**All Interactions with Dolutegravir (Tivicay)**

| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Antacids[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Maalox, Mylanta, Riopan, Milk of Magnesia, others) | Maalox given 2 hours after dolutegravir | 50 mg x 1 | - | Dolutegravir AUC: decreased 26%; Cmin: decreased 30% | Potentially decreased dolutegravir effectiveness | - | Administer dolutegravir 2 hours before or 6 hours after antacids. |
| Antacids[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Maalox, Mylanta, Riopan, Milk of Magnesia, others) | Maalox given simultaneously as dolutegravir | 50 mg x 1 | - | Dolutegravir AUC: decreased 74%; Cmin: decreased 74% | - | - | Do not coadminister simultaneously. Administer dolutegravir 2 hours before or 6 hours after antacids. |
| Atazanavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (ATV)(Reyataz) | 300 mg QD with ritonavir 100 mg QD | 30 mg QD | - | Dolutegravir AUC increased 62%; Cmin: increased 121% | - | - | No dose adjustment necessary |
| Atazanavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (ATV)(Reyataz) | 400 mg QD | 30 mg QD | - | Dolutegravir AUC: increased 91%; Cmin: increased 180% | - | - | No dose adjustment necessary |
| Boceprevir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Victrelis) | 800 mg Q8H | 50 mg QD | - | No significant change | - | - | No dose adjustment necessary |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Calcium carbonate[685](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#685),[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641) | 1200 mg | 50 mg | - | Dolutegravir AUC decreased ~39% if taken together, fasting conditions. | Potential decreased dolutegravir effectiveness | - | Administer dolutegravir 2 hours before or 6 hours after calcium-containing supplements. Alternatively, administer dolutegravir simulatenously with calcium supplements and with food. |
| Carbamazepine[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (others)(Tegretol) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | - | Contraindicated; consider alternative anticonvulsants  *Alternative Agents*:  **Gabapentin, Lamotrigine, Levitiracetam, Tiagabine Topiramate** |
| Daclatasvir[747](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#747)  (Daklinza) | 60 mg daily | 50 mg daily | No significant change | Dolutegravir Cmax increased 29%; AUC increased 33%; Cmin increased 45% | - | - | No dose adjustment necessary |
| Darunavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (DRV)(Prezista) | 600 mg BID with ritonavir 100 mg BID | 30 mg QD | - | Dolutegravir AUC: decreased 22%; Cmin: decreased 38% | - | - | No dose adjustment necessary |
| Dofetilide[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (Tikosyn) | - | - | Not studied; may increase dofetilide levels | - | Potential increased dofetilide toxicity | DTG may increase plasma concentrations of drugs eliminated by OCT2 or MATE1 | Contraindicated - do not coadminister |
| Efavirenz[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (EFV)(Sustiva) | 600 mg QD | 50 mg QD | - | Dolutegravir AUC: decreased 57%; Cmin: decreased 75% | Potentially reduced dolutegravir effectiveness | - | If no INSTI resistance, increase dolutegravir dosage to 50 mg BID. If known or clinically suspected INSTI resistance, use alternative combination |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Ethinyl estradiol/norgestimate[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (others)(Ortho Tri-Cyclen, Ortho Tri-Cyclen) | 0.035 mg ethinyl estradiol | 50 mg BID | No significant change | - | - | - | No dose adjustment necessary |
| Etravirine[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (ETR)(Intelence) | 200 mg BID | 50 mg QD | - | Dolutegravir AUC: decreased 71%; Cmin: decreased 88% | Potentially reduced dolutegravir effectiveness | - | Do not coadminister etravirine with dolutegravir unless boosted atazanavir, darunavir or lopinavir are also being used concomitantly. |
| Etravirine[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (ETR)(Intelence) | 200 mg BID with darunavir/ritonavir 600/100 mg BID | 50 mg QD | - | Dolutegravir AUC: decreased 25%; Cmin: decreased 37% | Potentially reduced dolutegravir effectiveness | - | If no INSTI resistance, no dose adjustment necessary. If known or clinically suspected INSTI resistance, increase dolutegravir dosage to 50 mg BID |
| Etravirine[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (ETR)(Intelence) | 200 mg BID with lopinavir/ritonavir 400/100 mg BID | 50 mg QD | - | Dolutegravir AUC increased 11%; Cmin: increased 28% | Potentially reduced dolutegravir effectiveness | - | If no INSTI resistance, no dose adjustment necessary. If known or clinically suspected INSTI resistance, increase dolutegravir dosage to 50 mg BID |
| Ferrous fumarate[687](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#687)  (Iron) | 324 mg | 50 mg | - | Dolutegravir AUC decreased 54% when administered simultaneously with ferrous fumarate, fasting conditions. No significant change in dolutegravir AUC if given simultaneously with ferrous fumarate, with food. | Potentially decreased dolutegravir effectiveness if given with iron. | Chelation of dolutegravir by divalent cations | Administer dolutegravir 2 hours before or 6 hours after medicines with divalent cations (Ca++, Fe++). Alternatively, dolutegravir can be taken simultaneously with iron supplements, with food. |
| Fosamprenavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (FPV)(Lexiva) | 700 mg BID with ritonavir 100 mg BID | 50 mg QD | - | Dolutegravir AUC: decreased 35%; Cmin: decreased 49% | Potentially reduced dolutegravir effectiveness | - | If no INSTI resistance, increase dolutegravir dosage to 50 mg BID. If known or clinically suspected INSTI resistance, use alternative combination |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Lopinavir/ritonavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (LPV/r)(Kaletra) | 400/100 mg BID | 30 mg QD | - | No significant change | - | - | No dose adjustment necessary |
| Metformin  (Glucophage) | 500 mg BID | 50 mg | Metformin AUC increased 79%; Cmax increase 66%, Cmin increase 9% when given with dolutegravir once daily. If given with dolutegravir 50 mg BID, then metformin AUC increase 2.4 fold; Cmax increase 2 fold and Cmin increase 14%. | - | Potential increased adverse effects from metformin (e.g. GI side effects). | - | In patients taking dolutegravir who are starting metformin, begin with low metformin dose and titrate up carefully. Recommended dose limit of metformin 1000 mg daily. If patient is already on metformin and initiating dolutegravir, monitor glucose, hemoglobin a1c, and metformin adverse effects and adjust dose as necessary. |
| Methadone[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Dolophine)(Dolophine) | 16-150 mg | 50 mg BID | No significant change | - | - | - | No dose adjustment necessary |
| Midazolam[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Versed)(Versed) | 3 mg | 25 mg QD | No significant change | - | - | - | No dose adjustment necessary |
| Multiple vitamin[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641) | One-A-Day given simultaneously with dolutegravir | 50 mg x 1 | - | Dolutegravir AUC: decreased 33%; Cmin: decreased 32% | Potentially decreased dolutegravir effectiveness | - | Administer dolutegravir 2 hours before or 6 hours after multiple vitamins. |
| Nevirapine[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (NVP)(Viramune) | 200 mg QD; 200 mg BID; 400 mg QD (XR formulation) | 50 mg QD | - | Dolutegravir AUC: decreased 19%; Cmin: decreased 34% | - | - | No dose adjustment necessary |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Norgestromin[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641) | 0.25 mg | 50 mg BID | No significant change | - | - | - | No dose adjustment necessary |
| Omeprazole[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Prilosec)(Prilosec) | 40 mg QD | 50 mg x 1 | - | No significant change | - | - | No dose adjustment necessary |
| Oxcarbazepine[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (Oxtellar, Trileptal) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | - | Contraindicated - consider alternative anticonvulsants  *Alternative Agents*:  **Gabapentin, Lamotrigine, Levitiracetam, Tiagabine Topiramate** |
| Phenobarbital  (Luminal, others)(Luminal) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | - | Contraindicated - consider alternative anticonvulsants  *Alternative Agents*:  **Gabapentin, Lamotrigine, Levitiracetam, Tiagabine Topiramate** |
| Phenytoin[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (Dilantin)(Dilantin) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | - | Contraindicated; consider alternative anticonvulsants  *Alternative Agents*:  **Gabapentin, Lamotrigine, Levitiracetam, Tiagabine Topiramate** |
| Prednisolone[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (others) | 60 mg QD with taper | 50 mg QD | - | Dolutegravir Cmin: increased 17% | - | - | No dose adjustment necessary |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Rifabutin[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Mycobutin)(Mycobutin) | 300 mg QD | 50 mg QD | - | Dolutegravir Cmin: decreased 30% | - | - | No dose adjustment necessary |
| Rifampin[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Rifampicin)(Rifadin) | 600 mg QD | 50 mg BID | - | Dolutegravir AUC: decreased 54%; Cmin: decreased 72% (when compared to dolutegravir 50 mg BID without rifampin) | Decreased dolutegravir effectiveness | - | Increase dolutegravir to 50 mg BID when used with rifampin |
| Rifampin[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Rifampicin)(Rifadin) | 600 mg QD | 50 mg BID | - | Dolutegravir AUC: increased 33%; Cmin: increased 22% (when compared to dolutegravir 50 mg QD) | - | - | No dose adjustment necessary when rifampin is used with dolutegravir 50 mg BID |
| Rifapentine[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (Priftin)(Priftin) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | - | Contraindicated - do not coadminister |
| Rilpivirine[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (RPV)(Edurant) | 25 mg QD | 50 mg QD | Rilpivirine Cmin increased 21% | Dolutegravir Cmin: increased 22% | - | - | No dose adjustment necessary |
| St. John's Wort[691](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#691)  (Hypericum perforatum) | - | - | - | Not studied; may decrease dolutegravir levels | Potentially decreased dolutegravir effectiveness | Induction of CYP450 3A4 by St. John's Wort | Contraindicated - do not coadminister |
| **Coadministered Drug** | **Dose of Drug** | **Dose of Dolutegravir** | **Effect on Drug Levels** | **Effect on Dolutegravir Levels** | **Potential Clinical Effects** | **Mechanism of Interaction** | **Management** |
| Sucralfate[689](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#689)  (Carafate) | - | - | - | Not studied - may result in decreased dolutegravir concentrations | Potentially decreased dolutegravir effectiveness | - | Administer dolutegravir 2 hours before or 6 hours after sucralfate. |
| Telaprevir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (Incivek) | 750 mg Q8H | 50 mg QD | - | Dolutegravir AUC: increased 25%; Cmin: increased 40% | - | - | No dose adjustment necessary |
| Tenofovir alafenamide | 10 mg QD | 50 mg QD | No significant change | No significant change | - | - | No dose adjustment necessary |
| Tenofovir disoproxil fumarate[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (TDF)(Viread) | 300 mg QD | 50 mg QD | TDF AUC: increased 12%; Cmin: increased 19% | No significant change | - | - | No dose adjustment necessary |
| Tipranavir[641](http://arv.ucsf.edu/insite?page=ar-00-02&param=235&post=4#641)  (TPV)(Aptivus) | 500 mg BID with ritonavir 200 mg BID | 50 mg QD | - | Dolutegravir AUC: decreased 59%; Cmin: decreased 76% | Potentially reduced dolutegravir effectiveness | - | If no INSTI resistance, increase dolutegravir dosage to 50 mg BID. If known or clinically suspected INSTI resistance, use alternative combination |
| "-" indicates that there are no data available | | | | | | | |

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| 641: | Tivicay [package insert]. Research Triangle Park, NC: Viiv Healthcare; Sept 2013. |
| 685: | Song I, Borland J, Arya N, Wynne B, Piscitelli S. The effect of calcium and iron supplements on the pharmacokinetics of Dolutegravir in healthy subjects. 15th International Workshop on Clinical Pharmacology of HIV and Hepatitis Therapy. May 19-21, 2014. Washington, DC. Abstract P\_13. |
| 687: | Song, I., Borland, J., Arya, N., Wynne, B. and Piscitelli, S. (2015), Pharmacokinetics of dolutegravir when administered with mineral supplements in healthy adult subjects. Journal of Clinical Pharma, 55: 490–496 |
| 689: | Tivicay [package insert]. Research Triangle Park, NC: Viiv Healthcare; August 2015 |
| 691: | Tivicay [package insert]. Research Triangle Park, NC: Viiv Healthcare; August 2015 |
| 747: | Daklinza [package insert]. Princeton, NJ: Bristol-Myers Squibb Company, 2016 |