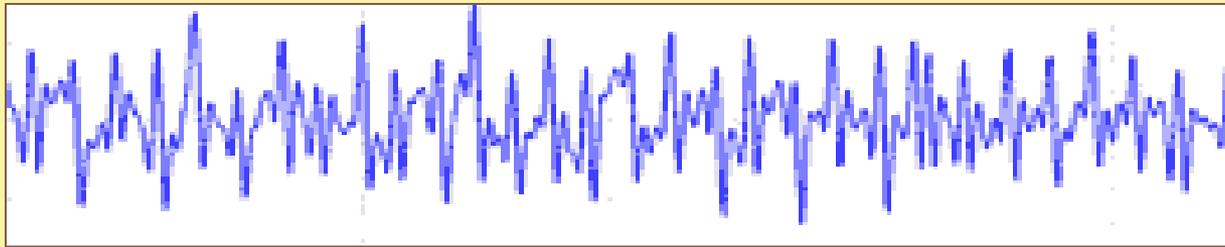


MANAGING STUDENTS WITH SEIZURES



Information for new school nurses



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What is Epilepsy?

- A seizure is a disturbance in the electrical activity of the brain
- Epilepsy is a neurological disorder characterized by recurrent unprovoked seizures
- *'Unprovoked' means not caused by a temporary problem (such as high fever or hypoglycemia)*

May also be known as a SEIZURE
DISORDER

Epilepsy in Children

Each year **200,000** new cases of epilepsy are diagnosed, including **45,000** children younger than 15 years of age.¹

Approx. 1% of the general population has epilepsy, but is much higher in children with disabilities:

- **25.8** percent of children with a cognitive disability
- **13** percent of children with cerebral palsy
- **50** percent of children with both disabilities

¹*Epilepsy and seizure statistics. Epilepsy Foundation.*
www.epilepsyfoundation.org/about/statistics.cfm

Pediatric Epilepsy Causes/Syndromes

Birth injury, head trauma,
other CNS disorders

Idiopathic – genetic/familial

Cryptogenic – unknown

Childhood Absence Epilepsy

Rasmussen's encephalitis

Benign Rolandic

Juvenile Myoclonic Epilepsy

Progressive Myoclonic Epilepsies

Lennox-Gastaut

Absence Seizures

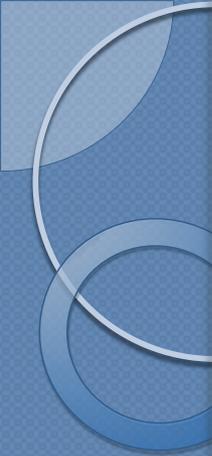
- Brief lapse of awareness
- Pause in activity with blank stare
- Possible chewing or blinking movements
- Usually lasts 1-10 seconds
- Often occur frequently throughout day
- Mistaken for daydreaming, inattentiveness, ADHD

Partial Seizures

- May resemble absence seizures but longer duration (30 seconds or more)
- Student unable to hear/respond to questions
- Often accompanied by 'repetitive purposeless behaviors' (automatisms)
- Automatisms may be the same sequence of movements each time that person has a seizure
- Post-ictal (post-seizure) confusion is very common

Tonic-Clonic Seizures

- A sudden hoarse cry, loss of consciousness, fall
- Rigidity, posturing (tonic)
- Rhythmic jerking (clonic)
- Irregular breathing - skin, nails, lips may turn blue
- Drooling, vomiting, loss of bowel/bladder control may occur
- Typically lasts 1 to 3 minutes
- Followed by confusion, headache, extreme fatigue, amnesia for events that preceded and followed seizure



The Impact of Epilepsy on the School-Age Child

Uncomplicated: medication is effective in preventing seizures. Few cognitive, behavioral, academic or social problems.

Significant: medications or other treatments **reduce** seizure frequency, but seizures and medication side effects compromise academic performance, behavior and/or social acceptance

Intractable Epilepsy

- 20% of people with epilepsy continue to have frequent seizures after all treatment options have been tried.
- Most commonly seen in those who also have other neurological deficits
- Their lives are significantly compromised in all areas – cognitive function, academic performance, social development, and ability to live independently.



Epilepsy Management in Schools – What's new for school nurses?

- Treatment alternatives
- Management of seizure emergencies
- In-school trainings and programs

Antiepileptic Medications¹

carbamazepine	phenobarbital
ethosuximide	phenytoin
gabapentin	topiramate
lamotrigine	valproic acid
levetiracetam	zonisamide
oxcarbazepine	

Vimpat[®] - lacosamide

Onfi[®] - clobazam

Banzel[®] - rufinamide

¹*Pharmacy and Therapeutics 2010 July (35) 7:392-415.*

Other treatment options

- Surgery – considered when there is an identified seizure focus
- Ketogenic diet – high fat and protein; initiated and maintained by a dietician
- Vagus Nerve Stimulation (VNS) - a programmable pulse generator implanted subcutaneously in left chest - can be triggered externally by a magnet

When to Call EMS - Epilepsy Foundation recommendations

- First time seizure
- Convulsive seizure lasting more than 5 minutes
- Repeated seizures without regaining consciousness
- Irregular breathing persists after seizure ends
- Student has diabetes or is pregnant
- Student has been injured

Seizure Emergencies

Most seizures will stop without intervention in < 3 minutes.

After 5 minutes, the person is at risk for:

acute repetitive seizures (ARS) - an emergency characterized by rapidly repeating seizures or

Status epilepticus (SE) - prolonged, continuous epileptic activity.

Rescue Medications

Prescribed for students who have seizure clusters or are at risk for seizure emergencies

May be given in different ways: oral, sublingual, buccal, rectal, intranasal

FDA-approved: Diazepam (rectal gel)

Off-label:

Lorazepam - oral, sublingual and buccal forms

Midazolam (nasal, sublingual or buccal)
IM form being researched

Diastat Concerns

Still widely prescribed. Rectal administration and concerns about respiratory side effects led some state nurse practice acts and local school districts to regulate administration.

KNOW your district's guidelines!

If prescribed by a health care provider, regulations and impact on the student must be discussed with parents to come to a workable solution.

Resources :

<http://www.diastat.com/>

http://sspw.dpi.wi.gov/sspw_medtraining

Resources for Staff Training

- Questionnaire for Parents
- Seizure Observation Record
- Seizure Action Plan
- Information about Diastat and other rescue medications

Excellent DVD can be used to train staff:

Seizures in School: Understanding and Assisting Students Who Have

Epilepsy Foundation Contact Information

Heart of Wisconsin –

www.epilepsywisconsin.org

afaulks@epilepsywisconsin.org

Printed materials, staff trainings, school programs

- National Epilepsy Foundation –
- www.efa.org
- www.epilepsy.com
- www.nichcy.org/disability/specific/epilepsy