



What are Non-Epileptic Seizures?



## CLEVELAND CLINIC EPILEPSY CENTER

Cleveland Clinic Epilepsy Center, established in 1978, is a national and international pacesetter in the treatment of epilepsy in both children and adults.

A team of dedicated physicians, healthcare professionals and support staff participate in the evaluation and treatment of our epilepsy patients who come here from across the country and around the world. More than 200 epilepsy surgical procedures are performed at Cleveland Clinic each year.

The Cleveland Clinic Epilepsy Center meets and exceeds guidelines for both fourth-level medical and fourth-level surgical epilepsy centers, the highest levels set forth by the National Association of Epilepsy Centers.

## WHAT IS A SEIZURE?

A **seizure** is a temporary loss of control often, but not always, accompanied by convulsions, unconsciousness or both. Most common are **epileptic seizures**, or seizures caused by sudden abnormal electrical discharges in the brain.

**Non-epileptic seizures**, on the other hand, are not accompanied by abnormal electrical discharges. They have been previously called pseudoseizures, but that term is misleading. These seizures are quite real, and people who have them do not have conscious, voluntary control over them. Non-epileptic seizures have no identifiable physical cause, but they are believed to be physical reactions to psychological stresses.

Non-epileptic seizures resemble epileptic seizures in outward appearance, even though their cause is very different. Non-epileptic seizures may appear to be generalized convulsions, similar to grand mal epileptic seizures, characterized by falling and shaking. They also may resemble petit mal epileptic seizures, or complex partial seizures, characterized by temporary loss of attention, staring into space or dozing off.

Many people have non-epileptic seizures. At Cleveland Clinic, we see between 100 and 200 patients each year with this condition. Most of our patients are between ages 20 and 40, but non-epileptic seizures can occur in both younger and older people as well.

## HOW CAN I BE SURE THAT I HAVE NON-EPILEPTIC SEIZURES?

Your neurologist may suspect non-epileptic seizures based on your medical history and the results of a physical examination, but additional tests will help to rule out other causes and confirm your diagnosis.

The most important factor in diagnosing non-epileptic seizures is to rule out the possibility of epilepsy. A final diagnosis typically is not made, therefore, until all tests for epilepsy are found to be negative.

A routine 20-minute electroencephalogram (EEG) often is helpful in diagnosing epilepsy because it can detect the abnormal electrical discharges in the brain that indicate epilepsy. However, a negative EEG test by itself is not enough to establish a diagnosis of non-epileptic seizures.

**The most reliable test is to monitor a patient with a video camera and an EEG until a seizure occurs. This test requires the patient to spend time in a specialized epilepsy monitoring unit (EMU).** By analyzing the video and EEG recordings of a seizure, your neurologist can determine whether abnormal electrical discharges are present.

Once epilepsy is ruled out, other physical conditions that resemble seizures also may have to be excluded. These conditions include heart disease, stroke and fainting, as well as some sleep and neuromuscular disorders. If additional tests for these issues are negative, then a psychological assessment can help to finalize your diagnosis of non-epileptic seizures.

### **WHY DID OTHER DOCTORS SAY I HAD EPILEPSY?**

Most patients with non-epileptic seizures are treated with antiepileptic drugs at some point before the correct diagnosis is made. Epileptic seizures are potentially more harmful than non-epileptic seizures and physicians, when uncertain of the diagnosis, usually treat for the more serious illness.

If medication stops the seizures, they probably were epileptic. If not, then either the treatment needs to be changed or the diagnosis is not epilepsy. Few physicians have access to the EEG and video monitoring facilities needed to distinguish non-epileptic seizures from epileptic ones. At this point, patients often are referred to an epilepsy center, such as the one we have at Cleveland Clinic, for further tests. This is where the diagnosis usually is made.

A diagnosis of non-epileptic seizures means that most patients can safely be taken off antiepileptic drugs. This fact is important because antiepileptic drugs can have harmful or even dangerous side-effects. A few patients with epilepsy have both non-epileptic and epileptic seizures. If you have both types, it is important that you and your physician know which are epileptic and which are not so that you can be treated accordingly.

### **WHAT CAUSES NON-EPILEPTIC SEIZURES?**

Unlike epileptic seizures, non-epileptic seizures are not caused by physical disorders of the brain. Rather, non-epileptic seizures may result from traumatic psychological experiences or unusual stresses, sometimes even those in the forgotten past.

It has been known since ancient times that emotional or psychological stresses can produce physical symptoms in a person with no apparent physical illness. Almost everyone



has blushed in embarrassment or been nervous and anxious as part of a “stage-fright” reaction.

Today, we know that more extreme emotional stresses can actually cause physical illnesses. In addition, some physical illnesses can be greatly influenced by psychological or emotional factors. Such illnesses are called **psychosomatic**, or mind-body, illnesses. Examples include forms of acne, allergy, angina (chest pain), asthma, headache, ulcer, obesity, rheumatoid arthritis and ulcerative colitis. Although psychosomatic illnesses have strong psychological components, their treatment is primarily medical.

Emotional stresses also can cause symptoms that resemble physical illnesses, but have no underlying physical cause. The medical term for these symptoms are **somatoform**, meaning they take form in the body. Examples include forms of paralysis, blindness and even the inability to speak. These disorders differ from psychosomatic illnesses in that both their causes and treatments are primarily psychological.

Non-epileptic seizures represent such a disorder. No underlying physical cause is known to be responsible. It is important to remember, however, that **somatoform disorders, including non-epileptic seizures, are real conditions that arise in response to real stresses. Patients are not imagining or inventing them.**

If your seizures are determined to be psychological in origin, you should not be ashamed or self-conscious of that fact. But you should recognize that your situation is poorly understood by many people, including some healthcare professionals. As a result, some people, including loved ones, may try to blame you for having a psychogenic illness or for not getting better. You may even want to blame yourself. Such blame can be far more destructive than the non-epileptic seizures themselves.

A specific traumatic event — such as physical or sexual abuse, incest, divorce, death of a loved one or other great loss or sudden change — can be identified in many patients with non-epileptic seizures. Often the underlying trauma has been blocked from consciousness. Many patients can recall the event only with considerable support from a trained therapist. The unconscious processes that give rise to non-epileptic seizures also may cause or contribute to other conditions, such as depression and anxiety, which need to be identified and treated.

Non-epileptic seizures differ from other psychogenic disorders in one important aspect: Non-epileptic seizures can be shown with great certainty to be of psychological origin. With the appropriate tests, the accuracy of the diagnosis is comparable to that of diagnosing a broken bone with an X-ray. Such certainty is not possible for other psychogenic symptoms, such as pain, blindness or paralysis. **This confidence in the diagnosis allows proper treatment to be given and greatly increases the chances of complete recovery.**

#### DO I REALLY NEED PSYCHIATRIC TREATMENT?

The psychological factors underlying non-epileptic seizures can be identified best with the help of healthcare professionals trained in psychological issues. This includes psychiatrists, psychologists and clinical social workers. As with all medical conditions, however, sometimes the exact cause of psychogenic seizures remains unknown. But even then, we can concentrate on the most important goal: reducing or eliminating your seizures.

Some people believe that treatment by a psychiatrist is a sign of being mentally unstable or incompetent. This is not the case with non-epileptic seizures, but many patients become upset when told their seizures are psychological. Remember that **non-epileptic seizures are not purposely produced; it is not your fault that you have them. It just makes sense to seek treatment from the person most able to help you.**

Some patients are reluctant to accept the diagnosis. Keep in mind that non-epileptic seizures represent a well-recognized condition that can be diagnosed with a high degree of certainty. Treatment for non-epileptic seizures may be provided by several medical professionals. At Cleveland Clinic, your epileptologist may continue to see you, but your treatment will be provided primarily by a psychiatrist, psychologist and/or clinical social worker.

Your care may involve psychotherapy, stress-reduction techniques (such as relaxation and biofeedback training) and personal support to help you cope with your seizures during the course of your treatment. The outlook for patients with non-epileptic seizures is good. With proper treatment, such seizures eventually disappear in 40 percent to 70 percent of adults. These percentages are even higher in children and adolescents.

#### WHAT ABOUT CHILDREN?

Although non-epileptic seizures are more common in young adults, they also occur in children. Typical psychogenic symptoms in these groups include headaches and stomachaches. Most of the information in this guide applies to children as well as adults. Children generally differ from adults only in that the stressors these young people experience tend to be less severe and tend to be related to school, dating or other age-related situations. Children also have a higher rate of recovery.

#### A FINAL THOUGHT

Non-epileptic seizures continue to be the subject of new and promising research. This well-recognized diagnosis is taken seriously by neurologists, psychiatrists and others in the medical community. Effective treatment is available for most patients who seek it.

**While this information is not intended to replace discussions with your physician, we hope it helps you to understand that you have a known and treatable condition. You are not alone.**

#### APPOINTMENTS

We encourage you to see your epileptologist at the Cleveland Clinic Epilepsy Center or your local doctor on a regular basis. Often the two will work together in caring for you. To schedule an appointment with a Cleveland Clinic Epilepsy Center specialist, please call toll-free **866.588.2264**.

For more information, please visit our Web site at **[clevelandclinic.org/epilepsy](http://clevelandclinic.org/epilepsy)**.



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Cleveland Clinic is a nonprofit multispecialty academic medical center. Founded in 1921, it is dedicated to providing quality specialized care and includes an outpatient clinic, a hospital with more than 1,000 staffed beds, an education institute and a research institute.

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