A look at new guidelines for HIV treatment and prevention

Start antiretroviral therapy as soon as possible after HIV infection is confirmed. Consider daily PrEP for patients at risk from sexual exposure or who inject illicit drugs.

The panel recommends one of 3 ART combinations (**TABLE 1**), all of which contain an integrase strand transfer inhibitor (INSTI). ART started immediately should not include a nonnucleoside reverse transcriptase inhibitor (NNRTI) because of possible viral resistance. The guideline recommends 6 other ART combinations if none of the first 3 options can be used.1

An initial set of laboratory tests (**TABLE 2**) should be conducted on each individual receiving ART, although treatment can start before the results are returned. Ongoing laboratory monitoring, described in detail in the guideline, depends on the ART regimen chosen and the patient’s response to therapy. The only routinely recommended prophylaxis for opportunistic infections is for *Pneumocystis* pneumonia if the CD4 count is <200/mcL.

Initiating treatment in those newly diagnosed as HIV positive

The panel now recommends starting antiretroviral therapy (ART) as soon as possible after HIV infection is confirmed; immediately if a patient is ready to commit to starting and continuing treatment. Any patient with an opportunistic infection should begin ART within 2 weeks of its diagnosis. Patients being treated for tuberculosis (TB) should begin ART within 2 weeks of starting TB treatment if their CD4 cell count is <50/mcL; those whose count is ≥50/mcL should begin ART within 2 to 8 weeks.

Preventing HIV with PrEP

Consider prescribing daily pre-exposure prophylaxis (PrEP) with emtricitabine/tenofovir disoproxil fumarate (Truvada) for men and women who are at risk from sexual exposure to HIV or who inject illicit drugs. It takes about 1 week for protective tissue levels to be achieved. Testing to rule out HIV infection is recommended before starting PrEP, as is testing for serum creatinine level, estimated glomerular filtration rate, and hepatitis B surface antigen. Tenofovir disoproxil fumarate is not recommended for those with creatinine clearance of less than 60 mL/min/1.73 m².
patients taking PrEP, emphasize other preventive measures such as using condoms to protect against both HIV and other sexually-transmitted diseases (STDs), using clean needles and syringes when injecting drugs, or entering a drug rehabilitation program. After initiating PrEP, schedule the first follow-up visit for 30 days later to repeat the HIV test and to assess adverse reactions and PrEP adherence.

For men who have sex with men (MSM), there is an alternative form of PrEP when sexual exposure is infrequent. “On-demand” or “event-driven” PrEP involves 4 doses of emtricitabine/tenofovir disoproxil fumarate; 2 doses given with food 2 to 24 hours before sex (the closer to 24 the better), one dose 24 hours after the first and one 24 hours after the second. This is referred to as 2-1-1 dosing. This option has only been tested in MSM with sexual exposure. It is not recommended at this time for others at risk for HIV or for MSM with chronic or active hepatitis B infection.

**Preventing HIV infection with post-exposure prophylaxis**

Post-exposure prophylaxis (PEP) for HIV infection is divided into 2 categories: occupational PEP (oPEP) and non-occupational PEP (nPEP). Recommendations for oPEP are described elsewhere and are not covered in this Practice Alert. Summarized below are the recommendations for nPEP after sex, injection drug use, and other nonoccupational exposures, which are also described on the Centers for Disease Control and Prevention (CDC) Web site.

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### TABLE 1

Recommended regimens for initial antiretroviral therapy

- Bictegravir/emtricitabine/tenofovir alafenamide (Biktarvy, Gilead Sciences)
- Abacavir/dolutegravir/lamivudine (Triumeq, GlaxoSmithKline)*
- Dolutegravir (Tivicay, GlaxoSmithKline) plus tenofovir alafenamide/emtricitabine (Descovy, Gilead)

*Do not start abacavir until testing has been conducted for the HLA-B*5701 allele.

### TABLE 2

Recommended laboratory testing at the time of HIV diagnosis

- HIV RNA level
- CD4 cell count
- HIV reverse transcriptase and protease genotype
- Sexually transmitted infections (gonorrhea, chlamydia, syphilis)
- Hepatitis A, B, and C
- Tuberculosis
- General health (liver and kidney functions, lipid levels, glucose, complete blood cell count)
- Pregnancy test and cervical cytology (female)
- HLA-B*5701 (before using abacavir)

CD4, cluster of differentiation-4; HIV, human immunodeficiency virus; HLA, human leukocyte antigen; RNA, ribonucleic acid.

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Consider prescribing daily pre-exposure prophylaxis for men and women at risk from sexual exposure to HIV or who inject illicit drugs.
Offer immediate post-exposure HIV prophylaxis if high-risk non-occupational contact occurred within the last 72 hours and rapid HIV testing is unavailable.

to assist with assessing whether nPEP is recommended (FIGURE 4).

Specific nPEP regimens. For otherwise healthy adults and adolescents, preferred nPEP consists of a 28-day course of a 3-drug combination: tenofovir disoproxil fumarate 300 mg once daily; emtricitabine 200 mg once daily; and raltegravir, 400 mg twice daily, or dolutegravir 50 mg once daily. Alternative regimens for adults and adolescents are described in the guideline, as are options for children, those with decreased renal function, and pregnant women. Those who receive more than one course of nPEP within a 12-month period should consider PrEP.

When additional vaccination is needed. For victims of sexual assault, offer prophylaxis against STD (TABLE 4) and hepatitis B virus (HBV). Those who have not been vaccinated against HBV should receive the first dose at the initial visit. If the exposure source is known to be HBsAg-positive, give the unvaccinated patient both hepatitis B vaccine and hepatitis B immune globulin at the first visit. The full hepatitis B vaccine series should then be completed according to the recommended schedule and the vaccine product used. Those who have completed hepatitis B vaccination but who were not tested with a post-vaccine titer should receive a single dose of hepatitis B vaccine.

Victims of sexual assault can benefit from referral to professionals with expertise in post-assault counseling. Sexual Assault Nurse Examiner programs are listed at http://www.sane-sart.com.

Financial assistance for patients. Antiretroviral drugs are expensive, and those who need nPEP may not have a payer source. Many pharmaceutical manufacturers offer medication assistance programs, and processes are set up to handle time-sensitive requests. Information for specific medications can be found at http://www.pparx.org/en/prescription_assistance_programs/list_of_participating_assistance_programs.
programs. Those who are prescribed nPEP after a sexual assault can receive reimbursement for medications and health care costs through state Crime Victim Compensation Programs funded by the Department of Justice. State-specific contact information is available at http://www.nacvcb.org/index.asp?sid=6.

### References


### TABLE 4

Recommended prophylaxis against STDs

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<tr>
<td><strong>Gonorrhea</strong></td>
<td>Ceftriaxone 250 mg, single dose intramuscularly; and azithromycin 1 g, single dose orally</td>
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<tr>
<td><strong>Chlamydia</strong></td>
<td>Azithromycin 1 g, single dose orally; or doxycycline 100 mg, twice a day orally for 7 days</td>
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<tr>
<td><strong>Trichomoniasis</strong></td>
<td>Metronidazole 2 g, single dose orally; or tinidazole 2 g, single dose orally</td>
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STDs, sexually transmitted diseases.
