

# Harmful Drug-Disease Interaction in the Elderly

## Did You Know?

Between 3% and 7% of all hospitalizations in the United States are due to adverse drug effects.

More than 40% of ambulatory senior patients use 5 or more different drugs a week, and 12% use 10 or more different drugs a week.

Take caution when prescribing medications for your senior patients. Ensure that there is coordination of care when treating a senior who has multiple disease states. Seniors are more than 2 times as susceptible to drug side effects as younger patients. The reason older patients are more likely to experience harmful side effects or drug interactions is because:

- They are more likely to have more than 1 disease or chronic medical condition for which they are taking drugs.
- Their bodies are more sensitive to side effects from drugs because of decreased lean muscle mass, increased fat mass, and decrease in total body water.

## Drugs and the Aging Body

Seniors have an increased chance for drug side effects because many drugs stay in their bodies longer as a result of changes in the body due to aging:

- Water-soluble drugs reach higher concentrations because of the decrease in total body water.

- Fat-soluble drugs accumulate in the body because of the increase in fat mass.
- A decrease in kidney function means less of a drug gets excreted in urine.
- A decrease in liver function means the body has a decreased ability to metabolize drugs.

Not only do they experience increased sensitivity to drugs, but many seniors are being treated for multiple diseases or conditions and are taking an average of 5 to 9 medications. This makes the situation especially complex because as the number of drugs used increases, the risk for adverse effects increases exponentially.

## Ways to Monitor for Adverse Drug Reactions

- Set up frequent follow-up visits, especially after prescribing a new medication, so you can assess potential drug-disease and drug-drug interactions.
- When prescribing new medications for your senior patients, remember the motto, “start low and go slow.” Consider a starting dose of 1/3 to 1/2 of what is recommended. In follow-up visits adjust dosage as necessary.
- At the time of each office visit, verify that each drug your patient is taking is indicated and that it is having intended results, and make sure there is no unnecessary drug duplication.

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**Close to 40% of senior patients do not take their medications properly; most of them take less of their medication than has been prescribed. A recent study shows that 1/3 of surveyed seniors have not talked to their doctors about all of their medications in the past year.**

Careful monitoring of your senior patients can help prevent a “prescribing cascade”—when a patient experiences an adverse drug effect, it is misinterpreted as a new condition that needs another prescribed drug, additional adverse effects are experienced, and so on.

Explain to your patients how important it is for them, when they pick up their prescription, to talk to their pharmacist about the potential side effects of their medications. Remind your patients to save and read the instructions that come with their prescription drugs. It is also important to remind your patients to maintain a current medication record and carry it at all times, and instruct them to share it with all of their practitioners.

Studies have shown that some drugs are harmful when given to older patients with certain medical conditions such as those listed below.

## Health Conditions and Medications That Don't Mix

If Your Patient:	These Drugs Could Be Harmful:
Has a history of falls	<ul style="list-style-type: none"> <li>• Tricyclic antidepressants</li> <li>• Antipsychotics</li> <li>• Sleep agents</li> </ul>
Has been diagnosed with dementia	<ul style="list-style-type: none"> <li>• Tricyclic antidepressants</li> <li>• Anticholinergic agents</li> </ul>
Has been diagnosed with chronic renal failure	<ul style="list-style-type: none"> <li>• Nonaspirin NSAIDs</li> <li>• Cox-2 Selective NSAIDS</li> </ul>

## Action to Avoid Harmful Interactions

To help your senior patients avoid harmful drug-disease interactions, be aware of medications that are not recommended for older patients.

