

## There are over three million reasons for this pamphlet.

That's how many Americans have epilepsy (seizure disorders). And locally, more than 60,000 people in Minnesota and eastern North Dakota are living with epilepsy.

You may see several seizures a day and not even know it. People with epilepsy look like everyone else except when they have a seizure.

You might not recognize what you are seeing and not know that the actions or movements are being caused by a temporary medical condition. This might lead to actions that you or the person with epilepsy might later regret. The following information can better prepare you to recognize and respond to seizures.

## WHAT IS EPILEPSY?

Epilepsy is a common neurological condition. It is the general term for more than 20 different types of seizure disorders produced by brief, temporary changes in the normal functioning of the brain's electrical system.

These brief malfunctions mean that more than the usual amount of electrical energy passes between cells. The sudden overload may stay in one small area of the brain, or it may affect the whole system.

Of course, you can't see what's happening inside a person's brain; however, you can see the unusual body movements, the effects on consciousness and the changed behavior that the malfunctioning areas are producing. These changes are what we call seizures.

A single seizure may be caused by a number of health conditions. In addition, about one person in 100 has recurring seizures, known

as epilepsy. Two out of four new cases begin in childhood. Epilepsy in adults may be the result of a head injury – often from auto accidents – or may date from their childhood years. Epilepsy is not contagious at any age.

Recognition of epilepsy and knowledge of appropriate seizure response is important because it is easy to mistake seizures for other conditions. For example, generalized tonic clonic seizure may look like a heart attack, and CPR techniques may be used when they are not necessary. A period of automatic behavior may be interpreted as being drunk or high on illegal drugs. The fact that a person may have Phenobarbital (an antiepileptic drug) with him/her may add confusion to the situation and the person responding.

Here are suggestions to determine whether or not to call 911. This also helps people with epilepsy avoid unnecessary and expensive trips to the emergency room.

### No need to call an ambulance

1. If medical I.D. jewelry or card says "epilepsy," and
2. If the seizure ends in under five minutes, and
3. If consciousness returns without further incident, and
4. If there are no signs of injury, physical distress or pregnancy.

### An ambulance should be called

1. If the seizure happened in water.
2. If there's no medical I.D. and no way of knowing whether the seizure is caused by epilepsy.
3. If the person is pregnant, injured or diabetic.
4. If the seizure continues for more than five minutes.
5. If a second seizure starts shortly after the first has ended.

6. If consciousness does not start to return after the seizure has stopped.
7. If the ambulance arrives after consciousness has returned, the person should be asked whether the seizure was associated with epilepsy and whether emergency room care is wanted.

### Individualized Aid

Some people may require individualized care plans that include ways to treat the person during a seizure. For example, people who use a magnet with a vagus nerve stimulator or those who use special types of medication to treat cluster seizures will require special instruction in the use of these therapies. This instruction falls outside the scope of basic seizure response/first aid and should be individualized for each person.

- A convulsive seizure with subsequent injury due to falling on cement floors or in a confined area.
- A series of convulsive seizures called status epilepticus, in which the convulsions continue nonstop, or are followed by a coma or a subsequent series of seizures. These are life threatening and the mortality risk is high unless prompt treatment at a properly equipped medical facility is available.
- Episodes of automatic behavior, known as complex partial seizures, in which the person is unaware of where he/she is or what his/her circumstances are, injures himself in unconscious efforts to escape, or is injured in struggles with law enforcement personnel. A person having this type of seizure is on automatic pilot as far as their actions are concerned. Efforts to restrain can produce a fighting reaction which he/she cannot control.

## LAW ENFORCEMENT OFFICERS: EPILEPSY AND DRUGS

Despite medical progress, epilepsy cannot be cured in the same sense that an infection can be cured.

Seizure control is achieved through regular, daily use of anti-seizure drugs called anticonvulsants. Doses may have to be taken up to four times a day and people with epilepsy therefore usually carry medication on-hand. To miss a scheduled dose is to risk a seizure. Many medications are used in epilepsy treatment and more than one drug may be prescribed.

If a law enforcement officer has any doubts about the legality of a person's possession of medication, the physician who prescribed the drug (or the pharmacy which dispensed it) should be contacted without delay. Depriving a person with epilepsy of access to his/her medication is putting their health – even their life – at risk.

When medication is taken away, for even as little as several hours, the following may occur:

## TYPES OF SEIZURES

### Focal (partial) seizures

This type of seizure involves only part of the brain, and has two different types:

Simple seizures are sometimes called an aura. During these seizures, there may be changes in body movements, emotions, or senses such as smelling things that are not there. It may last a few seconds to three minutes.

Complex seizures produce involuntary movements or activities with no purpose such as lip smacking, hand wringing, or wandering, with an unawareness of surroundings or the ability to respond.

### Generalized seizures

This type of seizure affects the entire brain. The two most common generalized seizures are:

Generalized tonic clonic seizures, formally called grand mal seizures, are what most people generally think of when they hear the word "epilepsy." In this seizure type, the person undergoes complete loss of consciousness and muscle spasms, which usually last two to five minutes.

Absence seizures take the form of a blank stare lasting only a few seconds.

Since these seizure disorders are so different in their effects, they require different kinds of action. Some require no action at all. The fold-out section of this pamphlet describes specific seizures in detail, and how to respond to each type. It's been produced in this form to encourage posting on bulletin boards or other places where it can be easily seen.

## RESPONDING TO SEIZURES IN SPECIAL CIRCUMSTANCES

Although the fold-out chart inside this pamphlet gives information on seizure first aid, there are circumstances in which additional steps should be taken.

### Seizure in water

If a seizure occurs in water, the person should be supported with the head tilted and removed from the water as quickly as possible with the head in this position. Once on dry land, he/she should be examined and if they are not breathing, an artificial respiration should begin at once. Anyone who has a seizure in water should be taken to the emergency room for a careful medical checkup, even if he/she appears to be fully recovered afterwards. Heart or lung damage from ingestion of water is a possible hazard in such cases.

### Seizure on a bus

Ease the person across a double or triple seat. Turn him/her on their side, and follow the same steps as indicated above. If he/she wishes to do so, there is no reason why a person who has fully recovered from a seizure cannot stay on the bus until he/she arrives to their destination.

### Is an emergency room visit needed?

An uncomplicated convulsive seizure in someone who has epilepsy is not a medical emergency, even though it may look like one. It stops naturally after a few minutes without ill effects. The average person is able to continue about his/her business after a rest period and may need only limited assistance, or no assistance at all, in getting home.

As noted earlier, there are several medical conditions other than epilepsy that can cause seizures including diabetes, brain infections, heat exhaustion, pregnancy, poisoning, hypoglycemia, high fever, and head injury.

When seizures are continuous or any of these conditions exists, immediate medical attention is needed.

## COULD IT BE EPILEPSY?

Only a physician can say whether or not a person has epilepsy. Many people miss the subtle signs of the condition and therefore also miss the opportunity for early diagnosis and treatment. The symptoms listed below are not necessarily indications of epilepsy but may be caused by other, unrelated conditions. However, if one or more is present, a medical check-up is recommended.

- Periods of blackout or confused memory.
- Occasional "fainting spells" in which bladder or bowel control is lost, followed by extreme fatigue.
- Episodes of blank staring in children; brief periods when there's no response to questions or instructions.
- Sudden falls in a child for no apparent reason.
- Episodes of blinking or chewing at inappropriate times.
- A convulsion, with or without fever.
- Clusters of swift jerking movements in babies.

### 24/7 SUPPORT & RESOURCES

Contact us anytime to:

- Answer questions about driving, employment, or personal safety
- Train a school or workplace about seizure first aid
- Get personalized educational materials and resources

Call **800.779.0777** or **info@efmn.org** during business hours or 800.332.1000 (en Espanol: 866.748.8008) after hours.



**EPILEPSY  
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# Seizure Recognition & Response



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# Seizure Recognition and Response

SEIZURE TYPE	WHAT IT LOOKS LIKE	WHAT IT IS NOT	WHAT TO DO	WHAT NOT TO DO
<b>Generalized Tonic Clonic</b> (also called Grand Mal)	Sudden cry, fall, rigidity, followed by muscle jerks, shallow breathing, bluish skin, possible loss of bladder or bowel control, usually last a couple of minutes. Normal breathing then starts again. There may be some confusion and/or fatigue, followed by a return to full consciousness.	Heart attack  Stroke	Look for medical identification. Protect from nearby hazards. Loosen ties or shirt collars. Protect from head injury. Turn on side to keep airway clear unless injury exists. Reassure as consciousness returns. If single seizure lasted less than five minutes, ask if hospital evaluation is wanted. If multiple seizures, or if one seizure lasts longer than five minutes, call an ambulance. If person is pregnant, injured or diabetic call for aid at once.	Don't put any hard implement in the mouth. Don't try to hold tongue. Don't try to give liquids during or just after seizure. Don't use artificial respiration unless breathing is absent after muscle jerks subside, or unless water has been inhaled. Don't restrain.
<b>Absence</b> (also called Petit Mal)	A blank stare, beginning and ending abruptly, lasting only a few seconds, most common in children. May be accompanied by rapid blinking, some chewing movements of the mouth. Child or adult is unaware of what's going on during the seizure, but quickly returns to full awareness once it has stopped. May result in learning difficulties if not recognized and treated.	Daydreaming  Lack of attention  Deliberate ignoring of adult instructions	No first aid necessary, but if this is the first observation of the seizure(s), medical evaluation should be recommended.	
<b>Focal Onset Aware</b> (also called Simple Partial)	Jerking may begin in one area of body, arm leg or face. The jerking can't be stopped but the patient stays awake and aware. Jerking may proceed from one area of the body to another and sometimes spreads to become a convulsive seizure.  Partial sensory seizures may not be obvious to an onlooker. Patient experiences a distorted environment. May see or hear things that aren't there, may feel unexplained fear or sadness, anger or joy. May have nausea, experience odd smells, and have a generally "funny" feeling in the stomach.	Acting out  Bizarre behavior  Hysteria  Mental illness  Psychosomatic illness  Para psychological or mystical experience	No response/first aid is necessary unless seizure becomes convulsive, then first aid as above.  No immediate action needed other than reassurance and emotional support.  Medical evaluation should be recommended.	
<b>Focal Onset Impaired Awareness</b> (also called Complex Partial)	Usually starts with a blank stare, followed by chewing, followed by random activity. Person appears unaware of surroundings, may seem dazed and mumble. Unresponsive actions, clumsy, not directed. May pick at clothing, pick up objects, may attempt to take off clothes off. May run, appear afraid, may struggle or flail at restraint. Once pattern is established, same set of actions usually occur with each seizure. Lasts a few minutes, but post-seizure confusion can last substantially longer. No memory of what happened during seizure period.	Drunkenness  Intoxication on drugs  Mental illness  Disorderly conduct	Speak calmly and reassuringly to patient and others. Guide gently away from obvious hazards. Stay with the person until completely aware of environment.	Don't grab hold unless sudden danger (such as cliff edge or an approaching car threatens). Don't try to restrain. Don't shout. Don't expect verbal instructions to be obeyed.
<b>Atonic Seizures</b> (also called Drop Attacks)	A child or adult suddenly collapses and falls. After 10 seconds to a minute he/she recovers, regains consciousness, and can stand and walk again.	Clumsiness  Normal childhood "stage"  In a child, lack of good walking skills  In an adult, drunkenness  Acute illness	No response/first aid is needed (unless he/she hurts themselves during the fall), but a child should be given a thorough medical evaluation.	
<b>Myoclonic Seizures</b>	Sudden brief, massive muscle jerks that may involve the whole body or parts of the body. May cause person to spill what they were holding or fall off a chair.	Clumsiness  Poor coordination	No response/first aid is needed, but should be given a thorough medical evaluation.	
<b>Infantile Spasms</b>	These are clusters of quick, sudden movements that start between three months and two years of age. If a child is sitting up, the head will fall forward and the arms will flex forward. If lying down, the knees will be drawn up with arms and head flexed forward as if the baby is reaching for support.	Normal movements of the baby  Colic	No response/first aid, but doctor should be consulted.	