# NEEDLE STICK INJURY

**PROTOCOL**

1. Immediate
    1. For Injury: Wash with soap and running water.
    2. For Non-intact Skin Exposure: Wash with soap and water.
    3. For Mucosal Exposure: Wash thoroughly.
2. Reporting
    1. All sharps injury and mucosal exposure MUST be reported to the immediate supervisor, and to the Casualty Medical Officer to evaluate the injury. Details of the needle-stick injury should be filled by the supervisor and handed over to the HIC nurse for further follow-up.
3. Management
    1. Management is on a case to case basis.
4. Follow-Up
    1. Follow-up and statistics of needle-stick injury are done by the HIC nurse on a weekly basis. This information is presented at the HICC meeting and preventive actions to avoid needle-stick injuries, if any, are recorded.

**POST-HIV EXPOSURE MANAGEMENT / PROPHYLAXIS (PEP)**

**Occupational exposure**:

Occupational exposure refers to exposure to potential blood-borne infections (HIV, HBV and HCV) that occurs during performance of job duties.

**"Exposure"** which may place an HCP at risk of blood-borne infection is defined as:

- a percutaneous injury (e.g. needle-stick or cut with a sharp instrument),
- contact with the mucous membranes of the eye or mouth,
- contact with non-intact skin (particularly when the exposed skin is chapped, abraded, or afflicted with dermatitis), or
- contact with intact skin when the duration of contact is prolonged (e.g. several minutes or more) with blood or other potentially infectious body fluids.

**What is infectious and what is not?**

| TABLE 12.3.4 POTENTIALLY INFECTIOUS BODY FLUIDS | | |
|---|---|---|
| **Exposure to body fluids considered 'at risk'** | **Exposure to body fluids considered 'not at risk'** | |
| **Blood** | Tears | Unless these secretions contain visible blood |
| **Semen** | Sweat | |
| **Vaginal secretions** | Urine and Faeces | |
| **Cerebrospinal fluid** | Saliva | |
| **Synovial, pleural, peritoneal, pericardial fluid** | | |
| **Amniotic fluid** | | |
| **Other body fluids contaminated with visible blood** | | |

**Protocol:**

It is necessary to determine the status of the exposure and the HIV status of the exposure source before starting post exposure prophylaxis (PEP).

**Step 1: Immediate measures**

**For skin — if the skin is broken after a needle-stick or sharp instrument:**

· Immediately wash the wound and surrounding skin with water and soap, and rinse. Do not scrub.

· Do not use antiseptics or skin washes (bleach, chlorine, alcohol, betadine).

**After a splash of blood or body fluids on unbroken skin:**

· Wash the area immediately

· Do not use antiseptics

**For the eye:**

· Irrigate exposed eye immediately with water or normal saline. Sit in a chair, tilt head back and ask a colleague to gently pour water or normal saline over the eye.

· If wearing contact lens, leave them in place while irrigating, as they form a barrier over the eye and will help protect it. Once the eye is cleaned, remove the contact lens and clean them in the normal manner. This will make them safe to wear again

· Do not use soap or disinfectant on the eye.

**For mouth:**

· Spit fluid out immediately

· Rinse the mouth thoroughly, using water or saline and spit again. Repeat this process several times

· Do not use soap or disinfectant in the mouth

· Consult the designated physician of the institution for management of the exposure immediately.

**Do not**

- Do not panic
- Do not put pricked finger in mouth
- Do not squeeze the wound to bleed
- Do not use bleach, chlorine, alcohol, betadine, iodine, or any antiseptic or detergent.

**Step II: Prompt reporting:**

a) All needle-stick/sharp injuries should be reported to the immediate supervisor, and then to the Casualty Medical Officer.

b) An entry is made in the Needle-Stick Injury Register in the Casualty.

**Step III: Post exposure treatment:**

The decision to start PEP is made on the basis of degree of exposure to HIV and the HIV status of the source from where the exposure/infection has occurred. More so, it should begin as soon as possible preferably within two hours, and is not recommended after 72 hours.

**PEP is not needed for all types of exposures:** The HIV seroconversion rate of 0.3% after an AEB (accidental exposure to blood) (for percutaneous exposure) is an average rate. The risk of infection transmission is proportional to the amount of HIV transmitted, which depends on the nature of exposure and the status of the source patient. A baseline rapid HIV testing of exposed and source person must be done for PEP. However, initiation of PEP should not be delayed while

waiting for the results of HIV testing of the source of exposure. Informed consent should be obtained before testing of the source as per national HIV testing guidelines.

**First PEP dose within 72 hours**

*A designated person/trained doctor must assess the risk* of HIV and HBV transmission following an AEB. This evaluation must be quick so as to start treatment without any delay, ideally within two hours but certainly within 72 hours; PEP is not effective when given more than 72 hours after exposure. The first dose of PEP should be administered within the first 72 hours of exposure. If the risk is insignificant, PEP could be discontinued, if already commenced.

**Step IV: Counselling for PEP**

Exposed persons (clients) should receive appropriate information about what PEP is about and the risk and benefits of PEP in order to provide informed consent for taking PEP. It should be clear that PEP is not mandatory.

**Step V: Psychological support**

Many people feel anxious after exposure. Every exposed person needs to be informed about the risks, and the measures that can be taken. This will help to relieve part of the anxiety. Some clients may require further specialised psychological support.

**Step VI: Documentation of exposure**

Documentation of exposures are essential. Special leave from work should be considered initially for a period of two weeks. Subsequently, it can be extended based on the assessment of the exposed person's mental state, side effects and requirements.

**IMPORTANT: Seek expert opinion in case of**

· Delay in reporting exposure (> 72 hours).

· Unknown source

· Known or suspected pregnancy, but initiate PEP

· Breastfeeding mothers, but initiate PEP

· Source patient is on ART

· Major toxicity of PEP regimen.

**Step VII: Follow-up of an exposed person**

Whether or not post-exposure prophylaxis is started, a follow up is needed to monitor for possible infections and to provide psychological support.

**Clinical follow-up**

In the weeks following an AEB, the exposed person must be monitored for the eventual appearance of signs indicating an HIV seroconversion: acute fever, generalized lymphadenopathy, cutaneous eruption, pharyngitis, non-specific flu symptoms and ulcers of the mouth or genital area. These symptoms appear in 50%-70% of individuals with an HIV primary (acute) infection and almost always within 3 to 6 weeks after exposure. When a primary (acute) infection is suspected, referral to an ART centre or for expert opinion should be arranged rapidly.

An exposed person should be advised to use precautions (e.g., avoid blood or tissue donations, breastfeeding, unprotected sexual relations or pregnancy) to prevent secondary transmission, especially during the first 6–12 weeks following exposure. Condom use is essential. Drug adherence and side effect counselling should be provided and reinforced at every follow-up visit. Psychological support and mental health counselling is often required.

**Laboratory follow-up**

Exposed persons should have post-PEP HIV tests. HIV-test at 3 months and again at 6 months is recommended. If the test at 6 months is negative, no further testing is recommended.