Recreational Drugs and HIV Antiretrovirals
A Guide to Interactions for Clinicians
2014
Recreational Drugs and HIV Antiretrovirals — A Guide to Interactions for Clinicians

Prepared by: Antonio Urbina, MD, John Faragon, PharmD, BCPS, AAHIVP

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Disclaimer: Neither the AIDS Education and Training Centers nor HRSA condone or recommend the use of illicit drugs in any context. The data in this guide are intended for use by clinicians and other health care providers to provide advice that may reduce harm to patients who use these substances in conjunction with antiretroviral agents.

The data in this guide are a compilation of information obtained from published and anecdotal studies through January 2014.

* PLEASE REFER TO PAGE 14 OF THIS GUIDE FOR IMPORTANT HARM REDUCTION THAT SHOULD BE SHARED WITH PATIENTS.
### ALCOHOL
Confusion, disorientation, incoordination, loss of balance and judgement, respiratory depression, stupor, coma

### AMPHETAMINES (Crystal)
Paranoia, anxiety, depression, hallucinations, tachycardia, hypertension stroke, myocardial infarction, hyperthermia, rhabdomyolysis, diarrhea, erectile dysfunction, teeth grinding

### GENERAL
Metabolized by alcohol dehydrogenase and aldehyde dehydrogenase; alcohol may induce CYP2E1 and CYP3A

### PHARMACOKINETICS
Metabolized by hydroxylation and deamination via CYP2D6 pathway; CYP2D6 inhibitors may increase amphetamine levels (try to avoid)

### KNOWN DRUG INTERACTIONS

#### NNRTI's
- delavirdine (Rescriptor)
- efavirenz (Sustiva)
- nevirapine (Viramune)
- etravirine (Intelence)
- rilpivirine (Edurant)

#### NRTI's
- abacavir (ABC, Ziagen)
  - *Atripla (EFV/TDF/FTC)
  - *Combivir (AZT/3TC)
  - *Complera (RPV/TDF/FTC)
  - didanosine (ddl, Videx)
  - emtricitabine (FTC, Emtriva)
  - *Epzicom (3TC/ABC)
  - lamivudine (3TC, Epivir)
  - stavudine (d4T, Zerit)
  - tenofovir (TDF, Viread)
  - *Trizivir (AZT/3TC/ABC)
  - *Truvada (FTC/TDF)
  - zidovudine (AZT, ZDV, Retrovir)

#### Protease Inhibitors
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

#### Known Drug Interactions
- **NNRTI's**
  - delavirdine (Rescriptor)
  - efavirenz (Sustiva)
  - nevirapine (Viramune)
  - etravirine (Intelence)
  - rilpivirine (Edurant)

- **NRTI's**
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    - *Atripla (EFV/TDF/FTC)
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    - *Truvada (FTC/TDF)
    - zidovudine (AZT, ZDV, Retrovir)

- **Protease Inhibitors**
  - amprenavir (Agenerase)
  - fosamprenavir (Lexiva)
  - atazanavir (Reyataz)
  - darunavir (Prezista)
  - indinavir (Crixivan)
  - lopinavir/ritonavir (Kaletra)
  - nelfinavir (Viracept)
  - ritonavir (Norvir)
  - saquinavir (Fortovase, Invirase)
  - tipranavir (Aptivus)

- **Use of full dose ritonavir or low dose ritonavir for boosting other protease inhibitors has the potential to increase amphetamine levels in the blood.**

- **No known interactions specific to this combination.**

- **Increases amphetamine blood levels 2-3 times**

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Continued next page
Confusion, disorientation, incoordination, loss of balance and judgement, respiratory depression, stupor, coma

Metabolized by alcohol dehydrogenase and aldehyde dehydrogenase; alcohol may induce CYP2E1 and CYP3A

Metabolized by hydroxylation and deamination via CYP2D6 pathway; CYP2D6 inhibitors may increase amphetamine levels (try to avoid)

No known interactions specific to this combination

Potential to increase amphetamine levels in the blood

No known interactions specific to this combination

No known interactions specific to this combination

Likely inhibits benzodiazepine metabolism through CYP3A4 inhibition and increases risk of adverse effects; concomitant use should be avoided

Diazepam drug levels may be increased by etravirine; a decrease in diazepam dosage may be needed

Continued next page
AMYL NITRITE (amyl nitrate, poppers) (Cont’d)
Reduces glutathione levels; inhaling the fumes acts as a vasodilator (hypotension, tachycardia, headaches), skin flushing

BENZODIAZEPINES (Cont’d)
CNS depression, drowsiness, memory loss, impaired coordination

Most agents extensively metabolized in the liver by the CYP3A4 system; lorazepam, oxazepam, and temazepam metabolized by conjugation via glucuronidation.

**GENERAL**

**PHARMACOKINETICS**

**KNOWN DRUG INTERACTIONS**

**NRTI’s**
- abacavir (ABC, Ziagen)
- Atripla (EFV/TDF/FTC)
- Combivir (AZT/3TC)
- Complera (RPV/TDF/FTC)
- didanosine (ddl, Videx)
- emtricitabine (FTC, Emtriva)
- Epzicom (3TC/ABC)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)
- Trizivir (AZT/3TC/ABC)
- Truvada (FTC/TDF)
- zidovudine (AZT, ZDV, Retrovir)

**Protease Inhibitors**
- amiprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

**CCR5 Inhibitor**
- Maraviroc (Selzentry)

**Integrase Inhibitor**
- Elvitegravir/cobicistat/TDF/FTC (Stribild)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

**Protease Inhibitors**
- amiprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
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- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

**KNOWN DRUG INTERACTIONS**

**NRTI’s**
- abacavir (ABC, Ziagen)
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**CCR5 Inhibitor**
- Maraviroc (Selzentry)

**Integrase Inhibitor**
- Elvitegravir/cobicistat/TDF/FTC (Stribild)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

No known interactions specific to this combination.

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No known interactions specific to this combination.
**COCAIN**E (coke, blow)  
Increases rate of HIV viral replication in vitro, hypertension, cardiac dysrhythmias, myocardial infarction, seizures, depression, anxiety

**ECSTASY (X, MDMA)**  
Tachycardia, hypertension, hyperthermia, dehydration, dry mouth, tense jaw, teeth grinding, depression

### GENERAL

**PHARMACOKINETICS**  
Mainly metabolized by nonspecific tissue and plasma esterases; some cocaine metabolism (-10%) via CYP3A4

### NNRTI’s
- delavirdine (Rescriptor)
- efavirenz (Sustiva)
- nevirapine (Viramune)
- etravirine (Intelex)
- rilpivirine (Edurant)

### NRTI’s
- abacavir (ABC, Ziagen)
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- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

### KNOWN DRUG INTERACTIONS

#### NNRTI’s
- delavirdine (Rescriptor)
  - *Atripla (EFV/TDF/FTC)
  - *Combivir (AZT/3TC)
  - *Complera (RPV/TDF/FTC)
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  - emtricitabine (FTC, Emtriva)
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- fosamprenavir (Lexiva)
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- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

- No known interactions specific to this combination

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Continued next page
COCAINE (coke, blow)  (Cont’d)
Increases rate of HIV viral replication in vitro, hypertension, cardiac dysrhythmias, myocardial infarction, seizures, depression, anxiety

ECSTASY (X, MDMA)  (Cont’d)
Tachycardia, hypertension, hyperthermia, dehydration, dry mouth, tense jaw, teeth grinding, depression

GENERAL

PHARMACOKINETICS
Mainly metabolized by nonspecific tissue and plasma esterases; some cocaine metabolism (-10%) via CYP3A4

KNOWN DRUG INTERACTIONS

CCR5 Inhibitor
Maraviroc (Selzentry)

Integrase Inhibitor
Elvitegravir/cobicistat/TDF/FTC (Stribild)
Dolutegravir (Tivicay)
Raltegravir (Isentress)

No known interactions specific to this combination

KNOWN DRUG INTERACTIONS

CCR5 Inhibitor
Maraviroc (Selzentry)

Integrase Inhibitor
Elvitegravir/cobicistat/TDF/FTC (Stribild)
Dolutegravir (Tivicay)
Raltegravir (Isentress)

No known interactions specific to this combination

KNOWN DRUG INTERACTIONS

Erectile Dysfunction Agents
(avanafil (Stendra), sildenafil (Viagra), tadalaft (Cialis), vardenafil (Levitra))
Hypotension, tachycardia, arrhythmias (cardiac arrest and death), headache, flushing, rhinitis, dyspepsia, nausea, and visual effects (e.g. light sensitivity, changes in color vision), priapism

GENERAL

PHARMACOKINETICS
Metabolized in the liver via CYP3A4

KNOWN DRUG INTERACTIONS

NNRTI’s
delavirdine (Rescriptor)
efavirenz (Sustiva)
nevirapine (Viramune)
etravirine (Intecence)
ralpivirine (Edurant)

Potential to significantly increase avanafil, sildenafil, tadalaft, vardenafil concentrations. Use sildenafil at reduced doses of 25 mg every 48 hours, tadalaft at reduced doses of 10 mg every 72 hours, vardenafil at reduced doses of no more than 2.5 mg every 72 hours and monitor closely for adverse effects. Do not use with avanafil.

No known interactions specific to this combination.

Etravirine has been shown to decrease sildenafil concentrations, though may be used together without sildenafil dosage adjustment. Sildenafil dosage may need to be adjusted based upon clinical effect. Similar interactions are also predicted with tadalaft and vardenafil.

Continued next page
Erectile Dysfunction Agents (Cont’d)
(avanafil (Stendra), sildenafil (Viagra), tadalafil (Cialis), vardenafil (Levitra))

Hypotension, tachycardia, arrhythmias (cardiac arrest and death), headache, flushing, rhinitis, dyspepsia, nausea, and visual effects (e.g. light sensitivity, changes in color vision), priapism

GENERAL

PHARMACOKINETICS
Metabolized in the liver via CYP3A4

KNOWN DRUG INTERACTIONS

NRTI’s
- abacavir (ABC, Ziagen)
- *Atripla (EFV/TDF/FTC)
- *Combivir (AZT/3TC)
- *Complera (RPV/TDF/FTC)
- didanosine (ddI, Videx)
- emtricitabine (FTC, Emtriva)
- *Epzicom (3TC/ABC)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)
- *Trizivir (AZT/3TC/ABC)
- *Truvada (FTC/TDF)
- zidovudine (AZT, ZDV, Retrovir)

- No known interactions specific to this combination
- *SEE INDIVIDUAL COMPONENTS

Protease Inhibitors
- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaltra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aplitus)

- No known interactions specific to this combination

CCR5 Inhibitor
- Maraviroc (Selzentry)

- No known interactions specific to this combination

Integrase Inhibitor
- Elvitegravir/cobicistat/TDF/FTC (Strivid)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

- Potential to significantly increase avanafil, sildenafil, tadalafil, vardenafil concentrations. Use sildenafil at reduced doses of 25 mg every 48 hours, tadalafil at reduced doses of 10 mg every 72 hours, vardenafil at reduced doses of no more than 2.5 mg every 72 hours and monitor closely for adverse effects. Do not use with avanafil.

- No known interactions specific to this combination

- Potential to significantly increase avanafil, sildenafil, tadalafil, vardenafil concentrations. Use sildenafil at reduced doses of 25 mg every 48 hours, tadalafil at reduced doses of 10 mg every 72 hours, vardenafil at reduced doses of no more than 2.5 mg every 72 hours and monitor closely for adverse effects. Do not use with avanafil.

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- No known interactions specific to this combination

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**GHB HEROIN**

(gamma-hydroxy-butyrate, grievous bodily harm, liquid X)

Seizures, bradycardia, severe respiratory depression, hypotension, vomiting coma, death

**GENERAL**

**PHARMACOKINETICS**

Utilizes CYP2D6 pathway for metabolism

**KNOWN DRUG INTERACTIONS**

**NNRTI’s**

- delavirdine (Rescriptor)
- efavirenz (Sustiva)
- nevirapine (Viramune)
- etravirine (Intelex)
- rilpivirine (Edurant)

**NRTI’s**

- abacavir (ABC, Ziagen)
- didanosine (ddl, Videx)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)

**Protease Inhibitors**

- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

**HEROIN (smack, brown junk, China White)**

Dreamlike state of warmth and well-being with small doses; CNS depression, drowsiness, respiratory depression, constricted pupils, nausea/vomiting with excessive doses

Utilizes CYP3A4 pathway for metabolism

**KNOWN DRUG INTERACTIONS**

**NNRTI’s**

- delavirdine (Rescriptor)
- efavirenz (Sustiva)
- nevirapine (Viramune)
- etravirine (Intelex)
- rilpivirine (Edurant)

**NRTI’s**

- abacavir (ABC, Ziagen)
- didanosine (ddl, Videx)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
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**Protease Inhibitors**

- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
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- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

*No known interactions specific to this combination*

*Possible decrease in heroin levels*

*No known interactions specific to this combination. Refer to comments for this drug class in general.*

*Reduces heroin levels by 50%*

Continued next page
GHB *(Cont'd)*
(gamma-hydroxy-butyrate, grievous bodily harm, liquid X)
Seizures, bradycardia, severe respiratory depression, hypotension, vomiting, coma, death

**GENERAL**

**PHARMACOKINETICS**
Utilizes CYP2D6 pathway for metabolism

**KNOWN DRUG INTERACTIONS**

<table>
<thead>
<tr>
<th>CCR5 Inhibitor</th>
<th>Integrase Inhibitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maraviroc (Selzentry)</td>
<td>Elvitegravir/cobicistat/TDF/FTC (Stribild)</td>
</tr>
<tr>
<td>Dolutegravir (Tivicay)</td>
<td>Raltegravir (Isentress)</td>
</tr>
</tbody>
</table>

- No known interactions specific to this combination
- Potential increase in GHB levels with cobicistat
- No known interactions specific to this combination

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HEROIN *(smack, brown junk, China White) (Cont'd)*
Dreamlike state of warmth and well-being with small doses; CNS depression, drowsiness, respiratory depression, constricted pupils, nausea/vomiting with excessive doses

**GENERAL**

**PHARMACOKINETICS**
Utilizes CYP3A4 pathway for metabolism

**KNOWN DRUG INTERACTIONS**

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</tbody>
</table>

- No known interactions specific to this combination
- No known interactions specific to this combination
- No known interactions specific to this combination

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KETAMINE *(K, Special K)*
Paranoia, anxiety, mania, hallucinations, ‘K-hole’ (semi-catatonic stupor).
Elevated levels may cause tachycardia, hypertension, respiratory depression

**GENERAL**

**PHARMACOKINETICS**
Undergoes N-demethylation and hydroxylation (possibly mediated by CYP3A4); possible weak inhibitor of CPY2D1 and CYP3A4

**KNOWN DRUG INTERACTIONS**

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- No known interactions specific to this combination

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LSD *(acid)*
Paranoia, visual and auditory hallucinations

**GENERAL**

**PHARMACOKINETICS**

**KNOWN DRUG INTERACTIONS**

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- No known interactions specific to this combination

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Continued next page
KETAMINE (K, Special K) (Cont’d)
Paranoia, anxiety, mania, hallucinations, ‘K-hole’ (semi-catatonic stupor). Elevated levels may cause tachycardia, hypertension, respiratory depression.

GENERAL
Undergoes N-demethylation and hydroxylation (possibly mediated by CYP3A4); possible weak inhibitor of CYP2D1 and CYP3A4

PHARMACOKINETICS

KNOWN DRUG INTERACTIONS
NRTI’s
- abacavir (ABC, Ziagen)
- *Atripla (EFV/TDF/FTC)
- *Complera (RPV/TDF/FTC)
- didanosine (ddl, Videx)
- emtricitabine (FTC, Emtriva)
- *Epzicom (3TC/ABC)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)
- *Truvada (FTC/TDF)
- zidovudine (AZT, ZDV, Retrovir)

- No known interactions specific to this combination

*SEE INDIVIDUAL COMPONENTS

Protease Inhibitors
- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

- Likely increase the effect of ketamine (more sedation, increased heart rate and blood pressure). Effects last longer
- No known interactions specific to this combination. Refer to comments for this drug class in general
- Combination may increase risk of drug induced hepatitis

*No known interactions specific to this combination

CCR5 Inhibitor
- Maraviroc (Selzentry)

Integrate Inhibitor
- Elvitegravir/cobicistat/ TDF/FTC (Stribild)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

- No known interactions specific to this combination
- Potential increase in ketamine levels; effects may last longer with cobicistat
- No known interactions specific to this combination

*No known interactions specific to this combination

LSD (acid) (Cont’d)
Paranoia, visual and auditory hallucinations

KNOWN DRUG INTERACTIONS
NRTI’s
- abacavir (ABC, Ziagen)
- *Atripla (EFV/TDF/FTC)
- *Complera (RPV/TDF/FTC)
- didanosine (ddl, Videx)
- emtricitabine (FTC, Emtriva)
- *Epzicom (3TC/ABC)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)
- *Truvada (FTC/TDF)
- zidovudine (AZT, ZDV, Retrovir)

- No known interactions specific to this combination

*SEE INDIVIDUAL COMPONENTS

Protease Inhibitors
- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

- Likely increase the effect of ketamine (more sedation, increased heart rate and blood pressure). Effects last longer
- No known interactions specific to this combination. Refer to comments for this drug class in general
- Combination may increase risk of drug induced hepatitis

*No known interactions specific to this combination

CCR5 Inhibitor
- Maraviroc (Selzentry)

Integrate Inhibitor
- Elvitegravir/cobicistat/ TDF/FTC (Stribild)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

- No known interactions specific to this combination
- No known interactions specific to this combination

*No known interactions specific to this combination

*No known interactions specific to this combination
MARIJUANA (Tetrahydrocannabinol; THC)

Tachycardia, loss of inhibitions, dry mouth, visual hallucinations

GENERAL

PHARMACOKINETICS

Metabolized in the liver to active metabolite (11-hydroxy THC) via CYP3A4, 2C9, and 2C6; inhibitors/inducers of CYP3A4 may interfere with THC metabolism

KNOWN DRUG INTERACTIONS

**NNRTI’s**

- delavirdine (Rescriptor)
- efavirenz (Sustiva)
- nevirapine (Viramune)
- etravirine (Intellence)
- rilpivirine (Edurant)

**NRTI’s**

- abacavir (ABC, Ziagen)
- *Atripla (EFV/TDF/FTC)
- *Complera (RPV/TDF/FTC)
- didanosine (ddl, Videx)
- emtricitabine (FTC, Emtriva)
- *Epzicom (3TC/ABC)
- lamivudine (3TC, Epivir)
- stavudine (d4T, Zerit)
- tenofovir (TDF, Viread)
- *Trizivir (AZT/3TC/ABC)
- *Truvada (FTC/TDF)

**Protease Inhibitors**

- amprenavir (Agenerase)
- fosamprenavir (Lexiva)
- atazanavir (Reyataz)
- darunavir (Prezista)
- indinavir (Crixivan)
- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

**Protease Inhibitors**

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- lopinavir/ritonavir (Kaletra)
- nelfinavir (Viracept)
- ritonavir (Norvir)
- saquinavir (Fortovase, Invirase)
- tipranavir (Aptivus)

**METHADONE**

Generalized CNS depression

Primarily utilizes CYP3A4 pathway for metabolism; inhibitor of CYP2D66 and CYP3A4

- No known interactions specific to this combination
- Decreases methadone AUC significantly (~60%); titrate methadone dose to effect
- Decreases methadone AUC significantly (~40-50%); titrate methadone dose to effect
- Increases methadone clearance ~22% (an increase in methadone dose may be required in some patients)
- Decreases didanosine AUC ~41-60% (consider didanosine tablet form dose increase or switch to enteric-coated formulation which may not be affected to the same degree)
- Decreases stavudine AUC ~23%
- Increases zidovudine AUC ~40% (increases AUC ~29% during chronic treatment)
- Interaction highly variable and patients should be evaluated on an individual basis
- Decreases methadone levels ~13-30%; monitor for withdrawal and consider methadone dose increase if needed
- Decreases methadone AUC ~16-36% (may require methadone dose increase)
- Decreases methadone AUC ~26-55% (may require methadone dose increase)
- Decreases methadone AUC ~47% (may require methadone dose increase)
- Decreases methadone AUC ~37% (may require methadone dose increase)
- Decrease methadone AUC by ~50% (may require methadone dosage increase)
**MARIJUANA (Tetrahydrocannabinol; THC) (Cont’d)**

**General**
- Tachycardia, loss of inhibitions, dry mouth, visual hallucinations

**Pharmacokinetics**
- Metabolized in the liver to active metabolite (11-hydroxy THC) via CYP3A4, 2C9, and 2C6; inhibitors/inducers of CYP3A4 may interfere with THC metabolism

**Known Drug Interactions**

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**METHADONE (Cont’d)**

**General**
- Generalized CNS depression

**Pharmacokinetics**
- Primarily utilizes CYP3A4 pathway for metabolism; inhibitor of CYP2D6 and CYP3A4

**Known Drug Interactions**

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PATIENT INFORMATION TO REDUCE HARM

ALCOHOL
If you take ddI, do not drink alcohol. Try to avoid alcohol or use modestly.

AMPHETAMINES (Crystal)
Avoid use if you have heart or liver problems, or high blood pressure. Recent reports of transmitted HIV resistance in patients using methamphetamine and practicing unsafe sex.

AMYL NITRITE (amyl nitrate, poppers)
Do not use with avanafil (Stendra), sildenafil (Viagra), vardenafil (Levitra) or adalafil (Cialis). Heart problems, glaucoma, or anemia make poppers more dangerous.

BENZODIAZEPINES
Avoid with midazolam and triazolam. Caution with other medications in this class. Discuss with provider to ensure potential interactions are identified.

COCAINE (coke, blow)
Don’t get so high you forget to stick to your antiretroviral regimen. Avoid cocaine if you have heart or liver problems, or high blood pressure.

ECSTASY (X, MDMA)
Start with 1/4 or 1/2 tablet. Drink plenty of water.

Erectile Dysfunction Agents
Do not mix with amyl or butyl nitrates (poppers). Combination can cause sudden drop in blood pressure leading to fainting or heart attack.

HEROIN (smack, brown junk, China, White)
Start with normal dose and increase only if you experience less of a hit and less buzz. Safe injecting. Do not mix with other recreational drugs.

GHB
Start with half-teaspoon, wait half-hour before taking more. Do not mix with alcohol, tranquilizers, pain-killers, or allergy medications. Do not use if you are alone. The dose you used last week can kill you this week.

METHADONE
Any changes to your methadone regimen or HIV medications should be reported to both providers to ensure potential interactions are identified.

KETAMINE (K, Special K)
Start with 1/3 or 1/2 of usual dose. Wait a half-hour before doing more. Always use with a friend, never alone.
RESOURCES

The National AETC Program also includes the following services:

**National HIV/AIDS Clinicians Consultation Center: 1-800-933-3413**
Offering treating clinicians current HIV clinical and drug information and individualized, expert case consultation.

**Post-Exposure Prophylaxis 24 hour hotline: 1-888-HIV-4911**
Providing consultation for occupational exposures.

**Perinatal Hotline: 1-888-448-8765**

Providing resources (including curricula and lecture slide sets) on HIV disease treatment, education and data.
FOR FURTHER INFORMATION, PLEASE VISIT ONE OF THE FOLLOWING WEBSITES:

NY/NJ AIDS Education and Training Center
www.nynjaetc.org

U.S. DHHS AIDS Info
aidsinfo.nih.gov

NYSDOH AIDS Institute Clinical Resources
www.hivguidelines.org

Substance Abuse and Mental Health Services Administration
www.samhsa.gov

Addiction Technology Transfer Center
www.nattc.org

Harm Reduction Coalition
www.harmreduction.org