

Fact Sheet 18

Epilepsy Diagnosis and Treatment

Epilepsy is a common and complex neurological condition affecting at least 1 in 100 people. It can be regarded as a spectrum of disorders because there are many types of seizures and they vary in severity with each individual with epilepsy. Anyone can develop epilepsy regardless of age, ethnicity, socio-economic status, or gender and the condition will affect the quality of life of each person depending on the type and severity of the seizures. Not all seizures are epileptic ones. Some medical problems can mimic epileptic seizures and are called non-epileptic seizures, or pseudo seizures, and so a proper diagnosis is needed for effective treatment.

Epilepsy is typically diagnosed by visual observations since not all epileptic seizures are convulsive. A person on having a first seizure may be asked a series of questions by a neurologist to ascertain if he/she has focal epilepsy (seizures that occur in part of the brain) or generalised (seizures that occur in the whole brain) or both. The questions may include:

Did you:

- Experience déjà vu?
- Experience any changes in smell or taste?
- Experience any abdominal/chest discomfort or altered heart and breathing rates?
- Lose consciousness or was your consciousness altered?
- Display unusual behaviours such as lip smacking, chewing, fumbling, picking?
- Wander off with no awareness of what you were doing?
- Turn your head to one side?
- Become incontinent?
- Convulse, drop onto the ground, or become stiff?

These types of questions build up a picture of a person's seizures but to be diagnosed with epilepsy a person would need to have the following conditions as defined by the ILAE (<https://www.ilae.org/guidelines/definition-and-classification/the-2014-definition-of-epilepsy-a-perspective-for-patients-and-caregivers>):

1. At least two unprovoked (or reflex) seizures occurring >24 hours apart;
2. One unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after two unprovoked seizures, occurring over the next 10 years;
3. Diagnosis of an epilepsy syndrome

Accurately diagnosing epilepsy can be challenging and so there are diagnostic tests that are used to help provide further information for the neurologists.

These include:

- An EEG (electroencephalograph) that measures brain activity
- Continuous video-EEG monitoring, which is useful in determining seizure types
- An MRI (magnetic resonance imaging) which uses magnetic fields to detect structural abnormalities in the brain such as tumours and scar tissue
- Initial blood tests that can detect diseases, infections, dietary deficiencies, etc. These show whether the body's organs or metabolism are working well.
- A neurological examination to show whether there are other problems with the brain

With technological advances it is also possible for family members to record seizures using mobile phones and digital cameras to help a neurologist with a diagnosis. If an epilepsy diagnosis is given then the use of anti-epileptic medication is discussed.

Seizure medications are used to control seizure recurrence, typically by decreasing brain excitation or increasing brain inhibition. For most people there is excellent seizure control with no, or few, side effects (See fact sheet 7 on medication).

Once a diagnosis and treatment of epilepsy has been made it is then necessary to self-manage the condition for optimum quality of life. Completing a seizure diary will enable a person to understand possible triggers. Triggers such as stress, tiredness, and high caffeine use can lower the seizure threshold thus making a person more vulnerable to seizures. Establishing a network of support from friends and family, and accessing community groups, can help with initial fears and anxieties that one may have regarding the epilepsy condition.

A trained epilepsy adviser can also help put in place support and advocacy to make adjusting to life with epilepsy as easy as possible.

Disclaimer: this fact sheet is for education purposes only. Please consult your doctor or other health professional for advice regarding your epilepsy.