

More Control, More Freedom

*Gain better control
of your seizures with
epilepsy surgery.*



Neurosurgery One

A Centura Health Clinic

NeurosurgeryOne.com/epilepsy-surgery

GAIN CONTROL *Surgery Can Reduce Seizures*

If you have epilepsy and medication isn't controlling your seizures to the extent you would like, it might be time to consider surgery. Thanks to advancements in technology and research, nearly every adult with uncontrolled epilepsy is now a candidate for surgery. And you don't have to wait years for surgery. In fact, studies show that earlier surgery is better to prevent a decline in thinking and functioning caused by uncontrolled seizures.

Epilepsy surgery benefits vary based on the patient and type and location (focality) of seizures. The more focal the seizure, the better odds of being seizure-free post-surgery. However, newer neurostimulators can dramatically improve seizures even in patients with poorly localized seizures.

Benefits of epilepsy surgery can include:

- > Reduction or elimination of seizures.
 - Nearly 70% of people who undergo a temporal lobe resection are either free from seizures or rarely experience disabling seizures.
 - In temporal lobe epilepsy, surgery is superior to prolonged medical therapy.
 - Research shows that for patients who did not respond to antiepileptic drugs (AEDs), surgery eliminated disabling seizures for approximately 60% of patients. For patients who did not undergo surgery and continued solely with medication, only 10% were seizure-free.
- > Improvements in both social and cognitive measurements.
- > Reduced risk of seizure emergencies, injuries, and death.
- > Elimination of or reduction in seizure medications.
- > Reduced likelihood of experiencing anxiety and depression.
- > Increased likelihood of returning to work and being able to drive.
- > Reduced costs associated with epilepsy treatment.

To learn more or schedule an appointment, please go to [NeurosurgeryOne.com/Epilepsy](https://www.NeurosurgeryOne.com/Epilepsy) or call **720.638.7500**.



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Are You a Candidate for Epilepsy Surgery?

If you are experiencing uncontrolled seizures, you may be a candidate for surgery. Patients do not have to wait a certain amount of time before considering surgery, and research shows that earlier surgery may be better.

Candidates for surgery typically must meet just two criteria:

- > Seizures failed to be controlled with at least two different types of antiepileptic drugs (AEDs)
- > General good health

If you have been diagnosed with a mental illness, such as anxiety or depression, you may have been told you do not qualify for surgery. However, often mental illness is a direct result of seizures, which does not automatically eliminate you from qualification. At Neurosurgery One, we can help determine if you are a candidate for surgery and help you navigate the process.



Earlier Surgery May Be Better

Historically, there has been more than a 20-year delay in referring epilepsy patients for surgery. However, one study found that newly diagnosed temporal lobe epilepsy patients who underwent surgery combined with AEDs were much more likely to be seizure-free than patients who only took AEDs. Another study found that for frontal lobe epilepsy, younger age and shorter epilepsy duration at time of surgery resulted in better seizure outcomes.



Steps to Surgery

To determine which type of surgery may be right for you, Neurosurgery One partners with you through the following steps:

- 1 Our neurosurgeon who is specially trained in treating epilepsy will meet with you to **determine your goals**, review your seizure history to date, and discuss the process.
- 2 Teaming up with epileptologists at Littleton Adventist Hospital's Epilepsy Monitoring Unit, we will conduct noninvasive testing to **locate the cause of your seizures**. These tests may include EEG, MRI, PET, or SPECT.
- 3 If these test results are inconclusive or conflicting, we may recommend **intracranial EEG monitoring** to get a more detailed look at your brain activity.
- 4 Once the cause and location of your seizures are determined, our epilepsy team will **determine the best surgical options** for your specific needs and discuss those with you. We will present you with the benefits and risks of the surgery, the research supporting the surgery option, what you can expect as a result of your surgery, and any alternative approaches.



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Types of Epilepsy Surgery

Epilepsy surgery has been a proven, safe, and effective option for many epilepsy patients since the 1980s. Thanks to advancements in research and technology, epilepsy surgery options continue to evolve. Newer, minimally invasive surgical options offer many patients a better overall experience with fewer side effects. Surgical options also now exist for poorly localized seizures, and many patients who have had previous surgery are also candidates for additional surgery.

Neurosurgery One's fellowship-trained neurosurgeons who specialize in epilepsy perform the following types of epilepsy surgeries:

- > **Resection:** The most common type of epilepsy surgery, this procedure removes the small part of the brain causing seizures.
- > **Thermal Laser Ablation:** Also known as laser interstitial thermal therapy (LITT), ablation uses laser heat to destroy the small area of the brain causing the seizures. This minimally invasive procedure is highly effective, with up to 60% cure rates.
- > **Responsive Neurostimulation (RNS)/NeuroPace:** Similar to a pacemaker, this implanted device monitors brain waves and automatically sends electrical pulses when seizure patterns are recognized to interrupt seizure activity.
- > **Vagus Nerve Stimulation:** A pacemaker-like device is implanted in the chest, and a wire is wrapped around the vagus nerve in the neck. The device sends regular, mild electrical pulses to the brain, preventing seizures.
- > **Deep Brain Stimulation (DBS):** Approved by the FDA in late 2018 for use with patients with epilepsy, this system works similar to the NeuroPace system. Neurosurgery One is a world leader in performing DBS using robotic guidance while patients are asleep. We also place the pulse generator; placement is conducted in our outpatient surgery center rather than requiring a subsequent hospital admission.

The type of surgery that may be right for you depends on your seizure type, cause, and location, as well as personal factors. We will discuss all viable options and potential benefits and side effects of each with you.

All research citations provided in this brochure can be found at NeurosurgeryOne.com/Epilepsy-Research.

Epilepsy surgery eliminates disabling seizures in approximately 60% of patients who do not respond to antiepileptic drugs.

Source: Multiple studies found at NeurosurgeryOne.com/epilepsy-research.

FAQs

Do I need to see a neurologist or epileptologist before contacting Neurosurgery One?

No. We work closely with a team of neurologists and epileptologists at the Epilepsy Monitoring Unit at Littleton Adventist Hospital.

Is surgery covered by insurance and/or Medicare?

Yes, epilepsy surgery is typically covered. We will contact your insurance provider and handle pre-qualification details.

What makes Neurosurgery One unique?

Our neurosurgeons have extensive training and experience in treating patients with epilepsy. We offer all types of epilepsy surgery and will provide you with evidence-based treatment plans customized to your unique needs and goals.



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Serving Patients Throughout the Rocky Mountain Region

Neurosurgery One neurosurgeons who specialize in treating patients with epilepsy provide in-person and telehealth consultations throughout Colorado and the Rocky Mountain region. They perform epilepsy surgery at Littleton Adventist Hospital, which houses one of the region's leading Epilepsy Monitoring Units as part of its Neurosciences Center. At Littleton Hospital, patients receive a high level of individual attentiveness by physicians and staff that a smaller community hospital can offer while also receiving the expertise and technology of a large university medical center.

Neurosurgery One's main Denver location for epilepsy treatment is located next to Littleton Adventist Hospital, just off C-470 and South Broadway Boulevard.

Arapahoe Medical Plaza III
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Neurosurgery One has offices throughout the Denver metro area, including Arvada, Castle Rock, Lakewood, Littleton, Lone Tree, and Parker.

LEARN MORE AT

NeurosurgeryOne.com/epilepsy-surgery or call us at **720.638.7500**.