

PART

1

EPILEPSY AND SEIZURES- BASICS

WHAT EVERYONE SHOULD KNOW ABOUT SEIZURES AND EPILEPSY

THIS BOOKLET GIVES A BRIEF INFORMATION ABOUT SEIZURES
AND EPILEPSY AND WHAT YOU NEED TO KNOW

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PART 1



EPILEPSY AND SEIZURES- BASICS

**WHAT EVERYONE SHOULD KNOW ABOUT
SEIZURES AND EPILEPSY**



DR SAUMYA H MITTAL

*Dedicated To Patients And Their Families Across The
World.*

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SOURCES OF IMAGES

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WHAT IS EPILEPSY? HOW IS IT DIFFERENT FROM SEIZURE? WHAT CAUSES SEIZURES?

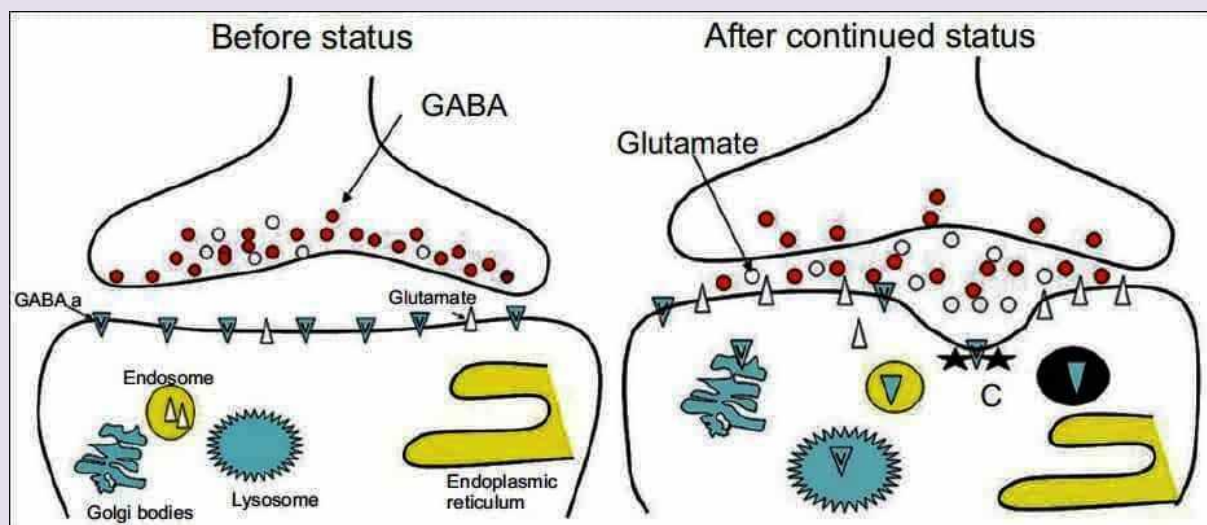
Epilepsy is a common illness that affects more than 50 million people globally. Epilepsy is said to happen when a person has had more than one seizure, and therefore needs medications called ANTIEPILEPTIC MEDICINES. A seizure or a convulsion, on the other hand, can occur in not just epilepsy but as a symptom of other disease as well. These include brain problems, infections, and abnormal metabolite levels (kidney disease, lung disease, low BP, low sugars) just to name a few.



CAUSES OF SEIZURES
Brain Problem- Stroke, Haemorrhage, Brain Infections, Brain Tumours
Infections Other Than Brain Infections – Sepsis, HIV, CMV
Abnormal Metabolic Levels- Kidney Disease, Lung Disease
Low Blood Pressure, Low Blood Sugars
Abnormal Drug Intake And Poisoning Including Alcohol
Birth Abnormality – Developmental Arrest, Decreased Birth Oxygen Levels
During Fever, Especially In Children Of Age Less Than 5 Years

WHY DOES A SEIZURE OCCUR?

The brain cells work on a form of chemo-electricity to help control the functions of the body. The signal travels from neuron to neuron via a chemical that eventually transmits it's message through the electricity in the cell. An excessive discharge of this chemo-electricity results in a seizure. The excessive discharge can be restricted to just a part of the brain or the entire brain. Accordingly, the seizure can involve a part of the body or the entire body.



HOW DO I RECOGNIZE SEIZURES?

A seizure can have many forms. Describing all forms is beyond the scope of this booklet. The commonest seizure is what is known as a Generalized Tonic Clonic Seizure. This is described as sudden jerking movement of all limbs and their stiffening with loss of consciousness and with no awareness of the event on arising from the seizure.

Some other symptoms include-

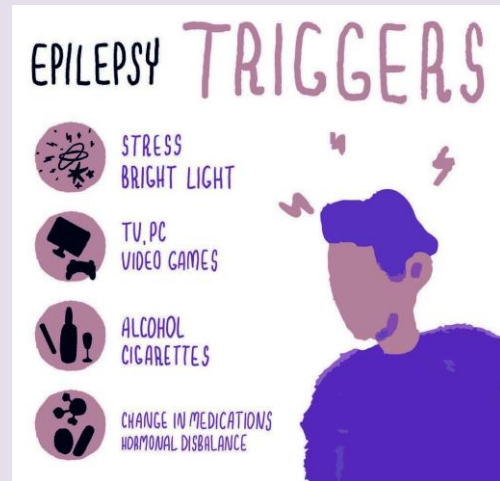
1. a staring gaze to one side,
2. loss of awareness,
3. loss of consciousness,
4. wandering without purpose,
5. recurrent falls,
6. abnormal lip smacking movements.



WHY DOES A SEIZURE DEVELOP WHEN IT DOES? WHAT TRIGGERS IT?

The brain can develop a propensity to develop a seizure at any time. There may be no brain abnormality, structurally.

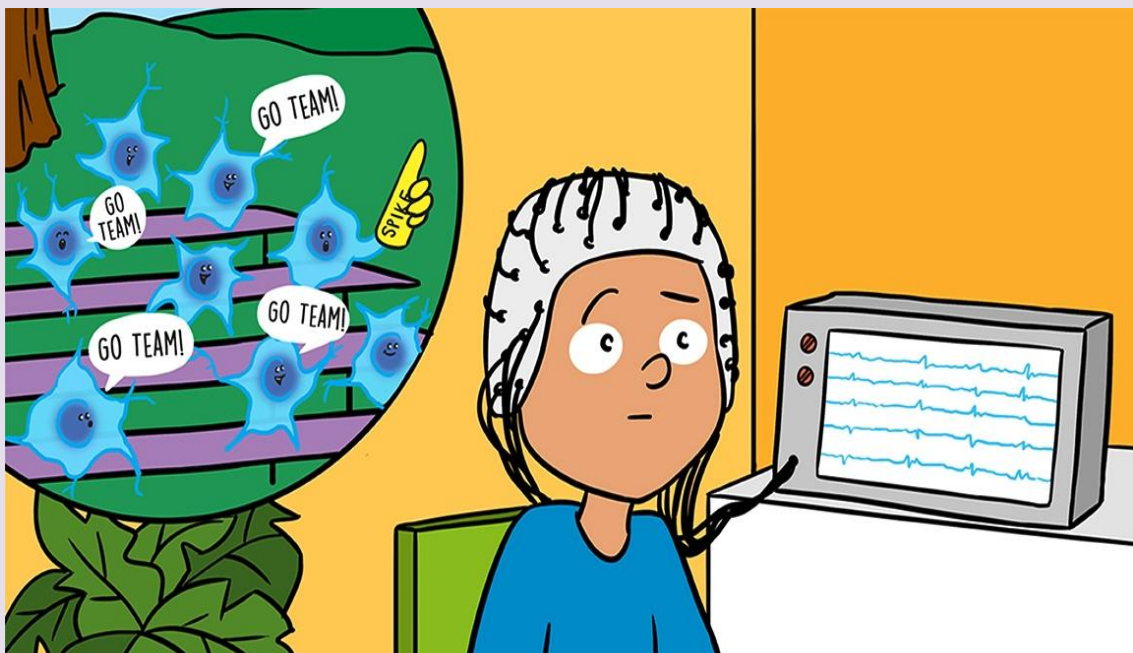
People do have specific triggers that can make it easy for the brain to develop a seizure. These triggers can be different for every person who develops seizures. And avoidance of these triggers is very useful.



TRIGGERS OF SEIZURES
LACK OF SLEEP AND ABNORMAL SLEEPING PATTERNS
LACK OF MEDICATIONS- SKIPPING OF MEDICATIONS
NEED OF ADDITIONAL MEDICATIONS OR DOSE OF MEDICINES
MENSTRUAL ABNORMALITIES
ABNORMAL DIETARY PATTERNS
FEVER AND INFECTIONS
LOW SUGARS, LOW BLOOD PRESSURE, LOW SODIUM ETC
USE OF DRUGS AND ALCOHOL
PERSISTENT BLINKING LIGHTS
STRESS

HOW DO I KNOW IF I HAVE SEIZURES? HOW DO I TEST FOR MY SEIZURES?

You need to meet your neurologist when there is a doubt of seizures or epilepsy. Usually a person with seizure disorder does not know about the symptoms that developed during a seizure. So it is always better to meet a neurologist with an eye witness of the seizure. A video of the seizure can be very informative to your neurologist. In accordance with the symptoms, a neurologist would order tests to help diagnose and evaluate the condition further. These include-

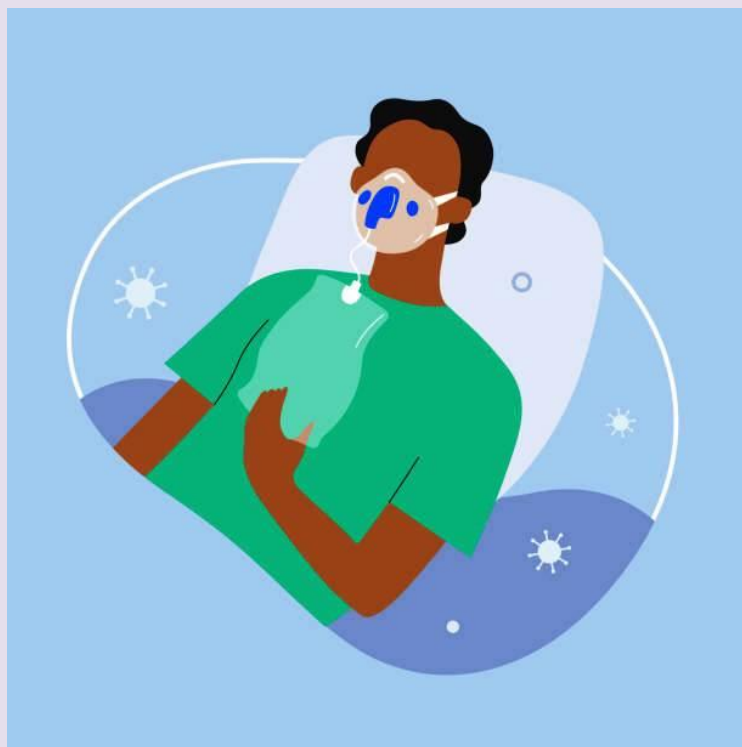


1. Brain Scan – an MRI Brain remains the best test to look for any brain abnormality. Where and when an MRI facility is not available, a CAT scan can be planned. Exact type of scan, with contrast or without contrast, with other sequence like angiography or venography may be needed as per the person's description or as per the basic scan report.

2. Electroencephalography (EEG) - this test helps in detecting the abnormal brain waves that can result from the abnormal discharges of the chemo-electricity. One needs to know that while an abnormal EEG is significant, a normal EEG doesn't rule out a diagnosis of Epilepsy or Seizures. It can also give a clue to the neurologist as to the cause of seizures, and medications needed.
3. Other Tests- These need to be individualized as per person's needs.

HOW LONG CAN SEIZURES AND EPILEPSY LAST? WHAT IS STATUS EPILEPTICUS?

A seizure can last a long duration. This is commonly known as Status Epilepticus. A seizure that lasts for more than 5 minutes or if there are multiple seizures without regaining consciousness then one probably has a status epilepticus and should be rushed to the hospital. This is important as intravenous medications are needed as an emergency protocol to terminate a seizure. Besides, this may be a harbinger to other diseases, not just epilepsy syndrome. So taking the patient to an emergency may help get the person to the care needed quicker.



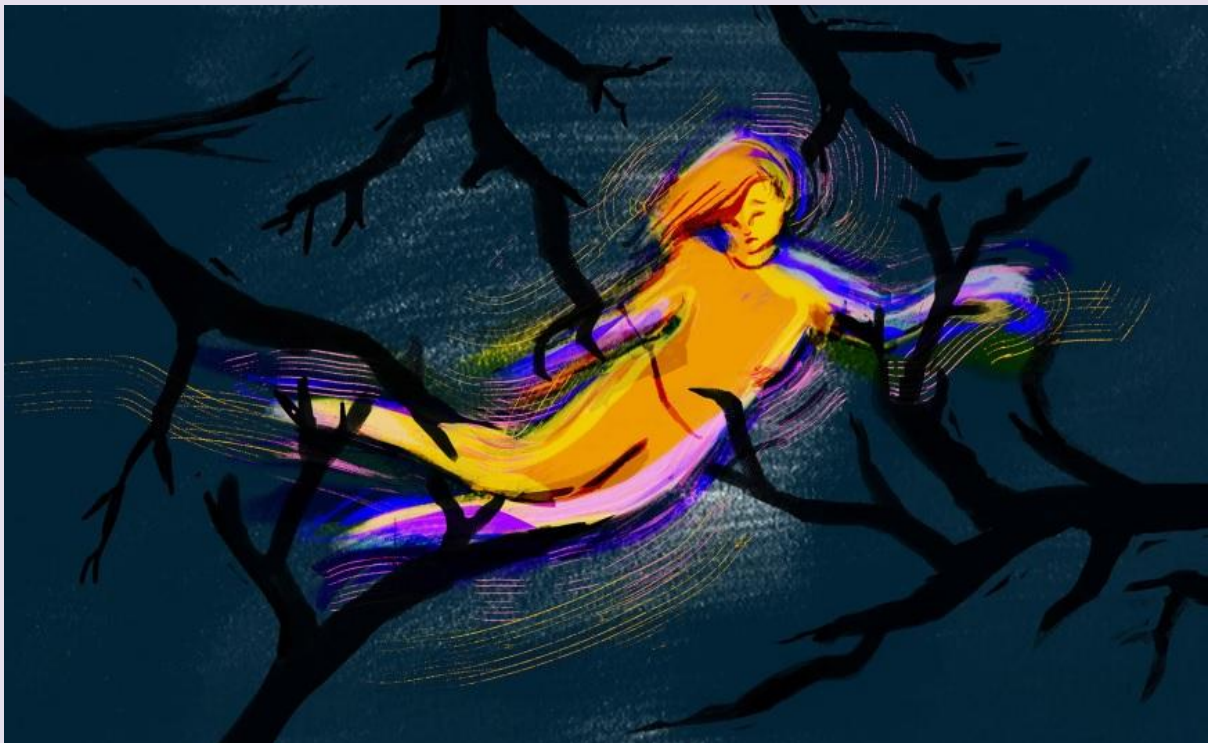
MY FAMILY SAYS THIS IS A SHAMEFUL DISEASE. WHY?

There is nothing to be ashamed of. Unfortunately, there is a lack of knowledge about this disease. And the superstitions have fed the monster created by lack of knowledge. IT IS A NEUROLOGICAL DISEASE THAT NEEDS TREATMENT FOR AN APPROPRIATE CONTROL.



MY CHILD DEVELOPED SEIZURES. IS THIS CHILD GOING TO BE MENTALLY CHALLENGED?

Seizures can occur at any age. Children are not immune from seizures either. They are prone to seizures as well. Some children in fact develop seizures with fever. These are called 'febrile seizures' and usually do not need long term treatment. Children may therefore have seizures without any deficit. The misconception of this question arises probably from the fact that some diseases of children affect their cognitive function in addition to seizures. In fact many times, the cognitive dysfunction precedes seizures. But this is the spectrum of symptoms of one disease. It should not be generalized that every child with fever will develop some other cognitive dysfunction.



I HAVE EPILEPSY. CAN MY FAMILY GET IT FROM ME?

Epilepsy is not transmitted by touch, contact or even mouth to mouth resuscitation. One needs to evaluate the cause of seizure in the afflicted person. Some epilepsy syndromes do have a genetic potential and the illness may therefore be inherited. However, seizures and epilepsy syndromes otherwise do not spread by other modalities.



I SAW MY VIDEO. I AM ON MEDICINES. I AM DEPRESSED. CAN THIS BE A PART OF EPILEPSY? IS EPILEPSY A MENTAL ILLNESS?

No. Seizure is not a mental illness. However with associated social stigma, the prolonged medications, a sense of fear, a few possible restrictions, a possibility of unknown (in view of recurrence of seizure at any time), mental issues like depression and anxiety can surface in a person with seizures and epilepsies. Discuss these doubts and issues with your doctor. It may be that one is simply over thinking. Knowing and understanding your problem always helps clear these doubts and the depression arising from it. Discuss this with your doctor- some medications do lead to mental issues.



SOMEONE IS HAVING A SEIZURE IN FRONT OF ME. WHAT SHOULD I DO?

1. A seizure is one of the scariest events that someone can witness. So staying calm is the most important.
2. Occurrence of a seizure means the person afflicted is likely going to be helpless. In such a situation, first and foremost, secure the person. Get them to a safe surrounding.
3. Try to keep them in a sideways position so that they can bring out the



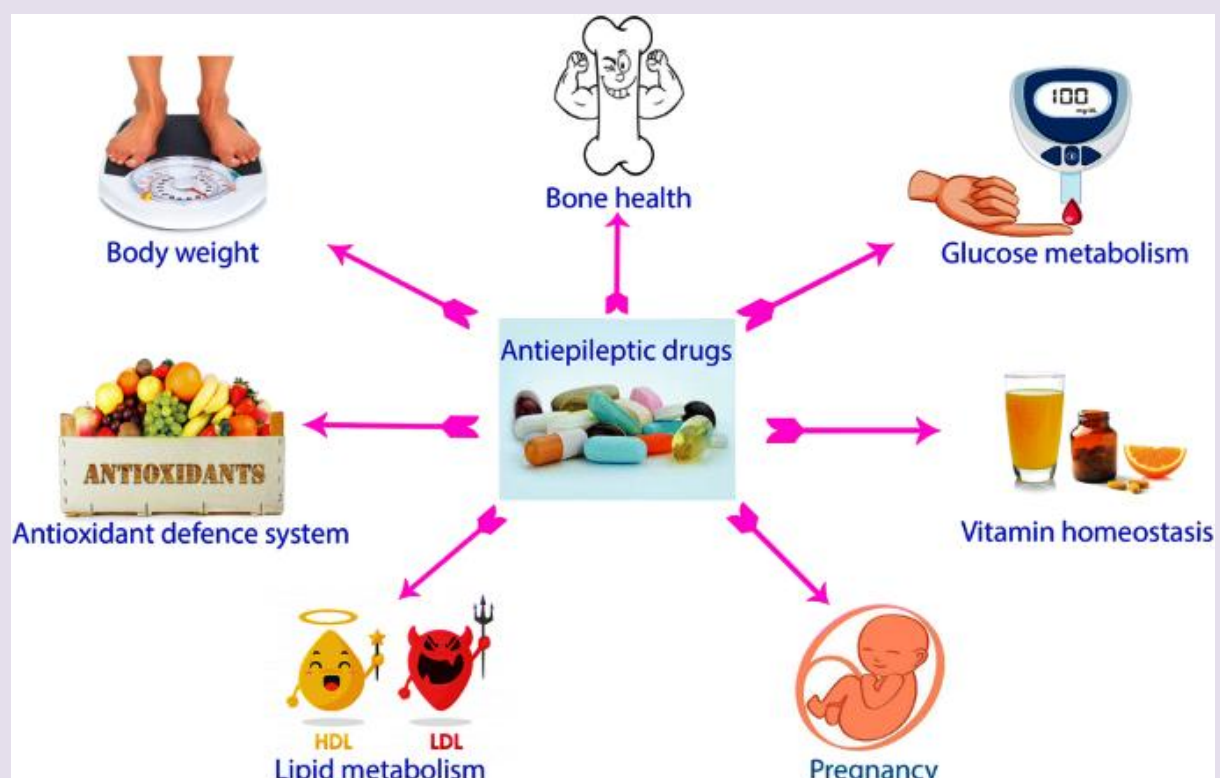
froth outside and avoids development of a possible pneumonia.

4. If this is secure, arrange for an ambulance and medical help.
5. If the person is a known epileptic, they may have a card or band etc to identify them and the emergency contact person. Look for it and use it.
6. Remove tight clothes, glasses, chains etc.
7. Time the seizure episode.

8. If there are more helpers available take a video of the seizure. Nothing will help the doctor diagnose better than a complete video of the event.
9. DO NOT PUT ANYTHING IN THE PERSON'S MOUTH, BE IT A SPOON, A WATER OR MILK. DO NOT PINCH THEIR NOSE OR LIMBS. CONTACT WITH METALS, ONIONS AND OTHER 'BHOOT BHAGAO THERAPY' IS UNLIKELY TO HELP.

DON'T ANTISEIZURE MEDICATIONS HAVE SIDE EFFECTS?

Like every other medications, antiepileptic medications may have side effects. Therefore, most neurologists start the medications at the lowest possible dose and gradually increase the dose and added medications as and when needed. Most of the side effects are mild and mostly, with low doses and adjustments of the timings, the person adapts to the side effects. IF NOT, THE MEDICATIONS MAY NEED REPLACEMENT. SO DISCUSS THE OPTIONS WITH YOUR NEUROLOGIST INSTEAD OF STOPPING THE MEDICINES. A single seizure may not kill neurons, but recurrent seizures may eventually lead to neuronal death. So avoiding the medicines completely isn't recommended.



I HAVE MISSED THE DOSE OF MY MEDICATIONS. WHAT DO I DO?

First and foremost, take your dose as soon as you remember it unless it is time to take the next dose. In that case take a single dose. Taking an extra dose is not recommended. Second, try to avoid this. Missing doses is one of the most common causes of developing recurrent seizures despite being on medications otherwise. Use a reminder or alarm system to remember taking the medications on time. Keep them handy and easily available. Keep an extra packet if the medicine shop is far off as a buffer. In a steady case, it is unlikely that your doctor would recommend an immediate urgent dose change. Third, if there is still chances you may miss a dose, talk to your neurologist. Extended release medicines may be prescribed. These formulations are more expensive, but risk of developing a seizure due to missing a dose reduces. Avoid missing too many doses.



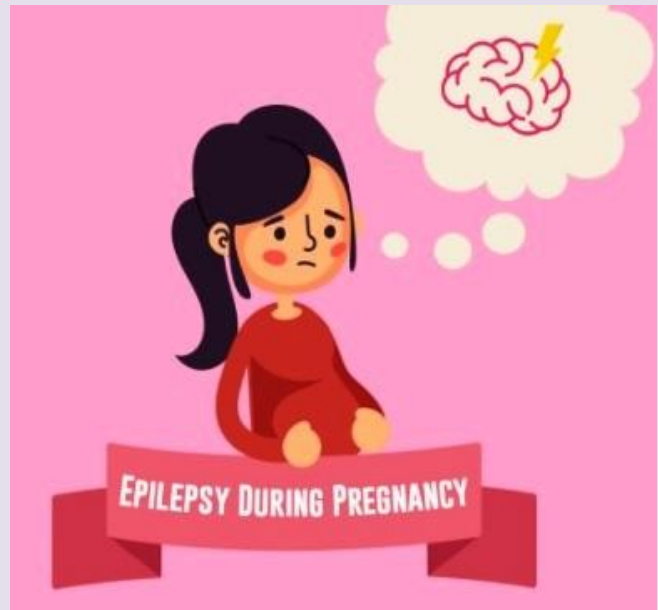
WHAT SHOULD I KNOW ABOUT IMPROVING MY MEDICATIONS EFFECTIVENESS?

1. Take the medications as prescribed.
2. While a small change in the timings is not a problem, maintaining an exact schedule of taking medicines is useful.
3. Avoid missing the dosage. Use of pill boxes, alarms, reminder etc.
4. Space the intake of other medications and foods to have a complete absorption of medicine and drug interactions with other substances in the stomach. Avoid alcohol, drugs and smoking.
5. DO NOT STOP THE MEDICATIONS FOR THE SAKE OF TAKING OTHER MEDICATIONS E.G. TAKING ANTIBIOTICS AND ANTIPYRETICS FOR FEVER.
6. To avoid confusion, especially in elderly, keep the medication (branded or generic) same. New colour and size of medications often confuse them leading to missed doses.
7. Keep a watch on the expiry dates of your medications.
8. Monitor the drug levels as suggested by your neurologist.
9. Avoid lack of sleep and your triggers.



IS PREGNANCY AND GOOD PARENTING POSSIBLE WITH SEIZURES AND EPILEPSY?

Many ladies want to avoid antiepileptic medicines in pregnancy. Their apprehension is understandable considering that none of the medicines is safe for foetus in pregnancy. Besides, the dose of anti-epileptics may need



adjustment during pregnancy. Stopping of medicines during pregnancy has led to seizures and subsequent abortions.

During lactation, feed the child in a safe position. Bathe the child on a flat surface like floor. Bathing should be supervised as far as possible. Keep the child in a play yard. Keep the medications away from the child.

As the child grows, carefully explain the condition to them. Teach them to call emergency number when needed. Stay calm, and it will keep them calm.

WHEN SHOULD THE ANTIEPILEPTIC MEDICINES BE STOPPED?

Unfortunately, there is no clear and one answer for all. This decision varies from person to person. For example in a patient who has had a seizure due to low sugar, long term medications may not be needed. The only control needed is management of the cause of seizures. On the other hand, someone who has a structural defect in the brain e.g. stroke or degeneration (sclerosis) of brain, long term medications may be needed.



CAN I PERFORM MY REGULAR WORK?

Avoid works that can be dangerous, for example, work at heights, involving heat, fire, hot objects, drills, power tools, being over water. If necessary, use safety guards and automatic shut offs. Wear gloves, safety glasses, boots and other protective gear. Avoid sleep deprivation. Keep regular and healthy working lifestyle. Stress management may help. Make sure your co-workers are aware about your illness and know appropriate first aid and how to use emergency medications if suggested by your neurologist.



WILL LIFESTYLE MODIFICATIONS HELP?

Heaters and fireplaces should be covered to avoid injury from tipping over. Floors should be carpeted to avoid injuries from falls. Corners should be rounded. Avoid carrying hot and heavy items.



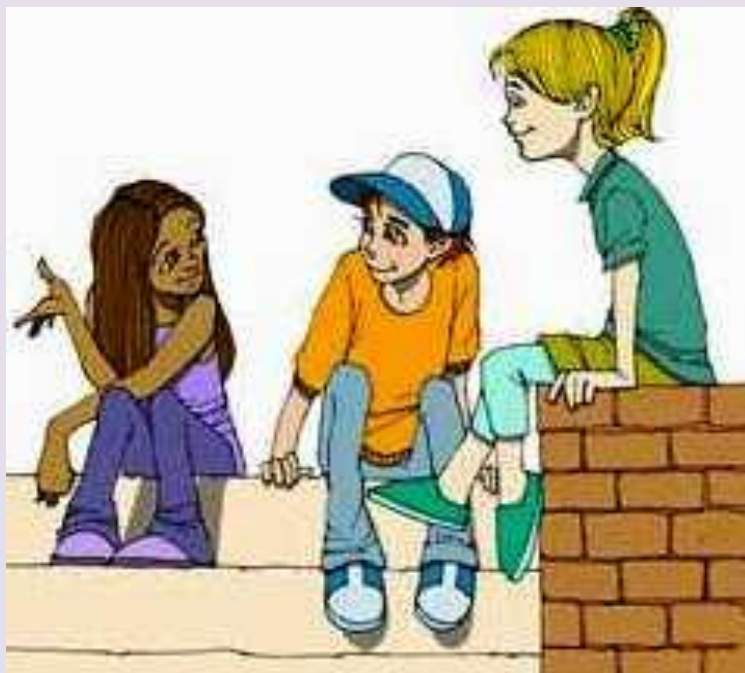
Bathrooms and toilets should have skid proof flooring and rounded corners. The glasses should be shatter proof. Use water at a temperature that won't burn in case of prolonged exposure. Avoid locking- use OCCUPIED sign instead. Taps should have protective edges.

Use paper or plastic utensils. Avoid glass and chin ware. Use microwave for cooking. Long heavy mittens would be preferred to reach into ovens. Use ovens and stoves when there's someone in home. Cups should have lids to avoid spills of hot liquids. Use of a regular knife should be when someone is at home.

If taking up any new sport or activity, understand it and question yourself whether it could be dangerous if you have a seizure during the activity. Use protective gear. Take breaks when exercising. Avoid overheating.

CAN I LEAD A NORMAL LIFE AFTER HAVING A SEIZURE, WITH A DIAGNOSIS OF EPILEPSY?

YES. Having a seizure doesn't usually restrict your working and normal daily life. However, one needs to make a few changes. Activities like driving, swimming and cooking should be avoided. The development of a seizure, for example while swimming can be dangerous. Similarly, a seizure when driving a vehicle can be threatening to the driver as well as the people around. In some countries, such activities are banned for people with epilepsy. But other than these activities, a normal life like going to school or office, shopping in the market, can be lead on regular medications. Life goes on, and, with a little planning, it will go on safely for you and your family.



EPILEPSY AND SEIZURES- BASICS

SEIZURES ARE COMMON SCARY AND DRASTIC NEUROLOGICAL OCCURENCES THAT CAUSE SIGNIFICANT ANXIETY AND DEPRESSION AMONG PATIENTS AND THEIR FAMILIES. PERSON IS SAID TO HAVE EPILEPSY WHEN HE DEVELOPS MORE THAN ONE SEIZURE. AS THE INDIAN POPULATION BECOMES EDUCATED AND AFFLUENT, NON COMMUNICABLE DISEASES LIKE STROKE AND DIABETES ARE GETTING MORE PREVALENT WHILE INFECTIONS ARE STILL COMMON. AND HENCE COMPLICATIONS ARE EVER INCREASING LEADING TO SEIZURES. THIS BOOKLET AIMS AT GIVING YOU AN IMPRESSION ABOUT SEIZURES, HOW AND WHEN TO IDENTIFY IT, AND HELPS ONE UNDERSTAND THE PROBLEMS FACED BY SUFFERERS OF SEIZURES AND EPILEPSY.

ABOUT THE AUTHOR:



DR SAUMYA H MITTAL IS A NEUROLOGIST WORKING IN NCR REGION OF THE INDIAN CAPITAL. HE IS INTERESTED AMONG ALL THE DISEASES THAT A NEUROLOGIST WORKS WITH. SEIZURES AND EPIEPSY ARE A SPECTRUM OF DISEASE CLOSE TO HIS HEART. HELPING SEIZURE AND EPILEPSY SUFFERERS IS SOMETHING HE STRONGLY BELIEVES IN.

THE IDEA OF THIS BOOKLET DEVELOPED WHEN THE FRIENDS AND FAMILIES KEPT COMING TO HIM AND IT WAS REALIZED HOW LITTLE THE PEOPLE KNOW ABOUT SEIZURES AND EPILEPSY. HE STRONGLY BELIEVES THAT KNOWING AND UNDERSTANDING THE DISEASE HELPS THE SEIZURE AND EPILEPSY SUFFERERS IMPROVE THEIR LIFE AND OVERCOME THEIR PROBLEMS. IT ALSO HELPS THEM AVOID SIMPLE MISTAKES. THE CONCEPT OF “EPILEPSY AND SEIZURES- BASIC” WAS THEREFORE CONCEIVED. MANY SEIZURE SUFFERERS HAVE DIFFERENT NEEDS. AND THESE VOLUMES TRY TO ANSWER THESE QUESTIONS AND PROVIDE INKLING ABOUT THE SOLUTIONS TO THEIR NEEDS.

KNOWLEDGE ABOUT SEIZURES AND EPILEPSY IS EXTENSIVE. HE TRIES HERE TO GIVE THE READERS THE MOST BASIC AND YET VERY IMPORTANT INFORMATION THAT ONE SHOULD HAVE ABOUT THE ILLNESS.