

# UNDERSTANDING SEIZURES AND EPILEPSY







## **WHAT TO KNOW ABOUT SEIZURES AND EPILEPSY**

Around 50 million people worldwide have epilepsy, making it one of the most common neurological diseases globally. Many people with epilepsy lead normal, active lives and a large percentage can successfully control their seizures through medication or other treatments. Working closely with a health care team to understand the condition and the best treatment for you is essential to quality of life.

### **Seizures**

Occur when one or more parts of the brain has a burst of abnormal electrical signals that interrupt normal brain signals. They can cause changes in the level of consciousness (brief lapses of attention or total loss of consciousness), behavior, muscle jerks, memory, feelings, or prolonged convulsions. Seizure frequency can vary from once in a lifetime to multiple times per day. Seizures may be provoked (identifiable/modifiable cause) or unprovoked (without clear cause).

## **Epilepsy or seizure disorder**

Is characterized as recurrent seizures, a single seizure along with a high risk for another seizure, or an epilepsy syndrome diagnosis (temporal lobe epilepsy or Lennox-Gastaut syndrome). Up to 10% of people worldwide have at least one seizure during their lifetime. Around 50 million people worldwide have epilepsy, making it one of the most common neurological disorders. In the U.S., 1.2% of the population have active epilepsy. This is about 3 million adults and 470,000 children.

## **Non-epileptic events**

There are also physical or medical events that may mimic seizures. Due to the absence of seizures, they are often called nonepileptic events. Some of these medical conditions include syncope, migraines, movement disorders, and sleep disorders.

## **Psychogenic nonepileptic seizures**

Psychogenic nonepileptic seizures (PNES) include involuntary changes in behavior, movement, or sensation. PNES are thought to be the body's response to physical or emotional distress that the brain is detecting. While PNES may look like epileptic seizures, they are not caused by abnormal brain electrical activity.







## What is an electroencephalogram (EEG)?

The neurodiagnostic team at Stamford Hospital's Diagnostic Neurology (EEG lab) includes qualified neurologist-epileptologists and EEG technologists. We perform the following outpatient and inpatient procedures to help make diagnoses and manage neurological conditions:

### EEG

An EEG is the recording of the electrical activity of the brain. The EEG exam is a test performed while the patient is relaxed — in the state of awake, drowsy, and sometimes asleep. We provide different lengths of EEG recordings; it is also optional to record on video camera at the request of the doctor. The test may range from 30 minutes (routine EEGs) to hours or several days (inpatient long-term monitoring with video or take-home ambulatory monitoring).

## EEG: What to expect and how to prepare

An EEG is a painless test. The head will be measured and electrodes will be fixed over the scalp using special solutions and creams. The application process takes approximately 20-30 minutes, and the duration of the test depends on which test is ordered. The patient should come with a clean scalp and NO hair pieces attached. Patients will be asked to answer some questions or perform some simple tasks during the test. If the test requests sleep, the patient should stay awake extra hours the night before in preparation.

Patients can eat before the test, but should refrain from caffeinated drinks or stimulants like chocolate three hours prior to the EEG. For the ambulatory test, we recommend patients wear a button-down or zipped shirt for easy clothing changes. Patients should also bring a list of all their current medications.

If you or a loved one has experienced a seizure or nonepileptic event and need to seek care, the first step is to discuss your symptoms with a primary care physician or a neurologist. They can refer you to Stamford Health's Neurology Department for further testing and to develop a care plan for you. The cost should not delay the diagnosis or treatment of seizures and nervous system conditions. Most insurance plans cover the cost of testing for epilepsy or neurological conditions.

**If you have any questions or concerns about what you should do, please reach out to us at 203.276.7543.**





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