Seizures (potential or new) in the Neurosurgery Patient

What is a seizure?
Every day, your brain sends electrical signals out, and your body does what is requested by these signals. A seizure occurs when the brain has a sudden burst of electrical signals that is not normal. It can be focused on a small part of your brain, or involve a large part of your brain. This disrupts the normal function of your body for a brief time, with the result being abnormal experiences and/or movements. Epilepsy is a chronic condition that makes people prone to having seizures that recur and are often without triggers.

What does a seizure look like?
Signs of a seizure can be very different for each person. Some may include:
- Twitching of one specific part of the body
- Violent, uncontrolled shaking of the body
- Staring off into space
- Lip smacking
- Memory loss
- Eyes “rolling back into the head”
- Sudden loss of consciousness

What might cause a seizure in a Neurosurgery patient?
There are many causes of seizures. Sometimes, we do not know what triggers a seizure. Other times, causes may include:
- Congenital (born with seizures)
- High fevers
- Tumors in the brain
- Blood in the brain
- Stroke
- Aneurysm in the brain
- Cyst in the brain
- Head injury
- Infection
- Very low blood sugar
- Withdrawal from medicines or drugs
- Withdrawal from alcohol
- Illnesses like meningitis or encephalitis
- Lack of oxygen to the brain

Phases of seizure activity
There are 3 phases of a seizure.

- **Aura**: a sensation or feeling you might have before the physical part of the seizure begins
- **Ictal**: the time during which the seizure occurs
  - Family and staff should protect you from self-harm during the seizure.
  - They should avoid putting anything into your mouth, as this will only cause more irritation.
  - They should also try to keep your head away from any hard objects.
- **Post-ictal**: the time after the seizure
  - You may feel weak and sleepy. You could be difficult to arouse or may be confused.

Will I always have seizures?
- The cause of your seizures will impact how long you are likely to have seizures.
- Some seizures don’t recur after the cause is treated.
- Other seizures persist even after the cause has been treated.
- Your doctor will have a better idea of how long you can expect to have seizures.

How to do you diagnose a seizure?
- Health history
- Physical exam
• Blood tests
  • EEG (electroencephalography) records the electrical activity in your brain. Pain-free electrodes are placed on your scalp to record the test results.
  • MRI (magnetic resonance imaging) uses a very strong magnet to make a “picture” of your brain.
  • CT or CAT scan (computed tomography) also makes a “picture” of your brain, but it can show different images than an MRI.

How do you treat a seizure?

Medicine: You may be placed on one or more medicines, based on how your body reacts to the treatment. This is the first step for seizure control. **Do not stop taking your medicines without talking with your doctor first.**

Surgery: Causes for seizures can include tumors, cysts, aneurysms, or blood in the brain. Each person is different, some have seizures prior to surgery, and some after surgery.

How will seizures affect my activities?
• Until your seizures are well controlled, you will not be allowed to drive.
• Limit alcohol and illegal drug use. Both can cause seizures and may interact with your seizure medicines.
  • You may have mild memory loss from the seizures which could affect your daily routines.
  • Do not swim alone. Be sure to have friends or family with you.
  • Keep bathroom doors unlocked while bathing. If you have a seizure while in the bathroom, others can assist you more quickly.

**Resources**
You can still lead an active life despite having seizures. These guidelines are to help keep you safe. If you have questions, ask your doctor or nurse. You may find the resources on the next page helpful also.

Epilepsy Foundation
4351 Garden City Drive
Landover, MD 20785
Toll free (sponsored by Novartis): 800-EFA-1000 (English and Spanish)
Fax: 301-577-4941
Web site: www.efa.org

National Institute of Neurological Disorders and Stroke
Office of Scientific and Health Reports
Room 8A-06, MSC 2540
31 Center Drive
Bethesda, MD 20892-2540
Toll free: 800-352-9424
Web site: www.ninds.nih.gov

The American Academy of Neurology
1080 Montreal Avenue
St. Paul, MN 55116
Phone: 651-695-1940
Web site: www.aan.com

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