

# Diabetes Therapies

Charts revised November 2024. Full information available at [www.hiv-druginteractions.org](http://www.hiv-druginteractions.org)

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	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>Sulfonylureas</b>																								
Glibenclamide	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↑	↑	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	
Gliclazide	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↔	↔	
Glimepiride	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↔	↔	
Glipizide	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↔	↔	
Tolbutamide	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↓	↓	↔	↔	↔	
<b>Biguanides</b>																								
Metformin	↑ a	↔	↑ a	↔	↔	↓ 6%	↔	↔	↔	↓ 3%	↔	↔	↔	↔	↔	↔	↔	↔	↑ 79% a	↑ a	↑ a	↔	↔	↔
<b>Thiazolidinediones</b>																								
Pioglitazone	↑	↑	↑	↑	↑	↔	↑	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
Rosiglitazone	↑ 35%	↓ 17%	↔	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
<b>Meglitinides</b>																								
Nateglinide	↑	↑↓	↑	↑↓	↑↓	↔	↑↓	↑↓	↓	↔	↑	↔	↔	↔	↔	↔	↔	↔	↑↓	↑↓	↔	↔	↔	↔
Repaglinide	↑	↑	↑	↑	↑	↔	↑↓	↓	↓	↔	↑	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔
<b>GLP-1 agonists</b>																								
Dulaglutide	↔↓ b	↔↓ b	↔	↔	↔	↔	↔	↔	↔	↔	↔↓ c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Exenatide	↔↓ b	↔↓ b	↔	↔	↔	↔	↔	↔	↔	↔	↔↓ c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Liraglutide	↔↓ b	↔↓ b	↔	↔	↔	↔	↔	↔	↔	↔	↔↓ c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Semaglutide	↔↓ b	↔↓ b	↔	↔	↔	↔	↔	↔	↔	↔	↔↓ c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Tirzepatide	↔↓ b	↔↓ b	↔	↔	↔	↔	↔	↔	↔	↔	↔↓ c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
<b>DPP-4 inhibitors</b>																								
Alogliptin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Linagliptin	↑ d	↑ d	↑ d	↑ d	↑ d	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑ d	↑ d	↔	↔	↔
Saxagliptin	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↑	↑	↔	↔	↔
Sitagliptin	↑ d	↑ d	↑ d	↑ d	↑ d	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑ d	↑ d	↔	↔	↔
Vildagliptin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
<b>SGLT-2 inhibitors</b>																								
Canagliflozin	↔	↓	↔	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ e	↔	↔	↔	↔ e
Dapagliflozin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Empagliflozin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
<b>Others</b>																								
Acarbose	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

**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: Caution with canagliflozin due to potential additive bone toxicities (e).

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 anti-diabetic drug
- ↓ Potential decreased exposure of the anti-diabetic drug
- ↔ No significant effect

- ↑ Potential increased exposure of HIV drug
- ↓ Potential decreased exposure of HIV drug

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

**Notes**

- a Close monitoring is recommended when starting or stopping the combination of these antiretrovirals and metformin as a dose adjustment of metformin may be necessary.
- b Caution is needed when coadministering atazanavir and GLP-1 agonists due to their potential to inhibit gastric secretion (and in some cases to slow gastric emptying), thereby reducing the absorption of atazanavir. Consider taking atazanavir 2-4 hours before the GLP-1 agonist.
- c Caution is needed when coadministering oral rilpivirine and GLP-1 agonists due to their potential to inhibit gastric secretion (and in some cases to slow gastric emptying), thereby reducing the absorption of rilpivirine. Consider taking oral rilpivirine 4 hours before the GLP-1 agonist.
- d Increase in anti-diabetic drug exposure is not considered as clinically significant as the drug is mainly eliminated unchanged and has a large safety window.
- e Caution is recommended when coadministering canagliflozin in the long term with tenofovir-DF due to potential additive bone toxicities.