

Five things you didn't know about epilepsy

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Credit: AI-generated image ([disclaimer](#))

Though it's the fourth most common neurological disease in the United States—affecting 1 in 26 people—epilepsy is also one of the most stigmatized. Hear the word "seizure," and you might picture a dramatic scene: A person's eyes roll to the back of the head as he or she shakes fiercely on the ground, reacting to a sea of strobe lights.

But some seizures may appear as subtle as a drooling mouth or a blank

stare. Others could go completely unnoticed, according to Carla LoPinto-Khoury, MD, a neurologist and assistant professor at Drexel University College of Medicine.

"Seizures can look very different," she explained.

One patient may have an episode every two years, while another could have two per day. Occasionally seizures begin in childhood and go away later in life. But often they persist, and in some cases begin, in later adulthood.

Still, any level of epilepsy can affect a person's quality of life. Patients worry about losing their jobs, taking care of their children and driving cars—never sure when their next [seizure](#) may strike.

Why do they happen? Seizures occur when the electrical and chemical signals that normally allow our brain cells to communicate with each other are over-activated, LoPinto-Khoury said.

"Normally cells are having all sorts of cross-talk from different parts of your brain at once, but it's in an organized way—a way that makes sense," she added. "But during a seizure, you have millions of brain cells in one tiny little space reacting abnormally. And that over-activity makes things happen that shouldn't be happening."

Depending on where in the brain the over-activity begins, different symptoms may occur. A patient's vision might be affected, for example, if the seizure happens in the mind's visual area. Likewise, if a seizure affects a patient's memory center, then the patient may not be able to recollect the episode.

During Epilepsy Awareness Month, LoPinto-Khoury explains the many faces of the condition and debunks some common misconceptions.

1. Epilepsy is characterized as the "tendency to have seizures."

Experiencing a single seizure doesn't mean you have epilepsy. Many factors, like a spike in blood sugar or trauma to the head, can set off a single seizure in an otherwise healthy person. A patient is diagnosed with epilepsy if he or she has two or more seizures not caused by another treatable medical condition. Patients may also be diagnosed with epilepsy if they've had only one seizure, but tests show that they would be likely to reoccur again. "I tell my [patients](#) that all epilepsy means is that they have a tendency to have seizures. That's the bottom line," LoPinto-Khoury said. Also, "there are a lot of things that seizures can look like, and lot of things that look like seizures," she adds, which is why patients are monitored with tests like an electroencephalogram (EEG), in order to better understand their condition.

2. Epilepsy can be a symptom of many different disorders.

"For doctors who specialize in something like HIV, there is a very specific cause for a disease with many different symptoms," LoPinto-Khoury said. "I'm kind of the opposite. I am a doctor for a symptom that has many different causes." That means LoPinto-Khoury treats patients of many different ages and backgrounds. Some patients have developmental problems or other special needs, and are unable to care for themselves, while others you may never know they had epilepsy.

While seizures are often unprovoked for patients with epilepsy, there are certain triggers that can increase their risk, like lack of sleep or during certain times of a woman's menstrual cycle. Surprisingly, "most patients do not have photosensitive epilepsy," LoPinto-Khoury said, meaning flashing lights will not necessarily set off a seizure in the majority of

people with the condition.

3. Epilepsy is treatable.

If you are diagnosed with epilepsy, your neurologist may prescribe you one of over a dozen different medications that are currently available for treating seizures. "Most seizure medicines in some way decrease the activation of the patient's [brain cells](#)," LoPinto-Khoury said.

About two-thirds of patients with epilepsy have seizures that can be controlled with medication. For the rest, other treatments are available. A patient may be a good candidate for a lobectomy, in which a surgeon removes a portion of the seizure-causing brain tissue. Up to half of patients who undergo the procedure are free of seizures with little side effects.

Other therapies such as brain or nerve stimulation, are also used to help those who do not respond to medication or surgery. "With the right care, many people can go on to lead good, 'normal' lives," LoPinto-Khoury said.

4. But treatment must be tailored to the individual patient's body and lifestyle.

One challenge for LoPinto-Khoury is prescribing medications for patients that won't interfere with other medical conditions they may have or cause too many side effects. Finding the ideal treatment often involves some trial and error, as well as a strong relationship between doctor and patient. "I can't tell how the epilepsy affects my patients as much as they can tell me," she said. "A lot of times I'll cycle through a lot of medications because they can't tolerate one or the other."

At Drexel, LoPinto-Khoury is working with Deeptha Sukumar, PhD, an assistant professor of nutrition sciences in the College of Nursing and Health Professions to find out how different seizure medications affect Vitamin D levels. "It seems like when we look at levels for all epilepsy patients—no matter what medications they take—they still have some level of vitamin D deficiency, and we don't know why," LoPinto-Khoury said.

5. If you see someone having a seizure, here's what to do.

If a patient has [epilepsy](#), he or she might already have made his or her colleagues, friends and family aware of the condition. If you witness someone have a seizure, it can be frightening, but try to remain calm. Ensure the person is not near anything harmful (like the edge of a sharp desk or a swimming pool). Also, try to turn the person on his or her side. Otherwise, do not try to restrain the person, because this could cause injury, LoPinto-Khoury said. While most seizures will resolve on their own within a few minutes and not require emergency medical treatment, you should call 9-1-1 if you witness a seizure lasting longer than five minutes, or if you have any doubts about the person's safety.

Provided by Drexel University

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