Blood and Body Fluid Exposures

What is an exposure?

In the workplace, an exposure to infected blood, tissue or other potentially infectious body fluids can occur by a puncture from a used needle or by a cut with a sharp object that has had contact with blood and body fluids. It can also occur after a splash, contact with mucous membranes (eyes, nose, mouth) or skin that is chapped or broken. Having an exposure potentially puts you at risk of acquiring Hepatitis B, Hepatitis C and HIV.

Body fluids capable of transmitting Hepatitis B, C, and/or HIV are:

Blood	Semen	Vaginal Secretions
Cerebrospinal Fluid	Synovial Fluid	Peritoneal fluid
Pleural fluid	Pericardial fluid	Amniotic Fluid
Saliva (Hep B only, unless blood present)	Breast Milk	

The following body fluids do not pose a risk of transmitting Hepatitis B, Hepatitis C, and HIV unless they contain visible blood:

Urine	Nasal Discharge	Feces	Sputum
Vomit	Tears	Sweat	

What's your risk?

If the patient you have been exposed to has Hepatitis B, Hepatitis C, or HIV, the risk that you might develop these diseases is relatively low:

If the patient has HIV infection, the risk of transmission is approximately 0.3% after a needle stick injury or cut with a used instrument, and 0.09% after exposure involving your mucous membranes or broken skin. Post exposure prophylaxis (to help prevent HIV transmission) is available in the Emergency department if deemed to be necessary.

If the patient has Hepatitis C, the risk of transmission is approximately 1.8% (ranges from 0-7%). There is no post-exposure prophylaxis or immune globulin available for Hepatitis C.

If the patient has Hepatitis B, the risk of transmission varies based on the source you've been exposed to, but ranges from 23% to 62%. Fortunately, most health care workers have been immunized against Hepatitis B, and there is no risk of transmission if you have documented immunity (i.e. lab report proving you are immune).

If you have not been immunized against Hepatitis B, you are unsure of your immune status, or have been told you are a non-responder, you will be offered immune globulin (HBIG) **if** the patient you've been exposed to has Hepatitis B. To be most effective, it should be given within 48 hours of your exposure and is available in the Emergency department.

The risk of infection with Hepatitis B, Hepatitis C, or HIV is dependent on:

- the amount of fluid you've been exposed to → more fluid = higher risk
- the amount of time you were in contact with the fluid → more time = higher risk
- the patient you've been exposed to → the more ill with the disease (Hepatitis or HIV) = higher risk
- the depth of the wound → deeper wound = higher risk

- the type of device → injury with a hollow bore, blood-filled needle = higher risk
- the type of fluid you've been exposed to → blood = higher risk

What should you do when you've had an exposure?

1. First aid:
   - Wash the area well with soap and water.
   - For a splash to your eyes, flush with water or saline solution.
   - For a mucous membrane exposure (mouth or nose) or skin exposure, flush with water.

2. Report the injury by calling:
   - SAFE (473-7233)
   - Employee Health's Exposure line (473-4666); an Occupational Health Nurse will return your call by the end of the business day.

In order to protect yourself and others, please refrain from the following until serology results of the patient you've been exposed to are known and you can be further counseled, if necessary:

- Unprotected sex
- Donating blood, semen, organs or tissues
- Sharing personal hygiene items such as toothbrush/razor/nail files

Do I need to go to the ER?

It is advisable you visit the ER if:
- the patient is known to be HIV (+), or has risk factors for HIV
- the patient is known to be Hep B (+) and you have never been immunized for Hepatitis B or have been told you are a "non-responder"
- the source of the blood/body fluid is unknown
- you've had a "high-risk" exposure:
  → a deep, percutaneous injury
  → injury with a device that was inserted directly into the patient's artery or vein
  → injury with a large bore, hollow needle

There your exposure will be evaluated to determine if there is a need for post-exposure prophylaxis (PEP), which is a medication that is given to reduce the risk of transmission of HIV. The evaluation considers the type of exposure/injury you have had and the patient you have been exposed to. PEP should be given as soon as possible after a high risk exposure.

What follow-up will be done?

An Occupational Health Nurse will investigate the injury and arrange to have blood work completed on you and the patient. Depending on the patient's blood work results, you may be advised to have follow-up blood work done 3 and 6 months after the exposure; this will also be the case if you have been exposed to an unknown source. The Occupational Health Nurse will contact you to advise of all blood work results. You should be aware of your educational institution/employer's policy regarding exposure to blood and body fluids and should see direction from them in the event of an exposure.