SIMS

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EPILEPSY

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You can feel some parts of your body – the heart as it beats, your arms and legs as you move about, and your stomach when you are hungry. However, you feel the existence of the brain only when you witness someone go into a seizure and have no idea how to assist. A seizure is the only way we can see a brain working, in lay terms; it is called “Electrical Storm of the Brain”.

Epilepsy

Epilepsy, also known as seizure disorders, is characterised by short unpredictable episode of abnormal activity in the brain lasting from a few seconds to a few minutes. The fourth most common neurological disorder affecting people of all ages, epilepsy control varies from person to person. About 1 in 20 people may have experienced a seizure at some point of their life.

What is Epilepsy?

Epilepsy is an episode of recurrent unprovoked seizures brought about by the electrical activity of the brain and may affect any part of the body. The human brain is the source of epilepsy and the location of the external manifestation, how long it lasts and its impact on the individual is dependent of how much the brain is affected.

Different types of Epilepsy & Seizures

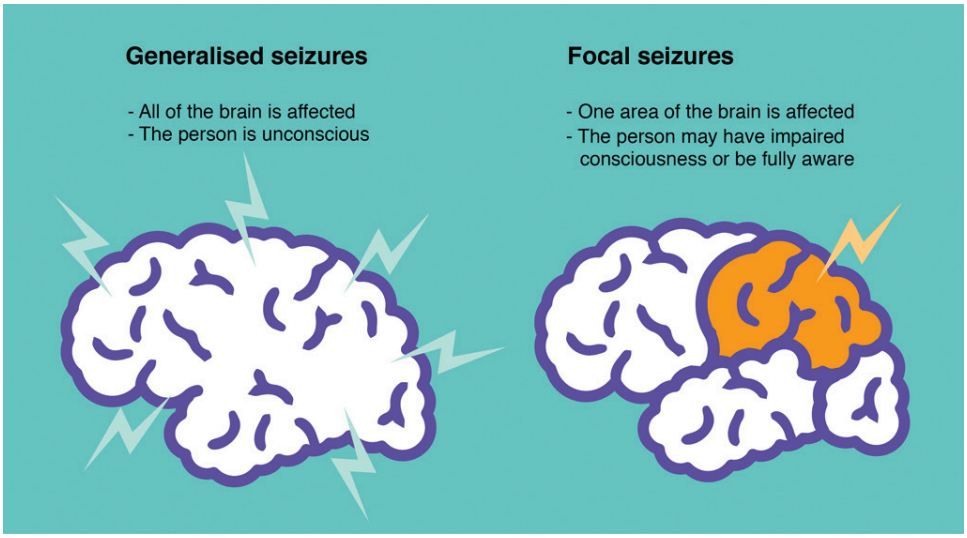
Seizures are divided into two main types – generalised and focal.

Generalised Seizures

These occur if the abnormal electrical activity affects all or most of the brain. A tonic-clonic seizure is the most common type of generalised seizure. With this type of seizure your whole body stiffens, you lose consciousness and then your body shakes due to uncontrollable muscle contractions. There is involuntary urination / passing of stools, tongue bite, frothing at mouth.

Focal Seizures

The burst of electrical activity is restricted to one part of the brain. Therefore, you tend to have localised (focal) symptoms. Different parts of the brain control different functions and so symptoms depend on which part of the brain is affected.



What causes Epilepsy?

Unknown cause (idiopathic epilepsy)

In many cases, it is difficult to establish the cause for the epilepsy bout. People with idiopathic epilepsy usually have no other brain (neurological) condition.

Symptomatic Epilepsy

In some cases, an underlying brain condition or brain damage causes epilepsy. The condition may irritate the surrounding brain cells and trigger seizures, such as:

- A patch of scar tissue in a part of the brain
- A head injury
- A stroke
- Cerebral palsy
- Some genetic syndromes
- Brain tumors
- Previous infections of the brain such as meningitis and encephalitis

What triggers a Seizure?

There is often no apparent reason why a seizure occurs at one time and not at another. However, some people with epilepsy are aware that certain triggers are more likely to bring about a seizure, and these may possibly include:

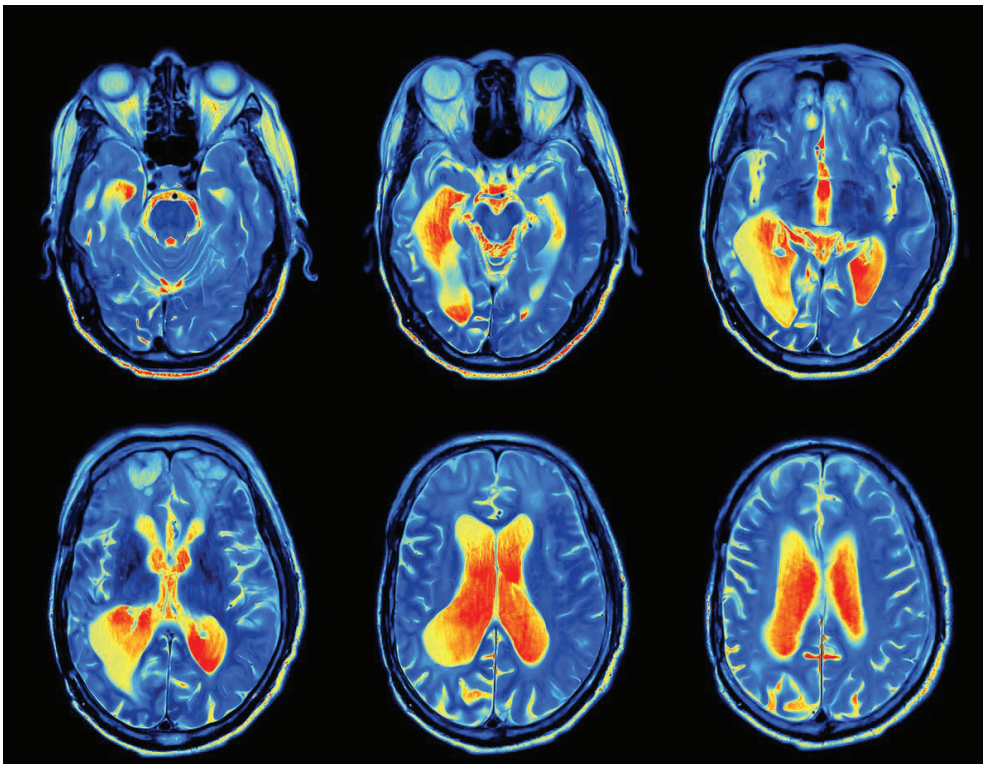
- Stress or anxiety
- Lack of sleep, or tiredness
- Irregular meals (or skipping meals) which may cause a low blood sugar level
- Heavy alcohol intake
- Periods (menstruation)
- Fever
- Missing the prescribed antiepileptic drugs

How is Epilepsy diagnosed?
You should see a doctor if you have had a possible seizure or similar event. The most important part of confirming the diagnosis is the description of what happened.

A detailed account of the event by a person who has witnessed the seizure is very important in making the diagnosis. Video recording of the episode provides a more accurate assessment of what happened during the seizure. There is no single test to confirm a diagnosis of epilepsy. However, tests such as brain scans, an electroencephalogram (EEG - brainwave recordings) may help to make a diagnosis.

A brain scan - Usually a magnetic resonance imaging (MRI) scan or computed tomography (CT) scan - shows the structure of different parts of the brain. This may be useful to establish the cause of seizure in some people.

Electroencephalograph (EEG) - This test records the electrical activity of the brain. Electrodes are placed on various parts of the scalp and are connected to the EEG machine. This amplifies the tiny electrical messages given off by the brain and records their pattern on computer. However, a normal recording does not rule out epilepsy.



Long Term video EEG Monitoring – This records the EEG and video of the patient over a prolonged period usually 5 to 7 days. This allows observation of brain activity during the time a seizure occurs. Although helpful, tests are not foolproof. It is possible to have epilepsy with normal test results. Also, an abnormality found on a brain scan need not necessarily mean that it is the root cause for the seizures.

What are the treatments for Epilepsy?

Medication

Epilepsy can be controlled in a majority of cases with drugs. The medicines work by stabilising the electrical activity of the brain. You need to take medication every day to prevent seizures.

Deciding on which medicine to prescribe depends on factors such as:

- Type of epilepsy
- Age
- Your existing medication for other medical conditions, and their possible side-effects
- Whether pregnant / planning a pregnancy

Surgery

A small part of the brain which is the underlying cause of the epilepsy is surgically removed, and may control or cure epilepsy in carefully selected patients. This is a suitable option if

- Seizures start in a small area of your brain
- Seizures occur more than once a month despite treatment with 2 or more antiepileptic drugs
- There is a structural lesion (tumor, vascular malformation) causing epilepsy

The ketogenic diet (KD)

This is used as a treatment option for children with epilepsy where the seizures are not controlled with anti-epileptic drugs (AEDs). The high fat, low carbohydrate, controlled protein diet may help to reduce the number or severity of seizures and can often have positive effects on behaviour. It needs to be administered with great care.

What is the outlook (prognosis) for people with Epilepsy?

The success in preventing seizures by medication varies depending on type of epilepsy.

- With medication, about 8 out of 10 people are well controlled
- The remaining 20% experience seizures, despite medication

A gradual reduction of drugs may be an option if you have not had any seizures for over 2-3 years.

Instructions to be followed by patients

- Regular sleep
- Avoid alcohol
- Take prescribed drugs regularly
- Avoid driving and swimming
- Never stop taking medication without discussing it with a doctor

What can be done to help a person having a seizure?

- If you are able to catch a person when he is about to fall down, do so and ease him gently on to the ground, or a soft rug
- Loosen tight clothing especially around the neck & remove glasses, if any
- Leave patient plenty of space and let the convulsion take its natural course
- When convulsions have stopped, roll the person to the side to help clear the airway
- Be gentle, calm and reassuring
- In complex partial seizures the person does not know what he is doing - so calmly and gently guide the person away from hazards Stay with the person until he or she regains awareness totally
- Call for an ambulance if seizure lasts more than 5 minutes

What should not be done when someone has a convulsion?

- Do not forcibly try to open the jaw. You may break his teeth
- Do not try to restrain a person however bad the convulsions may look to you. Remember that the seizures will stop only after the abnormal electrical discharges in the brain subside
- Do not try to put your fingers in the person's mouth. Seizures cause forceful contractions and your finger may be bitten
- Do not try to bring the person out of the seizure by using water or shaking or slapping him. You may cause harm to them
- Do not attempt to give any drugs or anything to drink during an attack
- Do not crowd around the person - give him plenty of air
- Do not give a key or metallic object to hold since it is of no use

Public perception and misunderstanding about the cause of epilepsy has far reaching consequences than managing the disease. Popular beliefs that it is due to previous birth sins, evil spirit are untrue; equally baseless is the idea that the seizure will stop if the patient is given an iron object to hold or smell an onion or shoe.