

# Herbal & Mineral Supplements Treatment Selector

Charts revised December 2021. Full information available at [www.hiv-druginteractions.org](http://www.hiv-druginteractions.org)

For personal use only. Not for distribution. For personal use only. Not for distribution. For personal use only. Not for distribution. For personal use only. Not for distribution.

	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV oral	FTR	MVC	BIC/F/TAF	CAB oral	CAB/ RPV	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	FTC/ TAF	FTC/ TDF	TDF
<b>Herbal Supplements</b>																						
African potato	↔	↔	↔	↔	↔	↓	↔	↔	↔	↓	↓	↓	↓	↔	↓	↓	↓	↔	↓	↓ <sub>a</sub>	↔	↔
Aloe vera	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Black cohosh	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Cat's claw	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↔	↔	↑	↔	↑	↑	↔	↔	↔	↔
Cubeb pepper	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↔	↑	↔	↔	↑	↔	↑	↑	↔	↑ <sub>a</sub>	↑ <sub>a</sub>	↑
Echinacea	↔	↔	↔	↔	↔	↓	↔	↔	↔	↓	↓	↓	↓	↔	↓	↔	↔	↔	↔	↔	↔	↔
Eucalyptus globulus	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Garlic	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↔	↔	↔	↓	↓	↓	↔	↓ <sub>a</sub>	↔	↔
Ginger	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↔	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔
Ginkgo biloba	↔	↔	↔	↔	↔	↓	↓	↓	↓	↓	↓	↓	↓	↔	↓	↓	↔	↔	↔	↔	↔	↔
Ginseng	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Goldenseal root	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Grapefruit juice	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Green tea extracts	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	? <sub>b</sub>	↔	↔	↔	? <sub>b</sub>	? <sub>b</sub>	↔	? <sub>b</sub>	? <sub>b</sub>	? <sub>b</sub>
Guggulsterone	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↔	↓	↔	↔	↓	↔	↓	↓	↔	↔	↔	↔
Hops	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↔	↓	↓	↓	↓	↔	↓ <sub>a</sub>	↔	↔
Inula racemosa	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔
Liquorice	↔	↔	↔	↔	↔	↓	↔	↔	↔	↓	↓	↓	↓	↔	↓	↓	↑	↑	↔	↑ <sub>a</sub>	↑ <sub>a</sub>	↑
Malabar nut tree	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↔	↓	↓	↓	↓	↓	↔	↔	↔
Menthol	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔
Milk thistle	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Quercetin	↑?	↑?	↑?	↑?	↑?	↑	↑?	↑?	↑?	↑	↔	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔
Red yeast rice	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Saw palmetto	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Seville orange juice	↔	↔	↔	↔	↔	↑	↔	↔	↔	↑	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
St John's wort	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓ <sub>c</sub>	↓	↓ <sub>c,d</sub>	↔	↔
Turmeric	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Valerian	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
<b>Mineral supplements</b>																						
Ascorbic acid <b>e</b>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Calcium	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Ferrous fumarate	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Folic acid <b>e</b>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Iodine <b>e</b>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Iron (infusion/injection)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Iron (oral)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Magnesium	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Multivitamins	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Nicotinamide <b>e</b>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔
Various vitamins <b>f</b>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↓	↓	↓	↓	↔	↔	↔

**Interactions with CAB/RPV long acting injections**

Pharmacokinetic interactions shown are mostly with RPV. QT interactions shown are with RPV.

**Interactions with Ibalizumab**

None

**Interactions with Abacavir (ABC), Lamivudine (3TC) or Zidovudine (ZDV)**

ABC: No clinically relevant interactions expected.  
 3TC: No clinically relevant interactions expected.  
 ZDV: No clinically relevant interactions expected.

**Colour Legend**

- No clinically significant interaction expected.
- These drugs should not be coadministered.
- Potential interaction which may require a dose adjustment or close monitoring.
- Potential interaction predicted to be of weak intensity. No *a priori* dosage adjustment is recommended.

**Text Legend**

- ↑ Potential increased exposure of the supplement
- ↓ Potential decreased exposure of the supplement
- ↔ No significant effect
- ↑ Potential increased exposure of HIV drug
- ↓ Potential decreased exposure of HIV drug
- ♥ One or both drugs may cause QT and/or PR prolongation. ECG monitoring is advised if coadministered with atazanavir or lopinavir; caution is advised with rilpivirine as supratherapeutic doses of rilpivirine (75 and 300 mg once daily) were shown to prolong the QT interval.
- Numbers refer to increase or decrease in AUC as observed in drug-drug interaction studies.

**Notes**

- a** No effect on emtricitabine expected.
- b** The effect on tenofovir is unclear as green tea extracts appeared to inhibit P-gp in vivo, but a contradictory effect was observed in vivo.
- c** Co-administration is not recommended in product label. However, a low risk of a clinically relevant pharmacokinetic interaction has been shown with low-hyperforin formulations (<1 mg/day) of St John's Wort (hyperforin is the constituent responsible for induction of CYPs and P-gp). Co-administration may be considered with St John's Wort formulations that clearly state the hyperforin content and which have a total daily hyperforin dose of 1 mg or less.
- d** No effect on emtricitabine is expected, but tenofovir alafenamide concentrations may decrease which may result in loss of therapeutic effect and development of resistance.
- e** Only when used in multivitamin preparations as they can contain mineral supplements.
- f** Only for vitamin preparations containing divalent cations.

Abbreviations ATV atazanavir DRV darunavir LPV lopinavir /c cobicistat /r ritonavir DOR doravirine EFV efavirenz ETV etravirine NVP nevirapine RPV rilpivirine FTR Fostemsavir MVC maraviroc BIC bictegravir CAB Cabotegravir DTG dolutegravir EVG elvitegravir RAL raltegravir F or FTC emtricitabine TAF tenofovir alafenamide TDF tenofovir-DP

© Liverpool Drug Interactions Group, University of Liverpool, Pharmacology Research Labs, 1st Floor Block H, 70 Pembroke Place, LIVERPOOL, L69 3GF.  
 We aim to ensure that information is accurate and consistent with current knowledge and practice. However, the University of Liverpool and its servants or agents shall not be responsible or in any way liable for the continued currency of information in this publication whether arising from negligence or otherwise howsoever or for any consequences arising therefrom. The University of Liverpool expressly exclude liability for errors, omissions or inaccuracies to the fullest extent permitted by law.