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Seizure Recognition & Response




www.eftm.org | 1600 University Avenue West, Suite 300, St. Paul, MN 55104 | 1.800.779.0777

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Today's Objectives

- Identify the most common types of seizures
- Define epilepsy and describe possible causes of disorder
- Describe appropriate response to seizures
- Discuss available treatment options




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Epilepsy is...

- **NOT** Contagious
- **NOT** a Mental Illness
- **NOT** a Mental Impairment




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Possible Causes of Epilepsy

- Head Trauma
- Brain tumor and stroke
- Infection and maternal injury
- Some forms are genetic

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**In 70% of the epilepsy cases –
there is no known cause**

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Possible Seizure Triggers

- Failure to take Medications
- Lack of Sleep
- Stress / Anxiety
- Dehydration
- Photosensitivity – Strobe Lights
- Menstrual Cycle / Hormonal Changes


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Seizure Classification

Partial Seizures (focal)

- Involves only part of brain
- Simple & complex forms
- Symptoms relate to the part of brain effected



Generalized Seizures

- Involves whole brain
- Convulsions, staring, muscle spasms, and falls
- Most common are absence & tonic-clonic

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Simple Partial Seizures

- Uncontrollable shaking movements of hand, arm or legs
- Sensory Seizures – may see flashing lights in peripheral vision, hear bells ringing, etc.
- Seizure usually lasts between 1 and 2 minutes – no impairment of consciousness
- May be considered an aura
- No immediate action is needed other than reassurance and emotional support
- A medical evaluation is recommended

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Complex Partial Seizures


- Most common seizure type
- Unaware of surroundings and unable to respond
- Repetitive, purposeless movements such as lip smacking, hand wringing, or wandering - actions seem unusual
- Seizure usually lasts approximately three minutes

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Appropriate Response
– Complex Partial

- Stay calm
- Track time
- Do not restrain
- Gently direct away from hazards
- Remain with the individual until they have gained full awareness




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Absence Seizures (formerly petit mal)

- Usual onset between 4 and 12 years of age
- Characterized by brief staring – can be confused with “daydreaming”
- Starts and ends abruptly - can happen several times a day
- Quickly returns to complete awareness
- Appropriate response includes documentation




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Generalized Tonic Clonic
(formerly grand mal)

- **NOT** the most common type
- Completely unconscious – loss of control
- Characterized by a sudden fall
- May cry out or make some types of noise
- Onset of uncontrolled jerking or shaking of muscles
- May have irregular breathing
- Lasts 5 minutes or less




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Also call 911 if:

STATUS EPILEPTICUS

There is more than 5 minutes
of continuous seizure activity
OR
Two or more consecutive seizures
(cluster) without complete recovery





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Treatment Options

- Medication
- Brain Surgery
- Diet
- VNS






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Medications

Medications are most often the first line of treatment:


- Approximately 60% of people achieve seizure control after the 1st year
- 15% achieve control at a later date
- 25% continue to have seizures despite treatment




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Ativan	HP Ecthar Gel	Tegretol
Banzel	Keppra	Topamax
Carbatrol	Klonopin	Tranxene
Depakene	Lamictal	Trileptal
Depakote	Lyrica	Vimpat
Diamox Sequels	Mysoline	Zarontin
DiasatAcudial	Neurontin	Zonegran
Dilantin	Phenobarbital	
Felbatol	Phenytek	
Gabitril	Sabril	



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- Common Side Effects of Medication**
- Lethargy
 - Weight gain / weight loss
 - Cognitive, concentration, memory difficulties
 - Hyperactivity
 - Emotional and/or behavioral changes
- 

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- Brain Surgery Options**
- Lobectomy
 - Partial Seizures
 - Hope for result of seizure free
 - Corpus Callosotomy
 - Generalized Seizures
 - Never seizure free, less frequent/ intense seizures
- 

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Medical Device Options

VAGAL NERVE STIMULATOR

A pulse generator is implanted on the left side of the chest, and a lead connects it to a tether and two electrodes that coil around the vagus nerve. The VNS generates an electrical pulse that stimulates the vagus nerve. The pulse prevents the abnormal electrical activity that causes a seizure and patients are able to activate the VNS when they feel a seizure coming on.

Brain
Vagus nerve
Electrodes
Tether
Pulse generator

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Special Diets

- **Ketogenic Diet**
 - Burns fat instead of glucose (fasting induced)
 - Gets 80% of calories from fat
 - Gets 20% from carbohydrates and proteins
 - Must be strictly managed and maintained daily
 - 1/3 become seizure free or almost seizure free
 - 1/3 improve but still have some seizures
 - 1/3 do not respond or find it too hard to comply

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Special Diets


- **Modified Atkins Diet**
 - No fluid or calorie restriction, no protein restriction
 - Foods not weighed and measured, carbohydrates monitored
 - Not fast induced
- **Low Glycemic Index Treatment**
 - Glycemic Index: how high that food raises your blood glucose
 - Easier to maintain - based more on portion control
 - Increase of carbohydrates with a low Glycemic Index

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Possible Impact of Epilepsy

- Depression, Anger, Anxiety, Fear
- Cognitive Problems
- Developmental Delays
- Relationships
- Financial Costs
- School/Employment
- Driving
- Recreational Activities



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The Epilepsy Foundation of Minnesota leads the fight to stop seizures, find a cure and overcome the challenges created by epilepsy.

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Epilogues Reading

Keep On Going

You hurt me like crazy.
You stop me from doing things I want to do.
But I keep on going forward.
I have to
go to a lot of doctor appointments because of you.
I remind myself that you changed me forever.
I don't know how I would be without you.

Tessa, age 15, person with epilepsy


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Writing Memory

I don't know exactly why my seizures started or why they have stopped. I don't even really know if they are gone because each tiny heat on my legs or tingle in my feet, each feeling that *I've been here before* hollows my stomach and scrapes through my chest, leaving me raw, scoured by the anxiety that the seizures might be back.

Molly, age 35, person with epilepsy