

BLOODBORNE PATHOGEN EXPOSURE: GUIDELINES AND RISKS

This data is from the Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV Recommendations for Postexposure Prophylaxis; *CDC MMRW Recommendations & Reports, June 29, 2001/ 50 (RR11); 1-42.*

- An exposure that may place a health care provider at risk for contracting Hepatitis B (HBV), Hepatitis C (HCV), or Human Immunodeficiency Virus (HIV) infection is defined as a percutaneous injury (example, a needlestick or cut with a sharp object) or contact of mucous membrane / non-intact skin (example, exposed skin that is chapped, abraded, or afflicted with dermatitis) with **blood, tissue, or other body fluids that are potentially infectious.**

Blood

Body fluids with visible blood

Cerebral spinal fluid

Synovial fluid

Pleural fluid

Peritoneal fluid

Pericardial fluid

Amniotic fluid

Semen & vaginal secretion

Feces, nasal secretions, saliva, sputum, sweat, tears, urine, and vomitus **are not** considered potentially infected **unless they contain blood.**

- Any direct contact (example, contact without barrier protection) to concentrated virus in a research laboratory is considered an exposure that requires clinical evaluation.
- For **Human Bites**, the clinical evaluation must include the possibility that both the person bitten and the person who inflicted the bite were exposed to bloodborne pathogens if a bite results in blood exposure.
- Health care providers should report occupational exposures immediately after they occur, particularly because HBIG and Hepatitis B vaccine (in addition to HIV postexposure prophylaxis) are most likely to be effective if administered as soon after the exposure as possible.

Risk for Occupational Transmission

HBV

- HBV infection is well recognized risk for health care providers.
- HBV has been demonstrated to survive in dried blood for at least 1 week.
- The risk of HBV infection is primarily related to the degree of contact with blood & hepatitis B e antigen (HbeAg) status of the source person.

HCV

- HCV is not transmitted efficiently through occupational exposure to blood. The average incidence of anti-HCV seroconversion after accidental percutaneous exposure from an HCV-positive sources is 1.8%.
- Data is limited on survival of HCV in the environment.

HIV

- The average risk of HIV transmission after a percutaneous exposure to HIV-infected blood has been estimated to approx. 0.3%; and after a mucous membrane exposure approx. 0.09%.
- 4 week postexposure prophylaxis with positive HIV exposure noting that the initiation of antiviral therapy be administered as soon after the exposure as possible.

BLOOD AND BODY FLUID EXPOSURE: GUIDELINES FOR MANAGEMENT

Introduction

Exposure to another person's blood or body fluids by needle stick, splash, or other exposure may place a worker at risk for exposure to HIV, Hepatitis B, Hepatitis C, or other infectious agents. Medication is available that may reduce a worker's risk of HIV transmission. A vaccine is available for Hepatitis B. There is currently no vaccine available for Hepatitis C or recommendation for post-exposure chemoprophylaxis.

Risk of Work Related Bloodborne Infection

Actual transmission of HIV in the workplace is rare. Studies of healthcare workers show that even the greatest risk of HIV infection due to injury with a hollow needle stick with HIV positive blood into the skin is 0.3%. That means that even with the highest risk, the chances of getting HIV from one such exposure is 1 in 300. The risk of HIV for splashes to the face and eyes is 1 in 900. Risk factors for hepatitis infection depend on illness in the source, the type of hepatitis virus, and previous vaccination status. Workers should always seek medical care immediately for any bloodborne exposure.

Management of Work Related HIV Exposure

Treatment for blood or body fluid exposure is based on recommendations by the CDC (Center for Disease Control). Only workers with the highest risk of HIV exposure should receive postexposure combination therapy. Medical treatment at the time of exposure with AZT and/or in combination with other medications appears to protect workers from HIV following exposure about 79% of the time.

Medication Information

Tell your doctor about any drug allergy and name all medicines you are currently taking. Treatment following blood exposure should be started within two hours post exposure.

AZT (ZDV, Zidovudine) – may cause headache, nausea, fatigue, anemia, low white blood cell count, low platelet count, muscle soreness, and, rarely drug-induced inflammation of the liver.

3TC (Lamivudine) – is generally well-tolerated alone and in combination with *AZT*.

IDV (Indinavir, Crixivan) – may cause kidney stones, stomach, or abdominal discomfort, changes in taste, or high bilirubin in the blood. During drug testing of *IDV*, it was reported that 4% of patients taking *IDV* developed kidney stones. Taking *Seldane*, *Hismanal*, *Propulsid*, *Halcion*, or *Versed* with *IDV* is not recommended. Take your medication exactly as prescribed. Notify the Employee Health office if you cannot tolerate your medication.

Follow Up

When you are seen for a blood or body fluid exposure, you will be given a follow-up appointment. On follow-up, you will be told lab results for yourself and the patient source of exposure. Further follow-up depends upon these results. Exposure management decisions are made by the Employee Health Service team of the Medical University Hospital Authority.