



## ART Drug-Drug Interactions

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<b>Table 13: Tenofovir Disoproxil Fumarate (TDF) and Tenofovir Alafenamide (TAF) Interactions</b> (also see drug package inserts)		
<b>Class or Drug</b>	<b>Mechanism of Action</b>	<b>Clinical Comments</b>
Adefovir [Jafari, et al. 2014]	<ul style="list-style-type: none"> <li>• Similar mechanisms of action and elimination, and thus, similar adverse event profiles.</li> <li>• Competitive inhibition of elimination results in additive adverse events.</li> </ul>	Avoid concomitant use to avoid increased risk of hepatic steatosis and lactic acidosis.
Other nephrotoxic agents [Jafari, et al. 2014]	Competitive inhibition of elimination results in additive adverse events.	<ul style="list-style-type: none"> <li>• Avoid concomitant use or use the lowest effective dose of other drug to avoid renal impairment and kidney dysfunction.</li> <li>• May be preferable to use TAF in these instances because TAF is less nephrotoxic.</li> </ul>
Sofosbuvir/velpatasvir/voxiclaprevir [brand name Vosevi] [Garrison, et al. 2017]	<ul style="list-style-type: none"> <li>• TDF and TAF are substrates for BCRP and P-gP.</li> <li>• Voxilaprevir is a BCRP inhibitor.</li> <li>• Velpatasvir inhibits BCRP and P-gP.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid concomitant use if possible to avoid TDF-associated adverse events.</li> <li>• May be preferable to use TAF in these instances.</li> </ul>
Potent CYP3A4 or P-gP inducers (phenytoin, rifampin, carbamazepine, St. John’s wort, etc.) [Gibson, et al. 2016]	<ul style="list-style-type: none"> <li>• CYP3A4 is a minor metabolic pathway for TAF, and as such, potent inducers of this enzyme may modestly reduce concentrations.</li> <li>• TAF is also a substrate of P-gP, and inducers may decrease TAF concentrations.</li> </ul>	Avoid coadministration of TAF with potent inducers of CYP3A4 or P-gP
Zonisamide	TDF may increase concentration of zonisamide.	Monitor for adverse events of zonisamide with TDF.
Topiramate	No significant interactions noted.	Monitor renal function when coadministered (topiramate may cause kidney stones; TDF is associated with renal toxicity).

**Abbreviations:** BCRP, breast cancer resistance protein; CYP, cytochrome P450; P-gP, P-glycoprotein.  
**No significant interactions/no dose adjustments necessary:** Common oral antibiotics (Table 15); drugs used as antihypertensive medicines (Table 16); anticoagulants (Table 17); antiplatelet drugs (Table 18); statins (Table 19); antidiabetic drugs (Table 20); acid-reducing agents (Table 21); polyvalent cations (Table 22); asthma and allergy medications (Table 23); long-acting beta agonists (Table 24); inhaled and injected corticosteroids (Table 25); antidepressants (Table 26); benzodiazepines (Table 27); sleep medications (Table 28); antipsychotics (Table 29); non-opioid pain medications (Table 31); opioid analgesics and tramadol (Table 32); hormonal contraceptives (Table 33); erectile and sexual dysfunction drugs (Table 34); tobacco and smoking cessation products (Table 35); alcohol, disulfiram, and acamprosate (Table 36); methadone, buprenorphine, naloxone, and naltrexone (Table 37); immunosuppressants (Table 38); gender-affirming hormones (Table 40).