

# ADULTS AND CHILDREN WITH EPILEPSY BENEFIT FROM USE OF VIDEO EEGs

*Saint Peter's is a Level 4 epilepsy center— the highest rating from the National Association of Epilepsy Centers*

The use of video is helping doctors at Saint Peter's University Hospital determine whether epilepsy is the cause of seizures in adults and children. Epilepsy is a chronic neurologic condition characterized by recurrent seizures. In some cases epilepsy can be a benign condition that may resolve on its own over a period of time, as is the case with benign rolandic epilepsy and seizures that occur with an acute illness such as encephalitis.

Video with continuous electroencephalography, the recording of brain-wave patterns, is an essential diagnostic tool used to distinguish among the various types of seizures, confirm the diagnosis of seizures, and classify the type of epilepsy, according to Jeffrey M. Politsky, M.D., medical director of adult diagnostic neurology at The Epilepsy Center at Saint Peter's University Hospital, and co-director of research for the Northeast Regional Epilepsy Group.

"Changes in brain waves don't always result in seizures, and not all seizures are caused by epilepsy," explains Carlos Lastra, M.D., a pediatric neurologist at The Children's Hospital at Saint Peter's University Hospital and medical director of pediatric diagnostic neurology at The Epilepsy Center at Saint Peter's. Neurologists use video EEGs (electroencephalograms) to help make a direct correlation between brain-wave patterns and external signs of seizures, Dr. Lastra says, and to rule out other disorders such as cardiac arrhythmia (an abnormal heart rhythm) or narcolepsy (a chronic sleep disorder) that can *look* like epilepsy.

"Most times video EEGs help us to confirm if it is epilepsy," adds Dr. Lastra.

### How It's Done

During a video EEG a patient's brain activity is recorded using electrodes that are placed on the patient's scalp. These electrodes map out the brain's activity; a video camera simultaneously records what happens to the patient during a seizure. Both can be viewed simultaneously on a split screen by the medical team.



*Carlos Lastra, M.D., pediatric neurologist, viewing a video EEG of a pediatric patient.*

The duration of a recording can vary from hours to days depending on the reason for the evaluation, says Dr. Politsky. Longer evaluations may be necessary in the case of patients with medication-resistant epilepsy who may be considered candidates for surgical treatments or patients in the intensive care unit who are at high risk of having seizures.

The doctor can view the EEG readings side by side with the videotape either in real time (if necessary for critical care) or after the test period. And besides being a diagnostic tool, video EEG can also be useful with patients already known to have epilepsy. "We use it to learn how stable the disorder is and if the

patient is a candidate for a reduction in medication," says Dr. Politsky. "Because a patient can have a seizure without knowing it, we also can see if the patient is having more seizures than we are aware of."

### Specialized Treatment

Saint Peter's is a Level 4 epilepsy center—the highest rating available from the National Association of Epilepsy Centers. The center's full-time, specially trained staff provides the most complete range of evaluative and surgical treatments for epilepsy available today.

Saint Peter's is planning to expand the center in order to develop specialized programs for the elderly, patients with mood and anxiety disorders, and the emergency care of seizures. Plans also are in place for the development of a female health and epilepsy program.

"There's a big need for these services. Epilepsy is an undertreated problem," says Dr. Lastra. "A conservative estimate is that it affects 1 percent of the population, but it's probably more like 1.5 percent. That means about 100,000 people in New Jersey and maybe 250,000 in the tri-state area. That's why Saint Peter's is striving to offer the fullest and finest services in epilepsy care."

*To learn more about services for the diagnosis and treatment of seizure disorders at Saint Peter's University Hospital, please call the Epilepsy Center 732-339-7900. Visit [www.saintpetershcs.com](http://www.saintpetershcs.com) to find a neurologist.*