### RECREATIONAL DRUGS:
**AMYL NITRATE, AMPHETAMINES, CANNABIS, COCAINE/CRACK, GHB, HALLUCINOGENS, KETAMINE, HEROIN, NALOXONE**

<table>
<thead>
<tr>
<th>INSTIs</th>
<th>NNRTIs</th>
<th>PIs</th>
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</table>
| • BICTEGRAVIR *(Biktarvy)*  
• DOLUTEGRAVIR *(Tivicay, Triumeq, Juluca)*  
• RALTEGRAVIR *(Isentress)*  
• ELVITEGRAVIR/COBICISTAT *(Stribild, Genvoya)*  
• DORAVIRINE *(Pifeltro, Delstrigo)*  
• RILPIVIRINE *(Edurant, Complera, Odefsey, Juluca)*  
• EFAVIRENZ *(Sustiva, Atripla)*  
• ETRAVIRINE *(Intelence)*  
• NEVIRAPINE *(Viramune)* | | Boosted with ritonavir *(Norvir)* or cobicistat  
• ATAZANAVIR *(Reyataz, Evotaz)*  
• DARUNAVIR *(Prezista, Prezobix, Syntuza)*  
• LOPINAVIR *(Kaletra)* |

### AMYL NITRATE
- • Poppers, ames |

### AMPHETAMINES
- • MDMA/ecstasy, crystal, molly  
  Potential for ↑ recreational drug |

### CANNABIS (THC), CANNABIDIOL (CBD) *Note that oral cannabis oils or dried cannabis may include THC/CBD in various ratios*
- • Marijuana, weed  
  Potential for ↑ THC & CBD  
  Potential for ↑ THC and ↓ CBD  
  Potential for ↑ THC  
  Potential for ↑THC/↓ CBD |

### COCAINE
- • crack, base  
  Potential for ↑ recreational drug  
  Potential QT prolongation *(rilpivirine)*  
  Potential for ↑ levels of hepatotoxic metabolite  
  Potential for ↑ recreational drug |

### GAMMA-HYDROXYBUTYRATE
- • GHB, date rape drug, Geeb, liquid X  
  Potential for ↑ recreational drug  
  Potential for ↑ recreational drug |
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| • BICTEGRAVIR (Biktarvy)  
• Dolutegravir (Tivicay, Triumeq, Juluca)  
• Raltegravir (Isentress)  
• Elvitegravir/Cobicistat (Stribild, Genvoya) | • Doravirine (Pifeltro, Delstrigo)  
• Rilpivirine (Edurant, Complera, Odefsey, Juluca) | • Efavirenz (Sustiva, Atripla)  
• Etravirine (Intelence)  
• Nevirapine (Viramune) | Boosted with ritonavir (Norvir) or cobicistat  
• Atazanavir (Reyataz, Evotaz)  
• Darunavir (Prezista, Prezobix, Symtuza)  
• Lopinavir (Kaletra) |

### HALLUCINOGENS

- LSD, acid  
- PCP, angel dust  

Potential for ↑ recreational drug  
Potential for ↓ recreational drug  
Potential for ↑ recreational drug

### KETAMINE

- Special K, vitamin K, KitKat  

Potential for ↑ recreational drug  
Potential for ↓ recreational drug  
Potential for ↑ recreational drug

### HEROIN

- Smack, H, tar, junk  

Potential for ↑ recreational drug  
Potential for ↓ morphine (converted from heroin) with efavirenz  
Potential for ↑ recreational drug

### NALOXONE

- Narcan  

Ritonavir-boosted PIs: potential for ↓ naloxone  
Cobicistat-boosted PIs

**Legend:**

- **Green:** No dose adjustment required.
- **Yellow:** Use combination with caution. Adjustment in drug dose or frequency or additional/more frequent monitoring may be required. May wish to consult with a pharmacist knowledgeable in HIV drug interactions.
- **Red:** Contraindicated/avoid combination.
## Mechanism of Drug Interactions, Management and Monitoring

<table>
<thead>
<tr>
<th>Class</th>
<th>Mechanism of Interaction</th>
<th>Main Interacting ARVs</th>
<th>Management</th>
<th>Monitoring</th>
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<tbody>
<tr>
<td>Cannabidiol (CBD)</td>
<td>Substrate of CYP3A4, 2C19; inhibits CYP2C19</td>
<td>Cobicistat-boosted elvitegravir and PIs may increase CBD. Ritonavir-boosted PIs may increase or decrease CBD. Enzyme inducing NNRTIs (efavirenz, etravirine, nevirapine) may decrease CBD levels. Protease Inhibitors (PI) (with ritonavir or cobicistat), elvitegravir/cobicistat, etravirine and efavirenz may increase THC levels.</td>
<td>Warn patient of potential for increased or decreased CBD levels; CBD dose may need to be titrated.</td>
<td>Toxicity: CNS effects (sedation, confusion, impairment), heart rate, blood pressure.</td>
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<tr>
<td>Cannabis (THC)</td>
<td>Substrate of CYP2C9&gt;3A4</td>
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<td>Stimulants:</td>
<td>Inhibition of CYP3A4 (cocaine) and CYP 2D6 (amphetamines, GHB?) leading to increased levels of stimulant</td>
<td>Protease Inhibitors (PI) (with ritonavir or cobicistat) &amp; Elvitegravir/cobicistat</td>
<td>Warn patient of potential for unpredictable increased levels of the recreational substance and provide harm reduction advice</td>
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<td>Cocaine, amphetamines</td>
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<tr>
<td>GHB</td>
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<tr>
<td>Hallucinogens:</td>
<td>Mechanism unclear but potential for inhibition or induction of drug metabolism</td>
<td>PIs &amp; elvitegravir/cobicistat may increase hallucinogen concentrations Enzyme inducing NNRTIs (efavirenz, etravirine, nevirapine) may decrease levels</td>
<td>Warn patient of unpredictable increased levels of hallucinogen and provide harm reduction advice</td>
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<td>LSD, PCP (angel dust)</td>
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<td>Ketamine</td>
<td>Mechanism unclear but potential for inhibition or induction of drug metabolism</td>
<td>PIs &amp; elvitegravir/cobicistat may increase ketamine Enzyme inducing NNRTIs (efavirenz, etravirine, nevirapine) may decrease levels</td>
<td>Warn patient of unpredictable increased levels and provide harm reduction advice</td>
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<td>Heroin</td>
<td>Converted to morphine, which is glucuronidated (UGT2B7&gt;UGT1A1) and a substrate of Pgp</td>
<td>PIs &amp; elvitegravir/cobicistat may increase morphine Efavirenz may induce UGT and decrease morphine</td>
<td>Warn patient of unpredictable increased levels and provide harm reduction advice</td>
<td>Toxicity: decreased level of consciousness, miosis, respiratory depression. Acute symptoms may be reversed with naloxone.</td>
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<tr>
<td>Naloxone</td>
<td>Substrate of UGT2B7</td>
<td>Ritonavir-boosted PIs may induce UGT and decrease naloxone</td>
<td>Potential for decreased duration of naloxone efficacy</td>
<td>Monitor for duration of naloxone efficacy.</td>
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