Epilepsy • Drug • Interactions

According to the Epilepsy Foundation of America, epilepsy is one of the most common disorders of the nervous system. More than 2.7 million Americans live with epilepsy. Every year, 181,000 Americans will develop seizures and epilepsy for the first time. As many as one in 20 people will have an epileptic seizure during their lives, and one in 200 people will be diagnosed with a seizure disorder.

Sometimes finding the best drug at the right dose for patients with seizures is difficult; in fact, as many as 25-30 percent of patients with seizures are not receiving effective drug therapy. Sometimes interactions between seizure drugs and other drugs a person is taking negatively impact therapy. Therefore, if you are receiving anti-seizure drugs, it is important that your pharmacist knows all of the other drugs you are taking at the same time.

The primary reason for interactions with seizure drugs is based in the liver. The liver is very important because it breaks down drugs into a form that can then be removed from the body. Proteins called enzymes are responsible for this process. Certain drugs can make these enzymes work faster or more slowly. If the enzyme works faster, concentrations of drugs broken down by that enzyme will decrease. This could lead to an increase in the possibility of a seizure occurring. Your doctor may need to increase the dose of the seizure drug so that seizures will not occur. If the enzyme works more slowly, concentrations of drugs broken down by that enzyme will increase. This could lead to an increase in the possibility of side effects occurring. Your doctor may need to decrease the dose of the seizure drug so that seizures will not occur.

Because these drug interactions can lead to a poor outcome (either a seizure or side effects), it is important that your pharmacist has a complete list of all the medications you take. This is especially important if you go to multiple physicians. Your pharmacist should also be aware of any nonprescription medications, vitamins or herbal medications that you take.

Many of the anti-seizure medications have been available for 30 to 40 years. These medications are very effective; however, they tend to have more drug interactions associated with their use. Phenytoin (Dilantin®), carbamazepine (Tegretol®) and phenobarbital are medications that cause the enzymes in the liver to speed up. Therefore, if you take any of these medications, you may need doses of some of your other medications increased. Valproic acid (Depakote®, Depakene®, Depacon®) is a medication that causes the enzymes in the liver to slow down. If you take this medication, you may need doses of some of your other medications decreased. Phenytoin, carbamazepine, phenobarbital and valproic acid are also affected by other drugs that influence the enzymes in the liver. Anytime you start taking a new medication (prescription, nonprescription or herbal), you should inform your physician and pharmacist.

Since 1993 there have been nine new seizure medications approved by the FDA. Each of these medications is unique, including the ability to cause or be affected by drug interactions. Three of these newer agents have no drug interactions associated with their use: gabapentin (Neurontin®), pregabalin (Lyrica®) and levetiracetam (Keppra®). The other six medications, felbamate (Felbatol®), topiramate (Topamax®), zonisamide (Zonegran®), tiagabine (Gabitril®), lamotrigine (Lamictal®) and oxcarbazepine (Trileptal™), all have a few drug interactions. These interactions, however, are less extensive than those that occur with the older agents. Still, it's important to inform your pharmacist of any changes in the drugs you are taking when you receive any of these agents.

Epilepsy is a common disorder, and there are many medications designed to prevent their occurrence. For those taking these medications, it is important to assess the potential for drug interactions. By informing your pharmacist of all the medications you take, he or she can help you avoid most of the potential problems associated with interactions with these drugs. For more information on epilepsy, go to the Epilepsy Foundation of America's website at www.efa.org.

For more information, ask your pharmacist!

This information provided by the Michigan Pharmacists Association and: