

Drug Information Education and Services

The Drug & Poison Information Center has provided drug information to the health care professionals and consumers in its region for over 30 years. During this time, it has also been an educational site where undergraduate pharmacy students, pharmacy residents, and Doctor of Pharmacy students can build drug information skills through exposure to a variety of settings. Under the guidance of preceptors, the students have the opportunity to become involved with some of the more than 7,000 annual questions from health care professionals, Pharmacy and Therapeutics Committee and Adverse Drug Reaction Committee activities, as well as Center newsletters. They also have the opportunity to enhance communications skills in handling questions from consumers via telephone or the Internet.

In 2000, ten Doctor of Pharmacy students from the University of Cincinnati, College of Pharmacy completed a one-month Drug Information clerkship rotation at the DPIC. Students from Creighton University and Butler University also completed drug information rotations. Gaylene Tsipis, M.S., R.Ph., Robert Goetz, Pharm.D., and Jan Scaglione, Pharm.D. precept these programs.

NetWellness™

In 1972, the Cincinnati Drug & Poison Information Center became the first Center in the country to offer drug information services to the public. While we believe that talking with one's own physician or pharmacist is the best way to learn about medications, we know that those discussions don't always take place for a variety of reasons. Helping to bridge that gap by providing drug information to the public remains a major commitment of the DPIC. In the past, dialing the telephone was the way to obtain factual, non-biased drug information. NetWellness, a consumer health information website, has provided yet another avenue to help people in their quest for information that can lead them to a healthier life.

During 2000, the DPIC continued its participation in NetWellness™. In addition to health information from quality-evaluated web links, medical literature, databases and original content, NetWellness™ offers access to health care professionals in a wide variety of specialty areas through "Ask an Expert." Pharmacists from the DPIC provide the "Expert" for the Pharmacy and Medication area. Since it began in 1994, this area has continuously been the most accessed of all NetWellness™ resources. Over 2,100 questions have been answered. Questions cover a wide range of topics, including concerns about drug-drug and drug-disease interactions, medication use during pregnancy and breast feeding, therapeutic uses, side effects, herbal and alternative medicine, substance abuse issues and newly approved medications, to name a few. In responding to questions, the pharmacists try not only to give the individual the information requested, but also to provide the information in a manner that may be useful to others with similar concerns. The overall goal is to encourage and enable consumers to become active, knowledgeable participants in their own healthcare. Typical questions answered through "Ask an Expert – Pharmacy and Medications" include:

1. "If I am taking Paxil 30mg, is it safe for me to also be taking trazadone 50mg and what is trazadone?"

Answer: Trazodone is an antidepressant. It is used primarily in the treatment of depression or depression/anxiety disorders but may also be used to treat other medical problems. Using two or more drugs together that increase serotonin levels in the body may result in a serious

condition known as serotonin syndrome. There have been several reports of serotonin syndrome due to interactions between SSRIs (e.g., Paxil, Prozac) and other antidepressants, including one case report due to simultaneous use of Paxil and trazodone. If serotonin levels are excessively increased, side effects such as excitation, agitation, incoordination and fast heartbeat may occur. Although these symptoms usually resolve quickly, a small number of deaths have been associated with serotonin syndrome. If coadministration of Paxil and trazodone is deemed to be necessary, you should be closely monitored for signs and symptoms of serotonin syndrome, and dosage adjustments may be required.

2. “Does grapefruit juice have significant drug /nutrient or drug absorption reactions?”

Answer: Grapefruit juice inhibits an enzyme in the body called CYP3A4 and can interact with drugs metabolized by this enzyme. Some medications that may interact with grapefruit juice include: amlodipine (Norvasc), astemizole (Hismanal), atorvastatin (Lipitor), buspirone (Buspar), caffeine, carbamazepine (Tegretol), cilostazol (Pletal), cisapride (Propulsid), clomipramine (Anafranil), cyclosporine (Sandimmune, Neoral), diazepam (Valium), dofetilide (Tikosyn), estrogens, felodipine (Plendil), itraconazole (Sporanox), lovastatin (Mevacor), midazolam (Versed), nifedipine (Procardia), nimodipine (Nimotop), nisoldipine (Sular), pimozone (Orap), saquinavir (Fortovase, Invirase), sertraline (Zoloft), simvastatin (Zocor), tacrolimus (Prograf), triazolam (Halcion), and verapamil (Calan, Isoptin). Other drug interactions with grapefruit juice may also occur.

3. “Is there a drug that keeps you from getting nervous while public speaking?”

Answer: Beta-blockers such as propranolol and atenolol have been used in preventing performance anxiety (stage fright). These drugs have been shown to provide some benefit in relieving physical symptoms of anxiety such as mild tremor, sweating, palpitations, and fast heart beat. Beta-blockers are not particularly useful for chronic anxiety or panic attacks but may help reduce anxiety and improve performance in specific stressful situations. These medications are available by prescription only. Please check with your doctor since beta-blockers may not be appropriate for all individuals.

4. “I want to know more about this medication I’m taking called Glucophage 500 mg. and about the Actos Pioglitazone 30 mg. The Glucophage was making me sick and I just wanted to know if you know if you know why it made me sick.”

Answer: Glucophage (generic name - metformin) is used in combination with diet for the treatment of Type II diabetes. It works to lower the amount of sugar in your blood by helping your body respond better to its own insulin. If high blood sugar is not treated, it can lead to serious problems, such as kidney disease, eye disease and blood vessel disease. Side effects of Glucophage may include diarrhea, nausea and upset stomach. A rare, but serious side effect of Glucophage is called lactic acidosis. Symptoms of lactic acidosis are quick to appear and can include, unusual muscle pain, trouble breathing, stomach pain, irregular heartbeat, tiredness, weakness, and dizziness. If you experience these symptoms, get medical attention right away. Other side effects may also occur. Actos (generic name - pioglitazone) is also used to treat Type II diabetes mellitus. It can be used alone or in combination with other medicines used to treat diabetes. Actos works by decreasing resistance to insulin. This medicine belongs to the class of drugs called thiazolidinediones. Since liver damage has been associated with another drug in this class, liver function should

be monitored while taking Actos. If signs of liver problems such as unexplained nausea, vomiting, stomach pain, fatigue, loss of appetite, or dark urine occur, contact your doctor right away. Some other side effects may include mild swelling in hands or feet, headache, and muscle pain.

5. “What can you tell me about the use of thalidomide as treatment for multiple myeloma? Are there any clinical trials in process for this drug?”

Answer: The original use of thalidomide was for treatment of morning sickness, but it was removed from the market for causing birth defects in the 1950`s. It has recently been approved by the Food and Drug Administration, with precaution against pregnancy, for certain symptoms of leprosy. It is also under investigation for a wide variety of other diseases, including multiple myeloma. There are several theories about how thalidomide may be beneficial in multiple myeloma. It may directly prevent the growth and survival of myeloma cells or it may stimulate the body`s immune system against the myeloma cells. Another theory involves the fact that increased blood-vessel formation occurs in the bone marrow of multiple myeloma patients. One property of thalidomide is to block this blood-vessel formation. Studies are currently being conducted to determine the potential benefit of thalidomide in multiple myeloma. Preliminary results have shown it to be helpful in certain patients, but further investigation is needed to determine the exact dose and place in therapy.

NetWellness™ is available through Internet access from personal computers and on more than 6,000 public-access computers through support from the State of Ohio and the Ohio Public Library Information Network. NetWellness™ can be accessed at <http://www.netwellness.org>. DPIC's Project Director of NetWellness™ services is Gaylene Tsipis, M.S., R.Ph.