

Surgery a safe, effective option for many epilepsy patients

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Treatment for epilepsy typically focuses on medication, with some patients spending 20 years or more on a variety of drugs in search of effective management of the condition. But a UC Health neurologist says that for many epilepsy patients, surgery can result in a seizure-free lifestyle.

"There are a lot of people who don't recognize that [surgery](#) is really an effective and safe treatment for the right candidates," says Michael Privitera, MD, a professor of neurology at the University of Cincinnati (UC) and director of the [Epilepsy](#) Center at the UC Neuroscience Institute.

"Our technology is better than ever, our MRI scans are better and new techniques help us highlight the specific parts of the brain where the seizures are coming from," he adds. "Plus, the safety of neurosurgery has improved—anesthesia is better, and the microsurgical techniques that neurosurgeons use to localize and get to the part of the brain that they need to get to are significantly better.

"All of those things add up to more effective and safer surgery than ever before."

The Center for Disease Control and Prevention (CDC) estimates that 2 million people in the United States have epilepsy, or a tendency to have recurrent seizures. Nearly 140,000 Americans develop the condition each year, the CDC says. Privitera estimates that up to one-third of those

with epilepsy may be medication resistant and be good candidates for surgery, yet only a small fraction of eligible [patients](#) ever undergo epilepsy surgery.

A study published earlier this month in the Journal of the American Medical Association provided a boost to epilepsy surgery: A randomized, controlled trial suggested that early surgical intervention was superior to continued drug therapy for patients with drug-resistant epilepsy, defined as failing trials of at least two appropriately chosen medications.

Researchers studied 38 patients, randomly assigning 15 to surgery with continued [drug treatment](#) and 23 to continued drug treatment alone. In the surgery plus drug treatment group, 11 patients were seizure-free in the second year of follow-up, while in the drug treatment alone group, no patients were seizure-free in the second year.

Still, Privitera warns, surgery is not appropriate for every epilepsy patient. The best candidates are those who have temporal lobe epilepsy with mesial temporal sclerosis—the loss of neurons or scarring of the deepest portion of the temporal lobe (the bottom section of the brain, just above the ear).

"Temporal lobe surgery is the least complicated and has the highest success rates, but successful epilepsy surgery can be performed in many other brain regions," he adds.

The typical surgery involves removal of a piece of tissue about the size of a walnut from the [temporal lobe](#). At the Epilepsy Center, surgeries are performed at UC Health University Hospital by Ellen Air, MD, PhD, a member of the UC neurosurgery faculty and a neurosurgeon with the Mayfield Clinic.

At the Epilepsy Center, one of 10 centers or programs within the UC Neuroscience institute, cases are typically presented at a multidisciplinary conference that includes Air, along with seven epilepsy neurologists, brain imaging specialists, neuropsychologists, nurses and other specialists. Privitera has led this group of specialists for 25 years.

"It's a whole group of people, but each with his or her own area of expertise that really helps put all the pieces together," says Privitera. (The Epilepsy Center has a Level IV rating from the National Association of Epilepsy Centers—the highest rating for epilepsy care.)

With the goal of seeing patients within a short time of disease presentation instead of 20 years or longer, as is the case with many patients, the Epilepsy Center holds a New-Onset [Seizure](#) Clinic two half-days per week, staffed by two epilepsy specialists and a nurse practitioner. David Ficker, MD, assistant director of the Epilepsy Center, is director of the clinic.

"The earlier we see patients, the more successful we can be at making decisions about what type of treatment is best for them," says Ficker.

Provided by University of Cincinnati

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