

Medications And Nutrient Interactions

Nutrients in food often affect how drugs work in your body. Interactions (what can occur between foods and drugs) can affect nutritional status. Interactions can also change the effect of a drug or cause serious side effects. The actions of your body's enzymes affect the way your body uses medications too. Learn about drug interactions to change your meal plan and lessen side effects or harmful drug effects.

Factors Affecting Prescribed Medications

❶ Age ❷ Alcohol intake ❸ Cytochrome P450 liver (CYP) enzymes ❹ Dietary and chemical exposure factors ❺ Food ❻ Gender ❼ Genetic factors (Heredity) ❽ Other drugs

Certain compounds from common foods react with your liver's CYP enzymes and compete with protease inhibitors for clearance. Other medications, recreational substances, herbs and alcohol also compete with drugs for clearance. Avoid alcohol and herbal supplements, especially St. John's Wort and garlic, to help limit side effects or harmful drug effects when taking prescribed medication. See your doctor, pharmacist or a knowledgeable Registered Dietitian to learn about the CYP enzyme(s) that affect the drugs you take. These healthcare professionals can also help you to develop a time schedule noting medications and food considerations.



Generally, all medications for HIV can cause Diarrhea; Fatigue; Fat redistribution/Lipodystrophy; Gastrointestinal effects: heartburn, upset/pain in stomach, etc; Headache; Liver abnormalities including abnormal labs and hepatitis; Nausea; and Vomiting.

- Follow these tips to lessen possible side effects or harmful drug interactions.
1. Tell your doctor about every drug and dietary supplement that you are taking.
 2. Follow your doctor's orders on when and how to take your medications.
 3. When getting a prescription drug, ask for the package insert and read it carefully.

Resources: 1. HIV ReSources newsletters and updates. WWW: <http://www.hivresources.com> 2. AIDSMEDS.com. WWW: <http://aidsmeds.com/DrugsNewContent.asp> 3. Cytochrome P450 Drug Interaction Table. WWW: <http://www.drug-interactions.com> 4. Pronsky ZM, Meyer SA, Fields-Gardner C. HIV Medications Food Interactions (And So Much More), 2nd Ed;2001. Food-Medication Interactions: Birchrunville, PA 19421-0204. WWW: <http://www.foodmedinteractions.com>

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Medication Considerations

MEDICATION	OTHER SIDE EFFECTS	FOOD/OTHER CONSIDERATIONS
Protease Inhibitors: Additional side effects for this group of medications include ↑ glucose/DM and taste alterations.		
Agenerase (Amprenavir)	anemia, gas, oral or peripheral paresthesia/numbing	Take on empty stomach or with low fat food to limit GI upset. Avoid grapefruit juice. Increase fluid intake. Avoid vitamin E supplements. Avoid taking antacids within two hours.
Crixivan (Indinavir)	kidney pain/stone, ill feeling, loss of appetite	Take on an empty stomach or with a light snack . Avoid grapefruit juice. Drink at least 1.5 liters (48 ounces) of liquid per day.
Saquinavir (Fortovase-soft gel-FTV & Invirase-INV)	gas, M	INV: Take within 2 hr after a full meal . Grapefruit juice increases absorption. FTV: Take with full meals to lessen side effects or if used alone. Absorbed better than INV.
Kaletra (Lopinavir+Ritonavir) See Ritonavir		
Norvir (Ritonavir)	loss of appetite, oral or peripheral paresthesia/numbing	Take with full meal to limit GI upset.
Viracept (Nelfinavir)	gas	Take with meals. Increase fluid intake. Avoid acidic food or liquid.
Nucleoside Reverse Transcriptase Inhibitors (NRTI): Additional side effects for this group of medications include lactic acidosis, loss of appetite, pancreatitis, and anemia. NRTIs reduce B12, copper, zinc and carnitine.		
Combivir (3TC+ AZT)		
Epivir (3TC/Lamivudine)	fever	
Hivid (ddC/Zalcitabine)	constipation, ↑ glucose, M	Take on empty stomach. Do not take antacids with magnesium or aluminum within two hours.
Retrovir (Zidovudine/AZT/ZDV)	constipation, fever, ill feeling, T	Take on empty stomach or with low fat food to limit GI upset.
Trizivir (TCT/AZT+3TC+ABC) See Retrovir, Epivir and Ziagen		
Videx/Videx EC (Didanosine/ddI)	constipation, fever, gas, M, T, ↑ glucose	Take with water on an empty stomach. Do not take antacids with magnesium or aluminum within two hours. Do not mix with acidic liquid.
Zerit (d4T/Stavudine)	fever, ill feeling, M	
Ziagen (Abacavir/ABC)	fever	
Viread (TDF/Tenofovir)	gas, ↑ glucose	Take with fatty meal . Besides St. John's Wort and garlic, avoid milk thistle.
Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI): Additional side effects for this group of medications include gas and loss of appetite.		
Rescriptor (Delavirdine)	constipation, M	Take without food or with a light snack . Do not take antacids containing aluminum & magnesium within two hours.
Sustiva (Efavirenz)	fever, pancreatitis, T	Take on an empty stomach or with low fat snack. Take at bedtime to lessen side effects.
Viramune (Nevirapine)		

KEY: **M**= Mouth/Esophageal Ulcers/stomatitis **T**= Taste alterations **↑ glucose/DM**= Increased risk of glucose abnormalities including diabetes mellitus **GI**= Gastrointestinal
Empty Stomach: one hour before meals, or two hours after meals. **Low Fat Food Examples:** fresh or dried fruit, cereal, skim milk, non-fat yogurt, toast with jam. **Light Snack Estimated At:** less than 300 calories, less than 2 grams fat, less than 6 grams protein and less than 65 grams carbohydrate. See *Additional Food List for Crixivan (indinavir sulfate)* at <<http://www.apla.org/apla/nutrition/factsheets/indlist.html>>. **Full/Fatty Meal Estimated At:** meal high in fat (40-50% fat), protein (more than 40 grams protein) and calories (900-1,200 calories). **Acidic Food Examples:** apple juice, applesauce, grapefruit juice