

Medications are the main treatment for epilepsy and there are over 20 choices.

These medicines are called anti-epileptic drugs, or AEDs, but this actually is a misnomer because these medications do not prevent or cure epilepsy. Instead, AEDs work to suppress seizures. There are five principles of AED therapy that many doctors follow.



When a patient has seizures, the first consideration is whether to treat them with AED therapy. Certain types of seizures, such as simple partial seizures with only minor sensory, motor or mental manifestations, may not require treatment. Also, a first seizure may not require treatment if tests show no factors likely to produce subsequent seizures.

The next step is to choose the best medication for particular patient's seizures. There are no hard and fast rules for selecting seizure medications, because most work for several different types of seizures. Many factors are considered, including side effects, risks of a serious reaction, convenience of administration, and cost.

After a medication is selected, a doctor will then decide the best AED regimen, which generally requires usage on a simple schedule. A regimen of one drug, called monotherapy, is less likely to produce side effects and drug interactions than is using multiple AEDs. Moreover, studies show that using additional drugs rarely eliminates seizures when using one drug does not. Although more than one drug is sometimes necessary, a simple dosing schedule is most likely to be followed correctly. It's important to take AEDs on a reliable schedule, because skipping medicine can result in a seizure.

Side effects are another consideration. Every medication, even aspirin, has potential side effects. Seizure medicines have many because they act on both body and brain. Most seizure medicines make brain cells fire less rapidly. This is useful to control a seizure where brain cells

fire at exceptionally high rates. But brain cells also fire quickly during some normal activities, such as maintaining balance, focusing eyes and thinking. All of these activities are slower and less precise with seizure medicines in the brain, which is why significant effort is devoted to balancing seizures and side effects.

All too often patients experience both seizures and side effects. When this occurs, a different strategy is needed, like a different medicine, fewer medications or non- medication therapies.

Switching medications can be difficult. A doctor can help keep the process on track by providing a written dose-initiation schedule. Patients should expect a temporary period of increased side effects and possible withdrawal seizures during any medication change.

Finally, AED therapy is not always forever. Tapering AEDs can be considered when a person has been seizure-free for at least two years. However, AED therapy can only be stopped once it has been established that a person has no major ongoing predisposition to seizures and has no seizure activity on a routine EEG. The person should also not have experienced problems with prior attempts to stop medications. Even if seizures have not occurred for years, medications usually are continued if an underlying problem in the brain is present, like a stroke, tumor, abnormal blood vessel or birth defect.

If a person meets the conditions for tapering, there is a two in three chance of being able to withdraw AEDs successfully. The flip side is that there is a one in three chance of having a seizure after withdrawing medicine, a risk that some find unacceptably high. Also, many doctors advise not driving while withdrawing AEDs, which prevents some patients from even trying. In all cases, except emergencies, medications are tapered slowly and under care of a doctor.

The goal of medication therapy is not only seizure control, but also improvement in quality of life. If side effects, inconvenience or cost make the treatment worse than the disease, do not hesitate to explore other options with your medical team.