EPILEPSY SUPPORT ASSOCIATION UGANDA
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MEDICAL MANAGEMENT OF EPILEPSY

MEDICATION FOR EPILEPSY

The standard modern treatment for epileptic seizures is the regular use of one or more chemical substances called anti-convulsant or anti-epileptic drugs.

Treatment with anti-convulsants has dramatically changed the kind of life that people with epilepsy cab expect to live. For hundreds of thousands of people these drugs have meant the difference between a fearful, isolated existence and a confident life and successful employment base on the knowledge that the chances of having a seizure are small.

There are a number of different anti-convulsants available. None of them can cure epilepsy, but they have become increasingly successful in preventing seizures as long as they are taken regularly.
An anti-convulsant may be prescribed as a single drug or in combination with other drugs. If a person has more than one kind of epileptic seizure, he or she may have to take more than one anti-convulsant to maintain control. This is because drugs that prevent one type of seizure may not necessarily be effective for another type. However, physicians try, wherever possible to limit the number of drugs prescribed and to use a single drug if they can.

FINDING THE RIGHT DRUG

People react individually to drugs just as they do to food or other substances that enter the body. One person may experience side effects from anti-convulsants, while another person may not. Some drugs reach an effective (that is, seizure-preventing) level in the person's blood more quickly than other drugs do. (Anything from 3 days). That is why it may take some time to "customize" the dosage and/or the choice of drug. A doctor tries to strike a balance when prescribing an anti-convulsant drug to achieve the greatest degree of seizure control in the patient with the smallest number of side effects.

NEW TESTS HELP

In the old days it might have taken many weeks, even months, to achieve the right drug, or combination of drugs, and dose for an individual patient. Now doctors treating epilepsy have a tool which shows them what is happening to the medication after it enter the patient's body.

This technique is called anti-epileptic level monitoring. It examines a sample of the patient's blood to find out how much of the medication is present. If the level of the drug in the blood is too low, seizures may occur and the doctor will increase the amount the patient takes. If the drug level is too high, the patient may also experience an increase in seizures as well as undesirable side effects, such as feelings of drowsiness, confusion or unsteadiness (sedatio0n is a common side effect). In such cases the dose will be reduced to arrive at an optimum level.

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Medical experts suggest that drug level tests be performed as a treatment programme progresses and subsequently when clinical changes take place or are contemplated, or if seizures suddenly begin again after a period of good control. Blood samples are usually obtained before the early morning dose. It has been found that the quantity of enzymes, which the liver will produce to break down medicines, varies from individual to individual and within each individual as his circumstances change.

DRUG INTERACTIONS

Once a person is stabilized on an anti-convulsant, the addition of another anti-convulsant or other medication may either increase or decrease the concentration of the original anti-convulsant in the blood stream. If an additional anti-convulsant is given to a stabilized patient, he may show symptoms of medicine toxicity or of altered seizure activity. Some examples of interactions include.

Anti- convulsant	Medication which may affect blood level concentration of certain anti-epilepsy drugs.
Phenytoin	Phenobarbitone, valproic acid, diazepam, aspirin, some oral contraceptives, propranolol
Carbamazepine	Phenytoin/phnobarbitone, propoxyphene, erythromycin
Phenobarbitone	Valproic acid, phenytoin, carbamazepine
Valproic acid	Phenytoin. Phenobarbitone, Carbamazepine

Apart from ant-convulsant blood level interactions, it should be remembered that several medicines can themselves precipitate seizures. Sometimes another drug, prescribed for an unrelated medical problem, will intensify the effect of an anti-convulsant drug. On the other hand, the anti-convulsant drug may intensify the effect of a drug not being taken to control seizures. This phenomenon is called drug interaction and it is the reason that patients are urged to tell their doctors what other medications they are taking whenever a new drug is prescribed. When purchasing an over –the counter product, a person taking anti-convulsants should check with the pharmacist as to the nature of possible drug interactions.

You should also consult with your doctor or pharmacist before taking any other medication eg. Anti-depressants, anti- nausea, oral contraceptives, and anti-motion sickness drugs, cough and cold preparations.

SIDE EFFECTS

Like all drugs, anti-convulsants may have some side effects. The appearance of these depends on each person's individual response to the drug as well as much of it he or she is taking. With only a few exceptions, side effects associated with anti-convulsant drugs are mild and usually occur at the beginning of therapy, usually disappearing as the person becomes used to the drug.

Depending on the type of drug involved, the most frequent side effects are drowsiness, irritability, nausea, rash, thickening of facial features, increase in the body hair, physical clumsiness, and hyperactivity in children. Some drugs may produce emotional changes; occasionally a drug will actually increase rather than decrease the number of seizures a person experiences.

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However, many people are able to take the medication for years without experiencing any of these effects. If side effects do occur, they should be reported.

DRUGS AND PREGNANCY

While there is a slightly higher than normal risk of birth defects in the babies of women who have epilepsy, the greater majority of mother (92%) on anti-convulsant medication give birth to normal, health babies.

When pregnancy occurs, the question for a woman with epilepsy and her doctor becomes one of balancing the risks and the benefits. Is the risk of the mother having a seizure and possibly falling, or experiencing an oxygen shortage, greater to a developing child than the risk of some defect developing as the result of anti-convulsant medication? Is the risk of seizures during pregnancy a greater hazard to the mother than the risk of a defect in the child? Unfortunately these questions are not easy to answer given current levels of knowledge. At present most medical experts would say that the risk of having a child with a defect is so low, that the possibility of having a seizure offers the greater potential harm. It is not yet certain, when defects occur, that the drug is necessarily the cause; family history may also be involved.

What is certain is that sudden withdrawal of anti-convulsants may cause non-stop severe seizures which may injure the mother and or interrupt the supply of oxygen to the developing child. In any case withdrawal of medication after the pregnancy is detected would not necessarily prevent a possible defect since by that time (usually about six weeks after conception) any malformations in the foetus would already have occurred. Thus women with epilepsy are being advised to continue their drug therapy during pregnancy under close supervision by a doctor.

The best solution for a woman who has epilepsy and who is taking anti-convulsants is to discuss the whole question of anti-convulsants during pregnancy with her doctor before she becomes pregnant. At that time the doctor may evaluate her continuing need for the drugs. If she has been seizure-free for a number of years and other tests show no sign of epilepsy, her doctor may decide before pregnancy begins to try a slow withdrawal from the medication. If the woman still needs medication but is taking a drug which has been closely associated with birth defects, the doctor may decide to see whether another medication could be successfully substituted.

ANTI-CONVULSANTS AND CHILDREN

Early recognition of seizures and regular consistent treatment with anti-convulsant drugs offer the best chance of normal development and a positive future for the child with epilepsy.

Because of the many physical changes that take place as the child grows, it is not unusual for a seizure-free child to suddenly begin having seizures again. This does not mean that medication is not working or that the condition is getting worse; usually a change of dosage by the doctor will take care of the problem.

Because of the differences in the way in which the physical systems of children and adults process drugs, it takes a relatively larger dose of the anti-convulsant to control seizures in the

average child than in the average adult. At the onset of puberty (adolescence stage), the body chemistry changes over from that of childhood to adulthood. I can happen in a matter of months. This may necessitate a change in dosage.

Children should be encouraged as early as possible to be responsible for taking their own medication. In most cases this will give them a sense of being in control of their condition. The decision on whether or not to allocate responsibility to the child should depend on his or her maturity and intelligence level.

If medication is being given in liquid form, the bottle should be taken well before the dose is poured. If this is not done, the effective part of the medication may sink to the bottom, making the first doses too weak and the last ones too strong.

When medication is prescribed, the doctor should be asked if it should be taken before, during or after meals. Sometimes medication on an empty stomach can increase the possibility of stomach upset. One the other hand, taking certain drugs after food may affect the rate at which the drug is absorbed into the blood stream.

ANTI-CONVILSANTS AND DRUG ABUSE

Parents often worry that children who take anti-convulsants may become addicted to them or be more susceptible to drug abuse.

Although it is true that barbiturates e.g. phenobarbitone are subject to abuse, the doses in which they are prescribed for epilepsy are not habit-forming. In fact, a more common reaction on the part of the adolescent with epilepsy is to express his rebellion against drugs rather by taking more of them.

DRUG THERAPY: A PERSONAL RESPONSIBILITY

Successful drug therapy involves more than care by a skilled physician. It also requires the active co-operation of the patient. Here are some important points to remember if you or someone in your family takes anti-convulsants.

- Don't take less or more than prescribed. You may have a seizure.
- Don't stop your medication abruptly. You could risk a medical emergency in the form of non-stop seizures which could be life threatening.
- Attend all follow-up appointments. Anti-convulsant drugs are safe and generally effective but careful monitoring is advisee.
- Don't try other people's pills even if a friend has better control with a different medication, check with your doctor instead.
- Alcohol and medication can be a dangerous combination. Both are depressants and one may affect the other.
- Don't drive or operate power tools when starting a new medication until you know how it affects you. It may make you drowsy at first.
- Don't assume that if you've missed a few doses of your medication you can then make them up safely by taking them at once. What you need is a certain amount of medication taken at regular intervals.

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- If you have trouble remembering to take your medication in sequence (this may be necessary if you are taking more than one type of drug), try counting out each days' supply of pills and storing them in special containers you can buy from a pharmacy.
- Don't let yourself run out of medication. If you are going on a trip, make sure you have enough to last until your return and carry a copy of your prescription with you. If you are going overseas find out from your doctor what the medication is called abroad (drugs often have different names in different countries).
- Keep all medication locked up and away from children. If you plan to carry medication in a container other than a pharmacy bottle, make sure your prescription label is fixed to it.

In conclusion, anti-convulsants drugs are successful in preventing seizures in the majority of people who take them as prescribed. It is estimated that at least 50% of all people with epilepsy gain complete control of their seizures.