



MOUNT SINAI
SCHOOL OF
MEDICINE

MOUNT SINAI – IRVING J. SELIKOFF CENTER FOR OCCUPATIONAL & ENVIRONMENTAL MEDICINE

Medical Treatment for a Blood Exposure Incident

Workers exposed to blood, or body fluids that may contain blood, should:

- Immediately wash exposed sites with soap and water. Flush mucous membranes (eyes, nose, and throat) or open sores or wounds exposed to blood or body fluids with copious amounts of water. Stringent scrubbing is NOT recommended because it can break down normal barriers against transmission.
- Seek medical attention immediately (in some cases you may need treatment within hours). DO NOT WAIT until your shift is over. It is best if the National Clinician's Post-Exposure Prophylaxis Hotline (PEpline)/New York State PEpline is consulted as part of your medical visit. They can both be reached for advice about treatment by having a healthcare professional call **1-888-448-4911**.
- If you can quickly locate your vaccination history, bring those records when you go for treatment or follow-up. If you know the person to whose blood you were exposed, bring information (test results, medical history) about their medical status.
- If you know the person to whose blood you were exposed, your employer should get consent to do a rapid (30 minute) blood test on that person for HIV/AIDS. In some cases, consent is not required.
- Once the urgent situation has been taken care of, you may contact the nearest occupational health clinic in New York State (<http://www.health.state.ny.us/environmental/workplace/clinic.htm>) or in the country (<http://www.aoec.org/directory.htm>) for recommendations and follow-up.
- This fact sheet is not a substitute for medical care. The purpose is to direct the exposed worker to the proper medical provider.
- Report any exposure to your employer immediately. Complete an incident or exposure form. If none is available, write a memo informing them of the exposure incident (date, time, location, and what you were doing). Keep copies and insist that documents are placed in your personnel files.

Why is exposure to blood, or body fluids that contain blood, a concern?

The danger of blood and body fluids that contain blood is that they may contain microbes that can give you infections. Of most concern are blood-borne viruses. These include viruses that cause hepatitis B and C (HBV and HCV) and the human immunodeficiency virus (HIV) that causes acquired immunodeficiency syndrome (AIDS). Hepatitis B infection is 100 times more easily transmitted than HIV and 10 times more than HCV. Blood-borne viruses can also be transmitted by semen, vaginal fluids, and body fluids other than blood (like spine, chest or abdominal fluids) and some can be transmitted by saliva and breast milk. Feces, nasal secretions, sputum, sweat, tears, urine and vomitus are considered low risk for transmission of blood-borne infections unless they are visibly bloody.

Your risk of getting a viral infection from an exposure depends on factors such as the amount of blood you were exposed to, how much virus was in the blood, how deep the blood penetrated in your tissues and the presence of wounds or sores in your skin or other mucous membranes.

How can I be exposed to blood?

You may be exposed directly to visible blood, or you may be exposed to visible or invisible blood from an object that has been contaminated in the past with blood. Exposure to blood is only a problem if it actually gets into your body. This can happen if you are stuck or cut with a needle or sharp object that has been contaminated with someone else's blood. Blood can also enter your blood directly if it contacts your mucus membranes, the slippery tissue around your eyes, nose and mouth. That can happen if you are splashed in the face and the fluid gets into your mouth, nose or eyes. *Blood does not penetrate intact skin*, but it rarely can get into your bloodstream through open cracks, scratches, or rashes on your skin, or through wounds. The bite from another human has a small risk of a blood-borne virus infection.

Do I need immediate medical care?

You need medical attention within a few hours. The benefits of immediate treatment decrease as time goes on. Treatment against the AIDS virus is most effective within hours of exposure and less effective after 36 hours. Treatment for hepatitis B (HBV) is most effective within 24 hours and much less effective after 7 days. However, **the hepatitis B vaccine will protect you from hepatitis B infection.** Workers at risk of blood-borne exposure must be

offered the vaccine by their employer. A blood test after the series of vaccinations is recommended to assure that the vaccine resulted in appropriate protection. There is no effective post-exposure treatment for HCV.

Do I need to see a doctor and what kind?

It is preferable to see a doctor familiar with the Occupational Safety and Health Administration (OSHA) Blood-borne Pathogen Standard. If you work in a job where you are expected to be exposed to blood, your employer must have a written Blood-borne Pathogen Exposure Control Plan that names a healthcare provider. Do not wait until your shift is over. Go to any Emergency Department if you do not know who to see. Provide the doctor with this national hotline phone number for physicians to get the most up-to-date advice on treatment: **1-888-448-4911. Remember, you have only a few hours after the incident to obtain the best post-exposure protection!**

Do I need certain tests and how quickly?

The most urgent test is the one on the person to whose blood you were exposed. This will help determine if you need to get or to continue treatment. If the person who is the source of the blood is known, OSHA mandates that your employer must make every effort to test them for hepatitis and HIV. They should do a rapid (30 minute) test for HIV. In some states, the law may authorize to test the source person even without consent. This is true in New York, but only under limited circumstances, including the inability of the source patient to give consent.

There is no test you can do immediately to find out if you were infected, because viruses take weeks to multiply in your body to the point where they can be detected. You should get a baseline test on your blood as soon as possible, but no later than 2 weeks, to know if you already had an infection before this exposure occurred. If you do not consent to a baseline, your employer must preserve your blood for 90 days after the incident, in case you change your mind.

Are there tests that would prove I have recently been exposed?

If you had a baseline test that was negative and you developed positive tests for blood-borne viruses within 6 months after an exposure, it would indicate a recent infection.

What is the treatment for acute exposures?

The risk of infection from each of the viruses is assessed and, based on the risk; the patient may be given medications to prevent the viral infections from developing. AIDS can be prevented by taking anti-viral drugs. These usually are not given unless it is likely that you were exposed to HIV. The treatment following exposure to hepatitis B is to give the hepatitis B vaccine (if the person has not already been vaccinated) or immune globulin, or both. Be mindful, however, that the best treatment in medicine is prevention. An effectively administered **Hepatitis B vaccine series before your exposure** is currently the best treatment available to prevent the development of this disease. If you are exposed to hepatitis C, you will need to be followed regularly to determine if you have contracted hepatitis C. If so, early treatment can be effective in preventing chronic hepatitis C infection. Treatment for hepatitis B and HIV are similar for pregnant women, except there are certain anti-viral drugs that pregnant women should not take.

What follow-up is needed?

Since it may take a while for an infection to show up, your physician may tell you to have your blood tested for signs of infection periodically for up to 6 months. Under the OSHA Blood-borne Pathogen Standard, your employer must provide you with post-exposure treatment and counseling.

How does this information apply to children and others in the community?

For children's health and pregnancy concerns you can check with your local Pediatric Environmental Health Specialty Unit at <http://aoec.org/PEHSU/index.html>. More information for pregnant women can be obtained from the Organization of Teratology Information (OTIS) at www.otispregnancy.org.

Suggested further readings:

<http://www.cdc.gov/mmwr/PDF/rr/rr5706.pdf> (HIV, HCV, HBV, tetanus, mass casualties, 2008)

<http://www.cdc.gov/mmwr/PDF/rr/rr5409.pdf> (HIV occupational, 2005)

<http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf> (HIV, HCV, HBV occupational, 2001)

<http://www.osha.gov/SLTC/bloodbornepathogens/index.html> (OSHA Standard)

**Hudson Valley Clinical Center
St. John's Riverside Hospital
Yonkers, NY 10701
914-964-4737**

**Manhattan Clinical Center
Mount Sinai Medical Center
New York, NY 10029
212-241-6336**