Post-Exposure Prophylaxis (PEP) to Prevent HIV Infection

June 2020

Table 2: Preferred Post-Exposure Prophylaxis Regimens for Patients Who Weigh ≥40 kg [a,c]

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 [b] ***or*** • Dolutegravir (DTG; Tivicay) 50 mg once per day – See *Box 2: Use of Dolutegravir in Individuals of Childbearing Capacity*	• **DTG**: If prescribed, discuss with individuals of childbearing capacity the risk of teratogenicity in the first trimester, and counsel about the need for birth control while completing the 28-day PEP regimen (see *Box 2: Use of Dolutegravir in Individuals of Childbearing Capacity*). – Metformin dosing should be limited to 1 g by mouth per day when an individual is taking DTG concurrently. • **DTG and RAL:** Divalent cations (e.g. calcium, magnesium) and iron supplements should not be taken concurrently. • **TDF**: Requires dose adjustment for creatinine clearance (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.

a. All medications are taken by mouth for 28 days.

b. RAL HD: May be prescribed for patients who weigh >40 kg; RAL HD should not be prescribed for pregnant individuals.

c. 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.

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Table 3: Alternative Post-Exposure Prophylaxis 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).	**For individuals with creatinine clearance (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. • **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.

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: Can be dissolved in water. Available as an oral powder (40 mg/1 g) that can be mixed with soft food only.
- TDF/FTC: Acceptable to crush and dissolve.

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Table 4: Post-Exposure Prophylaxis Regimens for Patients 2 to 12 Years Old Who Weigh <40 kg

See AIDS*info* for dosing, administration and additional information about each medication.
Each medication name below is linked to an AIDS*info* 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.

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Table 5: Antiretroviral Medications to Avoid for Post-Exposure Prophylaxis

Antiretroviral 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 [Garrett, et al. 2016; 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):1153-1156. [PMID: 11198946] https://www.ncbi.nlm.nih.gov/pubmed/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):1731-1740. [PMID: 28369415] https://www.ncbi.nlm.nih.gov/pubmed/28369415

Garrett KL, Cottrell ML, Prince HM, et al. Concentrations of TFV and TFVdp in female mucosal tissues after a single dose of TAF. CROI; 2016 Feb 22-25; Boston, MA. http://www.croiconference.org/sessions/concentrations-tfv-and-tfvdp-female-mucosal-tissues-after-single-dose-taf