

Table 48: Gender-Affirming Hormones [a] [Coleman, et al. 2022; Cirrincione, et al. 2020; Irving and Lehault 2017] (also see prescribing information)		
→ Dutasteride, estradiol, finasteride, goserelin, leuprolide acetate, spironolactone, testosterone		
Class or Drug	Mechanism of Action	Clinical Comments
<ul style="list-style-type: none"> Fostemsavir (FTR) Maraviroc (MVC) Lenacapavir (LEN) 	No clinically significant interactions expected.	No dose adjustments are necessary.
Cobicistat (COBI)	<ul style="list-style-type: none"> Estradiol: COBI-boosted PIs and EVG/COBI may increase estradiol levels via CYP3A inhibition. Finasteride, dutasteride: COBI-boosted PIs and EVG/COBI may increase finasteride or dutasteride levels, but with minimal clinical significance. Progestins (oral medroxyprogesterone, micronized progesterone): COBI-boosted PIs and EVG/COBI may increase progestin levels via CYP3A4 inhibition. Testosterone: COBI-boosted PIs and EVG/COBI may increase testosterone levels via CYP3A4 inhibition. Relevance of this interaction is expected to be low in transgender men. Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected. 	<ul style="list-style-type: none"> Estradiol: When taken concomitantly with COBI-boosted ARVs, monitor serum estradiol levels. Finasteride, dutasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No dose adjustments are necessary. Spironolactone, bicalutamide, leuprolide, goserelin: Drug interactions are unlikely.
Doravirine (DOR)	Estradiol, dutasteride, finasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No interactions expected.	N/A
Efavirenz (EFV)	<ul style="list-style-type: none"> Estradiol: EFV may reduce estradiol levels via CYP3A induction. Finasteride, dutasteride: EFV may reduce finasteride and dutasteride levels via CYP3A induction. Progestins (oral medroxyprogesterone, micronized progesterone): EFV may reduce progestin levels via CYP3A induction. Testosterone: EFV may reduce testosterone levels via CYP3A induction. Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected. 	<ul style="list-style-type: none"> Estradiol: Monitor serum estradiol levels; may require increased estradiol dose. Finasteride, dutasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No dose adjustments are necessary. Spironolactone, bicalutamide, leuprolide, goserelin: Drug interactions are unlikely.
Etravirine (ETR)	<ul style="list-style-type: none"> Estradiol: ETR may reduce estradiol levels via CYP3A induction. Finasteride, dutasteride: ETR may reduce finasteride and dutasteride levels via CYP3A induction. Progestins (oral medroxyprogesterone, micronized progesterone): ETR may reduce progestin levels via CYP3A induction. 	<ul style="list-style-type: none"> Estradiol: Monitor serum estradiol levels; may require increased estradiol dose. Finasteride, dutasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No dose adjustments are necessary. Spironolactone, bicalutamide, leuprolide, goserelin: Drug interactions are unlikely.

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Class or Drug	Mechanism of Action	Clinical Comments
	<ul style="list-style-type: none"> • Testosterone: ETR may reduce testosterone levels via CYP3A induction. • Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected 	
Nevirapine (NVP)	<ul style="list-style-type: none"> • Estradiol: NVP may reduce estradiol levels via CYP3A induction. • Finasteride, dutasteride: NVP may reduce finasteride and dutasteride levels via CYP3A induction. • Progestins (oral medroxyprogesterone, micronized progesterone): NVP may reduce progestin levels via CYP3A induction. • Testosterone: NVP may reduce testosterone levels via CYP3A induction. • Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected. 	<ul style="list-style-type: none"> • Estradiol: Monitor serum estradiol levels; may require increased estradiol dose. • Finasteride, dutasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No dose adjustments are necessary. • Spironolactone, bicalutamide, leuprolide, goserelin: Drug interactions are unlikely.
<ul style="list-style-type: none"> • Rilpivirine (RPV) • INSTIs, <i>non-boosted</i> • NRTIs, <i>non-boosted</i> 	Estradiol, dutasteride, finasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No interactions expected.	N/A
Ritonavir (RTV)	<ul style="list-style-type: none"> • Estradiol: RTV may reduce estradiol levels via CYP1A2 induction; RTV may increase estradiol levels via CYP3A4 inhibition. • Finasteride, dutasteride: RTV-boosted PIs may increase finasteride or dutasteride levels. • Progestins (oral medroxyprogesterone, micronized progesterone): RTV-boosted PIs may increase progestin levels via CYP3A4 inhibition. • Testosterone: RTV-boosted PIs may increase testosterone levels via CYP3A4 inhibition. • Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected. 	<ul style="list-style-type: none"> • Estradiol: When taken concomitantly with RTV-boosted ARVs, monitor serum estradiol levels. • Finasteride, dutasteride, progestins (oral medroxyprogesterone, micronized progesterone), testosterone: No dose adjustments are necessary. • Spironolactone, bicalutamide, leuprolide, goserelin: No interactions expected.
Abbreviations: ARV, antiretroviral; CYP, cytochrome P450; INSTI, integrase strand transfer inhibitor; N/A, not applicable; NRTI, nucleoside reverse transcriptase inhibitor; PI, protease inhibitor. Note: a. For recommended dosing and monitoring of gender-affirming hormones, refer to [Coleman, et al. 2022].		

References

- Cirincione LR, Senneker T, Scarsi K, et al. Drug interactions with gender-affirming hormone therapy: focus on antiretrovirals and direct acting antivirals. *Expert Opin Drug Metab Toxicol* 2020;16(7):565-582. [PMID: 32479127] <https://pubmed.ncbi.nlm.nih.gov/32479127>
- Coleman E, Radix AE, Bouman WP, et al. Standards of care for the health of transgender and gender diverse people, version 8. *Int J Transgend Health* 2022;23(Suppl 1):S1-259. [PMID: 36238954] <https://pubmed.ncbi.nlm.nih.gov/36238954>
- Irving A, Lehault WB. Clinical pearls of gender-affirming hormone therapy in transgender patients. *Ment Health Clin* 2017;7(4):164-167. [PMID: 29955517] <https://pubmed.ncbi.nlm.nih.gov/29955517>