Epilepsy affects about 65 million people worldwide and about 1% of the US population. Seizures pose risks and the main goal of epilepsy treatment is to eliminate seizures while minimizing the adverse effects of antiseizure drugs.

Andres M. Kanner, MD, and Manuel Melo Bicchi, MD, both of the University of Miami Miller School of Medicine in Miami, Florida, wrote an article in JAMA reviewing the management of epilepsy in adults using antiseizure drugs.

In a recent Clinical Reviews interview, Dr Kanner spoke with JAMA Senior Editor Christopher C. Muth, MD. This is an edited version of their conversation.

**DR MUTH:** There are many different types of seizures and different types of epilepsy. So to begin with, what is the actual definition of a seizure?

**DR KANNER:** So a seizure is what we call a paroxysmal event, a sudden event, that manifests with a variety of clinical phenomena that can include motor phenomena, sensory phenomena. Patients may experience visual symptoms, auditory symptoms, psychological symptoms. And, the seizures can actually result from abnormal, excessive electrical activity in circuits of the brain.

**DR MUTH:** When we’re talking about seizures vs epilepsy, can you clarify those 2 terms and what the term epilepsy signifies?

**DR KANNER:** The seizure is the individual event that happens. A person may have in the general population a risk of 5% of having a single unprovoked seizure in the course of their life and never have another one. Epilepsy is a condition of the brain that predisposes the occurrence of recurrent unprovoked seizures unless you start treatment that will prevent the recurrence. So when you are establishing a diagnosis of epilepsy, you are saying, this brain has the potential of generating spontaneous seizures, and that person needs to be treated.

**DR MUTH:** There are a lot of things to think about when choosing an initial antiseizure medication. What are some of the things that go into the initial treatment decision?

**DR KANNER:** It is of the essence that the clinician knows what type of seizures and what type of epilepsy and what type of epilepsy syndrome they are treating. The second set of variables that the clinician needs to consider is is this person suffering from other medical, psychiatric, and neurologic conditions where the antiseizure medication can have either a therapeutic effect or an iatrogenic effect, a negative effect. [For example,] there are several antiseizure medications that in people with a previous history of mood and/or anxiety disorder or family history of these conditions, can cause the occurrence of psychiatric symptoms including symptoms of depression, anxiety, suicidality, irritability, or frustration tolerance. So those are patients in whom you will try to avoid those drugs.

**DR MUTH:** In terms of the goals of therapy, what is the goal?

**DR KANNER:** The goal of therapy is to obtain a complete remission of seizures with minimal or no adverse events of the medication. Because persistent seizures, if you continue to have seizures, you are at increased risk of self-harm, such as fractures, injuries, concussions, contusions, and if you have convulsions in your sleep, an increased risk of death by what we call sudden unexpected death in epilepsy. You can also die from drowning. Therefore, the goal of therapy is no seizures.

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**Note:** Source references are available through embedded hyperlinks in the article text online.