

# Contraceptive Treatment Selector

Charts reviewed December 2023. 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	LEN	MVC	BIC/F/TAF	CAB oral	CAB/RPV	DTG	EVG/c/F/TAF	EVG/c/F/TDF	RAL	FTC/TAF	FTC/TDF	
<b>Estrogens</b>																							
Ethinylestradiol	↑1% a	↓19% b	↓30% c	↓44% c	↓42% c	↓2%	↔ d	↑22%	↓20%	↑14%	↑40% e	↑	↓<1%	↑4%	↑2%	↔	↑3%	↓25% f	↓25% f	↓2%	↔	↔	
<b>Progestins (Combined Oral Contraceptive, COC)</b>																							
Chlormadinone	↑ a	↑ b	↑ c	↑ g	↑ g	↔	↓ h	↓	↓	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Desogestrel	↑ a,k	↑ b,k	↑ c,k	↑ g,k	↑ g,k	↔	↓ h	↓	↓	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Drospirenone	↑130% l	↑ b,m	↑58% c,m	↑ g,m	↑ g,m	↔	↓ h	↓	↓	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Gestodene	↑ a	↑ b	↑ c	↑ g	↑ g	↔	↓ h	↓	↓	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Levonorgestrel	↓8% a	↑ b	↑ c	↑ g	↑ g	↑21%	↓ h	↓	↑	↔	↑ e,i	↑	↓2%	↔	↑12%	↔	↔	↑	↑	↔	↔	↔	
Norethisterone (Norethindrone)	↑ a	↑ b,n	↑ c	↓14% g	↓17% g	↔	↓ h	↓5%	↓19%	↓11%	↑8% e	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Norgestimate	↑ a	↑85% b	↑ c	↑ g	↑ g	↔	↓64% h	↓	↓	↔	↑ e,i	↑	↔	↑8%	↔	↔	↔	↓2%	↑126% j	↑126% j	↑14%	↔	↔
Norgestrel	↑ a	↑ b	↑ c	↑ g	↑ g	↔	↓ h	↓	↑29%	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
<b>Progestins (Progestin only pill, POP)</b>																							
Desogestrel	↑ k	↑ k	↑ k	↑ k	↑	↔	↓ h	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
Drospirenone	↑ l	↑ m	↑ m	↑ m	↑ m	↔	↓ h	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↑ m	↑ m	↔	↔	↔	
Levonorgestrel	↑	↑	↑	↑	↑	↔	↓ h	↓	↑	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
Norethisterone (Norethindrone)	↔ c	↑50% n	↔ c	↑50%	↑50%	↔	↓ h	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
<b>Progestins (Non-oral)</b>																							
Etonogestrel (implant)	↑	↑	↑120%	↑74%	↑52%	↔	↓63% o	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
Etonogestrel (CVR)	↑	↑71% p	↑ p	↑ p	↑ p	↔	↓79% o	↓	↓	↔	↑ q	↑	↔	↔	↔	↔	↔	↑ p	↑ p	↔	↔	↔	
Levonorgestrel (implant)	↑	↑	↑	↑	↑	↔	↓57% o	↓	↑14%	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
Levonorgestrel (IUD)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Medroxy-progesterone (depot)	↔	↔	↔	↔	↑70%	↔	↔ r	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔ s	↔	↔	↔ s	
Norelgestromin (patch)	↑ c	↑ t	↑ c	↑ u	↑83% u	↔	↓ h	↓	↓	↔	↑ e,i	↑	↔	↔	↔	↔	↔	↑ j	↑ j	↔	↔	↔	
Norethisterone (Norethindrone) (depot)	↔	↔	↔	↔	↔	↔	↓ h	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
<b>Other</b>																							
Levonorgestrel (EC)	↑ v	↑ v	↑ v	↑ v	↑ v	↔	↓58% w	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↑ v	↑ v	↔	↔	↔	
Mifepristone	↑ v	↑ v	↑ v	↑ v	↑ v	↑ v	↓	↓	↓	↑ v	↔	↑ v	↑ v	↑ v	↔	↔	↔	↑ v	↑ v	↔	↔	↔	
Ulipristal	↑ v	↑ v	↑ v	↑ v	↑ v	↔	↓ x	↓ x	↓ x	↔	↔	↑	↔	↔	↔	↔	↔	↑ v	↑ v	↔	↔	↔	

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

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

**Interactions with Lenacapavir**

Residual LEN may affect exposure of sensitive CYP3A4 substrates initiated within 9 months after stopping subcutaneous LEN.

**Interactions with Ibalizumab**

None

**Interactions with Abacavir (ABC), Lamivudine (3TC), Tenofovir-DF (TDF) or Zidovudine (ZDV)**

ABC: No clinically relevant interactions expected.  
 3TC: No clinically relevant interactions expected.  
 TDF: 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 hormone
- ↓ Potential decreased exposure of the hormone
- ↔ No significant effect

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

- CVR Combined vaginal ring
- IUD Intra uterine device
- EC Emergency contraception

**Notes**

- a Product labels for ATV/c advise coadministration with hormonal contraceptives should be avoided and an alternate (non-hormonal) reliable method of contraception is recommended.
- b Unboosted ATV increased ethinylestradiol AUC by 48%. Use no more than 30 µg of ethinylestradiol with unboosted ATV, and at least 35 µg of ethinylestradiol with ATV/r.
- c Alternative or additional contraceptive measures are recommended.
- d Depending on the contraceptive method, ethinylestradiol can be either unchanged (COC) or decreased (CVR). Levels of coadministered progestin were markedly decreased. A reliable method of barrier contraception must be used in addition to oral contraception.
- e The daily dose of ethinylestradiol should not exceed 30 µg. Caution is advised, particularly in patients with additional risk factors for thromboembolic events.
- f The European product label states a hormonal contraceptive should contain at least 30 µg ethinylestradiol.
- g When used in a COC the estrogen component is reduced. In the absence of clinical contraceptive efficacy data, use with caution and with additional contraceptive measures.
- h A reliable barrier contraceptive method must be used in addition to oral contraception.
- i No effect on the progestin is expected, but ethinylestradiol is expected to increase.
- j When used in a COC, the estrogen component is reduced to a limited extent. The European product label states a hormonal contraceptive should contain at least 30 µg ethinylestradiol.
- k Increased conversion to the active metabolite, etonogestrel.
- l Coadministration is contraindicated in the US product label due to potential hyperkalaemia. The European product label recommends clinical monitoring for hyperkalaemia.
- m Clinical monitoring is recommended due to the potential for hyperkalaemia.
- n Unboosted ATV increased norethisterone AUC by 2.1-fold.
- o The use of implants or vaginal rings is not recommended in women on long-term treatment with hepatic enzyme-inducing drugs.
- p Predicted to increase etonogestrel but to reduce ethinylestradiol concentrations. Since no dosage adjustment of ethinylestradiol is possible with the CVR, alternative forms of contraception should be used.
- q No effect on etonogestrel is expected but an increase in ethinylestradiol cannot be excluded and the clinical relevance of this is unknown. Caution is advised, particularly in patients with additional risk factors for thromboembolic events.
- r A higher risk of subtherapeutic DMPA concentrations (i.e., <0.1 ng/mL) at week 12 has been predicted in women with higher body weight on EFV treatment and an even higher risk when EFV is given with rifampicin. The risk of subtherapeutic concentrations is prevented by dosing DMPA every 8-10 weeks in these women.
- s Concurrent use of TDF and medroxyprogesterone has been shown to increase bone mineral density loss compared to TDF alone.
- t The efficacy of norelgestromin patch is unlikely to be impaired since the patch releases 33 µg ethinylestradiol/day. This meets the recommendation in the ATV product labels that the hormonal contraceptive should contain at least 30 µg ethinylestradiol in presence of ATV/r.
- u 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.
- v Any increase in exposure is unlikely to be clinically significant when used as a single dose.
- w Use 3 mg as a single dose for emergency contraception. Of note, doubling the standard dose is outside the product license and there is limited evidence in relation to efficacy.
- x Not recommended. Consider non-hormonal emergency contraception (Cu-IUD).

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

© Liverpool Drug Interactions Group, University of Liverpool, 3rd Floor William Duncan Building, 6 West Derby Street, Liverpool, L7 8TX.  
 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.