

# ENJOYING GRAPEFRUIT

## A PATIENT'S GUIDE TO POTENTIAL DRUG INTERACTIONS WITH GRAPEFRUIT

### ENJOYING GRAPEFRUIT

If you like the tangy-sweet taste and nutritional benefits of grapefruit and its juice, potential drug interactions with grapefruit may concern you. A lot of confusing information is available on the topic, but what's the truth?

The fact is while some prescription drugs may interact with grapefruit, **most do not**. And, it's safe to enjoy grapefruit while taking virtually all over-the-counter medications.

Always let your physician know you if enjoy grapefruit and ask if it interacts with any of your medications. If you would prefer not to skip this healthy fruit or its juice, your physician can likely recommend a non-interacting, alternative drug that will effectively treat your health condition while allowing you to enjoy grapefruit.

### GRAPEFRUIT IS GOOD FOR YOU

Grapefruit and 100 percent grapefruit juice are nutritionally beneficial, great-tasting foods that offer natural antioxidants that can help support the body's natural defenses against disease. The following health benefits keep grapefruit a staple in many people's diets – regardless of their prescription medication needs.

#### NATURALLY NUTRIENT-RICH

A study from the University of Florida reports that pink grapefruit juice provides more nutrients per calorie than many other commonly consumed 100 percent fruit juices, including apple, grape, pineapple and prune.<sup>1</sup>

#### GRAPEFRUIT CONTAINS ANTIOXIDANTS

Grapefruit and grapefruit juice contain antioxidants and other phytochemicals. In your body's cells, antioxidants, such as vitamin C, may help neutralize free radicals that can damage cells. Over time, this cell damage may even contribute to the development of certain chronic diseases like cancer and heart disease, and even the appearance of aging.

#### WATCH YOUR WAISTLINE

Grapefruit juice is fat free and has fewer calories than most commonly consumed 100 percent fruit juices, with fewer than 100 calories per 8-ounce glass. Half of a Florida grapefruit is fat free and contains 60 calories.

#### REJUVENATE FROM THE INSIDE

The invigorating taste of Florida grapefruit helps provide your body a natural boost in energy while delivering essential nutrients like vitamin C and vitamin A in pink grapefruit, making it an ideal snack after a workout or any time.

#### IMMUNE SYSTEM SUPPORT

One half of a medium grapefruit or an 8-ounce serving of grapefruit juice contains at least 100 percent of the Daily Value of vitamin C to support a healthy immune system.

A properly functioning immune system is necessary to help the body's natural ability to ward off seasonal sickness and maintain energy levels.

<sup>1</sup> *Journal of Food Science*. 2007; 72 (4):S261-S266

# Q&A

**Q:** How does grapefruit juice interact with certain medications?

**A:** Grapefruit juice contains natural substances called furanocoumarins that suppress an intestinal enzyme (CYP3A4) responsible for metabolizing certain medications. When the enzyme is suppressed, the body may absorb more of the medicine, which may increase the effects of the drug. Increased drug effects may lead to side effects or an adverse reaction to the higher level of the medication. Whether you will experience drug interactions is dependent on many factors, such as individual genetic make-up, the type of medication, the dosage and the amount of grapefruit that is consumed.

**Q:** Which drugs interact with grapefruit juice?

**A:** Certain immunosuppressants, cholesterol-lowering “statin” medications, calcium-channel blockers to treat high blood pressure, HIV, hormone, antihistamine and psychiatric medications are among the drugs known to interact with grapefruit. In most cases, non-interacting, alternative medications that offer appropriate, safe treatment are available. For example, only some cholesterol-lowering “statins” interact with grapefruit juice. Pravachol (pravastatin), Lescol (fluvastatin) and Crestor (rosuvastatin) generally are safe to consume with grapefruit juice. In addition, it is safe to consume grapefruit and grapefruit juice while taking virtually all over-the-counter medications. Check with your physician.



This chart shows some of the most popular medications that may interact with grapefruit and potential non-interacting alternatives that you may wish to discuss with your physician.

| DRUG CLASS   | AFFECTED MEDICATIONS                               | NON-INTERACTING MEDICATIONS                 |
|--|--|---|
| HMG-CoA Reductase Inhibitors (cholesterol-lowering medications, “statins”) | Lovastatin, Simvastatin, Atorvastatin              | Pravastatin, Fluvastatin, Rosuvastatin      |
| Calcium-Channel Blockers (blood pressure medications)                      | Nicardipine, Felodipine, Nisoldipine, Nitrendipine | Amlodipine, Diltiazem, Verapamil            |
| Anxiolytics and Hypnotics (anxiety and insomnia medications)               | Buspirone, Diazepam, Triazolam                     | Alprazolam, Clonazepam, Zolpidem, Lorazepam |
| Antiepileptic drugs (epilepsy and seizure medications)                     | Carbamazepine                                      | Phenytoin                                   |
| Antiarrhythmics drugs (cardiac arrhythmia medications)                     | Amiodarone   | Dofetilide                                  |

**Q:** Does grapefruit juice affect medications given intravenously (by injection)?

**A:** Research to date indicates that a potential interaction occurs only with affected medications that are taken orally. Check with your physician.

**Q:** Why do many reports suggest there might be risks associated with drinking grapefruit juice while taking cholesterol-lowering medications?

**A:** Potential grapefruit-drug interactions are the subject of ongoing scientific research and clinical trials, and this has led to numerous media reports on the topic. Some of those reports are misleading because they generalize information rather than identifying specific drugs that have the potential to interact. For instance, many reports imply that all cholesterol-lowering medications may interact with grapefruit juice, when in fact, the cholesterol-lowering drugs fluvastatin, pravastatin and rosuvastatin generally are safe to consume with grapefruit juice.

**Q:** Does fresh grapefruit also interact with certain medications?

**A:** Yes, the components in grapefruit juice responsible for the interaction with certain medications are also found in fresh grapefruit. The components are found in all grapefruit juices regardless of brand or whether the juice is fresh, pasteurized or made from concentrate. Interactions are also associated with both white and red/pink grapefruit.

**Q:** How much grapefruit juice needs to be consumed to cause an interaction?

**A:** The amount of grapefruit juice necessary to cause an interaction can vary significantly, depending on the type of medication and the individual. Check with your physician about switching to a non-interacting, alternative medication so you can continue to enjoy the health benefits of grapefruit and grapefruit juice.

**Q:** Is it safe to drink grapefruit juice if a certain amount of time elapses between medication doses?

**A:** Scientific research suggests that interactions may occur for up to 72 hours after consuming grapefruit or grapefruit juice. Check with your physician.

**Q:** I've been drinking grapefruit juice with an affected medication for some time with no ill effects. Should I stop drinking grapefruit juice now?

**A:** Talk to your physician who can assess the potential for an interaction and determine whether discontinuing grapefruit consumption or switching to an alternative, non-interacting medication is necessary.

**Q:** How would I know if I'm experiencing the effects of a grapefruit-drug interaction?

**A:** An interaction between grapefruit and affected heart or blood pressure medications might lead to irregularities in heart beat, called arrhythmia. An interaction with affected cholesterol-lowering statins may increase the likelihood of painful muscle disorders. A few of the medications used to treat psychiatric illnesses may cause similar problems. If you notice side effects from taking any of your medications, regardless of whether or not you are consuming grapefruit, you should consult your physician.

**Q:** Because grapefruit juice seems to enhance the action of certain drugs, could grapefruit juice be used to improve the effectiveness of some medications?

**A:** Grapefruit juice may enhance the effectiveness of certain medications, and research is underway to better understand the potential effects with some drugs. Patients should **never adjust the dosage of prescribed medications** without talking with their physician.

For more information on potential grapefruit-drug interactions, visit [www.DrugInteractionCenter.org](http://www.DrugInteractionCenter.org). The site provides a listing of drugs that may interact with grapefruit juice and the level of interaction, along with access to cited scientific documentation. It was developed by pharmacology experts at the University of Florida and David Greenblatt, MD, professor, Department of Pharmacology and Experimental Therapeutics, Tufts University School of Medicine.

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