxious. As a support person, try to remain patient. The withdrawal symptoms will eventually pass.
- If your friend or family member wants to discuss smoking, then help them. Just remember not to force the issue.
- Make the house a smoke-free zone. Your guests will respect your efforts to help your friend or family member quit, so ask them not to light up when visiting.
- If you are a smoker yourself, the best way to help your close friend is for you to quit smoking. The buddy system is a great way to quit. If you absolutely cannot quit smoking or are not ready, then be sure to not light up in front of your friend or family member. If you need to smoke, then do so outside and don't leave cigarettes lying around.
- If you were never a smoker, remember that you cannot understand exactly what your friend or family member is experiencing. Each experience is unique and quitting smoking is a difficult task. That is why it is important not to suggest that quitting is easy or that your friend or family member is making a big deal out of it. The best thing you can do is be there when your friend needs you and provide encouragement.

Medicines to help you control urges

There are medicines that can help you remain a nonsmoker once you have quit. Some medicines *(called nicotine replacements)* contain nicotine to help reduce the side effects of quitting. Another medicine called bupropion hydrochloride *(also called Zyban® or Wellbutrin®)* can also help you quit. Bupropion hydrochloride is a medicine used to treat depression, but it has also been shown to help with smoking cessation. Other types of antidepressants may be effective in some individuals. A new medication, varenicline *(Chantix®)*, has been approved by the FDA to help with smoking cessation.

Your doctor or nurse can help you decide if one of these medicines might help you and could be used safely with your medical condition. When you talk to your doctor or nurse, ask how to use the medicine. Studies show that many people don't use their quit smoking medicines correctly. If you don't use the medicine properly, it won't work well for you. The information sheet that comes with your medicine tells you exactly how to use the medicine.

Nicotine replacement medicines

While you have been in the hospital and not smoking, you will already have taken a huge step toward becoming a nonsmoker. If you are having strong urges and are ready to go home, you may want to ask your doctor about nicotine replacement medicines that can help these urges go away as you adjust to being a nonsmoker. However, you shouldn't use nicotine replacement medicines if you keep smoking or use other tobacco products. Your doctor may feel that they should not be used with your medical condition. The combined use of nicotine can be dangerous. So, you must stop smoking completely when you begin using a nicotine replacement medicine.

Nicotine replacement treatment usually lasts two to three months. Even though many products can be bought without a prescription, talk to your doctor first about which medicine is best for you. Your doctor may also decide that two medicines together may help you, such as the patch and bupropion hydrochloride.

Resources for Patients

Questions for stroke survivors, families and caregivers to ask their doctor about stroke

☐ Why do you suspect that I or my family member may have had a stroke?

☐ What kind of stroke do you think occurred?

☐ What is a mini stroke?

☐ What kinds of examinations and diagnostic tests will be performed?

☐ What do these tests involve?

☐ What are the risks, benefits and possible complications associated with these tests?

☐ What is the severity of my condition?

☐ Will special care at home be required as a result of stroke?

☐ How will stroke affect my daily life?

☐ How likely is another stroke?

☐ How can stroke risk be reduced?

☐ If another stroke occurs, will it likely be more severe?

☐ What will stroke treatment involve?

☐ What are the benefits, risks and possible complications of the recommended stroke treatment?

Rehabilitation

☐ Will stroke rehabilitation therapy be necessary? If so, will rehabilitation involve physical therapy, speech therapy and/or occupational therapy?

☐ How will these rehabilitation services be scheduled?

☐ How long will the stroke recovery process take?

☐ Do you expect that I will be able to return to my normal activities after rehabilitation?

Medication

☐ Will medication(s) to treat any damage done by the stroke be necessary?

☐ Will medication(s) to prevent another stroke from occurring be necessary?

☐ What are the risks, benefits and side effects associated with these medication(s)?

☐ What steps should be taken if serious drug side effects develop?

NOTES

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