



Cognitive therapy helps rebuild memory and language skills after a heart attack or stroke



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More than a dozen stroke survivors, a handful of spouses and siblings, and a dog attended a recent support group meeting at the Stroke Life Center in downtown Toledo.

Attendees discussed their frustrations with the lack of understanding and acceptance of the disability and accommodations stroke survivors need.

Many survivors also expressed that only those who have experienced stroke can understand the cognitive challenges that follow a brain injury.

Impact of brain injury

A stroke occurs when a blood vessel is blocked by a clot or ruptures, preventing the flow of blood and oxygen to part of the brain.

Similarly, a heart attack occurs when blood flow to the heart is reduced or cut off. Depending on the severity of the heart attack and how soon treatment is sought, a heart attack can cause a lack of oxygen to the brain, resulting in brain damage.

“The brain cells all need oxygen to function,” said William Feeman, a family physician in Bowling Green. “Without the oxygen, they die. Everything dies without oxygen.”

Lanna Walters, a speech-language pathologist at McLaren St. Luke’s Hospital, sees a lot of memory issues in people who have had heart attacks. Meanwhile, a stroke is more “specifically targeted” as it takes place at a specific location in the brain.

“[With heart attacks] you can still have a lot of the same characteristics as someone who has a stroke,” she said. “It’s just more generalized. I tend to see deficits across the board of cognition.”

The cognitive deficits one experiences are determined by where in the brain the injury occurred. Damage to the right side of the brain may result in deficits in problem solving, safety awareness, and logical thinking. The left side of the brain, which houses the speech and language centers, may cause loss of language and difficulty following instructions or putting thoughts into words.

Each side of the brain controls the opposite side of the body. A severe stroke on the left side of the brain may leave a patient with weakness or paralysis of the right side of the body.

Many stroke survivors will experience symptoms of aphasia, which is a language impairment that impacts reading, writing, speaking, and comprehension.

“Usually, it looks like not being able to express yourself, sometimes at all, or maybe you try to talk and the wrong words come out. Sometimes what ends up coming out doesn’t sound like words at all,” explained Adrienne Lange, the clinical program supervisor at the DaZy Aphasia Centre at the University of Toledo.

Even if a patient doesn’t have aphasia, they “could be overwhelmed or confused with tasks that they used to be able to do,” said Alexis Ickes, a ProMedica speech-language pathologist.

In cognitive-linguistic therapy, she's addressing challenges like paying bills and remembering names.

Cognitive therapy

Speech-language pathology is a "broad term," Ms. Ickes said, which makes the treatment confusing. Cognitive-linguistic therapy deals with cognitive concerns more than speech and communication deficits, which would be addressed in language therapy, she explained.

Cognitive-linguistic therapy is a part of the rehabilitation process that presents strategies to help manage or improve a patient's memory, attention, executive function, language, and visuospatial skills. Therapists also work with patients to retrain daily tasks like sorting medication or sending a text message.

Recovery from a stroke or heart attack is most effective with a collaboration between physical therapists, occupational therapists, speech therapists, and other medical specialists.

"I try to work really closely with other therapists as well as nursing, doctors if needed, family members, I always tried to really get them involved," Ms. Walters said. "It really takes that entire group along with the patient to try to have some success."

She gave the example of a patient who walks well but their cognition impacts their safety, such as walking too fast, taking too big of a step, or veering to one side.

"When you think about cognition, it involves every aspect of your daily living," Ms. Walters said. "It will affect maybe a patient's ability to be safe when it comes to walking. Getting dressed, cooking, cleaning, being able to pay bills, take medications. Driving is a big one."

"We'll do direct activities to try to improve those areas," she continued. "But a big part of what I do is introduce the patient to strategies."

Everyone is different

The approach is individualized to each patient based on their deficits and goals, but strategies may include repetition, visualization, association, and environmental cues like signs and calendars.

The likelihood of regaining memory and other cognitive skills depends on how much damage is done to the brain, Dr. Feeman said. The Bowling Green physician has researched risk factor intervention for cardiovascular disease for nearly 50 years.

The longer the brain goes without oxygen, the more brain cells die, he explained, referencing the expression, “Time lost in a stroke is brain lost.”

“If you don’t lose a whole lot, you do fine,” he said.

Ms. Ickes said recovery can also depend on the patient’s age.

“With our younger populations, we’re typically seeing more improvements because the brain has neuroplasticity and it grows and adapts,” she said.

Another difference that comes with age is the type of goals an individual may be seeking to achieve. A younger patient may be preparing to go back to work or care for their family, while goals for an older patient might focus on tasks at home like maintaining health and hygiene, and conversational skills.

“With our older population, we’re probably wanting to use more strategies within the home place,” Ms. Ickes said, “putting reminders around the house to help them with deficits that could have been there before they had their stroke or heart attack.”

Cognitive-linguistic therapy can also be confused with cognitive behavioral therapy, which is an approach used by psychologists in treating various mental health conditions.

While the focus is on cognitive function, speech pathologists will take into account a patient’s mental health history to inform their approach to rehab.

“We see a lot of stress and anxiety and depression. I think that comes with any big life change,” Ms. Ickes said. “It’s definitely a lot of counseling in that sense of trying to really motivate the patient that the therapy might be challenging but it is to help them achieve goals.”

Patients are encouraged to seek further counseling for psychological challenges when that would be beneficial.

Life after stroke

Survivors in attendance at the Stroke Life Center meeting validated each other's experiences with positive messages and shared their success stories.

The center's co-founder Cindy Roshon and co-director Valerie Diem are both stroke survivors themselves. Ms. Roshon said she was initially "guttural" after her stroke, and Ms. Diem still has difficulty retaining information and learning new things.

Julie Jessop had a stroke at age 43 and went back to school three years after to get a master's degree in nursing education from the University of Toledo. At the time of her stroke, she had been a trauma nurse at Toledo Hospital and then spent nine years teaching anatomy and physiology.

Even though it took her longer than is traditional to get the degree, she sees this as an achievement.

Ms. Jessop has also noticed positive impacts her injury has had on herself and her family.

"It helped my boys to be understanding and how to help," she said. "They became more independent."

"I walk slowly, but I see a lot more along the way and notice things I never noticed or cared about before," she said, adding that it's something she's "thankful" for.

Marcia Rosenberg described herself during the support group meeting as "probably one of the worst here." She was in a coma for eight months after having a hemorrhagic stroke at age 53.

Through therapy, she relearned how to walk. She currently relies on a cane as well as a brace on her right leg.

Cognitively, Ms. Rosenberg said her comprehension is "relatively good, but I may misplace a word or two." She added that "probably the most frustrating thing I can think of" is when people correct her when the words she says aren't she had intended to say.

"Aphasia, its just a matter of living each day the best that you can even though it's not good and you know it's not good," Ms. Rosenberg said. "I keep growing every day from one day to the next and that is for real."

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