



Owensboro
Health

Stroke Care

Risk Factors and Symptoms of Stroke

Stroke is one of the most preventable of all serious, life-threatening health conditions. There are some risk factors for stroke you cannot change. However, there are many you can change or control. Controllable risk factors include: high blood pressure, diabetes, smoking, high cholesterol, obesity, physical inactivity, alcohol use, illegal drug use, stress, atrial fibrillation and sleep apnea.

Stroke is a medical emergency. If you have any of the symptoms below, call 911 right away. Do not call your doctor's office. Do not wait to see if you will get better or lie down to rest. A stroke is a brain attack and can be deadly. **Time Saved is Brain Saved.**

- Sudden weakness or numbness/loss of feeling in the face, arm or leg, especially on one side of the body.
- Sudden confusion.
- Trouble speaking, slurred speech or problems understanding others when they speak
- Trouble seeing with one or both eyes, double vision
- Sudden trouble walking, dizziness, loss of balance or coordination.
- Sudden, severe headache with no known cause
- Blackouts, seizures and syncope

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



FACE

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



ARMS

Is one arm weak or numb?
Ask the person to raise both arms. Does one arm drift downward?



SPEECH

Is speech slurred?
Ask the person to repeat a simple sentence. Is the sentence repeated correctly?



TIME

If the person shows any of these symptoms, **Call 911** or get to the hospital immediately.



Stroke Risk Scorecard

Each box that applies to you equals 1 point. Total your score at the bottom of each column and compare with the stroke risk levels below.

RISK FACTOR	HIGH RISK	CAUTION	LOW RISK
Blood Pressure	<input type="checkbox"/> >140/90 or unknown	<input type="checkbox"/> 120-139/80-89	<input type="checkbox"/> <120/80
Atrial Fibrillation	<input type="checkbox"/> Irregular heartbeat	<input type="checkbox"/> I don't know	<input type="checkbox"/> Regular heartbeat
Smoking	<input type="checkbox"/> Smoker	<input type="checkbox"/> Trying to quit	<input type="checkbox"/> Nonsmoker
Cholesterol	<input type="checkbox"/> >240 or unknown	<input type="checkbox"/> 200-239	<input type="checkbox"/> <200
Diabetes	<input type="checkbox"/> Yes	<input type="checkbox"/> Borderline	<input type="checkbox"/> No
Physical Activity	<input type="checkbox"/> None	<input type="checkbox"/> 1-2 times a week	<input type="checkbox"/> 3-4 times a week
Weight	<input type="checkbox"/> Overweight	<input type="checkbox"/> Slightly overweight	<input type="checkbox"/> Healthy weight
Stroke in Family	<input type="checkbox"/> Yes	<input type="checkbox"/> Not sure	<input type="checkbox"/> No
TOTAL SCORE	<input type="checkbox"/> High Risk	<input type="checkbox"/> Caution	<input type="checkbox"/> Low Risk



Risk Scorecard Results

- High Risk ≥ 3:** Talk to your healthcare provider immediately, and ask about a stroke prevention plan. Make an appointment today.
- Caution 4-6:** You have several factors that, if elevated, could place you at higher risk for stroke. Work towards reducing your risk now.
- Low Risk 6-8:** You're doing well at controlling stroke risk! Continue to stay informed about your numbers. Get tips at www.stroke.org.

Ask your healthcare professional how to reduce your risk of stroke.

To reduce your risk:

1. Know your blood pressure.
2. Find out whether you have atrial fibrillation.
3. If you smoke, stop.
4. Find out if you have high cholesterol.
5. If diabetic, follow recommendations to control your diabetes.
6. Include exercise in your daily routine.
7. Enjoy a lower-sodium (salt), lower-fat diet.

Use **FAST** to remember warning signs of stroke:



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



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



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



TIME: If you observe any of these signs, **call 9-1-1 immediately.**

1-800-STROKES (787-6537) • www.stroke.org

Types of Stroke

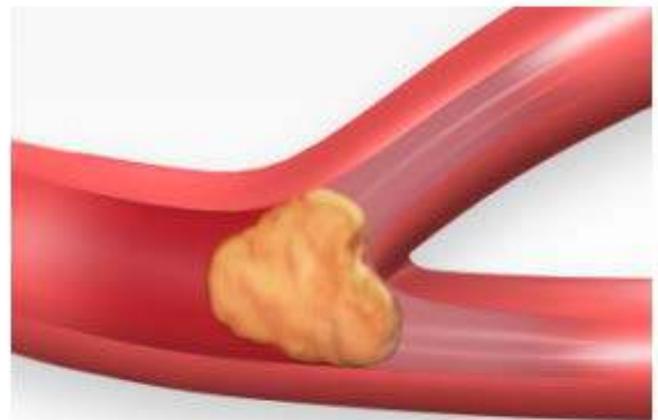
TIA (Transient Ischemic Attack)



© American Heart Association

TIA (transient ischemic attack) is caused by a temporary clot. Often called a “mini stroke”, these warning strokes should be taken very seriously.

Ischemic (Clots)



© American Heart Association

Ischemic stroke occurs as a result of an obstruction within a blood vessel supplying blood to the brain. It accounts for 87 percent of all stroke cases.

Hemorrhagic (Bleeds)



© American Heart Association

Hemorrhagic stroke occurs when a weakened blood vessel ruptures. Two types of weakened blood vessels usually cause hemorrhagic stroke: **aneurysms** and **arteriovenous malformations (AVMs)**. But the most common cause of hemorrhagic stroke is uncontrolled hypertension (high blood pressure).

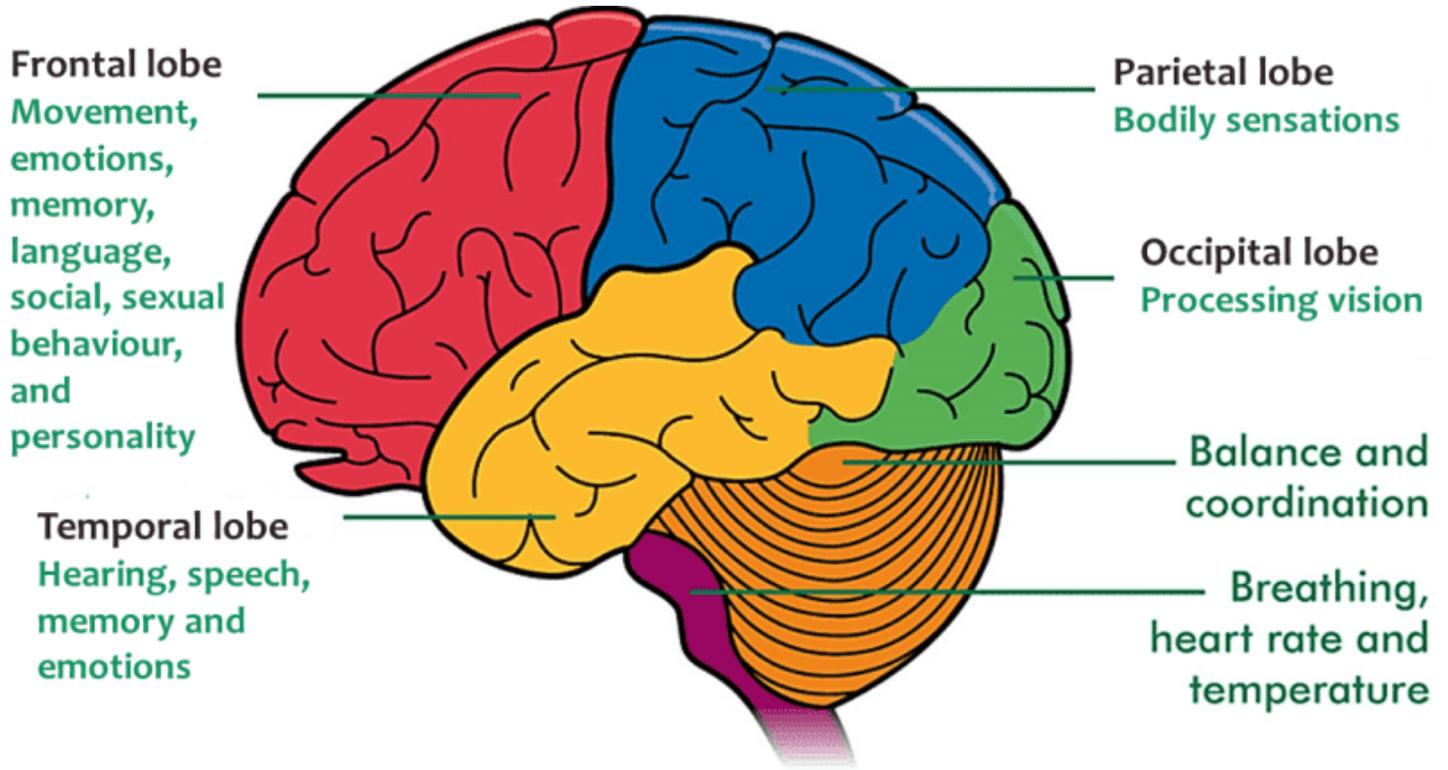
Cryptogenic Stroke



© American Heart Association

In most cases, a stroke is caused by a blood clot that blocks the flow of blood to the brain. In some instances, despite testing, the cause of the stroke cannot be determined. In this case, the stroke of unknown cause is called a “cryptogenic stroke”.

Functional Areas of the Brain



LEFT BRAIN FUNCTIONS

RIGHT BRAIN FUNCTIONS

Right side of body controls

Left side of body controls

Number skills

3-D shapes

Math/Scientific skills

Music/Art awareness

Written language

Intuition

Spoken language

Creativity

Objectivity

Imagination

Analytical

Subjectivity

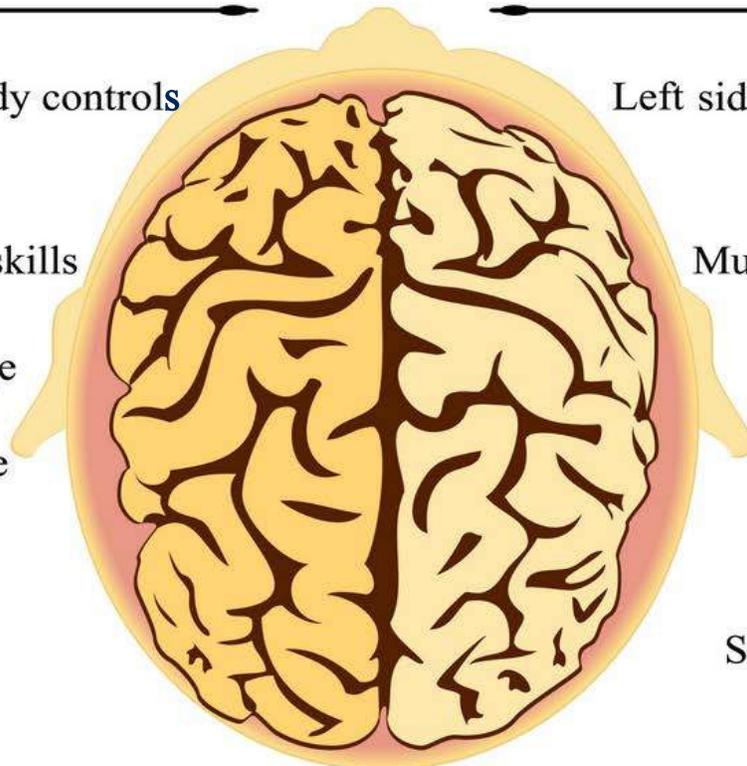
Logic

Synthesizing

Reasoning

Emotion

Face recognition



What to expect during your hospital stay

Here are a few things to expect during your hospitalization:

- A care team of nurses, doctors, therapists, certified nursing assistants, pharmacists, and social workers, in addition to many others who may be behind the scenes.
- A stroke can cause swallowing problems. Many people who have a stroke experience dysphagia, a problem chewing or swallowing food. You may not be able to have anything to eat or drink until the nurse checks you are swallowing safely.
- A speech therapist has special training in helping patients swallow safely. Speech therapy consists of exercises to strengthen and improve speech, language and swallowing. They may also provide other therapy, such as cognitive therapy.
- An occupational therapist may help you learn how to do the daily tasks of taking care of yourself, including eating, bathing and getting dressed. Their goal is to help you be as independent as possible and to be safe.
- Physical therapy can help improve your strength and work to restore functions you may have lost due to the stroke. Physical therapy includes movements and exercises to learn how to move in a new and safe way.
- A social worker/case manager helps with discharge plans and works with your insurance company to help you find appropriate resources for your discharge. They will help you find an appropriate rehabilitation facility, if necessary.
- You will have other medical tests so the doctor can see what type of stroke you had, what may have caused your stroke and the best treatment to help you get better.



Medical Testing

- **Cardiac monitor** to check that your heart is beating normally
- **CT Scan of the Brain** – A computed axial tomography (tuh-mah-gruh-fee) scan is also called a “CT” or “CAT” scan. It is a painless test that may use contrast to takes pictures of the inside of the body. CT scans use x-rays to produce a three-dimensional image of your head. CT scans are especially good for showing bone, soft tissue and blood vessels. This test usually takes about 15 to 30 minutes. Your doctor may order a CT scan to determine if you have had a stroke and what kind of stroke it was.
- **Magnetic Resonance Imaging (MRI)** –A magnetic resonance, or MRI, is a medical test that takes pictures of the inside of the body. The MRI machine uses a large magnet and a computer to take pictures of your body. This test usually takes between 15 and 90 minutes.
- **Echocardiogram** – Echocardiography is used to diagnose heart diseases. Heart disease is a risk factor for stroke. The ultrasound probe may be placed on your chest. A bubble study may be done during the echo. With this approach, a sterile salt solution is shaken until tiny bubbles form and then is injected into a vein. The bubbles travel to the right side of your heart and appear on the echocardiogram.
- **TEE**- A TEE (transesophageal echocardiogram) is a procedure in which a long flexible tube is inserted into the mouth and down the esophagus. Ultrasound waves create images of the heart. The images show the actual shape and motion of the heart and the flow of blood through the heart chambers and valves. Your throat will be numbed with an anesthetic spray, and you may be given a low dose of sedative through an IV. This procedure only takes 15-20 minutes. A TEE provides images of the heart that are often clearer than those of a standard echocardiogram.
- **Carotid Ultrasound** - This test is used to determine if the carotid arteries are filled with plaque. Too much plaque within the arteries can cause a stroke. This test is non-invasive and uses high frequency sound waves to create an image of the insides of the two large arteries in your neck.
- **EEG** – This test is to check the electrical activity in your brain.
- **Blood tests** including: Lipid Profile, Complete Blood Count (CBC), Prottime (PT/INR), Partial Thromboplastin Time (PTT)

Taking Medications

Below are tips for taking medication. Keep in mind that most medications need to be taken every day—even when you feel fine. Ask your doctor if you need to avoid certain foods or alcohol. Also, mention if you have problems affording medication.

- **Have a routine.** Take medication at the same time each day. Use reminders to help stay on track.
- **Take ALL your medications.** Some medications work best when used with others. Don't take one type and skip another.
- **Plan ahead.** Refill prescriptions before they run out. Be sure to take medications with you if you travel.
- **Never change your dosage or stop taking medication on your own.** And if you miss a pill, don't take two the next time.
- **Tell your doctor** if any medication causes side effects. Your doctor may change your dose or prescribe a new medication.
- Carry a list of your medications. Bring the list to appointments with healthcare providers.

Common Stroke Medications

- ACE inhibitors and angiotensin medicines lower blood pressure.
 - * Common side effects include: dizziness, headache, drowsiness, low blood pressure
- Diuretics help your body get rid of extra water.
 - * Common side effects include: Thirst, dizziness, muscle cramps, headache
- Statins lower the amount of cholesterol in your body.
 - * Common side effects include: Belly pain, dizziness, loose stools, or constipation
- Beta blockers work by blocking certain chemicals that make the heart work harder. This helps lower blood pressure.
 - * Common side effects include: dizziness, weakness, drowsiness, headache
- Antiplatelet medicine works by making your platelets less sticky; it reduces the chance of platelets sticking together to form a clot.
 - * Common side effects include: Bruising, itching, upset stomach, heartburn
- Anticoagulants make your blood thinner. This also helps lessen the chance of developing blood clots.
 - * Common side effects include: Bleeding, upset stomach



Discharge and Follow up

- Careful follow-up is important to stroke rehabilitation and recovery, so keep your medical appointments.
- Some medications require blood tests to check for progress or problems. Keep follow-up appointments for any blood test ordered by your doctors.
- Take all your medications as prescribed.
- Call your doctor if you have any side effects from your medications, if you miss a dose or cannot afford your medications.

Recovery and Rehabilitation

Rehabilitation consists of therapy to restore and recover as much function as you had before the stroke. Rehab should begin as soon as possible after your stroke. Your healthcare team will talk with you about your goals and help you develop a rehabilitation plan.

Types of rehabilitation programs:

- Inpatient rehabilitation in a hospital
- Sub-acute unit in a hospital
- Skilled nursing facility
- Outpatient rehabilitation
- Rehabilitation at home
- Home health



Discharge Self-Management Plan

Please take this booklet to your appointment to discuss with your provider.

Check only the risk factors and goals that apply to you:

HIGH BLOOD PRESSURE

Blood pressure is the measurement of the force your blood exerts on the blood vessel walls as it travels through your body. Your blood pressure reading has two numbers. The top number is called systolic blood pressure. It is the peak artery pressure reached as the heart pumps. The bottom number is called diastolic pressure. It is the artery pressure when the heart is relaxing between heartbeats.

High blood pressure is one of the most common causes of stroke because it puts stress on the blood vessel walls. This stress causes the arteries to thicken and wear down or can lead to bleeding in the brain. High blood pressure is the single most important risk factor for stroke that can be controlled. It is important to have your blood pressure checked by your doctor often to ensure it remains controlled. Eating a healthy diet, limiting sodium (salt), exercising on a regular basis and medications are ways to control blood pressure.

MY BLOOD PRESSURE AT THE HOSPITAL _____

MY GOAL FOR MANAGING HIGH BLOOD PRESSURE:

- I agree to limit my sodium/salt intake & exercise on a regular basis
- I agree to take my medication as prescribed: _____

DIABETES

Diabetes is a major risk factor for stroke and heart disease. It is important to keep your doctors appointments, and check your blood sugar every day or as advised by your doctor. If you are on medicine for diabetes, take it as ordered.

MY A1C AT THE HOSPITAL _____

MY GOAL FOR MANAGING DIABETES:

- I agree to monitor my blood sugar and take action to keep it within the range prescribed by my doctor.
- I agree to follow the diet prescribed by my doctor and exercise on a regular basis.
- I agree to take my medication as prescribed: _____

SMOKING

Smoking raises your blood pressure and deprives the body of oxygen. Your risk for stroke will drop within two years after quitting smoking. If you want to quit smoking, speak with your doctor or nurse who can give you information about successful methods to stop smoking.

MY GOAL FOR STOPPING SMOKING:

- I agree to decrease the number of cigarettes/vapor I smoke per day by _____ and follow up with my doctor for more help to eventually quit smoking.

CHOLESTEROL

Cholesterol is a waxlike substance that is made by the liver and travels in the blood. It can be found in some foods (egg yolks, liver, fried foods). High cholesterol in the blood can clog arteries and cause a stroke or heart attack. If your cholesterol is high, work with your doctor to control it with diet and exercise; however, some people may require medication to lower their cholesterol.

High-density lipoprotein (HDL) cholesterol is considered "good" cholesterol. The higher your HDL, the better because it takes the bad cholesterol from your blood vessels and brings it back to the liver where it can be broken down and removed. Regular exercise increases your HDL. The goal is to have an HDL level of more than 60.

MY HDL LEVEL IS _____

Low-density lipoprotein (LDL) cholesterol is considered "bad" cholesterol. It can attach to and block blood vessels. The lower your LDL, the better. The goal is to have an LDL level of less than 100.

MY LDL LEVEL IS _____

MY GOAL FOR MANAGING CHOLESTEROL LEVELS:

- I agree to stay aware of my HDL and LDL levels.
- I will follow up with my doctor to make a plan to get to my personal healthy level.
- I agree to exercise on a regular basis.
- I agree to limit my intake food high in cholesterol.
- I agree to take my medication as prescribed: _____

WEIGHT

People who are overweight or obese are more likely to have high blood pressure, diabetes and stroke. Your doctor can help you plan for healthy weight loss, if needed. This plan may include exercise and a diet that is safe for you.

MY WEIGHT IS _____

MY GOAL FOR MANAGING MY WEIGHT:

- I agree to follow the diet recommended by my doctor to lose _____ pounds over _____ weeks.

Diet Recommendations:

- Know the different types of fats. Food contains several different kinds of fats, including saturated and unsaturated.
- Watch your salt intake. Our body needs salt to work well, but too much of it increases the risk for high blood pressure.
- Read food labels. Food labels have two important parts: nutrition information and ingredients. Check the serving size. Look for the saturated fat, total fat, cholesterol and sodium. Just because an item is low-fat or low-calorie does not mean you can eat more of it. Choose food lower in saturated fat and cholesterol.
- Choose a healthy option when eating out. Say no to super-sized meals. Drink water instead of soda. Salad bars are good, but watch the amount of salad dressing and topping. Eat bread without butter. Choose foods that are lean, steamed, roasted, boiled, grilled or poached. Avoid foods that are breaded, stuffed, au gratin, creamed, served with gravy, sautéed or fried. Split a meal between two people.

PHYSICAL ACTIVITY

Exercise daily. Even a little exercise (brisk walk, bicycle ride or yard work) can improve your health and may reduce your stroke risk. Check with your doctor to find out what level of exercise is safe for you.

MY GOAL FOR INCREASING MY PHYSICAL ACTIVITY:

- o I agree to increase my physical activity, but first, I will discuss it with my doctor to get the right plan for me.

ALCOHOL AND DRUGS

Alcohol raises your blood pressure and drinking too much can lead to stroke. Cocaine and other illegal drugs can cause very high blood pressure and may cause a stroke or heart attack. Prescription medication and over-the-counter medication also can cause your blood pressure to rise. Always let your doctor know of any new medicine you are taking including: vitamins, natural remedies, herbal supplements or prescriptions.

MY GOAL FOR MANAGING ALCOHOL AND DRUGS:

- o I agree to decrease my drinking by _____ drinks per day and follow up with my doctor for more help to eventually quit drinking.
- o I agree to work with my medical team to get control of my addiction.
- o I agree to share information with my doctor about all medications I am taking.

STRESS

Stress can increase your risk for stroke by making your heart pump faster and raising your blood pressure. Some options for lowering stress are yoga, meditation, exercise, and having someone to talk to when you feel your stress level rise.

MY GOAL FOR MANAGING STRESS:

- o I agree to try one stress reduction technique.

ATRIAL FIBRILLATION

A-fib is an irregular heartbeat that can cause blood to pool in parts of the heart. This pooling of blood can cause clots to form. The clots can then break off and travel to your brain, causing a stroke. You must take any medication prescribed by your doctor exactly as directed.

MY GOAL FOR MANAGING A-FIB:

- o I agree to take my medication as prescribed: _____
- o I agree to keep all of my follow-up appointments.

SLEEP APNEA

Sleep apnea is a potentially serious sleep disorder that is linked to increased risk for stroke. Snoring, gasping or choking during sleep; excessive daytime sleepiness; daytime fatigue; problems with memory or concentration; mood swings; and morning headaches are all symptoms of sleep apnea.

MY GOAL FOR MANAGING SLEEP APNEA

- o I agree to follow up with my doctor to create a treatment plan for my sleep apnea.

Coping with Changes

It may be difficult to cope with the sudden changes that happen after a stroke. You may find yourself feeling sad or depressed. Stay calm and be patient with yourself. Stay as active as you can. Ask your care team about any questions or concerns you may have. If you begin to feel sad, depressed or have changes in your sleep or appetite, tell your doctor. A stroke can affect your body, mood, thoughts, and behavior. A stroke can change your eating habits, how you think and feel, your ability to work and how you interact with people. Clinical depression is common among people who have had a stroke, but it can be treated.

Symptoms of Depression

- Sad, anxious, or 'empty' mood that does not go away in a few days
- Loss of interest or pleasure in activities you used to enjoy
- Reduced or increased appetite
- Sleeping too much or too little; waking up in the middle of the night or early morning
- Energy loss or feeling tired
- Feeling irritable and restless
- Thoughts of death or suicide
- Physical symptoms that do not respond to treatment, such as chronic pain or digestive disorders
- Difficulty concentrating, trouble remembering things or making decisions
- Feeling guilty, hopeless or worthless

Resources

Owensboro Health Regional Hospital: Phone: 270-417-2000; www.owensborohealth.org

Owensboro Health Neurology: 270-417-7830

Owensboro Health Call Center: 270-685-7776

Regional Rehabilitation Center (Acute Inpatient); CARF Accredited: 270-417-2400

Outpatient Therapies (Healthpark): 270-683-9355

Owensboro Health Speech & Audiology: 270-688-6140

Multicare Physical Therapy (Outpatient Madisonville, KY) 270-825-0069

McAuley Primary Care: 270-926-6575

Owensboro Health Home Care: (270) 688-2182 or toll free (888) 299-2182

Owensboro Health Cardiology Coagulation Clinic: 270-417-7500

Cooper Clayton Smoking Cessation: 270-688-0808

Vocational Rehabilitation: 270-687-7308

American Stroke Association: www.strokeassociation.org

National Stroke Association: www.stroke.org

American Heart Association: www.americanheart.org

Stroke Support Group

The Owensboro Health Stroke Support Group meets the second Tuesday of every month at 6 p.m. at the Healthpark Classroom B, located on Ford Avenue, Owensboro, KY.

The support group will not meet if the Daviess County Public School System is closed for inclement weather.



OwensboroHealth.org/StrokeCare