



NORTHWEST AIDS EDUCATION AND TRAINING CENTER

ARV Drug Interactions

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ARVS & DRUG INTERACTIONS

- Many drug interactions
- Review of most common interactions you should know
- This review NOT comprehensive
 - <http://www.hiv-druginteractions.org/>
 - <http://www.madisonclinic.org>

#1 Atazanavir and Acid Suppressors

- Atazanavir 300mg + Ritonavir 100mg
 - Give with and/or > 10 hr after H2-blocker; 12 hours apart PPI
 - DO NOT EXCEED 300mg BID RANITIDINE or equivalent in ART-naïve patients (do not exceed 150mg BID in experienced patients)
- Unboosted Atazanavir 400mg
 - Give Atazanavir 2 hrs before OR 10 hrs AFTER H2 blocker
 - DO NOT EXCEED 150mg BID ranitidine or equivalent
 - AVOID PPIs
- Atazanavir 400mg + Ritonavir 100mg
 - For treatment experienced patients on TDF + H2 blocker

#2 Maraviroc Drug Interactions

- Maraviroc is a 3A4 and P-gp substrate
- 3A4/P-gp Inhibitors increase (↑) AUC/toxicity
 - Examples - azoles, PI, delavirdine, macrolides
- 3A4/P-gp Inducers decrease (↓) AUC/toxicity
 - Examples - NNRTI, anticonvulsants, rifamycins
- Strong inhibitors trump inducers

#2 Maraviroc Drug Interactions

ARVs	MVC Interaction	MVC Dose
-- All PI (except TPV/r) -- DLV	↑ MVC AUC	150 mg bid
-- NNRTI: EFV, ETR (except NVP, DLV)	↓ MVC AUC	600 mg bid
-- PI + NNRTI (except TPV/r, NVP)	↑ MVC AUC	150 mg bid
NRTI	none	300 mg bid
RAL, NVP, TPV/r, T-20	none	300 mg bid

#3 Etravirine Drug Interactions

- Etravirine
 - inducer of 3A4
 - inhibitor of CYP2C9, CYP2C19
- AVOID ETRAVIRINE WITH

Tipranavir + r	↓ ETRAVIRINE
Fosamprenavir + r	↑ AMPRENAVIR
Atazanavir + r	↓ ATAZANAVIR ↑ ETRAVIRINE
Any unboosted PI	

#3 Etravirine Drug Interactions

- OKAY TO USE ETRAVIRINE CAUTIOUSLY WITH

Lopinavir + r tabs 400/100mg bid	↓ ETR by 30-45% ↓ LPV slightly
Darunavir + r BID	↓ Cmin by ~ 50%

#4 Anti-Epileptic Drugs

AED	Interaction	Action
Phenytoin	PIs, NNRTIs RAL MVC	AVOID OK 600mg po BID
Carbamazepine	PIs NNRTIs MVC	AVOID Use with caution 600mg po BID
Lamotrigine	PIs NNRTIs	Use with caution OK

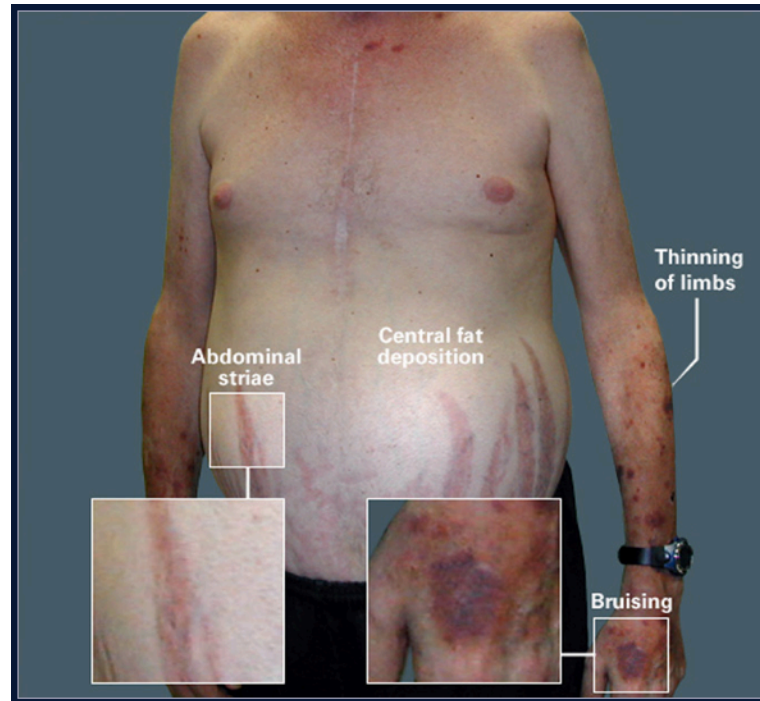
Levetiracetam , Gabapentin, Pregabalin okay

#5 Lipid Lowering Drugs

- NNRTI's
 - DECREASE statin levels by 40%
- PI's INHIBIT statin metabolism
 - Simvastatin, lovastatin -- INCREASED AUC 500-3000%;
 - INCREASED TOXICITY -- Increased risk of myopathy
- PREFERRED STATINS
 - Atorvastatin -- PI's increase AUC by 70-800%
 - Start at 10mg qday
 - Rosuvastatin -- PI's (ATV/r, LPV/r) increase AUC by 20-200%
 - Start at 5mg qday
 - Pravastatin
 - Start at 10mg qday

#6 Fluticasone & Ritonavir

- CYP 3A4 inhibitors INCREASE fluticasone levels
- Ritonavir INCREASES fluticasone AUC 350x --> increased systemic effects



- Consider replacing fluticasone with beclomethasone

#7 Antidepressants & ARVs

- Protease inhibitors
 - Decrease SSRI and bupropion AUC ~ 50% -- titrate dose based on clinical response
 - Increase trazadone -- start with lowest dose (except do not use with SQV)
 - Increase TCA levels -- start with lowest dose

- ## NNRTI's

Antidepressant	ARV	Effect	Dosing Recommendation
Bupropion	Efavirenz	Bupropion AUC ↓55%	Titrate bupropion dose based on clinical response.
Paroxetine	Etravirine	No significant effect	No dosage adjustment necessary.
Sertraline	Efavirenz	Sertraline AUC ↓39%	Titrate sertraline dose based on clinical response.

#8 ED Drugs & PI's

- REDUCE doses of erectile dysfunction drugs
 - Sildenafil 25mg q48 hrs
 - Tadalafil 5mg-10mg q72 hours



#9 TB Meds

- If on NNRTI --
 - EFV 600mg (or 800mg) with Rifampin
 - DO NOT USE ETR or NVP with Rifampin
- If on PI-based regimen --
 - Rifampin decreases PI levels by 75% -- DO NOT USE RIFAMPIN WITH PI's
 - PI's increase rifabutin levels -- Use Rifabutin 150mg -300mg qod OR 150mg qday
 - Check rifabutin levels
- If on Raltegravir
 - Increase raltegravir to 800mg BID with rifampin

#10 Salmeterol & PIs

- Administration of salmeterol with PI NOT recommended
- Risk of INCREASE salmeterol concentrations/toxicity
 - QTc prolongation
 - Palpitations
 - Tachycardia
- Consider using formoterol instead

ARVs and Drug Interactions

- MANY MANY INTERACTIONS
 - ie azoles, methadone, herbals, OCP's
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