



Patient Education

Epilepsy (Basics)

by *NeuroCare.AI*

Overview on Epilepsy

Epilepsy is a **neurological disorder that affects a person's brain and causes recurrent seizures.**

They are typically characterized by a sudden discharge of electrical energy in the brain, which may cause:

- Convulsions
- Changes in mood or sensation
- Loss of awareness, and/or temporary confusion

It's important to note that there is currently no single symptom of epilepsy as it can manifest differently for different people. Epilepsy is one of the most common neurological disorders in the world, **affecting 70 million people globally.** The cause of epilepsy can be a chemical imbalance in your brain or an injury.



Defining Epilepsy

According to **International League Against Epilepsy (ILAE)** a person is considered to have epilepsy if they meet any of the following conditions:

1. A minimum of two unprovoked (or reflex) seizures occur greater than 24 hours apart.
2. One unprovoked (or reflex) seizure and a likelihood of further seizures with the general recurrence risk (at least 60%) after two unprovoked seizures over the next decade.
3. Diagnosis of an epilepsy syndrome

Epilepsy in patients with age-dependent epilepsy syndrome who are seizure-free for the last 10 years, with no medication intake for the last 5 years, and now has passed the appropriate age for that syndrome is considered to be resolved.

Signs and Symptoms of Epilepsy

People with epilepsy may experience tonic-clonic or grand-mal seizures, which often include passing out, stiffness in the entire body (head to toe) followed by a series of jerking movements. Some people with other types of seizures may experience less obvious symptoms, such as shaking in one arm or face. Others may suddenly stop responding and stare for a few seconds. Sometimes people get a certain feeling or sense a smell before they experience seizures. This sensation is called an "aura."



Episodes of altered consciousness



Repetitive motor movements



Loss of Consciousness



Aura

Investigations for Diagnosing Epilepsy

Doctors and researchers use several techniques to diagnose epilepsy. Typically, multiple investigational techniques are used to diagnose epilepsy. These methods include the following and are adjusted for each individual patient according to their specific needs and profile:

- **Blood testing.** It is needed in most cases. In some cases, CSF analysis is also needed.
- **Electroencephalogram (EEG) Monitoring.** A brainwave test called an electroencephalogram or EEG can identify abnormal patterns of brain activity that may be an indication of epilepsy.
- **Brain Scans.** A CT scan or MRI scan of the brain can identify structural brain abnormalities that may contribute to epilepsy.

Treatment

Treatment for epilepsy mainly consists of anti-seizure medications. Despite being unable to permanently cure epilepsy, medications can be used as preventive measures to stop seizures from happening. This is beneficial for those who suffer from different types of epileptic disorders, with the right choice of the drug depending on what type you have access to. Some advanced cases of refractory epilepsy will require more advanced even invasive forms of therapies.



Treatment

continuation...

- **Brain Surgery** - may help control seizures if doctors determine that regions of the brain responsible for seizure activity are small enough in area and specialization to spare.
- **Vagus Nerve Stimulator** - is an electrophysiological device that works by stimulating the vagus nerve, and it's been used for years as a treatment for epilepsy. The vagus nerve is the longest of all cranial nerves, and when stimulated through this implant, it can reduce the severity of epileptic seizures.
- **Responsive Neurostimulation (RNS)** - are implanted devices that monitor seizures and deliver a small pulse or burst of stimulation to stop them.



Medication and Side Effects

It is important for you to know that anti-seizure medications must be taken properly according to your prescribed dosage. If any of the following applies to you, consult your doctor. It is important for you to know that anti-seizure medications must be taken properly according to your prescribed dosage. If any of the following applies to you, consult your doctor.

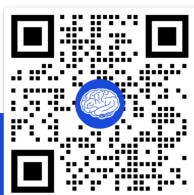
- Some of the side effects of these medicines might include feeling tired or dizzy, or experiencing other problems.
- The other possible side effects of taking these anti-seizure medicines may include a rash and a feeling of wanting to hurt yourself.
- The effectiveness of anti-seizure medications can be affected by other medications you're taking.



REMINDER



Any new prescription or over-the-counter medications you begin taking should be reported to your doctor. You may not get the best results if you take birth control pills and anti-seizure medications at the same time. This could lead to an unintended pregnancy.



Prevention

Lowering the Chances of having seizure attacks

Is there a chance to lower the chances of having a seizure attack? The answer is **YES!** To reduce the chance of future seizures, you should always take your meds exactly as directed by your doctor. You should also make sure to get enough sleep and avoid alcohol or other drugs.



Living with Epilepsy

- If you live with epilepsy, **you should wear a medical bracelet** to let others know about your condition.
- As a person with epilepsy, you might have some specific instructions on how to help during your next seizure. It is important for you to have a member in your family to know how to do the **Seizure First Aid**.
- For example, positioning you to prevent injury but not putting anything in your mouth. **If you have a seizure that lasts more than five minutes, make sure they call for an ambulance (dial emergency 911).**



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For further information, consult a physician and the organization referred to herein.

