Autism, Epilepsy & Seizures:

How to Recognize the Signs and Basic First Aid When You Do

Could It Be Epilepsy?

Only a physician can say for certain whether or not a person has Epilepsy. Many people miss the more subtle signs of the condition and therefore also miss the opportunity for early diagnosis and treatment. The symptoms listed below are not necessarily indicators of Epilepsy, and may be caused by some other, unrelated condition. 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.

For Law Enforcement Officers: Epilepsy And Drugs

Despite medical progress, Epilepsy cannot be cured in the same sense that an infection can be cured. However, seizures can be controlled completely or significantly reduced in most people who have the disorder. This control is achieved through regular, daily use of antiseizure drugs called anticonvulsants. Doses may have to be taken up to four times a day, and people with Epilepsy therefore usually carry medication with them. To miss a scheduled dose is to risk a seizure.

Many medications are used in the treatment of Epilepsy. More than one drug may be prescribed. Among them phenobarbital, Ativan (lorazepan), Klonopin (clonazepam), Tranxene (clorazepate) and Valium (diazepam).

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 that dispensed it, should be contacted without delay. Depriving a person with Epilepsy of access to her medication may put her health and life at risk.

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

- 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 non-stop, or are followed by 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, unaware of where he is or what his 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 so far as his actions are concerned. Efforts to restrain can produce a fighting reaction which he cannot control.

Is an Emergency Room Visit Needed?

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

However, occasionally a seizure will fail to stop naturally and as noted earlier, there are several medical conditions other than Epilepsy that can cause seizures. These include:

- Diabetes
- hypoglycemia
- pregnancy
- poisoning
- heat exhaustion
- head injury
- brain infections
- high fever

When seizures are continuous or any of these conditions exist, immediate medical attention is necessary.

The following are some suggestions to help people with Epilepsy avoid unnecessary trips to the emergency room and help one decide whether or not to call an ambulance. One should not rely on this general information as individual cases may vary, therefore a physician should always be consulted in all emergencies.

No Need to Call An Ambulance

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

An Ambulance Should Be Called

- If the seizure has happened in water.
- If there's no medical I.D., and no way of knowing whether the seizure is caused by Epilepsy.
- If the person is pregnant, injured, or diabetic.
- If the seizure continues for more than five minutes.
- If a second seizure starts shortly after the first has ended.
- If consciousness does not start to return after the shaking has stopped.

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.

The purpose of this informational brochure is to offer general information on Autism and Epilepsy and the co-condition as well as the types of seizures and basic first aid recommended by the Epilepsy Foundation.* One should not rely on this general information as individual cases may vary. It is recommended that one's physician should always be consulted on all information provided here as a public service.

* This information is taken from *Seizure Recognition and First Aid*, a publication of the Epilepsy Foundation.

Facts About Autism

- Autism affects each individual in a different manner but is generally characterized by impairments in social interactions and communication skills. In some people, Autism also affects cognitive, emotional and behavioral functioning. People with Asperger Syndrome (also know as high functioning Autism) may have superior skills and intelligence.
- Autism is four times more prevalent in boys than girls.
- No one is sure what causes Autism but studies of twins reveal that it is potentially a genetically based condition. In identical twins there is an 80-90% chance that each will have Autism and in non-identical twins there is a 3-10% chance that both will develop Autism. The chance that siblings will both be affected by Autism is also approximately 3-10%.
- Early signs of Autism may include lack of social interaction, communication, and inappropriate behavior. Autism's early signs may be detected in infants as young as 6-18 months and is often reported by parents who are concerned that their child fixates on objects, does not respond to their name, avoids eye contact and engages in repetitive movements such as rocking or arm flapping. Parents who notice such signs or are concerned that their child is not meeting developmental milestones, should contact their pediatrician and arrange for a developmental screening.
- Scientists agree that early intervention services can increase chances for a child's positive prognosis. Children with Autism can benefit from known effective treatments such as applied behavior analysis (ABA), occupational, speech and physical therapy. Other treatments touted on the internet and in the media may not be backed by science and should be cautiously pursued as they may cause harmful side effects.
- In 2007, the Center for Control and Prevention's Autism and Developmental Disabilities Monitoring Network determined that 1 in 150 children are diagnosed with an Autism in the United States. In some states the diagnosis is more prevalent.
- Autism is a lifespan challenge and most individuals, including those with Asperger Syndrome, will require some sort of support and services throughout their lifetime.
- Individuals with Autism are capable of participating in community life and can live, work and recreate in community settings with the proper support.
- Individuals with Autism have diverse talents and abilities and can contribute to society in suitable and sustainable endeavors.

Facts About Epilepsy

- Epilepsy is defined as a tendency toward recurrent seizures unprovoked by any systematic or acute neurologic insults.
- A seizure is the manifestation of abnormal electrical activity in the brain.
- The highest incidence of a first seizure occurs in individuals under 20 years old.
- In 2008, the CDC reported that 2.7 million Americans have Epilepsy and that Epilepsy affects 1 in 100 adults.
- There are different types of seizures that are manifested by a variety of symptoms.
- Seizures can be diagnosed by electroencephalogram known as an "EEG" which is a recording of electrical activity in the brain.
- Medications are available to help individuals control seizures and in some cases may be reduced or discontinued as a person ages.
- Individuals with Epilepsy can lead full and productive lives with proper treatment and monitoring.

Epilepsy and Autism: The Co-Condition

- As many as one-third of individuals with Autism also have Epilepsy.
- Two peaks of onset: infancy and adolescence.
- The risk of Epilepsy is low, about 2% by 5 years and 10% by 10 years, for those with Autism who do not have intellectual and developmental disabilities or Cerebral Palsy.
- Individuals with both Autism and Epilepsy have a more challenged developmental trajectory than those with either Autism or Epilepsy alone.
- Individuals with Autism and severe intellectual and developmental disabilities have a risk of acquiring Epilepsy of 5% at 1 year, 15% at 5 years, and 25% at 10 years.
- Individuals with Autism and both intellectual and developmental disabilities and Cerebral Palsy have a risk of acquiring Epilepsy of 20% at 1 year, 35% at 5 years, and 65% at 10 years.
- Epilepsy persists in the majority of patients into adult life with remission in only 15% of adults with Autism and Epilepsy.
- Epilepsy and Autism may reflect the same underlying brain abnormality and there are many disorders such as Fragile X, Tuberous Sclerosis and Down Syndrome where Autism and Epilepsy may co-occur on this basis.

Types of Seizures

Seizure disorders take several forms, depending on where in the brain the malfunction takes place and how much of the total brain area is involved.

Generalized tonic clonic seizure: These are the ones which most people generally think of when they hear the word "Epilepsy."

In this type of seizure the person undergoes convulsions which usually last from two to five minutes, with complete loss of consciousness and muscle spasms.

Absence seizure: Takes the form of a blank stare lasting only a few seconds.

Partial seizure: Produces involuntary movements of arm or leg, distorted sensations, or a period of automatic movement in which awareness is blurred or completely absent.

Since these seizure disorders are so different in their effects, they require different kinds of action from the public. Some require no action at all. The fold-out section of this brochure describes seizures in detail, and how to handle each type. It has been produced in this form to encourage posting on staff bulletin boards or other places where it can be easily seen, for example, by caregivers, first-responders, and by those who work with individuals who have Autism and/or Epilepsy.

First Aid for Seizures in Special Circumstances

Although the fold-out chart inside this brochure gives information on basic first aid for a generalized tonic clonic (convulsive) seizure, there are some special circumstances in which additional steps should be taken. One should not rely on this general information as individual cases may vary, therefore a physician should always be consulted on all first aid procedures.

A seizure in water

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

A seizure in an airplane

If the plane is not filled, and if the seat arms can be folded up, passengers to the left and/or right of the affected person may be reassigned to other seats, so that the person having the seizure can be helped to lie across two or more seats with head and body turned on one side.

Once consciousness has fully returned, the person can be helped into a resting position in a single reclining seat.

If there are no empty seats, the seat in which the person is sitting can be reclined, and, once the rigidity phase has passed, he can be turned gently while in the seat so that he is leaning towards one side.

Pillows or blankets can be arranged so that the head doesn't hit unpadded areas of the plane. However, care should be taken that the angle at which the person is sitting is such that his airway stays clear and breathing is unobstructed.

A seizure on a bus

Ease the person across a double or triple seat. Turn him on his side, and follow the same steps as indicated above. If he 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 arrives at his destination.

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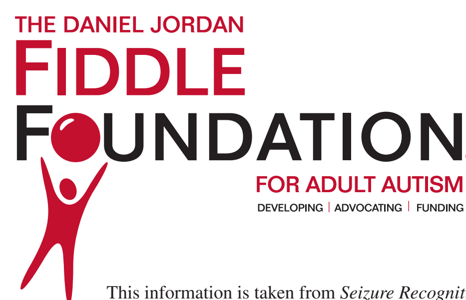

in collaboration with

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SEIZURE TYPE	WHAT IT LOOKS LIKE	WHAT IT IS NOT	WHAT TO DO	WHAT NOT TO DO
Generalized Tonic Clonic (Also called Grand Mal)	Sudden cry, fall, rigidity, followed by muscle jerks, shallow breathing or temporarily suspended breathing, bluish skin, possible loss of bladder or bowel control, usually lasts a couple of minutes. Normal breathing then starts again. There may be some confusion and/or fatigue, followed by return to full consciousness.	Heart attack. Stroke.	Look for medical identification. Protect from nearby hazards. Loosen ties or shirt collars. Protect head from injury. Turn on side to keep airway clear unless injury exists. Reassure as consciousness returns. If single seizure lasted less than 5 minutes, ask if hospital evaluation wanted. If multiple seizures, or if one seizure lasts longer than 5 minutes, call an ambulance. If person is pregnant, injured, or diabetic, call for aid at once.	Don't put anything in the mouth. Don't try to hold tongue. It can't be swallowed. Don't try to give liquids during or just after seizure. Don't use artificial respiration unless breathing is absent after muscle jerks subside. Don't restrain.
Absence (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. Deliberately ignoring adult instructions.	No first aid necessary, but if this is the first observation of a seizure, medical evaluation is recommended.	
Simple Partial	Jerking may begin in one area of body, arm, leg, or face. Can't be stopped, but patient stays awake and aware. Jerking may proceed from one area of the body to another, and sometimes spreads to become a generalized convulsive seizure.	Acting out, bizarre behavior. Hysteria. Mental illness. Psychosomatic illness. Parapsychological or mystical experience.	No first aid necessary unless seizure becomes convulsive, then first aid as above. No immediate action needed other than reassurance and emotional support. Medical evaluation is recommended.	
Complex Partial (Also called Psychomotor or Temporal Lobe)	Usually starts with 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, try to take clothes off. May run, appear afraid. May struggle or flail at restraint. Once pattern 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 person until completely aware of environment. Offer to help getting home.	Don't grab hold unless sudden danger (such as a cliff edge or an approaching car) threatens. Don't try to restrain. Don't shout. Don't expect verbal instructions to be obeyed.
Atonic Seizures (Also called Drop Attacks)	A child or adult suddenly collapses and falls, After 10 seconds to a minute he 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 first aid needed, unless the person was hurt upon falling. Medical evaluation is recommended.	
Myoclonic Seizures	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 first aid needed, but medical evaluation is recommended.	
Infantile Spasms	These are clusters of quick, sudden movements that start between 3 months and two years. 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 bead flexed forward as if the baby is reaching for support.	Normal movements of the baby. Colic.	No first aid needed, but medical evaluation is recommended.	