

Some patients may want to participate in clinical trials of investigational anti-epileptic drugs at the Emory Epilepsy Center. The Center also offers expertise with patient groups that typically experience special problems with these medications, such as pregnant women, children with learning or behavioral problems and the elderly.

- **Epilepsy Surgery**

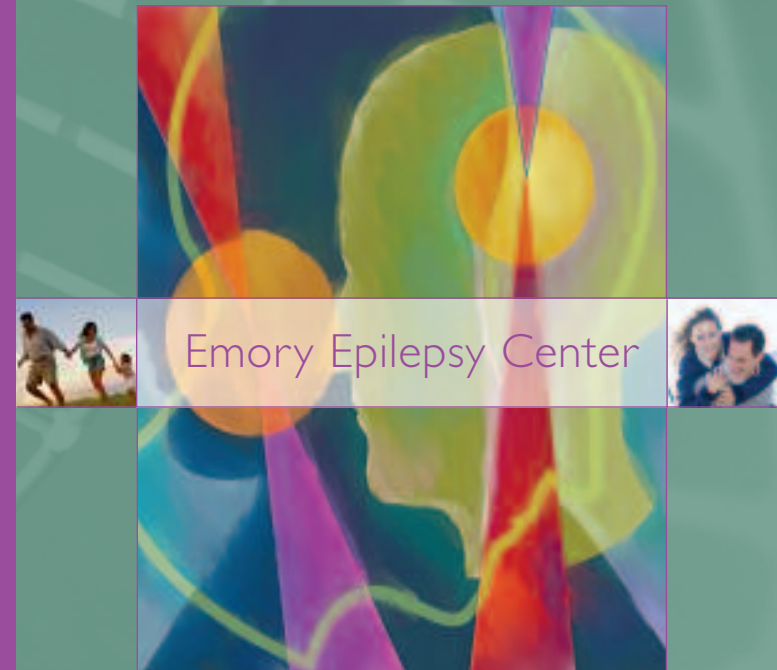
The Emory Epilepsy Center has been very successful with the use of surgery to treat certain cases of epilepsy. For example, temporal lobe epilepsy, the single most common type of epilepsy, typically responds well to selective amygdalo-hippocampectomy. Other types of epilepsy can respond well to different surgical procedures, such as topectomy or corpus callosotomy. While not every patient is a surgical candidate, epilepsy surgery now offers hope in selected patients whose seizures cannot be controlled with medication alone.

- **Vagus Nerve Stimulation**

The Emory Epilepsy Center has expertise with this procedure, which is designed to block seizure-producing electrical activity in the brain via stimulation of the vagus nerve. The vagus nerve stimulator is an excellent alternative to patients who have medically-refractory seizures but are not surgical candidates.

**To schedule your patient or  
for more information, call  
the Physician Consult Line at**

**404-778-5050 or  
1-800-22-EMORY.**



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*The Emory Epilepsy Center is dedicated to diagnosis, treatment and research to improve the lives of patients with epilepsy, seizures and disorders of consciousness.*

The Emory Epilepsy Center is one of the nation's leading institutions in the study and treatment of epilepsy, providing diagnostic services, therapy and surgical treatment for adults and children. Our epilepsy specialists have expertise in controlling seizures while minimizing excessive adverse effects of medication. The Center also addresses the educational, occupational and social problems younger adults and children may experience, as well as the memory and quality-of-life issues older adults with epilepsy face.

The Emory Epilepsy Center is part of the Emory University School of Medicine, globally recognized for medical research and physician training, and EMORY HEALTHCARE, one of the nation's leading healthcare systems. These resources support the neurologists and neurosurgeons of the Emory Epilepsy Center in applying the latest innovations in treatment. Our Center is a leader in research and clinical trials, searching for answers to the origins of epilepsy and new treatments that will improve the lives of patients with these disorders. Our comprehensive services include diagnostic testing and the latest treatments for the management of all forms of epilepsy.

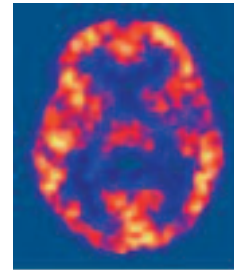


## DIAGNOSTIC SERVICES

### Diagnosis of the Causes and Consequences of Epilepsy

The Emory Epilepsy Center uses the latest diagnostic tools to identify the causes of epilepsy. These tools include:

- **Electroencephalography (EEG)** to measure brain electrical activity. EEG can be performed with video, or as a prolonged ambulatory recording.
- **Structural Neuroimaging**, a major diagnostic service of the Emory Epilepsy Center and Emory Department of Radiology, to detect lesions and biochemical dysfunction that cause epilepsy.
- **Functional Neuroimaging**, with positron emission tomography (PET) or single photon emission computed tomography (SPECT) scans, to map the patterns of blood flow, energy use and membrane receptors in specific brain regions.



*PET imaging is used for presurgical localization of the seizure-onset zone.*

- **Neuropsychological Testing** to measure the severity of memory and other cognitive dysfunction that can occur interictally in many individuals with epilepsy.
- **Genetic Testing, Blood Chemistry and other laboratory tests** also can help identify the causes of an individual's epilepsy.

### Diagnosis of Seizure Types

Lack of seizure control in patients who are taking anti-seizure medication as prescribed can arise from diagnostic inaccuracies. In some instances, seemingly typical seizure behaviors can be generated by psychological mechanisms in the absence of epilepsy. In other cases, brief bursts of bizarre behaviors, which can occur in psychotic episodes or other psychiatric conditions, are in fact, manifestations of epileptic seizures. Occasionally, parasomnias and other seizure-like, non-psychiatric conditions also can be mistaken for epilepsy.

The Emory Epilepsy Monitoring Unit allows for continuous video-EEG monitoring. Continuous monitoring can improve diagnostic accuracy when the diagnosis of epilepsy, particular seizure type, or location of onset is not clear by routine or prolonged EEG recordings. The accurate diagnosis of seizure types aids in the appropriate selection of effective medications and possible surgical treatment options. Accurate diagnosis also may lead to the discontinuation of medications that have been causing drowsiness, impaired thinking or other adverse effects.

## THERAPEUTIC SERVICES

- **Anti-Epileptic Drug Therapies**  
Anti-epileptic drugs can control seizures completely in more than two-thirds of epilepsy patients. In many cases, an epilepsy specialist must make adjustments to standard drug regimens in order to achieve complete seizure control.