Acid Reducing Agent Treatment Selector

Charts updated July 2022. *Full information available at www.hep-druginteractions.org*

		DCV	EBR/GZR	GLP/PIB	LED/SOF	OBV/PTV/r	OBV/PTV/r +DSV	SMV	SOF	SOF/VEL	SOF/VEL/VOX
	Aluminium hydroxide	↔	↔	↔	⇓ [a]	↔	↔	↔	↔ [b]	⇓ [a]	⇓ [a]
	Antacids	↔	↔	↔	⇓ [a]	↔	↔	↔	↔ [b]	⇓ [a]	⇓ [a]
H2 RA	**Cimetidine**	⇓	↔	⇓	⇓ [d]	↔	↔	↔	↔	⇓ [d]	⇓ [d]
H2 RA	**Famotidine**	⇓ 18%	⇑ [c]	⇓	⇑⇓ [e]	↔	↔	↔	↔	⇓ [f]	↔ [g]
H2 RA	**Ranitidine**	↔	↔	⇓	⇓ [d]	↔	↔	↔	↔	⇓ [d]	⇓ [d]
PPI	**Esomeprazole**	↔	↔	⇓ [i]	⇓ [k]	↓	↓	↔	↔	⇓ [m]	⇓ [o]
PPI	**Lansoprazole**	↔	↔	⇓ [i]	⇓ [k]	↓	↓	↔	↔	⇓ [m]	⇓ [o]
PPI	**Omeprazole**	⇓ 16%	↔	⇓ [j]	⇓ [l]	↓ 54%	↓ 38%	↑ 21%	↔	⇓ [n]	⇓ [p]
PPI	**Pantoprazole**	↔	⇑ [h]	⇓ [i]	⇓ [k]	↓	↓	↔	↔	⇓ [m]	⇓ [o]
PPI	**Rabeprazole**	↔	↔	⇓ [i]	⇓ [k]	↓	↓	↔	↔	⇓ [m]	⇓ [p]

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.

Text Legend

↑ Potential increased exposure of the acid reducing agent
↓ Potential decreased exposure of the acid reducing agent
↔ No significant effect
⇑ Potential increased exposure of HCV DAA
⇓ Potential decreased exposure of HCV DAA

Numbers refer to increased or decreased AUC as observed in drug-drug interaction studies.

H2 RA H2 receptor antagonists
PPI Proton pump inhibitors

a It is recommended to separate administration of the acid reducing agent and the DAA by 4 hours.
b Consider separating administration of the acid reducing agent and sofosbuvir by 2 hours.
c Elbasvir AUC increased by 5%; grazoprevir AUC increased by 10%.
d H2 receptor antagonists at a dose that does not exceed doses comparable to famotidine 40 mg twice daily can be given simultaneously with or 12 hours apart from the DAA.
e Simultaneous administration increased ledipasvir and sofosbuvir AUCs both by 11%; administration 12 h apart decreased ledipasvir and sofosbuvir AUCs by 2% and 5%, respectively. Famotidine may be administered simultaneously with or 12 hours apart from ledipasvir/sofosbuvir at a dose that does not exceed 40 mg twice daily.
f Simultaneous administration decreased sofosbuvir and velpatasvir AUCs by 18% and 19%, respectively; administration 12 h apart decreased sofosbuvir and velpatasvir AUCs by 20% and 15%, respectively. Famotidine may be administered simultaneously with or 12 hours apart from sofosbuvir/velpatasvir at a dose that does not exceed 40 mg twice daily.
g Famotidine at a dose that does not exceed 40 mg twice daily can be given simultaneously with or 12 hours apart from sofosbuvir/velpatasvir/voxilaprevir.
h Elbasvir AUC increased by 5%; grazoprevir AUC increased by 12%.
i For omeprazole, the European SPC for glecaprevir/pibrentasvir indicates that no dose adjustment is required and the US Prescribing Information indicates no clinically significant interaction and no dose adjustment required. However, it is important to note that currently there are no data with doses of omeprazole greater than 40 mg once daily.
j Coadministration of omeprazole (20 mg) decreased glecaprevir AUC by 29%; coadministration of omeprazole (40 mg) decreased glecaprevir AUC by ~50% but had no effect on pibrentasvir AUC. The European SPC for glecaprevir/pibrentasvir indicates that no dose adjustment is required and the US Prescribing Information indicates no clinically significant interaction and no dose adjustment required. However, it is important to note that currently there are no data with doses of omeprazole greater than 40 mg once daily.
k Proton pump inhibitor doses comparable to omeprazole 20 mg can be administered simultaneously with ledipasvir/sofosbuvir. Proton pump inhibitors should not be taken before ledipasvir/sofosbuvir.
l Simultaneous administration decreased ledipasvir AUC by 4% and had no effect on sofosbuvir; administration 2 h prior to ledipasvir decreased ledipasvir AUC by 42%. Omeprazole 20 mg can be administered simultaneously with ledipasvir/sofosbuvir but should not be taken before ledipasvir/sofosbuvir.
m If use of a proton pump inhibitor is considered medically necessary, the European Summary of Product Characteristics states that sofosbuvir/velpatasvir could be administered with food and taken 4 hours before a proton pump inhibitor at a dose not to exceed that comparable to omeprazole 20 mg. However, the US Prescribing Information recommends sofosbuvir/velpatasvir to be administered with food and taken 4 hours before omeprazole 20 mg but does not recommend the use of other proton pump inhibitors.
n Simultaneous administration decreased sofosbuvir and velpatasvir AUC by 29% and 26%; administration 4 h after sofosbuvir/velpatasvir increased sofosbuvir AUC by 5% but decreased velpatasvir AUC by 26%. Coadministration of omeprazole is not recommended. If it is considered medically necessary to coadminister, sofosbuvir/velpatasvir should be administered with food and taken 4 hours before omeprazole 20 mg.
o If use of a proton pump inhibitor is considered medically necessary, the European Summary of Product Characteristics states that sofosbuvir/velpatasvir/voxilaprevir could be administered with a proton pump inhibitor at a dose not to exceed that comparable to omeprazole 20 mg. However, the US Prescribing Information recommends sofosbuvir/velpatasvir/voxilaprevir to be administered with omeprazole 20 mg but does not recommend the use of other proton pump inhibitors.
p Administration 2 h prior to sofosbuvir/velpatasvir/voxilaprevir decreased sofosbuvir, velpatasvir and voxilaprevir AUC by 27%, 54% and 20%, respectively; administration 4 h after sofosbuvir/velpatasvir/voxilaprevir decreased sofosbuvir, velpatasvir and voxilaprevir AUC by 18%, 51% and 5%, respectively. If use of a proton pump inhibitor is considered medically necessary, the European Summary of Product Characteristics states that sofosbuvir/velpatasvir/voxilaprevir could be administered with omeprazole at a dose not to exceed 20 mg. The US Prescribing Information recommends sofosbuvir/velpatasvir/voxilaprevir to be administered with omeprazole 20 mg but does not recommend the use of other proton pump inhibitors.

Abbreviations: DCV Daclatasvir; EBR/GZR Elbasvir/Grazoprevir; GLP/PIB Glecaprevir/Pibrentasvir; LED Ledipasvir; OBV/PTV/r +DSV Ombitasvir/Paritaprevir/Ritonavir +Dasabuvir; SMV Simeprevir; SOF Sofosbuvir; VEL Velpatasvir; VOX Voxilaprevir