

Adult Epilepsy Program offers latest surgeries for stopping seizures



Approximately one million Americans continue to experience epileptic seizures despite the use of anti-seizure medications. The recent introduction of two innovative surgical procedures at UCLA's Adult Epilepsy Program means adults with debilitating seizures now have greater access to safe and effective treatments.

MRI-guided laser ablation

MRI-guided laser ablation is a relatively new, FDA-approved surgical procedure. During the procedure, UCLA neurosurgeons guide a laser through a small hole cut into the skull. Surgeons reference real-time MRI-thermal imaging to heat and destroy abnormal, seizure-causing brain tissue with the laser. This tissue may be located in areas of the brain that are unapproachable with standard surgery. The laser's targeted precision ensures surrounding healthy tissue remains untouched.

Because there is minimal impact to the skull and surrounding brain tissue, patients who undergo laser ablation often go home a day or two after the procedure. Patients who undergo this minimally-invasive surgery also benefit from a faster recovery time and lower infection risk compared to conventional surgeries.

Center provides individualized patient care

The introduction of two new surgical procedures in the Adult Epilepsy Program demonstrates UCLA doctors' ongoing commitment to providing patients with the most appropriate treatment options.

"Some adults aren't candidates for conventional epilepsy surgeries because their seizures originate from both sides of the brain or from areas too close to sections deemed critical for language and motor skills," explains Dawn Eliashiv, MD, co-director of the UCLA Seizure Disorder Center. "With RNS — responsive neurostimulator — and MRI-guided laser ablation, we are able to help a larger number of people who at one time may have been told they were out of options."

UCLA's multidisciplinary team of epilepsy experts works collaboratively with one another as well as with referring physicians. This team approach ensures that patients benefit from treatment plans tailored to their specific health needs. "Our goal is to provide a better quality of life for all of our patients. This is one of the reasons our doctors are so actively involved in ongoing research," says John Stern, MD, director of the UCLA Epilepsy Clinical Program.

Responsive neurostimulator therapy

Patients who are not eligible for conventional epilepsy surgery due to seizures that originate from more than one location or from areas close to centers providing critical functions can benefit from responsive neurostimulator (RNS) therapy. Neurosurgeons implant the RNS system under a patient's scalp and connect electrodes to regions identified as causing the patient's seizures. When the device detects the electrical activity of a seizure, it delivers a small amount of electrical stimulation to the area, which disrupts the abnormality before the patient is aware of it.

Clinical studies indicate that the RNS system may reduce the average number of monthly seizures by as much as 38 percent.

UCLA's Adult Epilepsy Program is one of about 20 programs nationwide currently offering the RNS system for adults with medically intractable epilepsy. The FDA approved RNS as an epilepsy treatment in November 2013.

About the UCLA Adult Epilepsy Program

UCLA's Adult Epilepsy Program is one of the largest and most established of its kind in the country. As part of UCLA's comprehensive program, patients receive a complete diagnostic evaluation to help doctors customize the most appropriate treatment plan. This may include medications, neurostimulation or surgical treatments. The program's team of experts works with neurologists for complete patient care.

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