

Fact Sheet: Epilepsy



About Epilepsy:

When nerve cells in the brain fire electrical impulses at an abnormally fast rate, an “electrical storm” takes place in the brain, known as a seizure. Seizures can cause abnormal movements, loss or change of consciousness, or change of mood. A pattern of repeated seizures is referred to as epilepsy. Some individuals are served by a Regional Center because of a primary diagnosis of epilepsy. Epilepsy is also common as a secondary condition in individuals with mental retardation, cerebral palsy, and brain injury. While not common, epilepsy can also be associated with autism.

- Epilepsy can be caused by inherited genetic conditions, metabolic disorders, cerebral malformations, cerebral tumors, trauma, infection, and other conditions.
- In some cases, syncope (fainting spells), pseudo-seizures (a rare form of seizure-like behavior caused by underlying emotional problems), and tics can be confused with seizures.
- It is important for people with epilepsy to undergo medical evaluation to look for possible causes. Evaluation can sometimes result in the discovery of a treatable underlying condition.
- Unfortunately, the majority of epilepsy cases cannot be attributed to a cause or treatable underlying condition.

Types of Epilepsy:

- The many types of epilepsy are distinguished by their different characteristics, depending on symptoms and on where the seizures occur in the brain.
- Many classification systems for epilepsy are in use, but the most common is the International Classification of Seizure Types (1981). Classification of epilepsy is likely to change soon as the International work-group is planning to release a new classification scheme.

Managing a Seizure:

- Even if an individual has attained good seizure control, a friend, family member, or caregiver must be responsible for knowing how to manage an acute seizure.
- A short seizure usually requires nothing more than positioning the individual so that injury is avoided.
- Certain medications can be given safely at home if a seizure lasts longer than usual. The individual’s physician should make arrangements in advance if these medications are part of the individual’s seizure management procedure.
- If a seizure does not stop within a specified amount of time, a caregiver should call 911 for assistance.

Treatment:

- Regardless of the underlying developmental disability, the ideal goal is complete seizure control with no adverse effects from medication. Reasonable goals include adequate control of seizures, a limited number of medications, no injuries from seizures, and optimal quality of life given the developmental disability. Many cases of epilepsy are easy to control with modern anticonvulsant medications. In these cases, it suffices to monitor adherence to the medication regimen, assess drug levels in the blood, and monitor the side-effects of medication, if any.
- Once an individual has been seizure-free for a number of years, especially if the last seizure occurred prior to adulthood, an attempt to reduce or eliminate medications may be considered.

Complex Cases:

- In complex cases, a seizure diary is a useful means of providing information about the frequency and duration of seizures. This process can assist the treating physician in making determinations about medication adjustments and the person in planning activities for work and recreation.
 - Emergency measures such as calling 911, duration of sleepiness, loss of appetite, incontinence of bowel or bladder, and time before resumption of activities should be recorded in the log.
- Some cases require frequent medication changes and also adjustment of dosage and timing. Monitoring of seizure frequency and intensity (seizure diary) along with assessment of side effects becomes challenging, as does gaining adherence to more complex medication regimens. Such individuals usually require the oversight of a neurologist to achieve satisfactory results.
- A small number of individuals have intractable epilepsy that cannot be adequately controlled using medication. These cases may require neurosurgery to remove an abnormal lesion in the brain. Other intractable seizure cases may be helped by implantation of a Vagus Nerve Stimulator (VNS) to improve seizure control. The VNS connects to the vagus nerve and sends electrical impulses to the brain which may reduce seizure frequency. Some individuals may feel better with a VNS even if seizure frequency is unchanged.
 - It is important for any person with a VNS to see a physician frequently.
 - Caregivers of an individual with a VNS should be trained to recognize seizure activity and to monitor for side effects such as hoarseness or voice changes, chest pain, skin irritation, and breathing problems.