FOCAL SEIZURES

What are focal seizures?

Seizures are caused by abnormal electrical activity in the brain. A focal seizure is a type of seizure that starts in one part of the brain. Focal seizures were once called "partial" or "complex partial" seizures. The appearance of focal seizures can vary from child to child, depending on where the seizure is occurring in the brain.

Sometimes the seizures are very obvious, and other times they are very subtle. Neurologists use clues from the appearance of the seizure, and data from a test called an electroencephalogram (EEG), to determine if a seizure is focal.

What causes focal seizures?

Focal seizures can be caused by a current or past irritation, infection, or injury in the brain. For instance, some children experience seizures after brain surgery, stroke, or during a serious infection. Other times focal seizures occur in or around areas of abnormally developed brain tissue (called congenital brain malformation). In many cases, there is no obvious problem triggering the focal seizures. Many children with focal seizures are eventually diagnosed with epilepsy.

What does a focal seizure look like?

The appearance of focal seizures depends on where in the brain the seizure occurs. A focal seizure can start in one part of the brain, and spread to other areas. The appearance of the seizure will depend on where the seizure, starts, where it spreads, and how quickly it spreads. The time during a seizure is also called the ictal state.

Depending on where the seizure occurs in the brain, a child may be aware at the onset of the seizure, but lose consciousness as the seizure progresses. Others may remain aware during the entire seizure. Oftentimes, the seizure causes an abrupt change in consciousness and the child does not remember the event.

Sometimes, a focal seizure will spread to the entire brain. This is called a secondary generalized seizure, meaning the seizure started in one part of the brain, but then spread through the entire brain. When this happens, the child is unconscious and their whole body is affected.

Common symptoms of focal seizures:

- Eyes forced or head turned to one side
- Blank stare or unresponsiveness
- Complex, repetitive movements (such as mouth movements, or picking at clothes)
- Rhythmic movements in the face or on one side of the body
- Abnormal movements of the head
- Difficulty speaking or nonsense speech
- Hallucinations (can be visual, auditory, tactile, or olfactory)
- Abnormal sensations in the body (such as numbness or tingling)
- Visual changes
- Sudden physical changes, such as pallor, nausea, or dizziness
- Abrupt changes in mood or behavior, or feelings of anxiety and fear

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SEIZURE FIRST AID/ PRECAUTIONS

Can my child tell when a seizure is about to start?

Some children are aware of the sensations, feelings, or movements that occur at the start of a focal seizure. This used to be called a seizure "aura" and the feelings were thought to be a warning sign of an impending seizure. We now know that these feelings are actually part of the focal seizure.

What happens after a seizure?

The period after a seizure is called the post-ictal state. During this time the brain is tired and recovering from the seizure. As a result, the child may be confused, tired, and irritable. They may have difficulty talking, vomit, or have a headache. They may also experience poor coordination or weakness in a part of their body. This usually lasts for several minutes, but some children will experience mild post-ictal symptoms for hours or even days.

How are focal seizures treated?

Treatment varies from child to child, depending on the situation. In most cases, a child will require daily antiepileptic medication to prevent seizures. The medication is chosen based on the individual needs of the child. The medication dosage is usually based on the child's weight and age, but may need to be adjusted as a child grows, or if he or she continues to have seizures. Sometimes a few different medications are tried before finding the one that will best help the child. In some cases, where medicines aren't helpful, other seizure treatments (such as specialized diets, vagal nerve stimulators, or epilepsy surgery), might offer a better chance of seizure control. If there is an underlying condition that is triggering focal seizures, it is possible that treating the condition may improve or stop the seizures. Your neurology provider will discuss these different treatment options with you.

How long will my child need medicine?

Some children outgrow focal seizures as their brain develops. Others will require lifelong treatment to prevent and control seizures. If your child has not had a seizure after two years, your provider may consider discontinuing antiepileptic medicine. EEG data often helps guide this choice. The decision to stop medication will depend greatly on your child's unique situation.

Reference and Resources:

http://www.epilepsy.com/learn/types-seizures/simple-partial-seizures
http://www.epilepsy.com/learn/types-seizures/complex-partial-seizures
http://www.epilepsy.com/learn/types-seizures/secondarily-generalized-seizures
http://www.epilepsy.com/learn/types-seizures/new-terms-and-concepts-seizures-and-epilepsy
http://www.epilepsy.com/learn/treating-seizures-and-epilepsy

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