

ORGANIZATION NEWS

Information/Education Page

Seizures and Traumatic Brain Injury



The risk of having seizures is much greater after a traumatic brain injury (TBI). Seizures happen in 1 of every 10 people who have a TBI that requires hospitalization. Most seizures occur in the first several days or weeks after a brain injury. Some may occur months or years after the injury. About 70% to 80% of people who have seizures are helped by medications.

What are Seizures?

The seizure usually happens where there is a scar in the brain.

During a seizure, there is a sudden abnormal electrical disturbance in the brain that results in one or more of the following symptoms:

- Strange movement of your head, body, arms, legs, or eyes
- Unresponsiveness and staring
- Chewing, lip-smacking, or fumbling movements
- Experiencing strange smells, sounds, feelings, tastes, or visual images
- Sudden tiredness or dizziness
- Inability to speak or understand others

Seizure symptoms are sudden and uncontrollable. Seizures usually last only a few seconds or minutes but sometimes continue for 5 to 10 minutes. You may have a bladder or bowel accident or bite your tongue or the inside of your mouth during a seizure. After the seizure, you may be drowsy, weak, or confused or have a hard time talking to or understanding others. After some seizures it may be harder for you to stand, walk, or take care of yourself for a few days or even longer.

Seizures related to TBI

- **Early post-traumatic seizures:** A seizure in the first week after a TBI. About 25% of people who have an early post-traumatic seizure will have another seizure months or years later.
- **Late post-traumatic seizures:** A seizure more than 7 days after TBI. About 80% of people who have a late post-traumatic seizure will have another seizure.
- **Epilepsy:** Having more than one seizure. More than half of people with epilepsy will have this problem for their whole lives.

Conditions that could increase the risk of having a seizure include:

- High fever
- Loss of sleep and extreme fatigue
- Use of alcohol or recreational drugs (such as marijuana, hashish, amphetamines, cocaine, ecstasy)
- Some prescription and over-the-counter medications
- Chemical changes in the body such as low sodium or magnesium, or high calcium

Medications to treat seizures

Medications used to control seizures are called antiepileptic drugs (AEDs). Commonly used AEDs include levetiracetam (Keppra),

phenytoin (Dilantin), carbamazepine (Tegretol, Carbatrol), valproic acid (Depakote, Depakene, Depacon), lamotrigine (Lamictal), topiramate (Topamax), oxcarbazepine (Trileptal), lacosamide (Vimpat), zonisamide (Zonegran). You and your doctor will decide on which drug to use based on your medical history.

What if the medications do not work?

If your seizures continue even after medication, your doctor may refer you to a comprehensive Epilepsy Center to be seen by seizure specialists (epileptologists).

The websites of the Epilepsy Foundation of America (www.efa.org) or the American Epilepsy Society (www.aesnet.org) can tell you about the nearest comprehensive Epilepsy Center.

Safety Issues

In most states, licensed drivers must notify the department of motor vehicles (DMV) if they have had a seizure. Usually you won't be able to return to driving for a period of time; that is, until you have demonstrated that you have been without seizures and can safely operate a motor vehicle while taking medications to prevent further seizures.

Other things you should do to stay safe if your seizures are not well controlled:

- Always have someone with you if you are in water.
- Don't climb on ladders, trees, roofs, or other tall objects.
- Let people you eat with know what to do in case you have a seizure and start choking.

What your caregiver should do if you are having a seizure

Family members or caregivers should watch closely to see what happens during a seizure so they can describe it to medical professionals. They should keep a diary with the date, time of day, duration, and description of each seizure.

Most seizures are short and do not result in significant injuries. However, it is important for your caregivers to know what to do to keep you from hurting yourself.

What to do for someone having a seizure:

- Loosen tight clothing, especially around the neck.
- Make sure the person does not fall: try to help them to the ground safely or hold them in a chair.
- Turn the person and his or her head to the side so that anything in the mouth does not block the throat.

- It can be dangerous to put anything in the mouth as you can get bitten.
- If you know CPR, start CPR if there is no pulse. Call 911.
- If there is no pulse, start chest compressions in the middle of the chest with 2 hands at least 100x minute. THIS IS THE MOST IMPORTANT PART OF CPR!
- Listen for breathing at the mouth and extend the neck if breathing is difficult. If there is no breathing, start CPR by sealing your lips over the person's mouth, holding their nostrils, and breathing 2 quick breaths. Continue breathing every 5 seconds unless the person starts breathing without help. Call 911.
- If this is the first seizure after TBI, call the person's doctor for advice.
- If the seizure does not stop after 3 minutes, call 911.
- If the seizure stops within 3 minutes, call the person's doctor.
- If the person does not return to normal within 20 minutes after the seizure, call 911.

Disclaimer

This information is not meant to replace the advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatment.

Source

Our health information content is based on research evidence whenever available and represents the consensus of expert opinion of the TBI Model System directors.

Authorship

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