



# EFFICACY AND TOLERABILITY OF THE NEW ANTIEPILEPTIC DRUGS FOR TREATMENT OF NEW ONSET EPILEPSY

If you are someone with **newly diagnosed** epilepsy, this fact sheet will help you and your doctor talk about medicines—called *antiepileptic drugs* or *AEDs*—that help manage, or could possibly end seizures. Recent studies suggest that the new AEDs can also improve your quality of life by minimizing side effects.

About two thirds of people with epilepsy will become seizure free with the first or second drug they try. Most people with epilepsy will stay on the drug prescribed for several years.

## What are seizures?

Seizures happen when there are sudden changes in the way normal brain cells interact electrically. During a seizure, a sudden wave of electrical energy swamps part or all of the brain, disrupting normal brain activity. Consciousness, movement, sensation, speech, mood, memory, and emotions can all be affected during the one or two minutes that the seizure lasts.

## What are antiepileptic drugs—or AEDs—and how can they help?

Antiepileptic drugs are chemical compounds that affect the brain. There are more than 20 drugs used in the treatment of epilepsy. Antiepileptic drugs do not cure the condition but will often control seizures completely if the AEDs are taken regularly. Some AEDs prevent seizures by controlling electrical signals in the brain.

If you have epilepsy, your physician will choose an AED based upon your seizure type, your age, and potential side effects. People differ in the way that their bodies handle drugs. There is often a trial and error period to determine the best course of therapy for each individual patient.

## Why did the experts decide to develop new guidelines for use of these drugs?

Many widely used antiepileptic drugs have been available for twenty, thirty, and even more than fifty years. Their positive and negative effects have been widely studied. However, physicians do not know as much about the newer antiepileptic drugs that have been approved by the U.S. Food and Drug Administration over the past ten years.

Neurologists from the American Academy of Neurology (AAN) who specialize in diseases of the brain and central nervous system, including epilepsy, and experts in epilepsy from the American Epilepsy Society (AES), believe you should know about the options for treating and managing your epilepsy.

The experts decided to look carefully at all the currently available information on the new antiepileptic drugs. These experts wanted to find out how safe and effective the new drugs are in the treatment of children and adults with newly diagnosed epilepsy. In some cases, there was not enough information to decide one way or another.

## What do the guidelines say?

The experts who studied the data found that there is evidence that four newer antiepileptic drugs are safe and effective for patients with newly diagnosed epilepsy. The four new drugs that work for newly diagnosed epilepsy are known in their generic form\* as gabapentin, lamotrigine, oxcarbazepine, and topiramate. The experts recommend that these four medications be considered as *monotherapy*—taking one drug at a time—for newly diagnosed adolescents and adults with either partial or mixed seizures. Many of the older antiepileptic drugs are also good options for this kind of seizure, but the experts did not study the data on these.

The drug known as lamotrigine may also be an option for children with newly diagnosed absence seizures (also known as *petit mal* seizures). Many of the older antiepileptic drugs are good options for this kind of seizure, but the experts did not study the data on these.

If you have questions about whether you—or your child—are candidates for these medications, ask your neurologist or child neurologist.

Even if the experts did not find enough information to recommend the use of one of the drugs, your doctor may recommend the AED. The risks, benefits, and options for treatment should be discussed with your doctor.

## \*Glossary of generic to name brand drugs

<b>Generic</b>	<b>Name Brand</b>
carbamazepine .....	Tegretol, Carbatrol
gabapentin .....	Neurontin
lamotrigine .....	Lamictal
levetiracetam.....	Keppra
oxcarbazepine.....	Trileptal
phenytoin .....	Dilantin
tiagabine .....	Gabitril
topiramate.....	Topamax
zonisamide .....	Zonegran

### How will these recommendations affect quality of life?

These drugs often enhance the quality of life for people with epilepsy. Antiepileptic drugs can make seizures less frequent or they can help people with epilepsy lead a completely seizure-free life.

The newer AEDs give people with epilepsy the option to possibly experience fewer side effects. While all medications have some side effects, the choice of which drug and which side effects can be tolerated depends on the individual person. Your doctor should discuss serious side effects, if any, when starting any of the new antiepileptic drugs. It is important to discuss possible side effects with your doctor and how willing you are to tolerate these side effects.

### What should you know about AED side effects?

Some of the side effects are short term, others continue as long as the medication is taken. Some side effects may be linked to dosage—the higher the dose needed to control seizures, the greater the risk of side effects. Side effects for each AED are different, and most will go away when the medication is stopped. The newer antiepileptic drugs are generally safer than some of the older AEDs. You should ask your doctor if there are any serious side effects that might be irreversible.

AEDs may affect women with epilepsy in their reproductive years. Some of the seizure medications available can decrease the effectiveness of hormone contraception and some seizure medications can increase the risk of birth defects. However, generally the newer AEDs are thought to be safer in pregnancy than some of the older AEDs. If you are a woman with epilepsy of childbearing age, ask your doctor *before you become pregnant* about any safety measures you should consider to minimize risks to the baby.

### Talk to your neurologist

Together you and your doctor can determine which of the many antiepileptic drugs now available will be the safest and most tolerable. Thanks to the new AAN and AES guidelines, you and your doctor have more information from which to make a decision.

It is important that your doctor check your progress at regular visits, especially during the first few months of your treatment with antiepileptic drugs. This will allow your doctor to adjust your dose, if necessary, and will help reduce any unwanted side effects.

For further information about epilepsy and its treatment, call 1-800-332-1000 or visit [www.epilepsyfoundation.org](http://www.epilepsyfoundation.org).

This is an evidence-based educational service of the American Academy of Neurology. It is designed to provide members with evidence-based guideline recommendations to assist with decision-making in patient care. It is based on an assessment of current scientific and clinical information, and is not intended to exclude any reasonable alternative methodologies. The AAN and AES recognize that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on the circumstances involved. Physicians are encouraged to carefully review the full AAN and AES guidelines so they understand all recommendations associated with care of these patients.



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