

# Contraceptives & HRT Treatment Selector

Charts revised May 2015. Full information available at [www.hiv-druginteractions.org](http://www.hiv-druginteractions.org) and [www.hiv-druginteractionslite.org](http://www.hiv-druginteractionslite.org)

	ATV/r	DRV/r	FPV/r	IDV/r	LPV/r	SQV/r	EFV	ETV	NVP	RPV	MVC	DTG	EVG/c	RAL	ABC	FTC	3TC	TDF	ZDV		
Estrogens	Ethinylestradiol	↓19% <sup>a</sup>	↓44% <sup>b</sup>	↓37% <sup>b</sup>	↓ <sup>b,c</sup>	↓42% <sup>b</sup>	↓ <sup>b</sup>	↔ <sup>d</sup>	↑22%	↓20% <sup>b</sup>	↑14%	↔	↑3%	↓25% <sup>e</sup>	↔	↔	↔	↔	↔	↔	
	Estradiol	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↓ <sup>f</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Progestins	Desogestrel	↑ <sup>g,h</sup>	↑ <sup>g,h</sup>	↑ <sup>g,h</sup>	↑ <sup>g,h</sup>	↑ <sup>g,h</sup>	↑ <sup>g,h</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
	Drospirenone	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
	Dydrogesterone	↑	↑	↑	↑	↑	↑	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
	Etonogestrel	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑52% <sup>h</sup>	↑ <sup>h</sup>	↓63% <sup>j</sup>	↓ <sup>j</sup>	↓ <sup>j</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Gestodene	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
	Levonorgestrel	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↓ <sup>j</sup>	↓ <sup>j</sup>	↓ <sup>j</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Medroxy-progesterone (IM)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Medroxy-progesterone (oral)	↑	↑	↑	↑	↑	↑	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Norelgestromin	↑ <sup>k</sup>	↑ <sup>k</sup>	↑ <sup>k</sup>	↑ <sup>k</sup>	↑83% <sup>k</sup>	↑ <sup>k</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Norethisterone (Norethindrone)	↓ <sup>l,j</sup>	↓14% <sup>j</sup>	↓34% <sup>j</sup>	↓ <sup>l,m</sup>	↓17% <sup>j</sup>	↓ <sup>j</sup>	↓ <sup>j</sup>	↓5%	↓19% <sup>j</sup>	↓11%	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Norgestimate	↑85% <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Norgestrel	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↑ <sup>h</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↓ <sup>i</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	Other	Levonorgestrel (EC)	↑	↑	↑	↑	↑	↓58% <sup>n</sup>	↓ <sup>n</sup>	↓ <sup>n</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Mifepristone		↑	↑	↑	↑	↑	↓	↓	↓	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Ulipristal		↑	↑	↑	↑	↑	↑	↓ <sup>o</sup>	↓ <sup>o</sup>	↓ <sup>o</sup>	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	

### Colour Legend

- No clinically significant interaction expected.
- These drugs should not be coadministered.
- Potential interaction which may require a dosage adjustment or close monitoring.
- Potential interaction predicted to be of weak intensity (<2 fold ↑AUC or <50% ↓AUC). No *a priori* dosage adjustment is recommended.

### Text Legend

- ↑ Potential increased exposure of the hormone
- ↓ Potential decreased exposure of the hormone
- ↔ No significant effect
- ↑↑ Potential increased exposure of HIV drug
- ↓↓ Potential decreased exposure of HIV drug

Numbers refer to decreased AUC of the hormone as observed in drug-drug interaction studies.

- a Unboosted ATV increased ethinylestradiol AUC by 48%. Use no more than 30 µg of ethinylestradiol if coadministered with unboosted ATV and at least 35 µg of ethinylestradiol if coadministered with ATV/r.
- b Alternative or additional contraceptive measures are recommended or, if used for hormone replacement therapy, monitor for signs of estrogen deficiency.
- c Unboosted IDV increased ethinylestradiol AUC by 22%. Boosted IDV is predicted to decrease ethinylestradiol exposure.
- d No effect on ethinylestradiol exposure, however, levels of coadministered progestin were markedly decreased. A reliable method of barrier contraception must be used in addition to oral contraception.
- e European SPC states a hormonal contraceptive should contain at least 30 µg ethinylestradiol.
- f Monitor for signs of estrogen deficiency.
- g Increased conversion to the active metabolite, etonogestrel.
- h When used in a combination pill the estrogen component is reduced. In the absence of clinical data on the contraceptive efficacy, caution is recommended and additional contraceptive measures should be used.
- i A reliable method of barrier contraception must be used in addition to oral contraception.
- j The use of implants or vaginal rings is not recommended in women on long-term treatment with hepatic enzyme-inducing drugs.
- k Norelgestromin is administered with ethinylestradiol as a transdermal patch. Ethinylestradiol exposure was reduced which may compromise contraceptive efficacy. Caution is recommended and additional contraceptive measures should be used.
- l Unboosted ATV increased norethisterone AUC by 2.1-fold.
- m Unboosted IDV increased norethisterone AUC by 26%.
- n Use 3 mg as a single dose for emergency contraception. Of note, the doubling of the standard dose is outside the product license and there is limited evidence in relation to efficacy.
- o May reduce the efficacy of the emergency contraceptive pill.

### Notes

- *Transdermal application avoids first-pass metabolism, however, hepatic metabolism still occurs and therefore there is a risk of drug-drug interactions.*
- *Intrauterine administration releases the hormone (i.e. levonorgestrel) directly to the target organ before it is absorbed into the systemic circulation and therefore is less likely to be affected by ARVs.*