

Epilepsy and Learning Challenges

Most children with epilepsy have similar intellectual abilities to children without epilepsy. However, children with epilepsy have a greater chance of experiencing learning challenges than their peers.

Common Learning Challenges for Children with Epilepsy

- Paying attention and concentrating
- Understanding instructions
- Using information
- Describing things to other people
- Remembering things
- Working out how to do something new
- Organizing thoughts or tasks
- Feeling you have no energy to do things
- Feeling muddled or confused
- Feeling sad or tearful
- Feeling short tempered or grumpy
- Working out sums
- Writing or copying figures
- Developmental delays

Causes

Frequency of seizures

- A child who is experiencing frequent seizures, may not fully recover between seizures

Location of seizure activity in the brain.

- When seizures are focused in a particular area of the brain, they may also affect functions controlled in that part of the brain.

Type of seizures

- When a child loses consciousness during a seizure, their mental functioning can be disrupted for up to several days
- Absence seizures appear to disrupt short-term memory for information presented immediately before the seizure.
- Tonic-clonic seizures are followed by a period of drowsiness or inattentiveness.
- Research has shown a correlation between cognitive/behavioural problems and complex partial seizures.



Medication side effects

- Some anti-seizure medication may make some children tired, less alert, or hyperactive.
- Someone taking more than one anti-seizure medication is more likely to experience negative side effects than someone taking a single anti-seizure medication.
- Herbal remedies can interact with prescribed medications in ways that will disrupt learning.

Age of onset

- When a child begins to have seizures while their brain is still developing, the seizures can interrupt that stage of development.

Type of epilepsy syndrome

- Some epilepsy syndromes (e.g. Lennox-Gastaut Syndrome) involve learning and thinking difficulties.

Epileptic (interictal) discharges

- Some children appear to be seizure-free but may be experiencing epileptic discharges in the brain, called interictal discharges or sub-clinical seizures
- Interictal discharges may produce restlessness, distractibility, inability to focus, decreased capacity for taking in new information, and behavioural disturbances.
- The underlying neurological problem causing the seizures can also impact learning and behaviour.

Other related conditions

- There are a number of other conditions that are more likely to occur in people with epilepsy than the general population, including Attention-Deficit Hyperactivity Disorder (ADHD), Learning Disabilities, and Autism Spectrum Disorders.

* For strategies to help a child with attention deficits, n), and Helping Children with Organization and Planning.

Adapted from Children and Learning (Epilepsy Toronto) and Cognitive, Behavioural and Social Co-Morbidities in Children with Medically Refractory Epilepsy (Mary Lou Smith).

Additional Sources:

Canadian Epilepsy Alliance. Learning through Storms: Epilepsy and Learning.

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