

# Epilepsy and Autism: Is There a Relationship?

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## What is Epilepsy?

- Seizures: abnormal electrical firing from the brain
- Epilepsy: recurrent seizures
- Approximately 1-2% of children are diagnosed with epilepsy

## What is Autism Spectrum Disorders?

- Autism Spectrum Disorders (ASD):

developmental dysfunction involving social, speech, cognition and behavioral disabilities

- About 0.1% of children have ASD worldwide
- In the United States, about 1.5% of children have ASD

## Is there a connection?

- Yes, there is an association between epilepsy and autism.
- Children with autism are (a little) more likely to have epilepsy.
- Children with epilepsy are (a little) more likely to have autism.
- Seizures are the most common neurologic complication in ASD.

## Do all children with autism have seizures?

- No. Not all autistic children will develop seizures. In fact, only a minority will.

- Similarly, not all children with epilepsy will have autism. Only a small minority.
- Approximately a third of the autistic spectrum also have epilepsy.

Are some people with ASD more prone to seizures than others?

- Yes, some genetic disorders are associated with both seizures and autism, including Rett's, Fragile X, [Angelman](#), Prader-Willi and many [other syndromes](#).
- Children with characteristics that suggest these disorders should undergo [genetic testing](#).

Is there a specific type of seizure associated with

# ASD?

- No, there is no one [type of seizure](#) in ASD.
- Seizures can be focal or generalized.
- Includes [focal onset impaired awareness \(complex partial\)](#), [absence](#), [tonic-clonic](#), and [atonic](#) just to name a few.

## Are seizures in people with ASD more severe?

- Generally no, but it is variable.
- Some seizures are easily controlled and others are [intractable](#).
- There is higher [mortality](#) and morbidity (rate of disease) associated with seizures in ASD.

## What should parents look for?

- It may be difficult to recognize seizure activity in ASD, because of the

communication barriers and overlap of symptoms with frequent abnormal behaviors.

- For example, repetitive purposeless behaviors of autism can resemble automatisms seen in seizures.
- Cognitive delay, impaired social interactions, and aggressive and irritable behavior seen in children with epilepsy can also be seen with ASD, thus it is difficult to discern the cause.
- Red flags to note for seizures:
  - Staring episodes (which could be signs of [absence](#) or [atypical absence](#) seizures)
  - Stiffening (which could be a sign of [tonic seizures](#))
  - Rhythmic shaking or twitching (which could be a sign of [focal aware/simple partial seizures](#))
  - Loss of attention (which could be a sign of [absence](#) or [focal impaired awareness/complex partial](#) seizures)

# What can be done?

Epilepsy associated with ASD does not change

the evaluation or management of seizures.

- Medical evaluation with [brain imaging](#) and [EEG \(electroencephalogram\)](#).
- [Anti-epileptic drugs](#) for treatment
- Adjunctive non-pharmacologic therapy can be considered if medications fail ([ketogenic diet](#), [vagus nerve stimulation](#))
- [Safety measures](#) by caregivers: avoid restraining child, move large objects from area to avoid injury, turn child on his or her side, ensure nothing in mouth to avoid choking. [Learn more care and comfort first aid.](#)

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