What is a Seizure?

Normal brain function is made possible by millions of small electrical charges that pass between different brain cells (called “neurons”) and to other cells in the body. A seizure happens when too many of these charges happen at once in all or part of the brain. Not all seizures look the same or have the same signs or “ictal semiology” as doctors refer to them. The behaviors seen depend upon which parts of the brain the seizure starts from and where in the brain it spreads. In a localization-related seizure, a specific part of the brain is involved and the symptoms relate to the function of that area. For example, a child may have brief movements on one side of the body if the seizure is in the frontal area or “frontal lobe” of the brain. Or, they may have visual changes if the seizure is in the back of the brain, called the “occipital lobe.” In generalized seizures, abnormal activity spreads quickly throughout the whole brain, causing a child to lose consciousness or awareness of their surroundings.

How are Seizures different from Epilepsy?

Having one seizure does not mean someone has epilepsy. Often, when an underlying cause (e.g., a high fever) is treated, seizures do not come back. Epilepsy is when there are repeated seizures. In many cases, there may be a known brain abnormality, but sometimes the cause is unknown (called “idiopathic” seizures). There are many types of epilepsy, depending on the age when seizures begin, which part(s) of the brain are involved, symptoms, the cause, and how the condition changes over time. Results from medical tests (images of the brain; tests of brain function such as the EEG) are also used to diagnose epilepsy. Epilepsy can often be controlled with anti-epileptic drugs, but some children continue to have seizures despite taking medication. If a child’s seizures are severe or continue despite medications, they typically need to see a neurologist with special training in epilepsy (an “Epileptologist”). This doctor may be able to figure out whether other treatments like a special diet (ketogenic diet), vagus nerve stimulator, or brain surgery may be helpful in stopping or reducing seizures.

How does a Seizure Disorder or Epilepsy affect a child?

Epilepsy comes from a brain abnormality, and that abnormality may affect thinking and behavior between seizures. Also, repeated seizures or the medications used to stop them can affect how the brain develops and works. **Common Learning Issues** - Children with epilepsy may develop learning disabilities. Factors like how old a child is when they develop epilepsy, how often they have seizures and which parts of the brain are involved influence the kinds of learning problems they might have. Children with epilepsy often need special school accommodations or supports. There are laws that protect and support children with epilepsy in the schools. Depending on a child’s needs, they may be eligible for special accommodations through what is called a 504 plan or an Individualized Education Program (IEP). **Attention Issues** - Attention Deficit Hyperactivity Disorder (ADHD) symptoms are more common in children with epilepsy compared with other groups. Symptoms may include trouble focusing and paying attention, acting on impulse, or hyperactivity. Of these, inattention is the most common symptom in children with epilepsy. Children with epilepsy should routinely be evaluated for ADHD since it can impair academic, social and behavioral functioning, work, and quality of life. ADHD symptoms can be safely treated in children with epilepsy. **Emotional Issues** - Children with epilepsy have greater risk for emotional problems than children with other medical conditions. Children with epilepsy can seem “moody” or have more “ups and downs” than other kids their age. Older children and teens can report self-esteem issues related to their epilepsy. Depression and anxiety can set in, since it can be difficult to predict when or where a seizure will happen. **Social Issues** - Children with epilepsy may have social anxiety and withdraw from their peers. Children may fear being teased because of their seizures so they may not tell anyone, affecting their friendships. They may become embarrassed at school or in other social situations if they are still having seizures. Safety or practical issues may limit social activities, like swimming or driving.
How does a neuropsychologist help a child with Epilepsy?

Neuropsychologists specialize in how brain abnormalities affect thinking, learning, behavior, and mood. They can help parents, schools, and other doctors develop:

- A better understanding of what brain functions are affected (e.g., weaknesses in learning/memory, strengths in language)
- A plan for how the school can help, based on a student's cognitive strengths and weaknesses
- Appropriate behavioral/emotional interventions (e.g., behavior management plans, psychotherapy)
- A picture of the child's day-to-day life to help doctors and parents make treatment decisions. Sometimes, neuropsychologists help families sort out the pros and cons of different interventions.

Where can I find resources online?

<table>
<thead>
<tr>
<th>Resource</th>
<th>Link</th>
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<tbody>
<tr>
<td>Epilepsy Foundation of America (EFA)</td>
<td><a href="http://www.epilepsyfoundation.org">www.epilepsyfoundation.org</a></td>
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<tr>
<td>Provides information regarding resources, advocacy, and issues related to living with epilepsy.</td>
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<tr>
<td>Citizens United for Research in Epilepsy (CURE)</td>
<td><a href="http://www.CUREepilepsy.org">www.CUREepilepsy.org</a></td>
</tr>
<tr>
<td>Provides information regarding research, news, and resources related to epilepsy.</td>
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<tr>
<td>Epilepsy Classroom</td>
<td><a href="http://www.epilepsyclassroom.com">www.epilepsyclassroom.com</a></td>
</tr>
<tr>
<td>Provides information and resources for managing epilepsy in the classroom.</td>
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</tbody>
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How about books?

Consider these, which were written for parents, educators, and adolescents:


Additional Information:

What is board certification in clinical neuropsychology?

Believe it or not, most states allow licensed psychologists to call themselves neuropsychologists without showing they have any special training on how to care for people who have neurological or neurodevelopmental disorders. Clinicians who are board-certified in clinical neuropsychology have proven, through a rigorous evaluation, that they are fully competent. That evaluation is conducted by the largest certification group in psychology, the American Board of Professional Psychology (ABPP; http://www.abpp.org), and its subspecialty board, The American Board of Clinical Neuropsychology. The goal of ABPP is to protect the public by examining and certifying psychologists who demonstrate competence in approved specialty areas.

How do I find a board-certified clinical neuropsychologist?

These are listed by name and by location on the web site of the American Academy of Clinical Neuropsychology (AACN; http://theaacn.org). Once you find a neuropsychologist near you, click on their name for more information, including the kinds of people they work with and how to contact them.

What is pediatric neuropsychology?

Click here (http://www.div40.org/resources.htm) to download a pamphlet that explains what makes pediatric neuropsychology unique, and what to expect from an evaluation by a pediatric neuropsychologist.

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