



# Senior Series

A partnership between Ohio State University Extension  
and Ohio Aging Network professionals



For more information, visit the Ohio Department of Aging web site at: <http://www.goldenbuckeye.com>  
and Ohio State University Extension's "Aging in Ohio" web site at: <http://seniorseries.osu.edu>

## Adverse Drug-Drug and Food-Drug Medication Interactions

Because older adults often take more medications than younger adults, the number of side effects increases with age. However, side effects frequently go unnoticed or are not always caught in older people for the following reasons:

- Drug reactions sometimes act like signs or symptoms of disease (e.g., dementia).
- Symptoms of a drug reaction are thought to be caused by an existing illness or the start of a new health problem.
- Physical reactions to medication, such as being tired, falling, or weight loss, may be mistakenly labeled as "normal" aging.

There are many physical signs that can happen due to a side effect. These include:

- fatigue (being tired)
- constipation or diarrhea
- confusion
- incontinence (not being able to control your bladder or frequent urination)
- frequent falls
- depression (feeling sad or blue)
- weakness or tremors
- excess drowsiness or dizziness
- agitation or anxiety
- decreased sexual behavior

If a problem develops shortly after a person begins taking a drug, alert a doctor right away. Sometimes it takes time for a side effect to occur, making it less likely the problem will be associated with taking medications.

## Drug-Drug Interactions

Another type of reaction is a drug-drug interaction. A drug-drug interaction occurs when the effect of one drug is altered by the presence of another drug in the body. For example:

- One drug might reduce or increase the effects of another drug.
- Two medications taken together may produce a new and dangerous interaction.
- Two medications that work the same way may produce an effect that is greater than would be expected from taking just one drug if they are taken at the same time.

In addition to prescription medications, over-the-counter medications can interact with each other. Some examples include:

- Taking a cough medication with alcohol at the same time as an antihistamine medication can increase drowsiness and decrease alertness.

- Mineral oil taken with fat-soluble vitamins (A, D, E, K) can decrease the absorption of the vitamins.

In addition to interacting with each other, over-the-counter medications can also interact with prescription medication. Some examples of this type of interaction include:

- **Aspirin** can significantly increase the effect of blood thinning medications (anticoagulants), thus increasing the risk of excessive bleeding.
- **Antacids** can interfere with drug absorption of antibiotics (i.e., tetracycline), thereby reducing the effectiveness of the drug in fighting infection.
- **Antihistamines**, often used for allergies and colds, can increase the sedative effects of barbiturates, tranquilizers, and some prescription pain relievers.
- **Decongestants** in cold and cough medications can interact with diuretics or “water” pills to aggravate high blood pressure.
- **Iron supplements** taken with antibiotics can reduce or stop the ability of the antibiotics to fight infection. The chemicals in the supplement and the antibiotic

bind together in the stomach, instead of being absorbed into the bloodstream.

- **Salt substitutes** can interact with “water” pills or blood pressure medication to increase blood potassium levels. This can result in symptoms of nausea, vomiting, muscle cramp diarrhea, muscle weakness, and cardiac arrest.

These are just a few of the many interactions that can occur when multiple medications are taken together. Check with your doctor or pharmacist to make sure your medications do not have the potential to interact.

## Drug and Food Interactions

Sometimes when medications are taken with food or meals, they can have less of an effect than if they were taken on an empty stomach. Additionally, vitamin and herbal supplements taken with prescribed medication can result in side effects.

Some examples of how foods and medications can interact include:

- Food can speed up or slow down the action of a drug.
- Some medications may cause vitamins and minerals to not work properly in the body.
- Stimulation or suppression of the appetite.
- Medications may alter how nutrients are used in the body.
- Herbs may interact with many medicines.

If you are taking medication, the food you eat or the supplements you take could cause the medication to work incorrectly.

Check with your pharmacist on how food can affect your specific medications.

## Factors Affecting the Extent of Interaction Between Foods and Medications

The impact of food-drug interactions will depend on a variety of intervening factors. For example:

- The dosage of the drug.
- A person’s age, size, and state of health.
- When the food is eaten and when the medication is taken.

Avoidance of drug interactions does not necessarily mean avoiding medications or foods. In the case of Tetracycline and dairy products, these should simply be taken at different times, rather than eliminating one or the other from the diet. Having good

information about the medications you take and timing your medications around your food intake can help to avoid drug interaction problems.

## Reference

*Senior Series Volume 2*, The Center on Rural Elderly, University of Missouri System.

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