

43. Guidelines on Needle stick Injury

The following information is abstracted from the South African Department of Health guidelines entitled:

“Management of Occupational Exposure to the Human Immunodeficiency Virus (HIV)” published in 1999.

Material that has been *added by ODNS* has been placed in *italics*.

The full text of this is available on our website www.dryneedling.co.za on the downloads page.

Background

Dry needling involves the use of sterile single use needles, which penetrate the body wall of humans to achieve therapeutic results. Of necessity, this exposes the therapist to the body fluids of the patient, specifically blood and blood products. The HI virus is transmitted through exposure to blood and some other body fluids. Body fluids include semen, vaginal secretions or other fluids contaminated with visible blood, such as are encountered when using needle therapy.

(Note that saliva, tears, sweat, urine and breast milk are not associated with the risk of HIV transmission in an occupational setting).

Thus the therapist practicing dry needling will be exposed to an increased risk of contracting HIV through contact with infected blood. The average risk of HIV infection from all types of reported percutaneous exposure to HIV infected blood is 0.3%. Although this increased risk is small, it behooves the therapist to take reasonable precautions to minimize this risk both before and after potential exposure. The risk increases with the amount of bleeding and depth to which the needle is inserted (superficial needling carries less risk than deep needling), but the risk is much less for solid needles, such as are used in Dry Needling, than it is for hollow needles which are typically used for Venepuncture or administration of medication.

This document is written to summarize the official government position on Post-exposure prophylaxis (PEP), and should be read together with the guidelines on needle safety, which are also contained in this manual. Remember that if you keep to the safety guidelines on how to needling safely (i.e. how to keep yourself safe), you will probably not need to follow the post exposure guidelines, as you will not get pricked.

The use of any trade names in this document is for identification only and does not imply endorsement by either Optimal Dry Needling Solutions, or the Department of Health.

Health department recommendations:

Management of occupational exposure to blood or body fluids (adapted for dry needling)

- 1. Know your own status now. Be tested after any suspect exposure.**
- 2. For all exposures, immediately clean the affected area with an antiseptic agent and water and irrigate. Mucous membrane and eye exposures should be rinsed and flushed extensively with water. Get yourself treated first before worrying about the patient's status.**
- 3. Evaluate the exposure as follows:**

3.1 The potential exposures that should be considered for PEP

- A blood contaminated needle stick injury (*i.e. dry needling, esp. deep needling*)
- An injury with a blood-contaminated sharp instrument or similar Instruments contaminated with semen, CSF, pleural or other serous fluid (excluding urine and faces
- An exposure to the mucous membranes (eye, mouth) with the above fluids
- A blood contamination of compromised or diseased skin (such as a Weeping eczema)
- Prolonged exposure to a large volume of blood on normal skin

3.2 Determine the HIV status of the exposure source

3.2.1 If there is no record of the HIV status of the source patient, then an attempt should be made to obtain blood from the patient for this purpose. This should be according to existing guidelines for HIV testing and include pre- and post-test counseling. An approved rapid HIV test could be performed and later confirmed by routine HIV testing procedures. *Do not wait for the result of such a test before beginning ARV treatment.*

3.2.2 If the patient refuses HIV testing, if there is no record of a recent HIV test result, or if HIV testing is not possible or available, then a doctor caring for the patient should be consulted as to the likelihood of the patient being HIV positive. Clinical signs indicating possible HIV infection include: TB infection, signs of immune deficiency such as oral thrush (candidiasis) and/or oral hairy cell leukoplakia on the tongue, recent herpes zoster or molluscum contagiosum infection, Kaposi sarcoma, recurrent infectious conditions such as diarrhoeal diseases, pneumonia, meningitis, skin sepsis; or unexplained weight loss, seborrhoeic dermatitis or persistent glandular lymphadenopathy. Using these clinical

parameters in the absence of an HIV test is far from ideal and many HIV positive persons will be asymptomatic.

[In situations where there is a high suspicion that the patient may be in the window period, then an HIV PCR or HIV p24 antigen test could be considered.]

4. Recommendations for PEP

- 4.1 PEP is recommended for any high-risk exposure (see table 1). *Deep dry needling falls in this category.*
- 4.2 ZVD in combination with Lamivudine is recommended for high-risk exposures. Single therapy with ZVD may be effective and is preferable to no PEP but is likely to be less effective than therapy with more than one drug. Single ZVD PEP therapy is not recommended by any recognized international authority.
- 4.3 Indinavir can be added for very high risk exposures. Very high risk exposures include: 1) large volume of blood; 2) deep injury; and, 3) if the source patient has been on ZVD for more than 6 months.
- 4.4 PEP should be initiated promptly, preferably within 1-2 hours after the exposure. The interval after which there is no benefit from using PEP is not yet defined, however most experts recommend PEP within 24 hours after exposure. Some experts may still consider PEP 7-14 days after the exposure in cases where there is highest risk exposure. To avoid delays in starting PEP, starter packs of recommended drugs should be available in all health care settings.
- 4.5 PEP should be continued for 4 weeks. PEP should be discontinued if there are serious toxicities or intolerance and should be continued even in the presence of mild side effects.
- 4.6 Exposures such as small blood volumes or other body fluid contact on normal healthy skin are considered very low risk. PEP is not recommended in these cases but can be assessed on a case by case basis. For exposures to urine or faeces, PEP is not recommended unless these are contaminated with blood.
- 4.7 If the source patient's HIV status is not known, initiating PEP should be decided upon on a case-by-case basis, and based on circumstances including the likelihood of HIV infection in the source patient.
- 4.8 PEP is **recommended** if:
 - 1) the source patient is HIV positive;
 - 2) the rapid HIV test is positive; or,
 - 3) or if there is a high index of suspicion that the source patient is HIV positive.
- 4.9 An Elisa HIV test should be done and documented on the exposed health care worker at baseline (i.e. within 24 hours of the injury), at 6 weeks, 12 weeks and at 6 months. In rare instances sero-conversion can take place over a period longer than 6 months.
- 4.10 Tests for occupational exposure to Hepatitis B and C, syphilis, malaria, etc. should also be considered if deemed appropriate. PCR and p24 antigen tests

are not routinely recommended as false positive and negative tests are not infrequent and these tests are costly.

- 4.11 Supportive counseling should be available to the health care worker. The health care worker should consider using a barrier method for safer sex. Avoidance of pregnancy in female health care workers is also recommended until sero-conversion is excluded. Pregnancy in health care workers should not preclude the use of PEP.
- 4.12 If HIV sero-conversion occurs the health care worker should be referred for appropriate counseling and treatment and informed about compensation claims (see Appendix 2).
- 4.13 An appropriate and confidential reporting system should exist within health facilities to document all occupational exposures and details on the source patient, and health care worker for medico-legal purposes and for possible compensation and insurance claims. All HIV related occupational exposures, irrespective of whether PEP is recommended, should be reported to health facilities.
- 4.14 Health care facilities should delegate responsible officials to oversee the reporting and recording of occupational HIV exposures.
- 4.15 If the HIV test on the source patient is negative, it can be assumed that there is a low risk of exposure to HIV unless there is reasonable information to suggest that the source patient is in the window period. In these cases PEP is **not recommended**.

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Type of occupational exposure, risk of exposure, HIV status of the source and recommendations for PEP

Percutaneous injury	Risk of exposure	Recommendation for PEP
Superficial injury, solid needle (Superficial dry needling)	Some risk	Consider Basic Regimen
Skin puncture, visible blood on the needle, hollow needle	High risk	Recommend Basic Regimen
Needle used in a vein or artery	Highest risk	Recommend Basic Regimen, Consider Expanded Regimen
Deep intra-muscular injury or injection into the body (Deep dry needling)	Highest risk	Recommend Basic Regimen, Consider Expanded Regimen
Mucosal and skin contacts	Risk of exposure	Recommendation for PEP
Unbroken healthy skin	Low risk	Not recommended
Compromised skin, small volume and brief contact	Low risk	Consider Basic Regimen
Compromised skin, large volume and/or prolonged contact	Increased risk	Recommend Basic Regimen
HIV Status of Source	Risk of exposure	Recommendation for PEP
Negative	Very Low	Not recommended
Positive, Clinical AIDS and/or a low CD4 cell count and /or a high viral load	Low for small volumes or short duration on intact skin	Consider Basic Regimen
HIV Positive, Clinical AIDS and/or a low CD4 cell count and /or a high viral load	High risk for percutaneous injuries	Recommend basic or expanded regimen depending on the severity of injury
Unknown		Consider PEP on a case-by-case basis