UNIVERSITY OF LIVERPOOL

Antiretrovirals and Recreational Drugs

Charts reviewed June 2022. Full information available at www.hiv-druginteractions.org

	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
Stimulants																						
Cocaine	↑a♥	↑a♥	↑a	↑a	↑a♥	↔	↑b	↑b	↑b	↔♥	↔♥	↔	↔	↔	↔♥	↔	↑a	↑a	↔	↔	↔	↔
Ecstasy (MDMA)	↑c	↑c	↑c	↑c	↑c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑c	↑c	↔	↔	↔	↔
Mephedrone	↑d	↑d	↑d	↑d	↑d	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑d	↑d	↔	↔	↔	↔
Methamphetamine	↑	↑	↑	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Poppers (Amyl nitrate)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Depressants																						
Alcohol	↔	↔	↔	↔	↔e	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Alprazolam	↑	↑f	↑	↑f	↑f	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Codeine	↑g	↑g	↑g	↑g	↑g	↔	↓g	↓g	↓g	↔	↔	↔	↔	↔	↔	↔	↑g	↑g	↔	↔	↔	↔
Diazepam	↑	↑	↑	↑	↑	↔	↓	↑	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
GHB (gamma hydroxybutyrate)	↔	↑h	↔	↑h	↑h	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Heroin (Diamorphine)	↔i	↓i	↔i	↓i	↓i	↔	↑	↔i	↔	↔	↔	↔	↔	↔	↔	↔	↔i	↔i	↔	↔	↔	↔
Hydrocodone	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Hydromorphone	↔	↓	↔	↓	↓	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ketamine	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Methadone	↔♥	↔♥	↑	↓16%	↓53%♥	↓5% ⇓26%	↓52%	↑6%	↓~50%	↓16%♥	↑14%♥	↔	↔	↔	↓♥	↓2%	↑7%	↑7%	↔	↔	↔	↑~5%
Midazolam (oral)	↑j	↑j	↑j	↑j	↑j	↓18%	↓k	↓	↓	↔	↔	↔	↔	↑10%	↔	↔	↑j	↑j	↔	↔	↔	↔
Morphine	↔l	↓l	↔l	↓l	↓l	↔	↑	↔l	↔	↔	↔	↔	↔	↔	↔	↔	↔l	↔l	↔	↔	↔	↔
Oxycodone	↑	↑	↑	↑	↑160%	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Pethidine (Meperidine)	↑	↓m	↑	↓m	↓m	↔	↓m	↓m	↓m	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Temazepam	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Triazolam	↑j	↑j	↑j	↑j	↑j	↔	↓k	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑j	↑j	↔	↔	↔	↔
Hallucinogens																						
Cannabis	↑n⇓	↓o⇓	↑n	↓o	↓o	↔	↑n	↑n	↔	↔	↔	↔	↔	↔	↔	↔	↓n	↓n	↔	↔	↔	↔
LSD (Lysergic acid diethylamide)	↑p	↑p	↑p	↑p	↑p	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑p	↑p	↔	↔	↔	↔
Phencyclidine (PCP, angel dust)	↑q	↑q	↑q	↑q	↑q	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑q	↑q	↔	↔	↔	↔

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 recreational drug
↓ Potential decreased exposure of the recreational drug
↔ 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. Rilpivirine and fostemsavir were shown to prolong the QT interval at supratherapeutic doses. Caution is advised with rilpivirine. ECG monitoring is advised with fostemsavir and drugs with a known QT prolongation risk.

Numbers refer to increase or decrease in AUC as observed in drug-drug interaction studies.

Notes

a Clinical relevance unknown as cocaine is metabolized by other non-CYP mediated pathways. Ensure patient is aware of signs/symptoms of cocaine toxicity (tremor, seizures, anxiety, headache, increased body temperature).

b Concentrations of hepatotoxic metabolite increased.

c Ensure patient is aware of signs/symptoms of ecstasy toxicity (increased body temperature, dehydration, dry mouth, tense jaw, teeth grinding).

d Ensure patient is aware of signs/symptoms of mephedrone toxicity (agitation, tachycardia, hypertension).

e Not recommended with oral solution due to large amount of propylene glycol in the solution which may compete with alcohol elimination.

f Initial inhibitory effect followed by induction in presence of ritonavir.

g Potential opiate withdrawal due to reduced conversion to morphine.

h Ensure patient is aware of signs/symptoms of GHB toxicity (myoclonic or seizure activity, bradycardia, respiratory depression, loss of consciousness).

i Heroin is rapidly deacetylated to 6-monoacetylmorphine (6-MAM) by plasma esterases and subsequently to morphine by liver esterases. 6-MAM enters the brain at a much faster rate than morphine and has been correlated to the acute effects of heroin. PIs/EFV are unlikely to alter 6-MAM concentrations but may alter morphine concentrations. Also, PIs, ETV, EVG/c could increase the amount of morphine entering the brain (via P-gp inhibition) and thus potentiate the effects of opiate in the CNS.

j Increased sedation or respiratory depression.

k Contraindicated by manufacturer.

l Amount of morphine entering the CNS may be increased due to inhibition of P-gp and thus potentiate the effects of opiate in the CNS.

m Concentrations of neurotoxic metabolite increased.

n Concentrations of tetrahydrocannabinol (THC, the psychoactive component of cannabis) could be increased.

o Concentrations of tetrahydrocannabinol (THC, the psychoactive component of cannabis) could be decreased, although to a modest extent.

p Ensure patient is aware of signs/symptoms of LSD toxicity (hallucination, agitation, psychosis, flashbacks).

q Ensure patient is aware of signs/symptoms of PCP toxicity (seizure, hypertension, increased body temperature).

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-DF