

## **Herb-Drug Interactions: What Every Patient Needs to Know**

By John Chen, PhD, PharmD, OMD, LAc

The first and most important thing to understand about herb-drug interactions is communication. It is important that patients tell their health care practitioners what herbs and drugs they are currently taking so that practitioners can provide comprehensive care.

Knowing this information is crucial to designing the best treatment and avoiding potential herb-drug interactions.

There are two fundamental mechanisms that contribute to interactions: pharmacokinetic and pharmacodynamic. Pharmacokinetic interactions refer to changes that occur as medicines move in and out of the body, such as with absorption, distribution, metabolism and elimination. Pharmacodynamic interactions refer to how medicines actually behave inside the human body, as they can sometimes increase or cancel out the effectiveness of one another.

Absorption, distribution, metabolism and elimination are four cycles that all medicines go through in the body. After a medicine is taken, it is absorbed from the intestines, distributed throughout the body, metabolized (broken down) in the liver, and finally, eliminated from the body through the kidneys.

Many factors may interrupt these cycles, leading to interactions. For example, ingestion of an antacid or anti-ulcer medication will reduce the acidity of the stomach, therefore decreasing the absorption of other medications and herbs. In addition, some drugs may interfere with blood circulation and affect the distribution of medicines or herbs to the affected parts of the body. Finally, some drugs may be harmful to the liver or kidneys, impairing the ability of the body to break down and eliminate the medicines or herbs. The extent and severity of each interaction will vary depending on specific circumstances such as dosage, sensitivity, metabolic rate, and the type of drugs and herbs taken.

Certain medicines have the same or opposite effects and, when taken together, may increase or cancel out the effect of each other. For example, a person taking coumadin (warfarin) to treat a clotting disorder should not take other substances that affect the blood, such as aspirin or ginkgo. Concurrent use of these medications may increase the effect of each other, leading to side-effects such as bleeding or bruising. Furthermore, a person with high blood pressure treated with drugs should not take any supplements that have a stimulant effect, such as ephedra, without supervision. Use of stimulants may increase the blood pressure, thereby canceling the effect of the drug treatment.

In short, drug-drug or drug-herb interactions occur as a result of inappropriate combinations. If a patient notices anything normal, he/she should contact their healthcare practitioner immediately. When detected early, most interactions can be stopped immediately. Interactions can be prevented simply by adjusting the dosage; changing the dosing schedule; or modifying the therapy. Once again, it is important that healthcare practitioners know exactly which drugs/herbs/supplements their patients are taking so that they can provide a comprehensive evaluation.

The following table lists some drugs that are more likely to cause interactions. Patients should make sure to inform their healthcare practitioners if they are taking any of these medications and ask if the herbs and/or supplements they are taking are compatible with the drugs they are taking. Remember: communication is the key to comprehensive care!

<b>Common Drugs and Possible Interactions</b>			
<b>Brand Name</b>	<b>Generic Name</b>	<b>Type of Drug</b>	<b>Effect of Interaction</b>
Amphotericin	amphotericin	antifungal	may reduce elimination by the kidney
Axid	nizatidine	acid-reducer	may interfere with absorption by reducing stomach acid
Carafate	sucralfate	anti-ulcer	may interfere with absorption due to its binding effect
Cholestid	colestipol	antihyperlipidemic	may interfere with absorption due to its binding effect
Coumadin	warfarin	anticoagulant	effect may change if other substances that affect the blood are also given
Diflucan	fluconazole	antifungal	may slow metabolism by the liver
Dilantin	phenytoin	anticonvulsant	may increase metabolism by the liver
E-Mycin	erythromycin	antibiotic	may slow metabolism by the liver
EES	erythromycin	antibiotic	may slow metabolism by the liver
Eryc	erythromycin	antibiotic	may slow metabolism by the liver
Ethanol	alcohol	alcohol	may interfere with metabolism by the liver
Haldol	haloperidol	antipsychotic	may interfere with absorption in the intestines
Maalox	antacid	antacid	may interfere with absorption in the intestines
Methotrexate	ketoconazole	anticancer	may reduce elimination by the kidney
Mylanta	antacid	antacid	may interfere with absorption in the intestines
Nizoral	ketoconazole	antifungal	may slow metabolism by the liver
Pepcid	famotidine	acid reducer	may interfere with absorption in the intestines
Phenobarbital	phenobarbital	anticonvulsant	may increase metabolism by the liver
Prilosec	omeprazole	acid reducer	may interfere with absorption in the intestines
Questran	cholestyramine	antihyperlipidemic	may decrease absorption in the intestines
Reglan	metoclopramide	GI stimulant	may interfere with absorption in the intestines
Rifadin	rifampin	antibiotic	may increase metabolism by the liver
Sporonox	itraconazole	antifungal	may slow metabolism by the liver
Tagamet	cimetidine	acid reducer	may interfere with absorption in the intestines and slow metabolism by the liver
Tegretol	carbamazepine	anticonvulsant	may increase metabolism by the liver
Tums	antacid	antacid	may interfere with absorption in the intestines
Zantac	ranitidine	acid reducer	may interfere with absorption in the intestines

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