



Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents

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Table 14. Drugs That Should Not Be Used With Antiretroviral Agents (Last updated February 12, 2013; last reviewed February 12, 2013) (page 1 of 2)

This table only lists drugs that should not be co-administered at any dose and regardless of ritonavir (RTV) boosting. See [Tables 15 and 16](#) for more detailed pharmacokinetic (PK) interaction data.

Drug Categories										
Antiretroviral Agents ^{a,b}	Cardiac Agents	Lipid-Lowering Agents	Antimycobacterials	Gastro-intestinal Drugs	Neuro-leptics	Psycho-tropics	Ergot Derivatives (vasoconstrictors)	Herbs	Anti-retroviral Agents	Others
ATV +/- RTV	amiodarone dronedarone	lovastatin simvastatin	rifampin rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	ETR NVP	alfuzosin irinotecan salmeterol sildenafil for PAH
DRV/r	amiodarone dronedarone	lovastatin simvastatin	rifampin rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	none	alfuzosin salmeterol sildenafil for PAH
FPV +/- RTV	amiodarone dronedarone flecainide propafenone	lovastatin simvastatin	rifampin rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	ETR	alfuzosin salmeterol sildenafil for PAH
LPV/r	amiodarone dronedarone	lovastatin simvastatin	rifampin ^d rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	none	alfuzosin salmeterol sildenafil for PAH
SQV/r	amiodarone dronedarone dofetilide flecainide lidocaine propafenone quinidine	lovastatin simvastatin	rifampin ^d rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam trazodone	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort garlic supplements	none	alfuzosin salmeterol sildenafil for PAH
TPV/r	amiodarone dronedarone flecainide propafenone quinidine	lovastatin simvastatin	rifampin rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	ETR	alfuzosin salmeterol sildenafil for PAH
EFV	none	none	rifapentine ^c	cisapride ^e	pimozide	midazolam ^f triazolam	dihydroergotamine ergonovine ergotamine methylergonovine	St. John's wort	other NNRTIs	none
ETR	none	none	rifampin rifapentine ^c	none	none	none	none	St. John's wort	unboosted PIs ATV/r, FPV/r, or TPV/r other NNRTIs	carbamazepine phenobarbital phenytoin clopidogrel

Table 14. Drugs That Should Not Be Used With Antiretroviral Agents (Last updated February 12, 2013; last reviewed February 12, 2013) (page 2 of 2)

Drug Categories										
Antiretroviral Agents ^{a,b}	Cardiac Agents	Lipid-Lowering Agents	Antimyco-bacterials	Gastro-intestinal Drugs	Neuro-leptics	Psycho-tropics	Ergot Derivatives (vasoconstrictors)	Herbs	Anti-retroviral Agents	Others
NVP	none	none	rifapentine ^c	none	none	none	none	St. John's wort	ATV +/- RTV other NNRTIs	ketoconazole
RPV	none	none	rifabutin rifampin rifapentine ^c	proton pump inhibitors	none	none	none	St. John's wort	other NNRTIs	carbamazepine oxcarbazepine phenobarbital phenytoin
MVC	none	none	rifapentine ^c	none	none	none	none	St. John's wort	none	none
EVG/COBI/TDF/FTC	none	lovastatin simvastatin	rifabutin rifampin rifapentine ^c	cisapride ^e	pimozide	midazolam ^f	dihydroergotamine ergotamine methylergonovine	St. John's wort	All other ARVs	alfuzosin sildenafil for PAH

^a DLV, IDV, NFV, and RTV (as sole PI) are not included in this table. Refer to the appropriate FDA package insert for information regarding DLV-, IDV-, NFV-, and RTV (as sole PI)-related drug interactions.

^b Certain listed drugs are contraindicated on the basis of theoretical considerations. Thus, drugs with narrow therapeutic indices and suspected metabolic involvement with CYP450 3A, 2D6, or unknown pathways are included in this table. Actual interactions may or may not occur in patients.

^c HIV-infected patients treated with rifapentine have a higher rate of tuberculosis (TB) relapse than those treated with other rifamycin-based regimens. Therefore an alternative agent to rifapentine is recommended.

^d A high rate of Grade 4 serum transaminase elevation was seen when a higher dose of RTV was added to LPV/r or SQV or when double-dose LPV/r was used with rifampin to compensate for rifampin's induction effect and therefore, these dosing strategies should not be used.

^e The manufacturer of cisapride has a limited-access protocol for patients who meet specific clinical eligibility criteria.

^f Use of oral midazolam is contraindicated. Parenteral midazolam can be used with caution as a single dose and can be given in a monitored situation for procedural sedation.

Suggested alternatives to:

- **Lovastatin, simvastatin:** Fluvastatin, pitavastatin, and pravastatin (except for pravastatin with DRV/r) have the least potential for drug-drug interactions (see [Table 15a](#)). Use atorvastatin and rosuvastatin with caution; start with the lowest possible dose and titrate based on tolerance and lipid-lowering efficacy.
- **Rifampin:** Rifabutin (with dosage adjustment, see [Tables 15a](#) and [15b](#))
- **Midazolam, triazolam:** temazepam, lorazepam, oxazepam

Key to Abbreviations: ATV +/- RTV = atazanavir +/- ritonavir, ATV/r = atazanavir/ritonavir, COBI = cobicistat, CYP = cytochrome P, DLV = delavirdine, DRV/r = darunavir/ritonavir, EFV = efavirenz, ETR = etravirine, EVG = elvitegravir, FDA = Food and Drug Administration, FPV +/- RTV = fosamprenavir +/- ritonavir, FPV/r = fosamprenavir/ritonavir, IDV = indinavir, LPV/r = lopinavir/ritonavir, MVC = maraviroc, NFV = nelfinavir, NNRTI = non-nucleoside reverse transcriptase inhibitor, NVP = nevirapine, PAH = pulmonary arterial hypertension, PI = protease inhibitor, PK = pharmacokinetic, RPV = rilpivirine, RTV = ritonavir, SQV = saquinavir, SQV/r = saquinavir/ritonavir, TB = tuberculosis, TPV/r = tipranavir/ritonavir