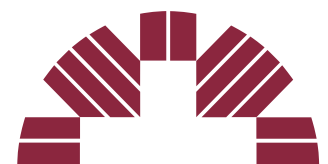


Hemorrhagic Stroke



Understanding and Recovering



MOUNT CARMEL

Learning About Hemorrhagic Stroke

If you or a loved one has had a hemorrhagic stroke, learning more about this condition can help you make choices about your care and treatment. This guide can help you understand hemorrhagic stroke, how to manage your risk factors, and the steps towards recovery. This guide is meant to provide general education about hemorrhagic stroke, and some information may not apply to you.

Your healthcare team is here to provide care, answer your questions, and help you with your recovery. Working together with you and your loved ones, our goal is to help you regain as much function as possible. Ask your healthcare provider if you have any questions or concerns.

STROKE is an Emergency!
Every minute counts... B.E.F.A.S.T.!

Know the signs and symptoms of a stroke:

BALANCE	Sudden trouble walking, dizziness, loss of balance or coordination
EYE	Sudden onset of blurred or double vision, or loss of vision in one eye
FACE	Facial droop Uneven smile <i>Ask the person to smile. Is the person's smile uneven or lopsided?</i>
ARM	Arm numbness Arm weakness <i>Ask the person to raise both arms. Does one arm drift downward?</i>
SPEECH	Slurred speech Difficulty speaking or understanding <i>Ask the person to repeat a simple sentence. Is the person unable to speak or hard to understand?</i>
TIME	If you have any of these symptoms or see someone else having them, BEFAST and call 9-1-1 immediately! Treating a stroke quickly can reduce damage to the brain. Note the time when the symptoms first appear. This will help healthcare providers determine the best treatment.

Have the ambulance go to the nearest certified stroke center.

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My Hemorrhagic Stroke Highlights

I was found to have:

- Subarachnoid hemorrhage (SAH)
- Intracerebral hemorrhage (ICH)

My medical risk factors include:

- High blood pressure
- Diabetes
- Heart disease
- Irregular heart rhythm
- Blood-thinning medication(s)
- Previous stroke
- Previous heart attack
- Carotid artery disease
- Peripheral vascular disease
- Other disease: polycystic kidney disease, Marfan syndrome

Risk factors I can control:

- Uncontrolled high blood pressure
- Uncontrolled diabetes
- Uncontrolled sleep apnea
- Inactivity
- Smoking
- Alcohol overuse
- Drug use
- Obesity

My warning signs and symptoms of rupture or re-bleeding include:

- Sudden severe headache; the worst headache of your life
- Sudden vision changes, such as blurred or double vision
- Pain above or behind the eye
- Sudden numbness or weakness of the face, arm or leg (especially on one side of the body)
- Sudden confusion, trouble speaking or understanding speech
- Sudden trouble walking or dizziness
- Seizure
- Loss of consciousness
- Nausea/vomiting
- Stiff neck
- Sensitivity to light
- Drooping eyelid

My follow-up care includes:

- ❑ See your doctor 10 to 14 days after discharge.
- ❑ If you do not have a family doctor, call 614-234-LIFE (5433) for help in finding one.
- ❑ Take your medication list from the hospital to your doctor's appointment. You will need refills from your doctor for some of these medications.
- ❑ Follow up with the neurosurgeon and neurologist in addition to your primary care doctor.
- ❑ If you need physical, speech, or occupational therapy, keep your scheduled appointment or call to schedule an appointment within 1 week.
- ❑ Do **not** drive until your doctor allows it.
- ❑ Depression is common after a stroke. See page 23 for more information. If you feel depressed or think you may have signs of depression, talk to your doctor.
- ❑ Do **not** take any over-the-counter medications, supplements, or herbal products before checking with your doctor. See page 27 for more information about taking medications safely.
- ❑ Do **not** take any blood-thinning medications until you have been instructed to do so by your doctor. See page 11 for more information.



Learning about Brain Hemorrhages (Hemorrhagic Stroke)

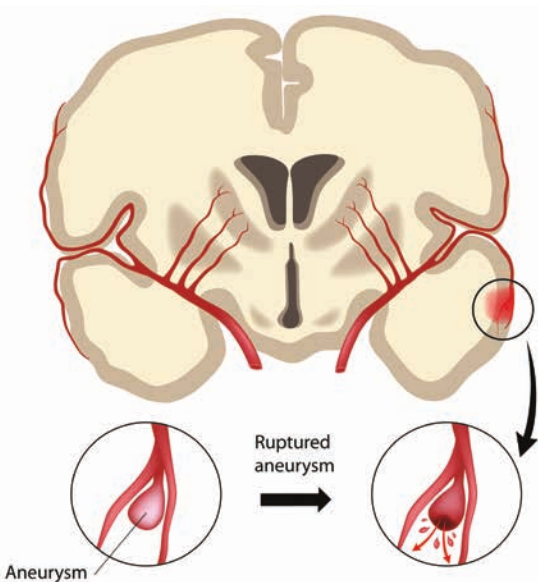
According to the American Stroke Association, hemorrhagic strokes make up about 13% of all stroke cases. A hemorrhagic stroke occurs when a blood vessel in the brain weakens and ruptures (breaks), causing blood to leak into the brain tissue. Other brain cells in the area die because blood does not reach them.

There are two types of hemorrhagic stroke:

- ▶ Subarachnoid hemorrhage (SAH)
- ▶ Intracerebral hemorrhage (ICH)

Subarachnoid Hemorrhage

Subarachnoid hemorrhage (SAH) occurs when blood leaks into the subarachnoid space. This is the area between the brain and the thin membrane that covers the brain tissue.

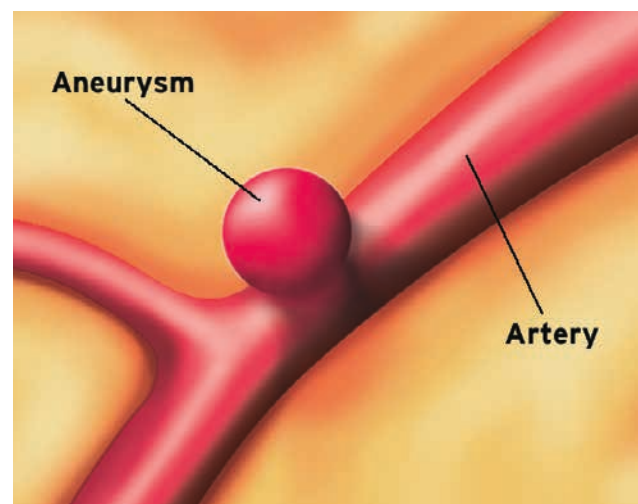


Subarachnoid hemorrhage

Symptoms of SAH:

- ▶ Sudden severe headache; often described as the “the worst headache of your life”
- ▶ Nausea and vomiting, especially when combined with other symptoms such as headache
- ▶ Sensitivity to light
- ▶ Stiff neck
- ▶ Loss of consciousness, especially at the same time as a severe headache

Aneurysms and arteriovenous malformations are common causes of subarachnoid hemorrhage, in addition to other causes, including head injuries or accidents.



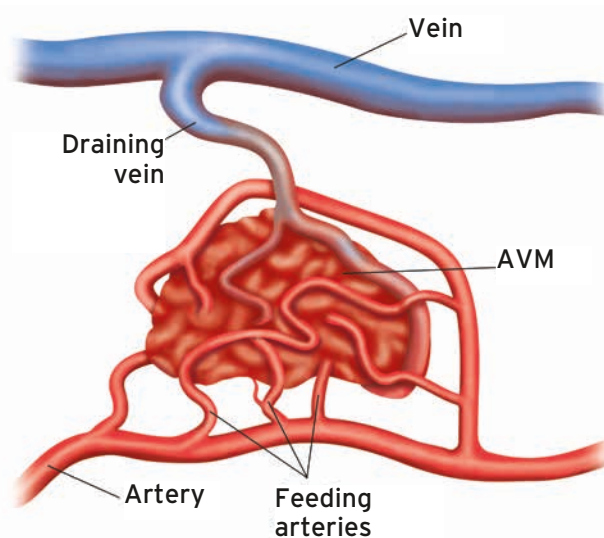
Aneurysm

An aneurysm is a balloon-like bulge on a wall of an artery. Most people are not born with aneurysms. They usually develop slowly and can be caused by multiple things, such as other blood vessel disorders, accidents, or infections. As the bulge enlarges, the vessel weakens and is more likely to rupture.

Smaller aneurysms may not cause symptoms, but as it enlarges it may cause issues such as headaches, pain, weakness, vision, or speech problems.

Arteriovenous Malformation

An arteriovenous malformation (AVM) is an abnormal collection of blood vessels where blood from arteries flows directly into the drainage veins. They appear as a “tangle” of vessels. As these abnormal vessels enlarge and the pressure within them increases, they are at a greater risk of rupturing.

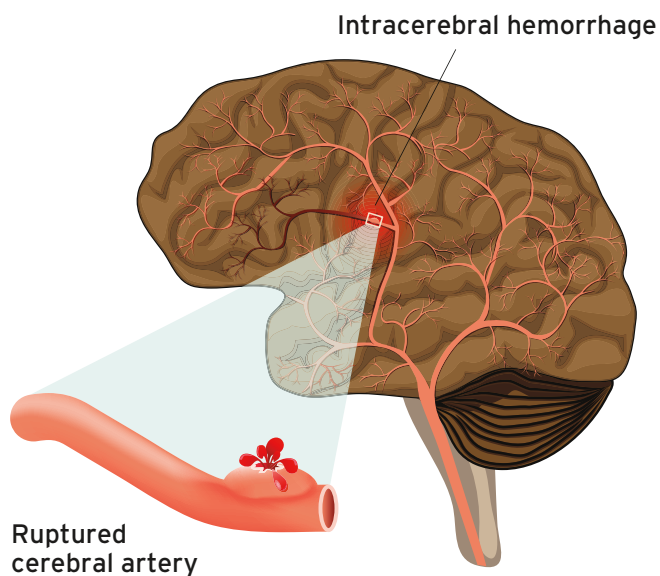


Vasospasm

Vasospasm is a narrowing of a blood vessel that can occur after an SAH. The blood that has collected at the base of the brain irritates a blood vessel and causes it to contract or spasm. This can result in not enough blood being supplied to an area of the brain, which can cause the brain cells to die. Measures are taken to prevent vasospasm. Special monitoring devices and Doppler imaging are used to detect vasospasm, which is most likely to occur 5 to 8 days after the SAH. If vasospasm does occur, it is treated with medications and IV fluid management.

Intracerebral Hemorrhage

Intracerebral hemorrhage (ICH) occurs when blood leaks directly into the brain tissue. This can be caused by high blood pressure, trauma, cocaine and other street drugs, excessive use of alcohol, and certain medications, such as blood thinners.



Symptoms of ICH:

- ▶ Partial or total loss of consciousness
- ▶ Vomiting or severe nausea at the time of other symptoms
- ▶ Sudden numbness, tingling, and/or weakness of the face, arm, and/or leg — usually on one side
- ▶ Sudden severe headache

Diagnosing and Treating

Computed Tomography (CT) Scan

If you have symptoms of a stroke, a CT scan will be done right away. If there is bleeding, this can be seen on a CT scan. It is important to determine the type of stroke in order to get the proper treatment.

Treatment options include medical management, clipping, coiling, and evacuation.

Medical Management

Different types of medications may be used depending on the type of hemorrhagic stroke. Some medications are only used in the hospital, while others may have to be continued after you are discharged from the hospital. The following is a list of medications that **may be used**:

Blood pressure medications: Medications are often used to lower your blood pressure to a safe level to prevent further bleeding. You may be on blood pressure medication after you are discharged from the hospital.

Blood products: Blood products (such as fresh frozen plasma and platelets) may be given if you have been on blood-thinning medication. These will help return your bleeding time to a safe level to prevent further bleeding.

Mannitol: Mannitol is a specialized medication that helps reduce brain swelling.

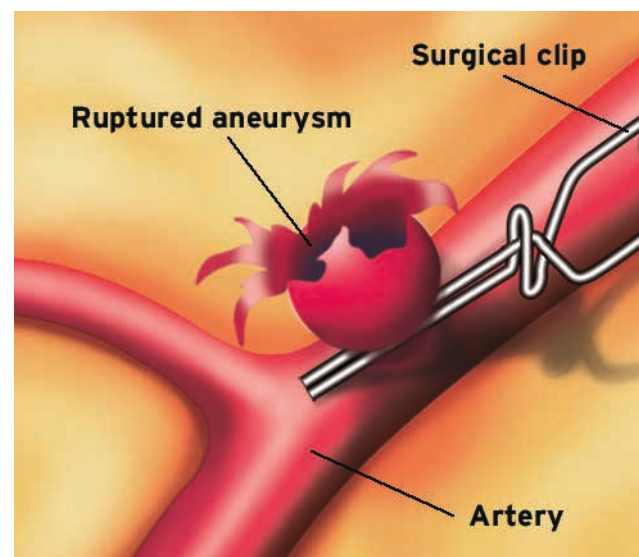
Nimodipine: Nimodipine helps relax the blood vessels in the brain to reduce vasospasm. Vasospasm can occur in subarachnoid hemorrhages and will cause surrounding brain cells to die.

Anti-seizure medication: Anti-seizure medications are used if you have a seizure as a result of your hemorrhagic stroke. These medications will reduce the chance of having another seizure. You may be on anti-seizure medication after you are discharged from the hospital.

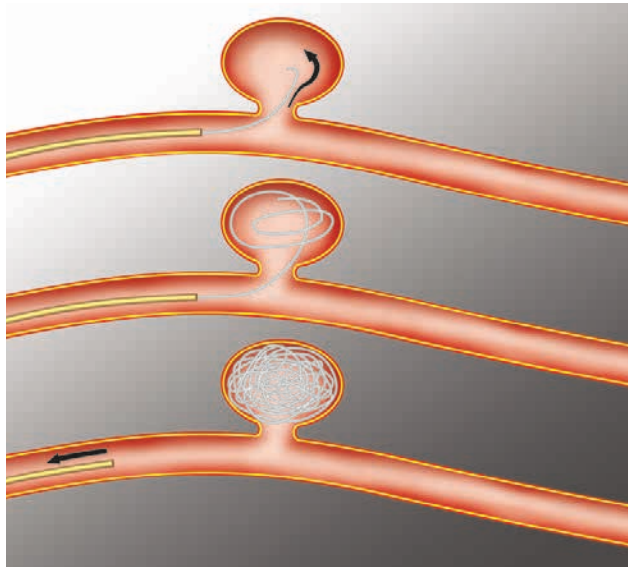
Sedation medication: Sedation medications are often given so you can tolerate certain treatments needed for your care, such as being on a breathing machine (ventilator).

Surgical Treatments

Clipping: A surgical treatment for brain aneurysms where the neurosurgeon places a clip across the neck of an aneurysm. This will block the flow of blood into the aneurysm and keep it from getting larger.



Coiling: A minimally invasive procedure in which a catheter is placed into the groin and then passed to the aneurysm location. Tiny coils are passed to the aneurysm and detached, blocking the flow of blood into the aneurysm.



Removal of blood clot: A surgical treatment in which the neurosurgeon removes part or all of the blood clot that has formed from bleeding into the brain.

Decompressive craniectomy: A surgical treatment for patients with a large amount of brain swelling. The neurosurgeon removes part of the skull and places it in the abdomen. Once swelling in the brain has resolved and the patient has had time to recover, the surgeon replaces the skull. Patients need to wear a special protective helmet while they are missing part of their skull.

Blood-Thinning Medications to Avoid

When you have had a stroke due to a bleed, it is very important to avoid medications that prevent clots. These include anticoagulants, antiplatelets, anti-inflammatory medications, and aspirin (including any medications and products that contain aspirin). These

medications can cause bleeding and be very harmful to you. **Always** tell your doctors that you had a hemorrhagic stroke when medications are being prescribed.

Follow these precautions until your doctor tells you that you no longer have to avoid these medications.

Please note: The following lists are to be used as a general guideline and are not intended to be a complete list of all medications that must be avoided. Always consult your doctor or pharmacist if you have any questions about your medications.

Anticoagulants

Anticoagulants are often called blood thinners and are prescribed to help prevent clots from forming in blood vessels. Some anticoagulants are:

- Coumadin® (warfarin)
- Eliquis® (apixaban)
- Heparin
- Lovenox® (enoxaparin)
- Pradaxa® (dabigatran)
- Xarelto® (rivaroxaban)

Antiplatelets

These are also prescribed to prevent clots from forming and include:

- Aggrenox® (acetylsalicylic acid and dipyridamole)
- Aspirin (acetylsalicylic acid)
- Brilinta® (ticagrelor)
- Effient® (prasugrel)
- Plavix® (clopidogrel)
- Ticlid® (ticlopidine)

Medications That Contain Aspirin

Do not take any medications that contain aspirin. Make sure to carefully read labels since many medications contain aspirin (acetylsalicylic acid). These can be prescription or over-the-counter and can be used to treat arthritis, colds, and pain.

Ask your doctor or pharmacist if you have questions.

Listed below are some of the medications and products that contain aspirin:

- ▶ Alka-Seltzer® Original
- ▶ Alka-Seltzer Plus® Cold
- ▶ Alka-Seltzer® Extra Strength
- ▶ Anacin® caplets and tablets
- ▶ Arthritis Strength BC® Powder
- ▶ Ascriptin®
- ▶ Aspergum®
- ▶ Bayer® Aspirin products
- ▶ Bayer® Chewable Low Dose Aspirin (children's aspirin)
- ▶ BC® Powder
- ▶ Bufferin® products
- ▶ Canasa® suppositories
- ▶ Doan's® Extra Strength
- ▶ Ecotrin® products
- ▶ Equagesic®
- ▶ Equaline®
- ▶ Excedrin® products
- ▶ Fiorinal® capsules and tablets
- ▶ Fiorinal® with Codeine
- ▶ Goody's® Powders
- ▶ GoodSense® products
- ▶ Halfprin® products
- ▶ Kaopectate®
- ▶ Momentum®
- ▶ Norgesic®
- ▶ Norwich® Aspirin products
- ▶ Pepto-Bismol®
- ▶ Percodan®
- ▶ St. Joseph® Aspirin
- ▶ Stanback® Powder
- ▶ Synalgos®-DC
- ▶ Tri-buffered aspirin products
- ▶ Vanquish® analgesic caplets

Knowing and Managing Your Risk Factors

A number of factors are linked to an increased risk for stroke. Some of these — such as being male, African American, Hispanic, or older than age 55 — are factors that you cannot change. Having heart disease or a prior TIA or stroke are also risk factors. Risk factors that you can manage include high blood pressure, diabetes, smoking, high blood cholesterol levels, and being overweight or inactive.

By changing some habits, having regular medical care, and following your doctor's instructions, you can make changes to manage your risk factors. Knowing what to focus on is the first step.

High Blood Pressure

High blood pressure (hypertension), or three readings higher than 130/80, is the leading risk factor for stroke. High blood pressure can injure the lining of the blood vessel walls. This can lead to plaque buildup and/or bleeding in the vessels of the brain, both of which can cause a stroke.

If you have high blood pressure:

- Discuss your target blood pressure with your doctor.
- Take your medication as prescribed by your doctor.
- Keep your blood pressure checkups.
- Work on losing weight, being more active, or quitting smoking.

Diabetes

People with diabetes are two to four times more likely to have a stroke or heart disease. Diabetes affects all blood vessels, including those that supply the brain.

If you have diabetes:

- See your doctor regularly and discuss your target blood sugar values.
- Take medications as prescribed by your doctor.
- Make certain that you and your family understand your diet and care.
- Consult a dietitian or attend a diabetes class if you feel you need more guidance about your diet or diabetes care.

Resources:

- Mount Carmel Diabetes Self-Management Program
614-546-4582
- Central Ohio Diabetes Association
614-884-4400
- American Diabetes Association
800-342-2383
diabetes.org



Smoking and Tobacco Use

Smoking and using tobacco products increase blood pressure, heart rate, and cholesterol and cause plaque buildup. All of these can lead to a stroke.

If you smoke or use tobacco:

- ▶ **Quit.** Millions of people have quit smoking, and so can you.
- ▶ Ask your doctor or nurse for more information on quitting smoking.

Resources:

- ▶ Ohio Tobacco Quit Line
800-784-8669
- ▶ American Lung Association
800-586-4872
- ▶ American Cancer Society
800-227-2345
- ▶ www.smokefree.gov — offers tools and guidance from professionals to help you quit

High Blood Cholesterol

Cholesterol is a waxy, fat-like substance that is found in your blood. It plays an important role in your body. Your liver makes cholesterol and it is also found in many foods. Cholesterol is carried through the blood on proteins called lipoproteins. Two main types of lipoproteins include:

Low-Density Lipoprotein (LDL) is often called the “bad” cholesterol because it can build up on the walls of your blood vessels. A high LDL level increases the risk of stroke and heart disease. Once you have had a stroke, your risk for another stroke and heart disease is greater. You will be treated with cholesterol-lowering medication (statins) regardless of what your cholesterol level was before your stroke.

High-Density Lipoprotein (HDL) is often called the “good” cholesterol because it picks up excess cholesterol in your blood and takes it back to the liver. The liver then breaks it down and removes it from your body. Although we often hear about lowering our cholesterol, having higher levels of HDL cholesterol may help reduce the risk of stroke and heart disease.

- ▶ An HDL level above 60 mg/dL is ideal.
- ▶ For men, having below 40 mg/dL is considered undesirable.
- ▶ For women, an HDL level below 50 mg/dL is undesirable.

In addition to medication, talk to your doctor about ways to:

- ▶ Safely increase your activity
- ▶ Get to a healthy weight
- ▶ Quit smoking
- ▶ Make healthful changes to your diet

These lifestyle changes can improve your cholesterol levels. Talk to your doctor or a dietitian for more information on weight loss and a healthy diet.

Heart Disease

If you have heart disease or have had a heart attack or bypass surgery, you are at an increased risk for stroke. When plaque builds up in the vessels in your heart, the vessels in your brain are likely to have buildup as well.

You are also at an increased risk for stroke if you have:

- ▶ Atrial fibrillation
- ▶ A valve replacement
- ▶ Heart failure

With these conditions, a blood clot could travel from the heart to the brain and cause a stroke. If you have any of these:

- ▶ See your doctor regularly.
- ▶ Follow your doctor's instructions closely.

Prior TIA or Stroke

Having a TIA is a warning sign that you are at high risk for a stroke. About one-third of people who experience a TIA go on to have a stroke within a year. If you have had a stroke in the past, you are at higher risk for having another stroke. Find out what other risk factors you have and how to make changes to decrease your risk.

Alcohol Use

If you drink alcohol, limit it to one drink per day for women and two drinks per day for men. One drink is 12 ounces of beer, 5 ounces of wine, or 1½ ounces of liquor. If you have trouble limiting your alcohol use, talk to your doctor, your nurse, or a social worker.

Drug Use

Using drugs such as cocaine can also cause a stroke. If you use drugs, talk to your doctor, your nurse, or a social worker. They can refer you to a substance-abuse treatment program.

Being Overweight (BMI 25 or Above)

Body Mass Index (BMI) is a more accurate measure than weight alone because it is based on your height and weight. If it is 25 or above, you are at an increased risk for high blood pressure, high cholesterol, and diabetes, all of which can lead to stroke and heart disease.

If you are overweight:

- ▶ Talk with your doctor or a dietitian about an eating plan to lose weight.
- ▶ Set goals and record your progress.
- ▶ Ask a friend or family member for support.
- ▶ Be as active as you can be within your doctor's guidelines.

Resources:

- ▶ Academy of Nutrition and Dietetics
800-877-1600
eatright.org
- ▶ *Cooking Light*
cookinglight.com

Being Inactive

Being inactive makes it harder for you to control your weight. Even if your weight is in the normal range for your height, a lack of regular activity is a risk factor for high blood pressure, high cholesterol, and diabetes.

If you have been inactive:

- ▶ Consult your doctor about your activity level.
- ▶ Find activities you enjoy.
- ▶ Set an exercise routine that you can keep.

Nutrition After a Stroke

Having a healthy eating plan after you've had a stroke will help you to manage risk factors and improve your health. Although you are likely taking medications to lower your blood pressure and cholesterol, following this plan will aid in managing those risk factors and will have many healthy benefits.

This plan includes:

- Foods that are low in sodium, which comes mainly from salt
- Plenty of vegetables, fruits, whole grains, and fat-free or low-fat dairy products
- Heart-healthy kinds of fat to reduce the buildup of plaque in your blood vessels

Difficulty Swallowing (Dysphagia)

After a stroke, some people have problems with swallowing. If you do, you will be taught how to manage this and what textures and types of foods and liquids are safe for you. This is important in preventing food or liquids from going down your windpipe into your lungs.

Weight Loss

Talk with your doctor about what a healthy weight is for you. If you need to lose weight, try decreasing your portion sizes and focus on eating vegetables, fruits, whole grains, healthy fats, and lean protein. You can also ask your doctor, dietitian, or nurse for more resources and information on weight loss.

To Help Control Blood Pressure

- Ask your doctor or dietitian how much sodium is right for you.
- Limit the sodium that you get from food and drinks.
 - Do not salt food at the table.
 - Use very little, if any, salt when you cook.
 - In general, avoid foods with more than 300 milligrams (mg) sodium per serving. These may be too high in sodium for your meal plan.
 - Check labels on processed meats and commercially prepared and prepackaged foods. These are often high in sodium.
 - Choose carefully when eating out. Restaurant foods can be very high in sodium. Request low-salt or no-salt foods. Many restaurants will prepare food with less salt upon request.
- Eat plenty of fruits and vegetables that are high in potassium.
 - Good fruit choices are bananas, oranges, apricots, cantaloupe, and apples.
 - Good vegetable choices include potatoes, sweet potatoes, tomatoes, spinach, and zucchini.
- Use fat-free and low-fat dairy products. These will help you get the calcium and potassium that your body needs.

To Help Control Blood Cholesterol Levels

- ▶ Limit total fat to 5 to 8 servings per day or 25% to 35% or less of total calories.
- ▶ Eat very little trans fat and saturated fat. These types of fat can raise LDL (low-density lipoprotein), which is the “bad” cholesterol in the blood.
- ▶ Choose unsaturated fats, which are heart healthy and include soybean, canola, olive, and sunflower oils. Liquid or soft tub margarines are also fine. Remember, too much of any fat is unhealthy.
- ▶ Limit the amount of cholesterol you have each day to 200 milligrams (mg). Foods high in cholesterol include fatty meats, shrimp, egg yolks, and dairy foods.
- ▶ Eat 20 to 30 grams (g) of fiber each day.
- ▶ Eat walnuts or add flaxseed (ground or oil) to food.



Understanding Deficits

Brain Regions and Functions

The brain is divided into regions that control the functions of the body. If a region of the brain is damaged from a stroke, symptoms related to that region may occur. These symptoms may include loss of movement or coordination, impaired sight, and trouble speaking or understanding speech.

- ▶ Sensory functions relate to sensation of body parts, such as feeling heat from a stove or pain from a sharp object on the foot.
- ▶ Motor functions relate to movement. Certain regions of the brain direct specific body movements.
- ▶ Regions in the brain also control vision, language, hearing, emotions, speech, smell, posture, and balance.

Deficits That May Occur

Understanding the deficits that you or your family member has is the first step in dealing with them. Each part of the brain has a role in controlling the body. Damage to any part of the brain limits its ability to carry out its role. This results in lost skills, problems with thought processes or movement, or changes in personality traits. Having a stroke does not mean that you have all of these changes. Your doctor and healthcare team will explain your deficits and the treatment plan.

Cognitive (Thought Process) Changes

Cognitive changes may include not being able to:

- ▶ Recognize family members, friends, or familiar places
- ▶ Remember how to do daily activities
- ▶ Recall such things as the date, the season, or your age
- ▶ Follow simple commands
- ▶ Act in the manner that seems appropriate to a situation

Emotional Changes

There may be a lack of control of emotions. This often involves rapid mood changes that include laughing or crying at the wrong times. This is called emotional lability.

Depression is also common after a stroke. It can slow down recovery from a stroke and needs to be treated if it occurs.

Motor (Movement) Deficits

Movement problems usually happen on only one side of the body. These range from mild weakness to not being able to move the arm or leg at all. If muscles in the face are weakened, there will be a drooping of an eyelid, the mouth, or a whole side of the face.

Neglect

Neglect involves:

- ▶ Ignoring the side of the body that has been affected
- ▶ Dividing things at the midline
- ▶ Eating only from one side of the plate and leaving the rest

Ataxia

Ataxia is the lack of control and coordination of muscles and movement. This may involve clumsiness, staggering, or dizziness.

Apraxia

With apraxia, the brain sends incorrect messages to the muscles. Apraxia can affect the muscles in the arms, legs, voice box, or mouth. This results in a loss of the ability to:

- ▶ Perform learned or purposeful movements
- ▶ Make proper use of objects
- ▶ Do things that are normally automatic

Sensory Deficits

Sensory deficits usually occur on one side of the body. When the sense of touch is involved, there may be tingling or numbness in the face, arm, or leg. The ability to feel or sense hot or cold may be decreased or missing. Sight deficits may be present as blurred vision or a loss of vision in one or both eyes. Blindness or defective vision in one half of the field of vision is called hemianopia or hemianopsia.

Dysphagia

Difficulty with swallowing is called dysphagia. It can affect eating, drinking, and taking medication. If your doctor suspects a swallowing problem, a speech-language pathologist (SLP) will test your swallowing.

Language Deficits

These may include:

- ▶ Not being able to express things correctly
- ▶ Not being able to name objects or people (anomia)
- ▶ Knowing what you want to say, but having the wrong words come out
- ▶ Not understanding spoken language
- ▶ Slurred or garbled speech

Aphasia

Aphasia results in difficulty using and understanding language. This includes speaking, understanding, reading, and writing. The severity of aphasia varies widely.

People with aphasia have difficulty communicating and they are often aware that their understanding and use of language has changed. This makes aphasia very frustrating.

People with aphasia may:

- ▶ Struggle to produce sounds or words
- ▶ Have trouble repeating words or imitating simple sounds
- ▶ Speak in short phrases or “broken” sentences
- ▶ Use constant jargon or “nonsense” speech
- ▶ Swear, without really meaning to use that language
- ▶ Have trouble with reading, writing, or simple calculation
- ▶ Not be able to understand what others are saying, even though it may appear that they do

When talking to someone with aphasia:

- ▶ Include him/her in conversations.
- ▶ Speak slowly and clearly.



- ▶ Give information in small amounts.
- ▶ Allow extra time for processing thoughts.
- ▶ Use gestures, pictures, or drawings.
- ▶ Avoid constant “quizzing” or “testing.”
- ▶ Offer encouragement and support without pressure to perform.

Dysarthria

Dysarthria is slurred speech that is caused by weakened muscles and nerves in the tongue, voice box (larynx), or mouth. A person with dysarthria may be able to say words and understand language, but may not be able to speak the words clearly enough to be understood by others.

Someone with dysarthria may:

- ▶ Not be able to control and manage breathing to clearly produce sounds
- ▶ Sound monotone, nasal, or strained, or have a different voice than before the stroke
- ▶ Have problems with chewing food or drinking liquids

To help someone with dysarthria, encourage him or her to:

- ▶ Take a deep breath before speaking
- ▶ Slow down when speaking
- ▶ Exaggerate tongue and mouth movements when speaking
- ▶ Sing songs

Recovering from a Hemorrhagic Stroke

You and Your Family

You and your family are the most important people on your healthcare team. You will be working with many staff members in your recovery. It is hard to predict recovery from a stroke. Recovery can be a slow process, and many decisions may need to be made about treatment options. Your doctor and the staff will offer guidance to you and your family.

Your recovery will be enhanced by:

- Being patient with the evaluation process. This is an important part of treatment, since a stroke affects each person differently.
- Keeping a list of questions, phone numbers, and appointments. You may also want to record progress as it occurs. A record of your progress helps you to remember how far you have come and to stay motivated throughout the rehab process.

As a family member or loved one, it is important for you to:

- Check when it is best to visit. Once therapy begins, your loved one may spend a lot of time in therapy. The therapist may need you to attend some sessions, but often it is best for the patient to work with the therapist without “an audience.”
- Take care of yourself so you will be better able to support and care for your loved one. This is often a stressful time. Try to rest when you can, eat healthfully, and do some things that you enjoy.

About Your Therapy

While many tests are being performed and the cause of your stroke is being determined, an occupational therapist, a physical therapist, and/or a speech therapist may be ordered to assist with your recovery. Depending upon your needs, therapists are available in many different settings.

Occupational Therapy

An occupational therapist will help you improve your skills with self-care, homemaking, leisure interests, and work tasks. The focus is on your normal daily activities.

The occupational therapist may work with you on:

- Bathing
- Dressing
- Feeding/meals
- Managing household chores

The occupational therapist may help you to relearn daily activities by:

- Increasing the use (strength and coordination) of the affected side
- Evaluating if adaptive equipment would be helpful
- Teaching you how to do daily activities
- Teaching you how to adapt to any visual loss

Physical Therapy

A physical therapist will help you to improve movement and increase independence in positioning yourself in bed, wheelchair mobility, transfers, walking, and exercise. The physical therapist will see how you are able to move about in bed and in your room and do certain exercises. In order to help you regain motor skills such as moving about, walking, and using stairs, the physical therapist will be:

- ▶ Helping you practice basic tasks and progressing to more complex tasks
- ▶ Using exercises to increase muscle strength and coordination
- ▶ Having you do activities to help with positioning and balance
- ▶ Helping you get needed equipment such as a cane, walker, or wheelchair

Speech Therapy

A speech therapist (speech-language pathologist) will help in the recovery of speech and language or thinking (cognitive) skills that may have been lost as a result of a stroke. They will work with you to improve any problems you may have with swallowing, speaking, listening, reading, or cognitive skills.

A speech therapist begins by checking your speaking and thinking skills. The speech therapist designs a treatment program using the findings. Family members are also taught how to help in the recovery process.

Areas that speech therapists address include:

- ▶ **Language** — Understanding and using spoken and written language. The four parts of language are:
 - Listening and understanding
 - Speaking
 - Reading
 - Writing

- ▶ **Oral-Motor Skills** — Strength and control of muscles used for speaking and eating.
- ▶ **Voice** — Maintaining normal pitch, volume, breath control, and vocal quality for speaking.
- ▶ **Swallowing** — Controlling lip and tongue movements for swallowing. Diet changes for a safer swallow may be needed.
- ▶ **Cognition** — Thinking skills, including attention, memory, problem solving, and reasoning. These skills are needed in order to live independently.

Rehabilitation Team Members

There are many members of the healthcare team who will be working with you during your recovery. They will provide care, evaluate your progress, and communicate with each other and with you and your family.

In addition to the physical therapists, speech therapists, and occupational therapists described above, your healthcare team will include a team of specially trained doctors, nurses, and other clinicians who will work with you to meet your healthcare needs. These may include respiratory therapists, dietitians, discharge planners, and nurse case managers. The following team members will also play a big role in your recovery:

Stroke Coordinator

The stroke coordinator is a nurse who can provide information to help you understand what causes a stroke and help you reduce your risk factors. He or she can answer your questions about medications, the recovery process, and tests and treatments. The stroke coordinator meets with your doctor on your behalf, asks questions for you, and voices your concerns. They can explain your discharge instructions and help you choose the correct level of care and type of rehab you need.

Rehab Nurse

If you are transferred to an inpatient rehab unit, you may also see a rehab nurse. The rehab nurse focuses on your physical needs and care. He or she also works with other team members to coordinate your rehab program.

Recreational Therapist

The recreational therapist uses recreation and leisure to help you make life more enjoyable as you recover.

Social Worker

The social worker works with you and your support system on planning for discharge and making any needed arrangements.

Neuropsychologist

The neuropsychologist assesses behavior and thinking ability and offers guidance to the team in making treatment goals. He or she may also provide general counseling to assist with your adjustment during rehab.

Depression

Depression is a very common, treatable medical illness that involves the body, mood, and thoughts.

Depression is caused in part by changes in brain chemicals such as serotonin and norepinephrine. Depression can be triggered by a major health change, and is common after a stroke. When the brain is injured, there can be changes to emotions. In addition, adjusting to changes after a stroke can cause stress and sadness. Untreated depression can make it hard to cope and can interfere with recovery.

Symptoms of Depression

Symptoms vary, but people with depression experience some of these symptoms most of the time for at least 2 weeks:

- ▶ Feeling sad, blue, or down
- ▶ Losing interest in activities normally enjoyed
- ▶ Feeling slowed down or restless
- ▶ Difficulty sleeping or sleeping too much
- ▶ Feeling tired all the time or lacking energy
- ▶ Increases or decreases in appetite or weight
- ▶ Difficulty concentrating or remembering
- ▶ Feeling hopeless, guilty, worthless, or helpless
- ▶ Having thoughts of death or suicide
- ▶ Headaches, digestive problems, or chronic pain that does not respond to treatment

Getting the Treatment You Need

Treating depression is important. Depression affects thoughts, feelings, physical health, and behavior. If you have other illnesses along with depression, these can be more difficult to manage and recovery can be slowed if depression is not treated. Since recovering from a stroke can be lengthy and challenging, it is especially important to seek treatment if depression occurs.

The first step to getting treatment is to discuss your symptoms with your doctor. Your doctor can make an evaluation and help you find effective treatment. Treatment options include antidepressant medication, counseling, or both.

You can help manage your symptoms as treatment begins to take effect by:

- Being with other people and talking with someone. Reach out to a family member, friend, or co-worker.
- Increasing activity or exercise. This can also help relieve stress.
- Expecting your mood to improve gradually, not right away. Feeling better takes time.
- Letting your family and friends help you.

Family and Friends Can Help

Many people with depression do not have the motivation or energy to seek treatment. Depression may cause confusion and withdrawal. Helping someone with depression get treatment is important.

- Offer to go to the doctor with the person to ask questions and note instructions.
- Invite the person for walks, on outings, to the movies, and to other activities, but do not be discouraged if your invitation is refused. Continue asking, but do not push.
- Provide emotional support through conversations and careful listening. Do not minimize expressed feelings, but do point out realities and offer hope.
- Offer reassurance that with time and help he or she will feel better.
- Don't ignore suicidal thoughts, words, or actions. Seek professional help right away at a hospital emergency department.
- Remember, depression is a treatable illness. It can be treated in addition to other illnesses a person has. If you think you or your loved one may have depression, talk to your doctor today.

Planning Your Discharge

You will have multiple discharge options once you are ready to leave the hospital. Choosing the best option will depend on factors such as how severe your stroke was, how well you are able to do your normal activities, and your living arrangement prior to your stroke.

Many people need rehabilitation (rehab) after a stroke. Rehab programs help stroke survivors gain strength and relearn skills that are lost when the brain was injured. The goal of rehab is to help survivors become as independent as possible and to improve their quality of life.

The length and type of rehab required will depend on individual needs and goals. More than one rehab setting may be necessary. Insurance coverage will vary and may be a factor in your decision. Your healthcare team will offer guidance and work with you to decide the best treatment plan.

Rehabilitation Options Include:

Inpatient Therapy

- Located in a hospital or a stand-alone facility
- Nursing care is provided
- Daily visits by a doctor specializing in physical medicine and rehab
- 3 or more hours per day of core therapies (physical, occupational and/or speech therapy), 5 days per week
- Length of stay is usually shorter than a skilled nursing facility

Skilled Nursing Facility

- Stand-alone facility (also known as a rehabilitation center or nursing home)
- An advanced practice healthcare provider visits 1 to 2 times a week; a physician visits at least once a month
- 1 to 3 hours per day of core therapies (physical, occupational and/or speech therapy), 5 days a week

Home

- If you have had a mild stroke with no lasting deficits or a TIA, you will be discharged to home. If you have mild deficits that persist, you may be sent home with home health therapy or outpatient therapy.

Home Health

- Rehab/nursing care is provided in your own home
- You must be homebound to qualify for home health services
- 1 to 3 visits a week per therapy (nursing, physical, occupational and/or speech)
- Visits typically last 30 to 60 minutes each session

Outpatient Therapy

- Stand-alone facility
- 1 to 3 visits a week
- Visits are usually 45 minutes to 1 hour in length for each type of therapy you are receiving
- Best for patients who are in their final stages of returning to being as independent as possible

Palliative Care

- Your doctor may consult the Palliative Care Team to assist in your care. Palliative care is specialized medical care for people with serious illnesses. It is appropriate at any age and at any stage in a serious illness, and it can be provided together with curative treatment.

Palliative care is provided by a team of doctors and nurses who will work with your doctor to provide an extra layer of support. The team will focus on providing you with relief from the symptoms, pain, and stress of your illness. The goal is to improve quality of life for you and your family.

Recovery from a stroke is a team effort. You, your loved ones, and the healthcare team will work together to provide support and help you meet your goals for recovery.

Fall Safety in the Home

After a stroke, you are at a higher risk of falling. Your therapists will work with you on improving your movement and independence. Home safety is an important part of preventing falls. This checklist will help you find and fix any hazards in your home.

Floors

- Make sure there is a clear path through each room. Ask someone to move furniture so your path is clear.
- Remove throw rugs or use double-sided tape or non-slip backing so rugs won't slip.

- ▶ Pick up things that are on the floor. Always keep papers, magazines, books, blankets, towels, and other objects off the floor.
- ▶ Coil or tape cords and wires next to the wall so you do not trip over them. Have an electrician put in extra outlets if needed.

Stairs

- ▶ Use reflective tape at the top and bottom of the stairs so you can see them better.
- ▶ Pick up things on the stairs. Always keep papers, shoes, books, or other objects off the stairs.
- ▶ Fix any loose or uneven steps.
- ▶ Have a handyman or electrician put an overhead light and switch at the top and bottom of the stairs. It is helpful to get light switches that glow.
- ▶ Repair loose or broken handrails. There should be handrails on both sides of the stairway. They should be as long as the stairs.
- ▶ Repair any carpet on the steps that is loose or torn. If carpet is not firmly attached to every step, remove carpet and attach non-slip rubber treads on stairs.

Kitchen

- ▶ Move items that you use often to lower shelves (about waist high).
- ▶ Buy a steady step stool with a bar to hold onto. Never use a chair as a step stool.

Bedrooms

- ▶ Place a lamp close to your bed where it is easy to reach.
- ▶ Use a night-light so you can see where you're walking. Some night-lights can be placed on a timer.

Bathrooms

- ▶ Put a non-slip rubber mat or self-stick strips on the floor of the tub or shower.
- ▶ Have a grab bar installed inside the tub and next to the toilet.

Other Injury Prevention Tips

- ▶ Exercise regularly. Focus on increasing leg strength and improving balance.
- ▶ Ask your doctor or pharmacist to review a list of your medications (both prescription and over-the-counter) to check for side effects and interactions that may cause dizziness or drowsiness.
- ▶ Have your vision checked at least once a year. Poor vision can increase your risk of falling.
- ▶ Get up slowly from a sitting or lying position.
- ▶ Wear sturdy shoes with non-slip soles. Avoid slippers and running shoes with thick soles.
- ▶ Improve the lighting in your home. Use brighter bulbs (at least 60 watts). Use lamps or frosted bulbs to reduce glare.
- ▶ Have a friend or family member replace any burned-out light bulbs.
- ▶ Paint doorsills a different color to prevent tripping.
- ▶ Keep emergency numbers in large print near each phone.
- ▶ Put a phone near the floor in case you fall and can't get up.
- ▶ Think about wearing an alarm device that will bring help in case you fall and can't get up.
- ▶ Be careful around your pets. Be sure they are out of your way when you are walking.

Taking Medications Safely

Follow these guidelines when taking medications:

General Guidelines

- ▶ Take your medication as prescribed. Do not change the dose or stop taking any medication without your doctor's instruction.
- ▶ Do not take less of a medication or skip doses. If you have trouble affording your medications, talk to your doctor or pharmacist.
- ▶ Keep a list of your current medications with you. Include the name of the healthcare provider that prescribed the medication and the reason you are taking it. Show this list to your healthcare providers. Be sure to include:
 - Prescription medications (injectables, pills, inhalers, patches or creams)
 - Over-the-counter medications (pills, creams, lotions, or eye drops)
 - Vitamins, supplements, or herbal remedies (including teas)
 - Weight gain or loss products (such as pills, shakes, or bars)
 - Home remedies
- ▶ Take your medications at set times each day. If needed, use a pill box or set alarms to remember to take your medications.
- ▶ Read the information provided or ask the pharmacist if the medication should be taken with food or between meals.
- ▶ Make sure your doctors and pharmacy have an updated list of your allergies.
- ▶ Keep appointments for lab work and check-ups. These may be needed to check how well the medication is working or adjust dosing.
- ▶ If you are traveling, be sure to have your list of medications and a list of your doctors and pharmacy. When flying, carry your medicines with you - do not put them in your checked luggage. Take enough medication with you in case you need to stay longer than expected.
- ▶ Talk to your doctor or pharmacist if you have problems with your medications, such as trouble swallowing pills or if you can't read the label.
- ▶ Check with your doctor before taking over-the-counter medications, vitamins, supplements, or herbal remedies.

Starting a New Medication

- ▶ Make sure you understand what the medication is treating and why it is being prescribed to you.
- ▶ Read the instructions carefully before you begin taking a new medication. Make sure you understand the directions and any special instructions. Talk to your doctor or pharmacist if you have any questions.
- ▶ You may want to check if the medication is covered by your insurance or if a generic medication can be used.
- ▶ It is best to use the same pharmacy when filling your prescriptions. When you have the prescription filled, tell the pharmacist about any other medications or products that you are taking. This helps prevent interactions between medications.
- ▶ Ask your pharmacy about automatic refills or reminders to avoid running out of your medication.

Storing your Medications

- ▶ Keep all medications in their containers unless you are using a pillbox to organize your medications.
- ▶ Store medications in a cool, dry place. The medicine cabinet in the bathroom is not usually the best place. Some medications need to be kept refrigerated. Read label instructions.
- ▶ Keep medication bottles tightly capped and out of the reach of children.

- ▶ Discard unused or expired medications by taking them to announced locations at community drug disposal days or talk to your pharmacist.
- ▶ Do not share your medications with anyone or take any medications that were prescribed for someone else.

Call your Doctor


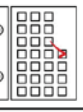









- ▶ If you have side effects or problems with a medication, tell your doctor. They may need to change your medication. Talk to your doctor or pharmacist if you have questions or concerns.



Home Medication Record



Name: _____ Date: _____

 Medication Name and Dose:	 I take this amount, this often:	I take it at (check each time): Morning  Afternoon  Evening  Bedtime 	 I take it for:	 I started on:	 I stopped on:	 I was told to take this by:	 Notes/special instructions:
Example: Lipitor 20 mg	1 tablet once a day	Morning <input type="checkbox"/> Afternoon <input type="checkbox"/> Evening <input checked="" type="checkbox"/> Bedtime <input type="checkbox"/>	High Cholesterol	1/1/20		Dr. Smith	Avoid grapefruit

RN discussed home medications with patient/family before discharge, including when the last doses were given and when to take next dose.

Please bring this medication sheet to all follow-up appointments.

Resources

Caregiver Support Resources

- ▶ **Franklin County Office on Aging Caregiver Support Program**
614-525-6200
The Caregiver Support Program aids caregivers of adults age 60 and older on a short-term basis. Assistance is limited to a three-month time period per calendar year with a cost ceiling for services. The program can assist with a variety of services, including in-home respite, adult day care, caregiver counseling, institutional respite in a licensed facility, and durable medical equipment. For more information, contact Senior Options at 614-525-6200.
- ▶ **Central Ohio Area Agency on Aging**
614-645-7250 or 866-750-CARE
Free caregiver advice, education and support for those helping loved ones. If your loved one needs help at home, COAAA staff can advise on hiring, financial help, and senior housing.
- ▶ **A Place For Mom**
866-344-1802
A Place for Mom helps seniors and their families find senior care and housing based on their unique needs and budget.
- ▶ **National Family Caregiver Support Program**
866-750-2273
Provides information, services and support to family and friends caring for an older adult. Services include respite care, counseling, education and flexible assistance to address individual needs.

Out-of-County Resources

- ▶ **Delaware County — SourcePointe**
740-363-6677
- ▶ **Fayette County — Community Action Commission of Fayette County**
740-335-1831
- ▶ **Licking County — Aging Program**
740-345-0821
- ▶ **Madison County — Madison County Senior Center**
740-852-3001
- ▶ **Pickaway County — Pickaway County Senior Center**
740-474-8617
- ▶ **Union County — Senior Services**
937-644-1010

Helpful Resources

Stroke

- ▶ **American Stroke Association**
strokeassociation.org
888-4-STROKE
- ▶ **Brain Aneurysm Foundation**
bafound.org
- ▶ **Support Network**
supportnetwork.heart.org
Online support for those who have had a stroke or heart attack or are living with a heart condition.



Mount Carmel Resources

To learn more about stroke and other health topics, visit mountcarmelhealth.com.

- ▶ **Healthy Living Center**
614-234-5932

Mount Carmel Franklinton Campus
Medical Office Building 2, Suite 1
777 S. Davis Avenue
Columbus, Ohio 43222

- ▶ **HealthCall**
614-234-LIFE (5433)

An information and referral service.

- ▶ **Mount Carmel Stroke Support Group**
614-392-3400

A group that provides speakers, education, and support for those who have had a stroke and their family members. There is no cost to attend.

If you would like to receive *Healthier You*, a catalog of the programs available at Mount Carmel, call 614-234-LIFE (614-234-5433) to request a copy.

Common Stroke Terms

Activities of daily living (ADLs): functions that are done on a daily basis, such as dressing, eating, walking, personal hygiene, and communication.

Ambulation: walking or gait.

Aneurysm: a bulging of the wall of an artery that forms a thin-walled bubble.

Anomia: the inability to name objects or persons.

Anticoagulants: medicine that prevents blood clots from forming in blood vessels.

Antiplatelets: medicine that thins the blood and keeps platelets from sticking together to help keep blood clots from forming.

Aphasia: the inability to express and/or understand speech or language.

Aspiration: the inhalation of food or fluids into the lungs instead of going down to the stomach.

Ataxia: inability to coordinate movements of arms and/or legs.

Atrial fibrillation (A-Fib): an irregular heartbeat that can allow blood in the heart to form a clot, break off, and travel to the brain, causing a stroke.

Carotid arteries: arteries that run up each side of the neck into the brain, which may become blocked by plaque, causing decreased blood flow to the brain and resulting in a stroke.

Carotid endarterectomy: surgery in which plaque in a blocked carotid artery is removed.

Coagulation: the process of blood clotting in the blood vessels.

Cognition: the ability to think.

Deficits: a lost skill such as talking or walking.

Delayed cerebral ischemia: the development of new areas of stroke that developed after the initial stroke has occurred. Typically seen in conjunction with vasospasm.

Depression: prolonged feeling of sadness that may be caused by brain damage from a stroke or by the response to the losses caused by the stroke.

Dizziness: sensation of lightheadedness or spinning.

Dysarthria: slurred speech due to weakness of certain muscles in the mouth, face, neck, or throat.

Dysphagia: difficulty swallowing or inability to swallow.

Embolism: a blood clot that forms outside of the brain that breaks away and travels to the brain.

Emotional lability: uncontrollable mood changes such as crying, laughter, or anger.

Gait: ambulation or walking.

Hemianopia: blindness or defective vision in one half of the field of vision.

Hemiparesis: weakness of the arm and/or leg on the same side of the body.

Hemiplegia: paralysis of the arm and/or leg on the same side of the body.

Hemorrhage: bleeding into the brain tissue caused either by leakage of blood from a blood vessel or by a ruptured aneurysm.

Hypertension: high blood pressure.

Intracerebral hemorrhage: a type of hemorrhagic stroke that causes blood to directly leak into the brain.

Magnetic resonance image (MRI): a type of test that uses radio waves and a strong magnetic field to detect problems in the brain.

Neglect: condition where the patient ignores or is unaware of one side of the body or his/her surroundings.

Occupational therapist (OT): a therapist who works with patients on restoring hand and arm function, thinking skills, and activities of daily living.

Physical therapist (PT): a therapist who helps patients regain strength, coordination, balance, endurance, and walking ability.

Rehabilitation: the process of gaining function through the use of various therapies.

Speech therapist (ST): a therapist who works with patients on improving swallowing, speaking, listening, reading, or thinking skills.

Stroke: decreased blood flow to the brain that usually results in some type of damage to the nerve centers in the brain.

Sub-acute rehabilitation: a program that works with people who need to gain strength and endurance but are not able to do a more intense program.

Subarachnoid hemorrhage: a type of hemorrhagic stroke that causes blood to leak into the space surrounding the brain.

Thrombus: clot.

Transcranial Doppler: an ultrasound that can detect the occurrence of vasospasm in the brain.

Transient ischemic attack (TIA): decreased blood flow to the brain, causing a “mini-stroke” usually lasting a few minutes to a few hours, but which can last up to 24 hours.

Vasospasm: a spasm or sudden contraction which causes the narrowing of an artery in the brain that can lead to the formation of new areas of stroke.



MOUNT CARMEL

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