

hepatitis B HIV infection

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ACCIDENTAL EXPOSURE TO BLOOD OR OTHER BODY FLUIDS POTENTIALLY CONTAMINATED

● WITH hepatitis B virus (HBV)

● hepatitis C virus (HCV)

● OR human immunodeficiency virus (HIV)

INFORMATION FOR EXPOSED HEALTH WORKERS

No undue pressure can be made on the source individual to obtain his or her consent to conduct laboratory analyses. It is incumbent upon a health professional other than the exposed worker to request the person's consent.

Some of the source individual's behaviours, such as drug injection and risky sexual practices, should also be considered.

The doctor will decide on the follow-up measures required, based on the information provided and the tests performed.

In some cases, if the source person cannot be identified or refuses to undergo testing, follow-up will proceed as if the person has been exposed to blood or a body fluid that is contaminated.

● Screening tests AND PREVENTIVE INTERVENTIONS

If the doctor considers that the exposure presents a risk of transmission, he or she may prescribe blood tests, to be done as soon as possible after the event, to determine whether the exposed person was infected

prior to the exposure. Other tests may subsequently be done to establish whether or not there was transmission at the time of the exposure.

Interventions to prevent hepatitis B and HIV infection can be carried out; in addition, **prompt diagnosis of hepatitis C allows for early treatment, which has a cure rate of over 80%.**

Hepatitis B (HBV):

Antibodies (immunoglobulins) or a vaccine can be administered alone or in combination to prevent hepatitis B following accidental exposure to the virus. These measures are known to be effective

Ideally, immunoglobulins should be administered within 48 hours of exposure since their effectiveness decreases over time and is unknown if given beyond 7 days of exposure.

HIV infection:

The decision to prescribe antiretroviral therapy is based on the risk associated with the exposure and on time of exposure. Preventive treatment should start as soon as possible, ideally within 2 hours of exposure; it is probably ineffective if it is initiated more than 72 hours following exposure.

To be effective, medications must be

taken for 28 days. Antiretrovirals can have side effects, some of which can be major, especially at the beginning. However, over time, these drugs have been improved and preventive treatments are increasingly well tolerated.

The effectiveness of preventive HIV treatment (around 80%) is recognized when administered rapidly.

● Prevention for CLOSE CONTACTS

If the doctor determines that you may have contracted HBV, HCV or HIV, you must take certain preventive measures until any possibility of infection is eliminated, to protect the people around you. This period can last **six months**, during which time you must:

- refrain from donating blood, plasma, sperm, tissues or organs, and never lend or borrow razors and toothbrushes;
- practice safe sex and avoid having unprotected sexual relations (always use a condom) in case of possible HIV or hepatitis infections. In addition, tell your sex partner(s) that you may have been exposed to HIV, HBV or HCV;
- if you are a woman, avoid getting pregnant or breastfeeding, in case of possible exposure to HIV or HBV. There are no specific recommendations for HCV;

- reduce harm associated with drug use: avoid sharing injection equipment; use other means than injection when taking drugs; or stop drug use;
- immediately wash and disinfect any blood-stained object or surface using a solution of 1 part bleach to 9 parts water; the solution is effective for a week if kept in a sealed opaque container.

- For more information, call Info-Santé at 8-1-1 or contact your doctor.

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HIV infection hepatitis C

You have been accidentally exposed to blood or another body fluid potentially contaminated with hepatitis B virus (HBV), hepatitis C virus (HCV) or human immunodeficiency virus (HIV) while providing care to a patient.

● Risk associated WITH ACCIDENTAL EXPOSURE

Exposure to blood or other body fluids carries the risk of contracting one of the blood-borne infections caused by the HBV, HCV or HIV.

Such a risk exists when blood, sperm, serum, vaginal secretion, plasma, or any other body fluid (tears, nasal secretions, urine) **visibly soiled** with blood comes into contact with a wound that hasn't healed or a mucous membrane (nose, mouth, eyes), or through broken skin (e.g. needle stick, bite, cut with a soiled instrument).

The level of risk varies with the type of exposure. For instance, the risk of HBV, HCV and HIV transmission is lower if contact is with a mucous membrane than if with broken skin (percutaneous exposure). In the latter case, the depth of the wound, quantity

of blood involved and type of needle or instrument are all elements that affect level of risk. As for exposure to HIV, the risk is greater if the instrument is visibly soiled with blood, the wound is deep, the instrument has just been in contact with a blood vessel of the source person, or the source person's viral load is high.

Healthy skin is a good barrier against HBV, HCV and HIV. Tears, nasal secretions, urine and saliva that are not soiled with blood do not pose a risk, except saliva during a dental procedure or in the case of a human bite.

● Effects OF HBV, HCV AND HIV

HBV attacks the liver and causes an infection. Over half of the persons affected do not become noticeably sick. Others develop a variety of symptoms such as jaundice (yellowing of the skin and eyes), fever, abdominal discomfort, nausea, vomiting and diarrhoea. Most people recover completely and are then protected against hepatitis B for the rest of their lives.

Infected persons can pass on the virus for several weeks before they develop symptoms and as long as the virus is in their blood. Up

to 10% of people will stay infected for more than six months, and often for life; this is called a chronic infection. Infected individuals can be healthy carriers of hepatitis B virus, that is, the disease will evolve quietly. Nonetheless, they can spread the virus and are at greater risk of developing cirrhosis or liver cancer. Regular medical check-ups are necessary.

HCV also attacks the liver and causes an infection that generally goes unnoticed. However, some people suffer from fatigue or nausea and, less often, jaundice. Only about 20% of people infected with the hepatitis C virus recover spontaneously. In the rest of cases, the virus remains in the system, and when the infection lasts over six months, it is then considered a chronic infection. Some chronic carriers will not develop complications for decades, while others will develop cirrhosis of the liver. Nonetheless, all hepatitis C carriers can transmit the virus and must have regular medical check-ups.

HIV attacks the body's immune system: signs and symptoms of acquired immunodeficiency syndrome (AIDS) appear when the immune system is very weak. There are drugs to control viremia, that is, the quantity of virus in the blood, and to prevent the immune system from

deteriorating. These drugs can slow down the infection or prevent it from progressing to AIDS, and can prolong the lives of people living with HIV.

● Risks of TRANSMISSION

The risk of contracting an infection as a result of exposure to blood or other body fluids varies depending on the virus involved.

Hepatitis B (HBV):

If the person exposed has not been vaccinated or has never been infected, the risk of transmission is 1% to 31%, depending on the type of exposure and the level of infection of the source individual.

Hepatitis (HCV):

The risk of transmission is approximately 0.5% (5 cases per 1,000) for percutaneous exposures (contaminated needlestick injury) in the context of a work-related injury. Finally, HCV transmission following contact with a mucous membrane or resulting from a bite is much rarer.

HIV infection:

The risk of transmission is 0.3% (3 cases per 1,000) for percutaneous exposures. Generally, the risk is 10 times lower in the case of contact with a mucous membrane.

● The source PERSON

To determine the risk of infection, it is important to know if the source individual (the person whose blood or body fluid is involved) is infected. The only reliable way to do this is to carry out blood tests, which can only be done once the source individual has given free and informed consent.

If the person is unable to give consent, because of a psychiatric problem, for instance, then consent must be obtained from his or her legal representative. If the person is under psychiatric care, the psychiatrist's authorization must be obtained before the person is asked to provide consent.