

**ECHO IDAHO**

*K12 School Nurses*

# Treatment in Schools for Seizure Disorders

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Please keep in mind that your School District policies and Health Services procedures, medication administration protocols, process guidelines, remain the guiding principles to your practice. | None of the planners or presenters for this educational activity have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.



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# Disclosures

- No financial disclosures

# Learning Objectives

Review the major different types of seizures

Understand that the treatment and urgency for seizure treatment can vary from person to person and seizure type to seizure type

Discuss the 4 major type of abortive seizure interventions, how to ensure they are optimally given

When to activate EMS and when it may be OK not to.

Brief mention of non-epileptic seizures

# Epilepsy in children

1.5% of Children have epilepsy and 4% of children will have at least 1 unprovoked seizure

Death due to seizures in children is very rare (1/2,000,000)

Approximately 50-80% of children are expected to “outgrow” their epilepsy by adulthood

Most common cause of breakthrough seizures in children is medical non-compliance

Learning and cognitive difficulties are more common in children with epilepsy, even if the seizures are fully controlled

# Types of seizures

## Generalized

- Tonic-clonic (Convulsive)
- Absence
- Myoclonic
- Atonic

## Focal

- Can have some very unusual presentations (semiology)

## Complex

- Sometimes hard to tell the difference between complex and absence

## Secondary Generalization

- Starts focal and spreads to Tonic-Clonic

# Some examples

- Video 1:  
<https://www.neurology.org/doi/10.1212/WNL.00000000000008637>
- Video 2:  
<https://www.neurology.org/doi/10.1212/WNL.00000000000010844>
- Video 3:  
<https://www.neurology.org/doi/10.1212/WNL.000000000000209913>

# Practical facts to know

Most seizures stop by 5 minutes but if a seizure hasn't stopped by 5 minutes, then it will become increasingly less likely to stop without intervention

At about 15-30 minutes, seizures will start to become resistant to medications

If a child has a history of having a prolonged seizure, they are at a high risk that any seizure will turn prolonged

Likewise, if a child has a history of a focal seizure generalizing then they are at a high risk that the next seizure will generalize

Almost everyone desats and becomes cyanotic with a convulsive seizure

“Don’t just do something, stand there!”

- Absence seizures
- Limited focal seizures without a history of generalizing
- Myoclonic seizures

“Don’t just stand there, do something!”

- A child with a history of status epilepticus
- A child with a history of severe autonomic dysfunction with the seizures”
- A child with a history of secondary generalization

For all others, usually give the seizure 3-5 minutes before intervening



# Abortive interventions (intra-nasal)



- ValtoCO (Diazepam: 6 years old )
- Nayzilam (Midazolam: 12 years old)
- ValtoCO may need 1 dose per nostril depending on the dose
- Most common error
  - Not sticking it in far enough!
  - Place your fingers on both sides of the applicator and insert until your fingers touch the nose.

# Diastat (rectal Diazepam)



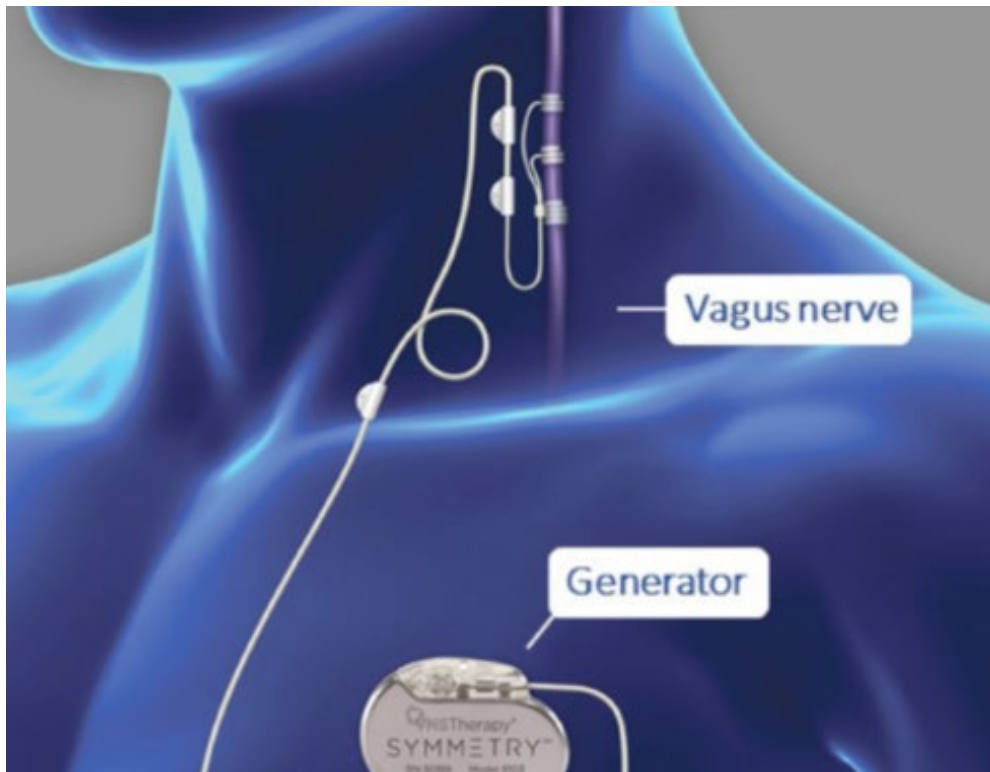
- The most effective abortive medication but the time lost can often decrease the efficacy
- Hard to convince a teenager in a focal seizure to go along with this
- Most common mistakes
  - Pushing too quickly (I recommend taking 5-10 seconds to push)
  - Not inserting far enough
  - Forgetting to squeeze the

# Clonazepam ODT



- Place pill under tongue to dissolve.
- If teeth are clenched or tongue is not accessible, then between cheek and gum is acceptable
- Sub-optimal but better than nothing

# VNS magnet



- When activated, gives a 60 second “dose” of electricity
- Slowly swipe the magnet over the generator (1-3 seconds)
- Repeat after 60 seconds if needed
- A rapid swipe will not activate it, too slow (6 seconds) will temporarily turn off the magnet

# To EMS or not to EMS

- If rescue medications are needed
- If seizure does not stop after 2-3 minutes of giving the dose
- If unclear whether patient has stopped seizing
- If witnessed head trauma has occurred
- Follow your school district's protocol for activating EMS

# Psychogenic Non-epileptic Seizures



NOT A MEDICAL  
EMERGENCY



SELF PRESERVATION  
CENTERS ARE INTACT.  
SERIOUS HARM DOES  
NOT OCCUR



SEIZURE ABORTIVE  
MEDICATIONS ARE NOT  
INDICATED



EMS SHOULD NOT BE  
ACTIVATED



AS LITTLE ATTENTION  
AS POSSIBLE

# Thanks

- Questions/Cases