

Navigating Life After a Stroke

Stroke is a leading cause of disability and death worldwide, and survivors often face significant physical challenges. Depending on the affected area of the brain, a stroke can impact movement, speech, memory, and thinking. Daily activities such as dressing, bathing, and communication may also be difficult. Timely intervention and treatment are critical for minimizing damage to the brain and maximizing recovery.

A stroke occurs when blood flow is disrupted to an area of the brain, which deprives the brain cells of oxygen and nutrients causing the cells to die. The two most common types of stroke that can occur are ischemic stroke and hemorrhagic stroke. An ischemic stroke occurs when a blood vessel supplying blood to the brain is blocked. Ischemic strokes account for 87 percent of all strokes. A hemorrhagic stroke occurs when a weakened blood vessel ruptures and there is bleeding in the brain. Both types of strokes require immediate attention and treatment to reduce the long-term effects of stroke and prevent death.

Starting rehabilitation as soon as possible after a stroke is vital in stroke recovery. Rehab begins while the patient is in the hospital with the goal of giving patients the greatest amount of independence to perform basic daily activities. Patients receive physical therapy to regain mobility, strength, and coordination. Occupational therapy assists in improving daily living skills, and speech therapy benefits communication and swallowing. Recovery time is different for each person, depending on the severity of the stroke.

Upon discharge from the hospital, patients will receive a plan to continue their rehabilitation depending on their level of function. Options include an inpatient rehabilitation unit, an independent rehabilitation facility, or rehabilitation at home with visits to an outpatient facility as needed.

Individuals who have suffered a stroke are 25 percent more likely to experience a second one. Risk of disability and death increase with secondary strokes, which makes prevention a high priority. As part of their treatment plan, patients may be prescribed certain medications, such as blood thinners, drugs to control high blood pressure and cholesterol, and diabetes medication. Taking medications as prescribed is critical for post-stroke recovery and recurrent stroke prevention. Patients should consult with their physician before discontinuing any prescribed medications.

Making healthy lifestyle modifications after a stroke may prevent another stroke from occurring. Consuming foods that contain important nutrients, such as potassium, magnesium, folate and omega-3 fatty acids, can help to lower blood pressure and reduce cholesterol levels, which are two known factors that can increase the risk of a stroke. When making food choices, individuals should include a variety of fruits and vegetables, whole grains, low-fat dairy, healthy sources of protein, and healthy oils.

Regular exercise improves brain and heart health by controlling blood sugar and lowering cholesterol and blood pressure. Physical activity also reduces depression and anxiety often associated with the physical and emotional changes that a person may experience after a stroke. Patients can discuss their exercise goals with their physician. It is best to start slowly and work up to the recommended amount of 150 minutes of moderate-intensity activity per week.

Tobacco cessation and limiting alcohol consumption also greatly reduces the risk of stroke. Alcohol can raise blood pressure. It is recommended that men should have no more than two drinks per day and only one for women. Cigarette smoking increases the chance of blood clot formation by thickening the blood and increasing the amount of plaque buildup in the arteries.

Self-care after a stroke is also important for an individual's mental and emotional well-being. Practicing mindfulness encourages people to be present in the moment and to focus on positive thoughts instead of negative ones. Maintaining social connections with friends, family, and other stroke survivors can help individuals to process and share their experience with others.

Stroke recovery takes time, and setbacks are a part of recovery. It is important for patients to remember to give themselves grace and be kind to themselves. Taking medications as prescribed, adopting a healthy lifestyle, and maintaining regular rehabilitation appointments will help patients to reach their recovery goal.

Patient Story - Debbie*

Debbie had recently undergone some lifechanging situations. One of those changes was that she and her husband decided to move from Arizona back to Ohio to be closer to family. Both were born and raised in Ohio and had moved to Arizona early in their marriage for Debbie's career. Now that Debbie and her husband were retired and their children were grown and living out of state, they decided it was time to move.

One Sunday morning in April, Debbie began to experience the feeling of numbness on the entire right side of her body. Following an excess of lifting and unpacking after moving into their new home, so Debbie thought that she had just pinched a nerve or overexerted herself. Her husband suggested that she take an aspirin just in case and see how she felt in the morning. She awoke with the numbness still present but had no other symptoms. She did experience a strange pulsing feeling in her side, which she assumed was her liver, and that concerned her. Debbie had just moved to the area, so she spent the morning searching for a primary care provider. She found one but needed to wait a few days for an open appointment. Her husband suggested that they go to Urgent Care. When they arrived at Urgent Care, there was a problem verifying Debbie's insurance, so they decided to go to Licking Memorial Hospital (LMH) Emergency Department (ED).

Sami T. Getahun, M.D., was Debbie's attending physician. He ordered an ultrasound on her abdomen and a computed tomography (CT) scan with contrast on her head. Neither test revealed any findings. Debbie also had a CT scan with contrast on her abdomen, but this test also showed no abnormalities. A magnetic resonance imaging (MRI) scan was recommended by neurology. It was not until neurologist, Gloria Galloway, M.D., of Licking Memorial Neurology, called the ED after reviewing Debbie's MRI scan that Debbie learned a small blood clot had been lodged into a small vessel in the thalamus. The thalamus is an egg-shaped structure in the middle of the brain that relays sensory and motor information from the body to the brain. Debbie had suffered a stroke.

A stroke occurs when blood flow is disrupted to an area of the brain, which deprives the brain cells of oxygen and nutrients causing the cells to die. Numbness on one side of the body is a common symptom of stroke. Other symptoms include face drooping, speech difficulty, confusion, vision problems, loss of balance or coordination, and severe headache.

"Nobody was more surprised than I was to hear that I had suffered a stroke," Debbie said. "I did not experience any other stroke symptoms. I did not feel impaired in any way, but I am so glad that the neurologist discovered it."

Debbie has a family history of brain aneurysms. Her mother died from a ruptured aneurysm when she was young, and her sister had also suffered from a brain aneurysm. A brain aneurysm is a weak area in the wall of a blood vessel in the brain that causes the vessel to bulge. Most brain aneurysms that have not ruptured do not cause symptoms. A ruptured aneurysm is a very serious condition. The most notable and common symptom is a sudden, severe headache. Other symptoms may include nausea, vomiting, a stiff neck, blurred or double vision, sensitivity to light, a drooping eyelid, seizure, loss of consciousness, or confusion.

"I was admitted to the Hospital, and the nursing staff and care team were wonderful. I cannot say enough good things about them," Debbie said. "Dr. Kret was very thorough and so knowledgeable. Dr. Osubeni visited me during the night and was very compassionate when she spoke with me. I felt comforted and cared for greatly."

Because of Debbie's family history of aneurysm, an additional MRI was performed. The results came back clear for an aneurysm, and Debbie was relieved to hear the news. She was discharged from LMH and wore a heart monitor for two weeks to rule out atrial fibrillation, a common cause of blood clots. She was also prescribed 325 milligrams of aspirin and 20 milligrams of Crestor, a statin, which she takes daily. These medications are common for post-stroke care.

Debbie visited Sarah Robinson, APRN-CNP, of Licking Memorial Family Practice – Granville, for her one-week follow-up and later had an appointment with her primary care physician, Kalpana Jones, M.D., also of Licking Memorial Family Practice – Granville. She also has scheduled a follow up with Dr. Galloway.

"Dr. Jones is a great family physician. She is very thorough, knowledgeable, and compassionate. All are qualities that I want my physician to have."

Debbie is very grateful that the staff at LMH discovered her stroke. She still experiences some numbness in her shoulder but is thankful that she did not suffer any permanent damage. She will continue to follow up with her care team regularly and take her medications as prescribed.

Stroke Care – How do we compare?

At Licking Memorial Health Systems (LMHS), we take pride in the care we provide. To monitor the quality of that care, we track specific quality measures and compare to benchmark measures. Then, we publish the information so you can draw your own conclusions regarding your healthcare choices.

Thrombolytic drugs, sometimes called "clot-busters," often are effective in treating a stroke in progress, and may even reverse some of the neurological damage. However, thrombolytic drugs can have dangerous side effects. To lower the risk of complications, thrombolytic drugs can be given only to patients who have arrived at the Emergency Department (ED) quickly enough to have the drugs initiated within four and a half hours of their first symptoms of having a stroke.

Eligible stroke patients who received	LMH 2021	LMH 2022	LMH 2023	LMH Goal	
timely thrombolytic drugs in the ED	100%	91.7%	96.9%	88%	

Tenecteplase (TNK) and tissue plasminogen activator (tPA) – FDA-approved medications for acute ischemic strokes, are given through intravenous therapy (IV) in the arm, and work by dissolving clots and improving blood flow to the part of the brain being deprived. tPA can help reduce damage to the brain and the long-term effects of stroke. Minimal time to administration produces brain-saving benefits.

	LMH 2021	LMH 2022	LMH 2023	LMH Goal
Median time from arrival to administration of tPA	68 Minutes	65 Minutes	57 Minutes	60 Minutes

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Quick access to brain scan results is critical to physicians when treating a patient with a suspected stroke. Clot-buster medications can be administered, but only for a short period of time after the patient's stroke symptoms begin, and the medications may not be given until a brain scan is completed. Quick completion of a brain scan upon the patient's arrival can reduce the amount of time elapsed before these important medicines can be given, which then increases the patient's chance for improved recovery from a stroke.

	LMH 2021	LMH 2022	LMH 2023	National ⁽¹⁾
Stroke patients in the ED with brain scan results within 45 minutes	84%	84%	88%	69%

Ischemic stroke is a type of stroke that results in damage to the brain caused by an interruption or blockage in blood flow. It is the most common type of stroke. A stroke can result in death, so seeking medical attention quickly is vitally important. Licking Memorial Hospital (LMH) measures the rate of in-hospital death of patients suffering an ischemic stroke. Prompt and comprehensive stroke treatment can reduce the risk of death and long-term complications. Lower percentages are preferable.

	LMH 2021	LMH 2022	LMH 2023	National ⁽²⁾
lschemic stroke – inpatient mortality rate	0.78%*	0.79%*	0.0%	2.40%
*In 2021 and 2022, one individual suffered a t	fatal ischemic stroke.			

The "incidence rate" is a measure of how often ischemic strokes occur in our community, as compared to national averages. It is measured as the number of patients who are admitted with a stroke, out of every 1,000 admitted patients. Rates higher than average mean that more patients are admitted to the Hospital with strokes than the national average, while lower rates indicate fewer strokes occur in the community than the national average. Lower numbers are preferable.

Incidence rate	LMH 2021 20.51	LMH 2022 21.43	LMH 2023 16.06	National ⁽²⁾ 20.10	
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Atrial fibrillation, also known as "AFib," is a condition in which the heart does not pump blood effectively. Patients with AFib are five times more likely to suffer a stroke than the general population, and many patients may be unaware that they have it. Patients with AFib are at risk of having blood clots form inside their heart, which can travel to the brain, causing a stroke. This measure reflects the percentage of patients, diagnosed with stroke who had underlying AFib. Patients with AFib typically are treated with blood thinners to help reduce the likelihood of clots forming inside the heart. Lower percentages are preferable.

	LMH 2021	LMH 2022	LMH 2023	National ⁽²⁾
Ischemic stroke - percentage with AFib	11.72%	14.96%	14.29%	18.45%

Stroke Care - How do we compare? (continued on back)



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Check out our Quality Report Cards online at LMHealth.org.

Stroke Care - How do we compare? (continued from inside)

In some cases, after the immediate crisis is stabilized and the patient no longer requires hospital care, ongoing care may be required depending on the needs of the patient. Patients may be transferred to post-hospital care settings such as inpatient rehabilitation, skilled nursing facilities, or home health agencies. The LMH goal is for the patient to return to baseline functioning and be discharged directly home from the Hospital.

	LMH 2021	LMH 2022	LMH 2023	National ⁽²⁾
Ischemic stroke – percent discharged home	53.13%	58.27%	50.00%	55.90%

8. Licking Memorial Health Professionals (LMHP) office-based physicians use evidence-based measures in order to provide excellent, quality care to patients. The American Stroke Association and American Heart Association recommend the use of blood-thinning medication in order to reduce the risk of blood clots in patients with coronary artery disease.

	LMHP 2021	LMHP 2022	LMHP 2023	National ⁽³⁾	LMHP Goal
% LMHP coronary artery disease patients seen receiving blood-thinning medication	96%	88%	88%	>80%	>85%

Data Footnotes: (1) Comparative data from www.medicare.gov/care-compare. (2) Comparative data from the Midas Comparative Database. (3) American Heart Association/American Stroke Association/National Committee for Quality Assurance Heart/Stroke Recognition Program.

TIA vs. Stroke: What is the Difference?

A transient ischemic attack (TIA) is commonly referred to as a mini stroke. However, the term "mini stroke" is not an accurate description of the condition. TIA is still considered a serious medical emergency. While the symptoms of a TIA are similar to those of a stroke, there are significant differences between the two.

A TIA is a brief blockage of blood flow to part of the brain, spinal cord, or retina that can cause stroke-like symptoms including numbness or weakness on one side of the body, dizziness or loss of balance, trouble speaking or understanding speech, and vision problems. Symptoms can last anywhere from just a few minutes up to 24 hours. TIA does not cause damage to brain cells or permanent disability. TIA is often an early warning sign that a person has an increased risk of experiencing a stroke.

A stroke occurs when blood supply to an area of the brain is blocked or when a blood vessel in the brain ruptures. The brain cells are deprived of oxygen and then begin to die. Stroke can cause lasting brain damage, long-term disability, or even death. Symptoms of a stroke are persistent for greater than 24 hours. Stroke symptoms can improve, but over longer periods of time and often require additional medical interventions such as medications that dissolve clots.

It is important to seek immediate medical attention if someone is experiencing symptoms of a TIA or stroke, as symptoms can be the same. Early assessment allows physicians to diagnose the cause and prescribe treatment, which can also help to reduce the risk of a more serious stroke in the future.

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Visit us at LMHealth.org.

Please take a few minutes to read this month's report on **Stroke Care.** You will soon discover why Licking Memorial Health Systems is measurably different ... for your health!

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