NATIONWIDE CHILDREN'S HOSPITAL™

HELPING HAND™

700 Children's Drive
Columbus, Ohio 43205-2696
nationwidechildrens.org

SEIZURES: GENERALIZED

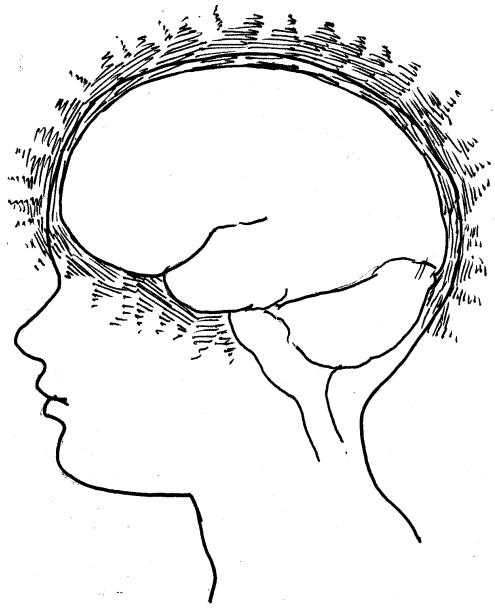
Seizures occur when nerve cells in the brain send out sudden, excess, uncontrolled electrical signals. *Generalized seizures* occur when nerve cells in ***both sides of the brain*** are involved at the same time (Picture 1). When the seizure starts, the person is not aware of his or her surroundings. A person who is about to have a generalized seizure has no warning that it will happen. However, just before it starts there may be a change in behavior, such as being irritable or feeling restless.

NOTE TO HEALTH PROFESSIONAL

Please also give the Helping Hand: *Seizure Care*, HH-I-61, when using this Helping Hand.

There are 6 types of generalized seizures:

- Absence
- Atonic
- Tonic
- Myoclonic
- Tonic-clonic
- Clonic



Picture 1 During a generalized seizure, nerve cells in the entire brain have extra discharges.

ABSENCE SEIZURES

Absence (AB-sens) seizures may also be called *petit mal* (peh-Tee-mahl) seizures. They come on quickly, last a short time (30 seconds or less), and the child recovers right away. With an absence seizure, the child simply stares into space. He does not speak or hear what is spoken. The seizure may include eye blinking that lasts from 5 to 30 seconds.

When the seizure is over, the child continues with what he was doing before the seizure. He does not know he has had a seizure. This type of seizure can be mistaken for problems with learning, behavior, or coordination because the child may seem confused or "spaced-out."

MYOCLONIC SEIZURES

Myoclonic (MY-oh-KLON-ik) seizures are brief, sudden jerks of the body. The entire body may be involved, or the seizure may be limited to the face, trunk, arms, or legs. The seizure may be just one jerk or several jerks in a row. The child with myoclonic seizures may complain about dropping or spilling things, or may find himself on the floor and not remember how he got there.

ATONIC SEIZURES

With an atonic (ay-TON-ik) seizure (also called "drop" seizures), the child has a sudden loss of muscle tone and control. If he is standing, he will fall suddenly to the floor. The seizure may be followed by a short period of confusion.

TONIC-CLONIC SEIZURES

Tonic-clonic (TON-ik KLON-ik) seizures are the most common type of generalized seizure. They may also be called *grand mal* seizures. At the start of the seizure, the child is not aware of his surroundings. He may let out a shrill cry. The tonic phase is the first stage of the seizure when the whole body becomes stiff. The eyes roll back or to the side. The pupils of the eyes become large. Breathing becomes very slow and shallow. The heart rate may be slowed. The child may bite his tongue, but *it is **impossible** for the child to swallow his tongue*.

The *tonic* phase is followed by trembling movements or a *clonic* phase. Clonic actions includes jerking of the face, head, arms, and legs. As the seizure continues, the jerking decreases.

After the seizure, the child becomes limp. He may urinate, have a bowel movement, or vomit. This is the start of the *post-ictal* phase. During this time, the child may be confused, in a "fighting" mood, or hard to wake up, or he may sleep for several hours. When the child wakes up, he will not remember anything about the seizure and may complain of tiredness, headache, or sore muscles.

TONIC SEIZURES

The tonic (TON-ik) seizure starts the same way as the tonic-clonic seizure. The difference is that the tonic seizure does not go beyond the stiffening of the body. When the child stiffens, he may look like he is shivering or having a "cold chill." The muscles do not relax until the seizure is over.

After the seizure, the child becomes limp. He may urinate, have a bowel movement, or vomit. This is the start of the *post-ictal* phase. During this time, the child may be confused, in a "fighting" mood, or hard to awaken, or he may sleep for several hours. When the child wakes up, he will not remember anything about the seizure and may complain of tiredness, headache, or sore muscles.

CLONIC SEIZURES

With a clonic (KLON-ik) seizure the body stiffens and relaxes in a rhythmic way. It may look like jerking of the entire body.

After the seizure, the child becomes limp. He may urinate, have a bowel movement, or vomit. This is the start of the *post-ictal* phase. During this time, the child may be confused, in a "fighting" mood, or hard to awaken, or he may sleep for several hours. When the child wakes up, he will not remember anything about the seizure and may complain of tiredness, headache, or sore muscles.

WHEN TO GET EMERGENCY HELP

The tonic-clonic, tonic, and clonic seizures usually last only a few minutes. It is important to remember that **seizures do not usually cause brain damage**. However, you should call for emergency help if any of the following occurs:

- Trouble breathing during the seizure and the child's color changes
- Seizure lasts more than 5 minutes
- Child chokes on blood, vomit, etc.)
- Child is injured during a fall or during the seizure and needs first aid (a bad cut, broken bone)

Check on your child every 5 minutes. If you can't wake up your child 30 minutes after the seizure, call 911.

To learn more about how to care for your child during a seizure, ask for the Helping Hand: *Seizure Care,* HH-I-61.

If you have any questions, please ask your doctor or nurse or call _____.

If you need to speak with someone after regular office hours, call the hospital operator at (614) 722-2000 and ask to speak with the neurology doctor on call.