

Dolutegravir (DTG) Interactions (also see drug package inserts)		NYSDOH AI Clinical Guidelines Program www.hivguidelines.org
Class or Drug	Mechanism of Action	Clinical Comments
Dofetilide [Max and Vibhakar 2014; Feng and Varma 2016]	DTG inhibits renal OCT2 and MATE1, and these transporters eliminate dofetilide.	Avoid concomitant use (may cause QT prolongation or torsade de pointes).
Metformin [Song, et al. 2016; Gervasoni, et al. 2017]	DTG inhibits renal OCT2, MATE1, and MATE2, which are involved in elimination of metformin.	<ul style="list-style-type: none"> Administer at lowest dose possible to achieve glycemic control; monitor for adverse effects. Titrate metformin and do not exceed 1,000 mg when coadministered with DTG; monitor for adverse effects, including lactic acidosis.
Pioglitazone [Fantauzzi, et al. 2013]	Pioglitazone is a weak inducer of CYP3A, and DTG is partially metabolized by this enzyme.	Avoid concomitant use because this may decrease DTG concentrations.
Divalent and trivalent cations (aluminum, magnesium, calcium, zinc, etc.) [Cottrell, et al. 2013; Song, et al. 2015]	DTG chelates with cations forming insoluble compounds that inactivate both drugs.	<ul style="list-style-type: none"> Administer DTG 2 hours before or 6 hours after taking cations. Calcium-containing supplements may be used concomitantly if taken with food.
Iron salts [Song, et al. 2015]	DTG chelates with cations, forming insoluble compounds that inactivate both drugs.	<ul style="list-style-type: none"> Administer DTG 2 hours before or 6 hours after taking iron salts. These drugs may be used concomitantly if taken with food.
Atenolol	<ul style="list-style-type: none"> Atenolol is eliminated via OCT2 and MATE1, which are inhibited by DTG. Coadministration may increase levels of atenolol. 	<ul style="list-style-type: none"> Start at a lower dose of atenolol and adjust slowly until desired clinical effect is achieved. If patient is already on atenolol but starting DTG, monitor for atenolol-related adverse events. Reduce dose of atenolol if necessary or switch to another ARV agent.
Valproic Acid	<ul style="list-style-type: none"> Coadministration may significantly decrease DTG concentrations. Coadministration with strong inducers of CYP3A (phenytoin, phenobarbital, etc.) may decrease DTG concentrations. 	<ul style="list-style-type: none"> Coadministration is not recommended. If an alternative anticonvulsant cannot be used, monitor for safety and efficacy, including therapeutic drug monitoring. Coadministration with strong inducers of CYP3A are not recommended because they may reduce concentrations of INSTIs.
<p>Abbreviations: ARV, antiretroviral; CYP, cytochrome P450; INSTI, integrase strand transfer inhibitor; MATE, multidrug and toxin extrusion; OCT, organic cation transporter.</p> <p>No significant interactions/no dose adjustments necessary: Common oral antibiotics; anticoagulants; antiplatelet drugs; statins; acid-reducing agents; asthma and allergy medications; long-acting beta agonists; inhaled and injected corticosteroids; antidepressants; benzodiazepines; sleep medications; antipsychotics; non-opioid pain medications; opioid analgesics and tramadol; hormonal contraceptives; erectile and sexual dysfunction agents; tobacco and smoking cessation products; alcohol, disulfiram, and acamprosate; methadone, buprenorphine, naloxone, and naltrexone; immunosuppressants.</p>		

References

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