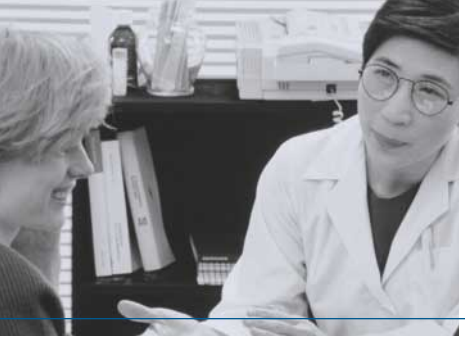

AAN Guideline Summary for **PATIENTS and THEIR FAMILIES**

EFFICACY AND TOLERABILITY OF THE NEW ANTIEPILEPTIC DRUGS FOR TREATMENT OF REFRACTORY EPILEPSY

If you or a loved one has epilepsy, this fact sheet will help you and your doctor talk about medicines—called *antiepileptic drugs (AEDs)*—that offer hope for people with **refractory epilepsy**. People with refractory epilepsy continue to have seizures, even after trying several medications. This fact sheet is based on the recommendations of a group of experts in neurology and epilepsy who have reviewed all available information on how well the newer antiepileptic drugs work in people who have hard to control seizures.

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. 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 refractory epilepsy. In some cases, there was not enough information to decide one way or another.

What do the guidelines say?

The AAN and AES expert team made recommendations for treatment of partial epilepsy—seizures affecting one area of the brain; generalized epilepsy—seizures affecting the whole brain, and the Lennox Gastaut syndrome—involving mixed seizures.

The experts did not review the information about the older drugs, which also can be used to treat many of the conditions discussed in this brochure. Studies have not been done to determine whether the newer drugs could be used in all conditions. 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.

Partial epilepsy

The experts determined that all the newer antiepileptic drugs are effective when taken in addition to another antiepileptic drug—*or add-on therapy*—for adults with partial seizures. The drug known by its generic name* gabapentin was found to be effective for the treatment of mixed seizure. Gabapentin, lamotrigine, oxcarbazepine, and topiramate were recommended for children with refractory partial seizures. In a previous guideline, the experts found that felbamate, another new antiepileptic drug, is also effective in partial seizures. Felbamate has special risks that should be considered by you and your doctor before you make a decision to use it.

The experts who carefully looked at the data wanted to determine which of the newer drugs are effective as *monotherapy*—or when taken as a single drug—by people with partial seizures. They concluded that oxcarbazepine, topiramate, and possibly lamotrigine are effective in preventing refractory partial seizures when taken as monotherapy.

Generalized epilepsy
When the experts studied the data for generalized epilepsy, only topiramate was shown to be effective in people who have been diagnosed with generalized epilepsy and who have not had success with other drug therapies. Studies had not been done for the other drugs.

Lennox Gastaut syndrome
People with Lennox Gastaut syndrome have many seizures each day. These may include drop attacks, in which the individual experiences a sudden total loss of muscle control and falls abruptly to the floor. The expert group recommended that lamotrigine and topiramate may be used to treat drop attacks associated with the Lennox Gastaut syndrome in adults and children. In a previous guideline, felbamate was also found to be effective in the Lennox Gastaut syndrome. The special risks of felbamate (discussed in a previous guideline) should be considered before making a decision to use it.

*Glossary of generic to name brand drugs

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

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

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 in general safer than some of the older ones. 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. 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*.

342 North Main Street • West Hartford, CT 06117
www.aesnet.org
(860) 586-7505

AMERICAN ACADEMY OF NEUROLOGY

1080 Montreal Avenue • St. Paul, MN 55116
www.aan.com • www.thebrainmatters.org
(651) 695-1940