

## Post Exposure Prophylaxis (PEP) After Exposure to HIV

### What is PEP?

Post Exposure Prophylaxis means prevention of HIV infection after an occupational exposure to HIV infected blood, needle stick injury or during surgical procedures. PEP means taking antiretroviral prophylaxis (ARVs) as soon as possible after exposure to HIV, so that the exposure will not result in HIV infection. **PEP should begin within 24-36 hours and should continue for 4 weeks.**

### Who Should Use PEP?

#### Occupational Exposure:

An workplace exposure is defined as one that may place a worker at risk of HIV infection through percutaneous injury, contact of mucous membrane or skin (chapped or abraded) with blood, tissue or other body fluids to which universal precautions apply from a person known or suspected to be HIV positive.

**Most exposures do not result in infection.** Average risk of HIV infection after an occupational exposure is generally low:

Clinical Situation	Risk
Risk with Small amount of blood on intact skin	no risk
Risk with needle stick injury	1 in 300 (0.003%, dependent on type of needle i.e solid versus hollow bore, percutaneous)
Exposure of mucous membrane	1 in 1000 (0.001%)
Risk with broken skin	1 in 1000 (0.001%)

#### Other Non- Occupational Exposure:

Are generally considered to be the following:

- Sexual assault or rape
- Infants exposed to breast milk from HIV infected mothers

#### Factors Affecting Transmission:

- Amount of blood in the exposure
- Higher viral load >100,000 (greater risk)
- Advanced AIDS in source patient

### What Actions Should be Undertaken Upon Exposure?

- **DO NOT PANIC. MAJORITY OF EXPOSURES DO NOT RESULT IN HIV INFECTION.**
- Do not put the cut/pricked finger into your mouth.
- Do not bleed the area.
- **Immediately wash the exposed area thoroughly with soap and water. No added benefit in using bleach or anti-septic.**
- Promptly report exposure to your hospital administration, provincial HIV Treatment and Care Centers (list of provincial AIDS Programs and clinic sites available on NACP website) or The National AIDS Control Program (NACP) 051-9255096, 9255367-8
- Determine the HIV status of the exposure source person (i.e HIV +, or if available last known HIV viral load, CD4 count, HBV and HCV)
- Decision to initiate PEP must be determined in consultation with a HIV physician or an Infectious Disease specialist.

- If yes to initiating PEP then recommend starting Post exposure prophylaxis as soon as possible within 24-8 hours, at the latest within 72 hours (<3 days)

Regimens for PEP:

For low risk exposures :

2 drug regimen :

- ZDV+3TC

For high risk exposures :

Expanded 3 drug regimen :

- ZDV + 3TC + EFV (for men or women in whom pregnancy is definitely ruled out)
- or
- ZDV + 3TC + Nelfinavir (can be given to both men and women)

Decisions to initiate PEP should be made after carefully evaluating the exposure and preferably in consultation with an Infectious Disease specialist. Particularly in rape cases the use of EFV is contraindicated and an Infectious diseases specialist must be consulted. The following table 4 and 5 will assist in categorizing the type of exposure and the need for PEP :

**TABLE 4. Recommended HIV postexposure prophylaxis for percutaneous injuries**

Exposure type	Infection status of source				
	HIV-Positive Class 1*	HIV-Positive Class 2*	Source of unknown HIV status <sup>†</sup>	Unknown source <sup>‡</sup>	HIV-Negative
Less severe <sup>§</sup>	Recommend basic 2-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors <sup>††</sup>	Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings where exposure to HIV-infected persons is likely	No PEP warranted
More severe <sup>¶</sup>	Recommend expanded 3-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors <sup>††</sup>	Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings where exposure to HIV-infected persons is likely	No PEP warranted

\* HIV-Positive, Class 1 — asymptomatic HIV infection or known low viral load (e.g., <1,500 RNA copies/mL). HIV-Positive, Class 2 — symptomatic HIV infection, AIDS, acute seroconversion, or known high viral load. If drug resistance is a concern, obtain expert consultation. Initiation of postexposure prophylaxis (PEP) should not be delayed pending expert consultation, and, because expert consultation alone cannot substitute for face-to-face counseling, resources should be available to provide immediate evaluation and follow-up care for all exposures.

<sup>†</sup> Source of unknown HIV status (e.g., deceased source person with no samples available for HIV testing).

<sup>‡</sup> Unknown source (e.g., a needle from a sharps disposal container).

<sup>§</sup> Less severe (e.g., solid needle and superficial injury).

\*\* The designation "consider PEP" indicates that PEP is optional and should be based on an individualized decision between the exposed person and the treating clinician.

<sup>††</sup> If PEP is offered and taken and the source is later determined to be HIV-negative, PEP should be discontinued.

<sup>¶</sup> More severe (e.g., large-bore hollow needle, deep puncture, visible blood on device, or needle used in patient's artery or vein).

**TABLE 5. Recommended HIV postexposure prophylaxis for mucous membrane exposures and nonintact skin\* exposures**

Exposure type	Infection status of source				
	HIV-Positive Class 1 <sup>†</sup>	HIV-Positive Class 2 <sup>†</sup>	Source of unknown HIV status <sup>‡</sup>	Unknown source <sup>§</sup>	HIV-Negative
Small volume**	Consider basic 2-drug PEP <sup>¶</sup>	Recommend basic 2-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP <sup>¶</sup> for source with HIV risk factors <sup>  </sup>	Generally, no PEP warranted; however, consider basic 2-drug PEP <sup>¶</sup> in settings where exposure to HIV-infected persons is likely	No PEP warranted
Large volume <sup>¶¶</sup>	Recommend basic 2-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP <sup>¶</sup> for source with HIV risk factors <sup>  </sup>	Generally, no PEP warranted; however, consider basic 2-drug PEP <sup>¶</sup> in settings where exposure to HIV-infected persons is likely	No PEP warranted

\* For skin exposures, follow-up is indicated only if there is evidence of compromised skin integrity (e.g., dermatitis, abrasion, or open wound).

<sup>†</sup> HIV-Positive, Class 1 — asymptomatic HIV infection or known low viral load (e.g., <1,500 RNA copies/mL). HIV-Positive, Class 2 — symptomatic HIV infection, AIDS, acute seroconversion, or known high viral load. If drug resistance is a concern, obtain expert consultation. Initiation of postexposure prophylaxis (PEP) should not be delayed pending expert consultation, and, because expert consultation alone cannot substitute for face-to-face counseling, resources should be available to provide immediate evaluation and follow-up care for all exposures.

<sup>‡</sup> Source of unknown HIV status (e.g., deceased source person with no samples available for HIV testing).

<sup>§</sup> Unknown source (e.g., splash from inappropriately disposed blood).

\*\* Small volume (i.e., a few drops).

<sup>¶</sup> The designation, "consider PEP," indicates that PEP is optional and should be based on an individualized decision between the exposed person and the treating clinician.

<sup>¶¶</sup> If PEP is offered and taken and the source is later determined to be HIV-negative, PEP should be discontinued.

<sup>¶¶¶</sup> Large volume (i.e., major blood splash).