Post-Exposure Prophylaxis (PEP) to Prevent HIV Infection

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Table 2: Preferred PEP Regimen for Patients Who Weigh ≥40 kg [a,b]

Preferred Regimen	Notes
• Tenofovir disoproxil fumarate 300 mg/ emtricitabine 200 mg (TDF/FTC; Truvada) once per day ***or*** • TDF 300 mg/lamivudine (TDF/3TC; Cimduo) 300 mg once per day ***plus*** • Raltegravir (RAL; Isentress) 400 mg twice per day ***or*** • RAL HD 1200 mg once per day [c] ***or*** • Dolutegravir (DTG; Tivicay) 50 mg once per day	• **DTG:** – Metformin dosing should be limited to 1 g by mouth per day when an individual is taking DTG concurrently. – Magnesium- or aluminum-containing antacids may be taken 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. – The recommendation regarding discussion of the small risk of teratogenicity with DTG in the first trimester and the need for birth control while completing the 28-day PEP regimen has been removed. DTG has been shown to be safe throughout pregnancy. See the MCCC's statement on Use of Dolutegravir in Individuals of Childbearing Capacity for further discussion [Zash, et al. 2022]. • **RAL:** Magnesium- or aluminum-containing antacids are contraindicated; coadministration of calcium-containing antacids is not recommended with RAL HD. • **TDF:** Requires dose adjustment for CrCl <50 mL/min. Alternatively, another agent can be considered, in which case consultation with an experienced HIV care provider is advised. • **TDF/FTC and TDF/3TC:** Dosing should be adjusted in patients with baseline CrCl <50 mL/min.

Abbreviations: CrCl, creatinine clearance; PEP, post-exposure prophylaxis.

Notes:

a. All medications are taken by mouth for 28 days.
b. Available alternative formulations and methods of administration:
   - 3TC: Acceptable to crush or split. Available as an oral solution (10 mg/mL).
   - DTG: Acceptable to crush.
   - FTC: Acceptable to open and dissolve in water. Available as an oral solution (10 mg/mL).
   - RAL: Available as a chewable tablet (25 mg, 100 mg) and oral powder for suspension (100 mg/packet); neither is bioequivalent to the 400 mg adult dose.
   - TDF: Acceptable to dissolve in water. Available as an oral powder only (40 mg/1 g) that can be mixed with soft food.
   - TDF/FTC: Acceptable to crush and dissolve.
c. RAL HD: May be prescribed for patients who weigh >40 kg; RAL HD should *not* be prescribed for pregnant individuals.

Reference

Zash R, Holmes LB, Diseko M, et al. Update on neural tube defects with antiretroviral exposure in the Tsepamo Study, Botswana. AIDS; 2022 Jul 29-Aug 2; Montreal, Canada. https://www.natap.org/2022/IAC/IAC_31.htm

Table 3: Alternative PEP Regimens for Patients Who Weigh ≥40 kg [a,b]	
Alternative Regimens	**Notes**
• Elvitegravir 150 mg/cobicistat 150 mg/emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg (EVG/COBI/FTC/TDF) as a fixed-dose single tablet once per day (Stribild) [c]	**For individuals with CrCl <70 mL/min:** Fixed-dose single tablet EVG/COBI/TDF/FTC is *contraindicated*.
• TDF 300 mg/FTC 200 mg (Truvada) *plus* ritonavir (RTV; Norvir) 100 mg ***plus*** darunavir (DRV; Prezista) 800 mg once per day [d] • Substitutions: – For FTC: Lamivudine (3TC; Epivir) 300 mg once per day. – For DRV: Atazanavir (ATV; Reyataz) 300 mg once per day ***or*** fosamprenavir (FPV; Lexiva) 1400 mg once per day *plus* RTV 100 mg once per day.	**For individuals with baseline CrCl <50 mL/min:** Adjust dosing of 3TC/FTC plus TDF.

Abbreviations: CrCl, creatinine clearance; PEP, post-exposure prophylaxis.

Notes:

a. All medications are taken by mouth for 28 days.
b. Available alternative formulations and methods of administration:
   - 3TC: Acceptable to crush or split. Available as an oral solution (10 mg/mL).
   - ATV: Acceptable to open capsule and sprinkle contents. Oral dispersible powder (50 mg/packet).
   - DRV: Probably acceptable to crush. Available as an oral suspension (100 mg/mL).
   - DTG: Acceptable to crush.
   - FTC: Acceptable to open and dissolve in water. Available as an oral solution (10 mg/mL).
   - RAL: Available as a chewable tablet (25 mg, 100 mg) and oral powder for suspension (100 mg/packet); neither is bioequivalent to the 400 mg adult dose.
   - RTV: Available as an oral solution (80 mg/mL).
   - TDF: Acceptable to dissolve in water. Available as an oral powder only (40 mg/1 g) that can be mixed with soft food.
   - TDF/FTC: Acceptable to crush and dissolve.
c. Cobicistat-containing regimens should not be used during pregnancy.
d. If DRV or ATV are prescribed during pregnancy, dose adjustments are required. See guideline section PEP During Pregnancy or Breastfeeding or Clinicalinfo.HIV.gov > Table 14. Antiretroviral Drug Use in Pregnant People with HIV: Pharmacokinetic and Toxicity Data in Human Pregnancy and Recommendations for Use in Pregnancy.

Table 4: PEP Regimens for Patients 2 to 12 Years Old Who Weigh <40 kg [a]

See DHHS for dosing, administration, and additional information about each medication. Each medication name below is linked to a page about that medication.

- **Preferred:** Tenofovir disoproxil fumarate (TDF; Viread) *plus* emtricitabine (FTC; Emtriva) *plus* raltegravir (RAL; Isentress). TDF/FTC is available as the fixed-dose combination (Truvada).
- **Substitutions:**
  - Lamivudine (3TC; Epivir) may be substituted for FTC.
  - Dolutegravir (DTG; Tivicay) may be substituted for RAL.
- **Alternatives:**
  - **Age ≥2 years to 12 years:** Zidovudine (ZDV; Retrovir) *plus* 3TC (Epivir) *plus* RAL (Isentress) *or* lopinavir/ritonavir (LPV/RTV; Kaletra).
  - **Age ≥3 years to <12 years:** TDF (Viread) *plus* FTC (Emtriva) *plus* darunavir (DRV/Prezista) *plus* ritonavir (RTV; Norvir).
    - **Substitution:** 3TC (Epivir) may be substituted for FTC.

Table 5: Antiretroviral Medications to Avoid for Post-Exposure Prophylaxis				
ARV Class	**Agent**	**<40 kg**	**≥40 kg**	**Comments**
First-generation protease inhibitors	• Indinavir (IDV; Crixivan) • Nelfinavir (NFV; Viracept)	Avoid	Avoid	Poorly tolerated.
First-generation non-nucleoside reverse transcriptase inhibitors	• Efavirenz (EFV; Sustiva) • Nevirapine (NVP; Viramune)	Avoid	Avoid	• **EFV:** Potential for neuropsychiatric adverse effects • **NVP:** Associated with fulminant hepatic failure and risk of Stevens-Johnson syndrome [CDC 2001]
Nucleoside reverse transcriptase inhibitors	• Abacavir (ABC; Ziagen) • Didanosine (ddI; Videx) • Stavudine (d4T; Zerit) • Tenofovir alafenamide (TAF) • Zidovudine (ZDV, AZT; Retrovir)	Avoid d4T, ddI, ABC, TAF	Avoid all	• **ABC:** Potential for serious, sometimes fatal hypersensitivity reaction • **d4T, ddI, ZDV:** Significant mitochondrial toxicities • **TAF:** Decreased vaginal, cervical, and rectal tissue concentrations of the active moiety of (tenofovir diphosphate) in healthy volunteers [Cottrell, et al. 2017]
CCR5 antagonist	Maraviroc (MVC; Selzentry)	Avoid	Avoid	Only shows activity against R5-tropic virus

References

CDC. Serious adverse events attributed to nevirapine regimens for postexposure prophylaxis after HIV exposures--worldwide, 1997-2000. *MMWR Morb Mortal Wkly Rep* 2001;49(51-52):1153-56. [PMID: 11198946] https://pubmed.ncbi.nlm.nih.gov/11198946

Cottrell ML, Garrett KL, Prince HMA, et al. Single-dose pharmacokinetics of tenofovir alafenamide and its active metabolite in the mucosal tissues. *J Antimicrob Chemother* 2017;72(6):1731-40. [PMID: 28369415] https://pubmed.ncbi.nlm.nih.gov/28369415