



## Important Drug and Food Information

From the Clinical Center, National Institutes of Health  
Drug-Nutrient Interaction Task Force

### Important information to know when you are taking any of the following drugs:

Amiodarone (Cordarone, Pacerone®)  
Buspirone (Buspar®)  
Carbamazepine (Tegretol®)  
Cisapride (Propulsid®)  
Cyclosporine (Gengraf,® Neoral®)

Lovastatin (Mevacor®)  
Nifedipine (Procardia,® Aldalat®)  
Simvastatin (Zocor®)  
Sirolimus (Rapamune®)  
Tacrolimus (Prograf®)

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#### **Grapefruit can interact with these drugs. When taking any of these drugs, avoid:**

- Grapefruit juice
- Drinks that contain grapefruit juice
- Fresh, canned, or frozen grapefruit

#### **What is a drug-nutrient interaction?**

A drug-nutrient interaction can occur when the food you eat affects how your medicine works. The effect of the medicine may be changed, or there may be serious side effects.

#### **What does this mean to me?**

It is recommended that you avoid grapefruit products while taking any of the above medications.

#### **Why do I need to avoid grapefruit in particular?**

Grapefruit, unlike other fruit in the citrus family, contains chemical compounds (such as naringine) that can affect how some medicines are absorbed from the gastrointestinal tract. The absorption of some drugs can be increased.

#### **Why would increasing the absorption of my medicines not be beneficial, especially if it allows me to save money on some of the more expensive medications?**

For many drugs, the best dose is not much lower than the amount that can be toxic. As a result, even a moderate increase in absorption could cause harm. More importantly, the effects could vary depending on the brand and batch of grapefruit, and how much you eat or drink.

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Amiodarone (Cordarone,® Pacerone®), Buspirone (Buspar®), Carbamazepine (Tegretol®), Cisapride (Propulsid®), Cyclosporine (Gengraf,® Neoral®), Lovastatin (Mevacor®), Nifedipine (Procardia,® Aldalat®), Simvastatin (Zocor®), Sirolimus (Rapamune®), Tacrolimus (Prograf®)

### **Could I safely take grapefruit several hours before or after the drug?**

No. This may be unsafe. The effects of grapefruit can last for many hours, so separating medicine and the grapefruit may not prevent this interaction.

### **What will happen if I accidentally have grapefruit?**

It is unlikely that an accidental, one-time eating or drinking of small amounts of grapefruit products will cause serious problems. Consult your doctor or pharmacist if you think you are experiencing side effects.

### **What if I have always taken my medication with grapefruit?**

Do not make any sudden changes without first checking with your pharmacist and doctor.

### **Does this mean I will never be able to have grapefruit again?**

Until more is known, it is strongly recommended that you change to other fruits and juices while taking drugs that are known to interact with grapefruit.

### **What is the possibility that grapefruit affects other drugs that I take?**

While studies are by no means complete, it has been found that grapefruit may increase the absorption of several prescription and over-the-counter drugs. Always ask your pharmacist if there is current information about the medicines you take, and the possibility of a food-drug interaction.



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This information is prepared specifically for patients taking part in clinical research at the Clinical Center at the National Institutes of Health and is not necessarily applicable to individuals who are patients elsewhere. If you have questions about the information presented here, talk to a member of your healthcare team.

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