

GUIDELINE FOR FOLLOW UP TESTING ON BLOOD/BODY FLUID EXPOSURES AND NEEDLESTICK INJURY

Hepatitis B, Hepatitis C and HIV may be contracted through exposure to anybody fluid, particularly blood. Follow up testing of exposed people is appropriate if the source is positive for infectious diseases or if the source person is unknown. Any person that has positive serology on follow up testing for blood or body fluid exposure should be discussed with the on call Clinical Microbiologist/Infectious Disease physician.

EXPOSURE FROM UNKNOWN SOURCE

The risk of infection with Hepatitis B, Hepatitis C or HIV following a blood or body fluid exposure from an unknown source is usually low. A risk assessment should be performed at the time of the injury by a doctor and if necessary, should be discussed with the on call Clinical Microbiologist/Infectious Diseases physician.

In assessing whether an exposure has the potential to transmit a blood borne virus (BBV), considerations are:

- Type of exposure;
- Type of body substance;
- Volume of blood or body fluids;
- Length of time in contact with blood or body fluids time elapsed since exposure.

Additional considerations after a sharps injury are:

- Presence of visible blood or body substance on the device causing the injury;
- Type of device involved;
- Whether a hollow bore needle or solid sharp object;
- Procedure for which the device was used (for example, into a vein or artery);
- Gauge of the needle or device;
- Time elapsed since use of device whether the injury was through a glove or clothing.

The risk assessment is undertaken urgently as initiation of post exposure prophylaxis (PEP) may potentially prevent a life-threatening disease. PEP is expensive and may have significant side effects, so an accurate risk assessment is important in ensuring PEP is only recommended when warranted. A Clinical Microbiologist/Infectious Diseases Physician is always available to follow up all reported needlestick, blood or body fluid exposures.

If the risk is deemed to be low, PEP will not be given. The exposed person should have serology for Hepatitis B, Hepatitis C and HIV performed at the time of the incident, 3 months and 6 months after the exposure. They should be informed to seek medical attention if they develop jaundice or an infectious mononucleosis syndrome in the six months after their exposure.

TIME POST EXPOSURE

TEST REQUIRED

- | | |
|---------------------------|--------------------------------------|
| ❖ Time of Incident | ❖ HBsAg, and HBsAb, HCVAb, HIV Ag/Ab |
| ❖ 3 Months | ❖ HBsAg, and HBsAb, HCVAb, HIV Ag/Ab |
| ❖ 6 Months | ❖ HBsAg, and HBsAb, HCVAb, HIV Ag/Ab |

EXPOSURE FROM SOURCE INFECTED WITH HEPATITIS C

The risk of infection following a blood or body fluid exposure where the source patient is infected with Hepatitis C is around 1.8%. This risk may change depending on the circumstances of the exposure. There is no effective PEP or vaccination for Hepatitis C. It is recommended to perform follow up testing at the time of the incident, 3 months and 6 months after the exposure. The exposed person should be informed to seek medical attention if they develop nausea, abdominal pain or jaundice in the six months after their exposure.

EXPOSURE FROM SOURCE INFECTED WITH HIV

GUIDELINE FOR FOLLOW UP TESTING ON BLOOD/BODY FLUID EXPOSURES AND NEEDLESTICK INJURY

The risk of infection following a blood or body fluid exposure where the source patient is infected with HIV depends on the circumstances of the exposure, but is estimated at < 1% in most situations. A risk assessment should be performed at the time of the injury and this should be discussed with the on-call Clinical Microbiologist/Infectious Diseases physician. In many cases, HIV PEP will have been offered to the exposed person and follow up should have been arranged with the Infectious Diseases service at CCDHB. If the risk of transmission was deemed very low, PEP may not be given. In either situation, it is recommended to perform follow up testing with HIV Ag/Ab at the time of the incident, 3 months and 6 months after the exposure. The exposed person should be informed to seek medical attention if they develop fever, rash or an infectious mononucleosis syndrome in the three months following their exposure.

EXPOSURE FROM A SOURCE WITH HEPATITIS B

The risk of infection with Hepatitis B following a blood or body fluid exposure where the source is infected with Hepatitis B depends on the nature of the exposure, on the infectivity of the source (HBeAg positivity) and the immunity of the exposed person (vaccination status). Transmission may be as high as 30% in a non-immune recipient where the source person is HBeAg positive, or approximately 6% if the source person is HBsAg positive but HBeAg negative. A risk assessment should be performed at the time of the injury and this should be discussed with the on-call Clinical Microbiologist/Infectious Diseases physician.

If the exposed person has been vaccinated and is known to have HBsAb >10 IU/mL documented at any time following vaccination, there is no need for HBV PEP. No follow up testing is required.

If the exposed person does not have HBsAb >10 IU/mL demonstrated at any time following vaccination, Hepatitis B Immunoglobulin and a booster dose of Hepatitis B vaccination should have been given within 72 hours of exposure. Follow up testing is outlined in the table below (HBsAb ≤10 IU/mL column).

If the exposed person has not been vaccinated, Hepatitis B Immunoglobulin and the first dose of Hepatitis B vaccination should have been given within 72 hours of exposure. Two further doses should be given at four weekly intervals. Follow up testing is outlined in the table below.

TIME POST EXPOSURE	SOURCE HBV + RECIPIENT HBsAB ≤10IU/mL	SOURCE HBV + RECIPIENT NEVER IMMUNISED
4 Weeks	-	2 nd dose HBV vaccine
6 Weeks	HBsAg, HBsAb	-
8 Weeks	-	3 rd dose HBV vaccine
3 Months	HBsAg, HBsAb	HBsAg, HBsAb
6 Months	HBsAg, HBsAb	-

For persons given single booster of Hepatitis B vaccine: If HBsAb at three months still ≤10 IU/mL, give two further doses of Hepatitis B vaccine each four weeks apart. For persons given three doses of Hepatitis B vaccine: If HBsAb at three months still ≤10 IU/mL, repeat complete course (3 doses) of Hepatitis B vaccine. For further information see [Immunisation Handbook 2020 online | Ministry of Health NZ](#).