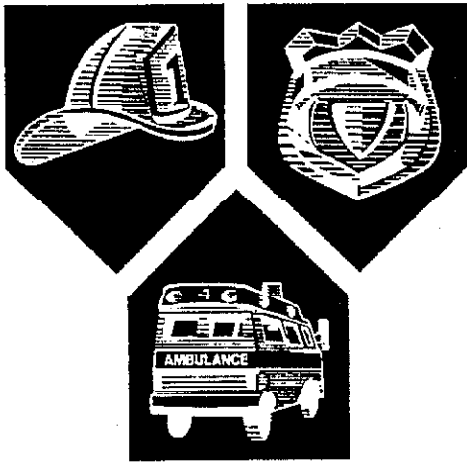


Protecting Yourself against Serious Bloodborne Infections on the Job



A GUIDE FOR
FIRST RESPONDERS



A program
for employees
exposed to
bloodborne infections

Where there's blood... there's risk of serious infections

Introduction

If you are an emergency medical responder, fire fighter, or law enforcement officer, your duties in an emergency may expose you to infected blood and other body fluids, increasing your risk of contracting serious bloodborne infections, such as hepatitis B and AIDS (the Acquired Immunodeficiency Syndrome).

This booklet summarizes key guidelines recommended by the Occupational Safety and Health Administration (OSHA)* and how they apply to you and your job.

*For further information related to OSHA guidelines, please refer to the following: *A Curriculum Guide for Public-Safety and Emergency-Response Workers: Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus* (U.S. Department of Health and Human Services, February 1989); "Occupational exposure to bloodborne pathogens: proposed rule and notice of hearing" (29 *Federal Register*, Part 1910, OSHA, May 30, 1989); "Protection against viral hepatitis: Recommendations of the Immunization Practices Advisory Committee (MMWR), February 9, 1990).



You can reduce your risk of bloodborne infection by following these recommendations:

- Understand the infections.
- Realize that you usually cannot tell which person may carry an infection.
- Treat *all* blood or other body fluids as infectious.
- Handle *all* used needles and other sharp objects ("sharps") that may have been in contact with blood as if they are infectious.
- Use proper protective equipment.
- Follow proper work practices.
- Discuss with your doctor whether you are a candidate for vaccination against hepatitis B.
- Follow your department's procedure if you have been exposed to blood or other body fluids.

UNDERSTANDING THE INFECTIONS

Hepatitis B

Hepatitis B is a disease of the liver that is caused by the Hepatitis B Virus (or "HBV"). Many people infected with HBV never feel sick, while others get a mild flu-like illness. Other people get jaundice (yellow eyes and skin), feel very tired, lose their appetites, and have other severe health problems after being infected with HBV. These symptoms can last as long as six months. HBV infection leads to death in about 1 in 100 cases.

While most infected people completely recover, up to 10 in 100 carry the virus for a long time without having any symptoms. These carriers are *infectious*, which means they can spread HBV to others. And, carriers are at risk of developing serious, and sometimes fatal, liver diseases such as cirrhosis and liver cancer.

In the United States, there are about 1 million HBV carriers and 300,000 new HBV infections each year.

Important points about hepatitis B	
Spread mostly through contact with	Blood Semen Vaginal fluids Saliva (from a bite)
Chance of infection after being stuck with an infected needle	6% to 30%
Survival of virus outside the body	Seven days or longer
Vaccine available	Yes



The AIDS virus

The Human Immunodeficiency Virus (or "HIV") can cause AIDS. HIV destroys the body's natural defenses against a wide range of illnesses and leads to death in most cases. A person infected with HIV may carry the virus for years before starting to look or feel sick. Even though that person may not appear to be sick, he or she is still infectious and can transmit that virus to others.

In the United States, the number of HIV carriers is 1 million or more, with at least 40,000 new infections among adults and adolescents each year. As of 1990, 22 cases of job-related AIDS infection have been documented in the world, and none involved first responders. However, it is important to note again that nearly every case of AIDS results in death.

Important points about AIDS	
Spread mostly through contact with	Blood Semen Vaginal fluids
Chance of infection after being stuck with an infected needle	0.5%
Survival of virus outside the body	Several hours
Vaccine available	No

CONTACT WITH SERIOUS BLOODBORNE INFECTIONS ON THE JOB

How contact with these viruses can occur on the job

You can be exposed to HBV and/or HIV if you have direct contact with infected blood or other body fluids in one or more of the following ways:

- Being stuck with infected needles or other sharps
- Having infected blood or other body fluids splashed
 - into the mouth, eyes, or nose
 - onto skin that is cut, scratched, or has sores, rashes, or other skin conditions
- Being bitten by a human
 - saliva carrying HBV may be infectious

The risk of infection

Direct contact with a virus does not always mean that you will become infected; however, the more frequently you are exposed to infected blood or other body fluids, the more likely you are of becoming infected.

For both HBV and HIV, the risk of infection from splashes of infected blood into the mouth, eyes, or nose is lower than the risk from being stuck with a needle. You are unlikely to catch HBV through casual, everyday contact, such as touching or shaking hands with an infected person, eating food prepared by an infected person, or from contact with drinking fountains, telephones, toilets, or other surfaces. In addition, you will not catch HIV through casual contact.



Body fluids that can carry the viruses

Blood is an important source of HBV and HIV in the work setting. Other body fluids that can carry the viruses include:

- Semen and vaginal fluids
- Fluid from the brain, spine, chest cavity, stomach, heart, and joints, as well as fluids in the womb of a pregnant woman
- Saliva (from a bite)

Follow universal precautions

Universal precautions are procedures developed by the Centers for Disease Control (CDC) and incorporated into OSHA guidelines, which say that workers should treat all blood and other body fluids as infectious. **Workers should practice universal precautions whenever they may be exposed to blood or other body fluids.** This rule is important because it is often impossible to tell if the person you come in contact with has HBV or HIV.

In an emergency when you cannot identify body fluids or tell whether they contain blood, treat all body fluids as potentially infectious.

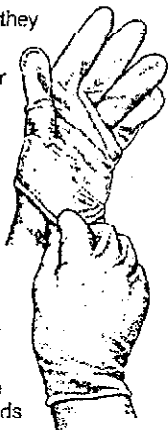
PROTECTING YOURSELF AGAINST SERIOUS BLOODBORNE INFECTIONS ON THE JOB

Use personal protective equipment

Appropriate protective attire should always be worn to help reduce the risk of exposure. Standard personal protective equipment for infection control includes the following:

Gloves

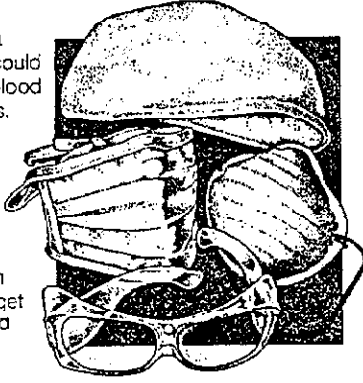
- Use well-fitting, disposable, latex or vinyl gloves for any task involving exposure to blood and other body fluids. Make sure extra pairs are available.
- Before putting on gloves, make sure they have no holes, cracks, or tears.
- Change gloves if they become torn or dirty.
- Use fit tighter gloves when working around broken glass or sharp surfaces — for instance, when removing a person from an auto wreck.
- Change gloves between handling different people.
- Remove gloves by grasping the cuffs and pulling them off inside out.
- Dispose of latex gloves in identifiable medical-waste containers. Wash hands following glove removal.





Masks, eyewear, gowns

- Wear a mask and safety glasses (or a face shield) if you could be splashed with blood or other body fluids.
- Wear fluidproof gowns or aprons during emergency deliveries.
- Keep a change of uniform available in case your clothes get soaked or splashed with blood.



Resuscitation equipment

- Use mechanical respiratory-assist devices. Devices with a one-way valve are preferred
- Pocket resuscitation masks should be carried by all personnel who might provide emergency treatment.

Be sure to explain that you are taking these precautions for the protection of both you and the victim. Stress that this is standard procedure.

Follow proper work practices

Precautionary measures

- Cover all cuts and scratches on your skin before going to work.

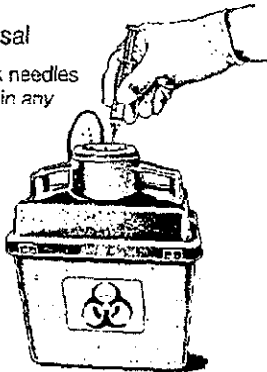
PROTECTING YOURSELF AGAINST SERIOUS BLOODBORNE INFECTIONS ON THE JOB

Handwashing

- Handwashing is the best overall protective measure against most communicable diseases.
- Wash your hands and other skin surfaces thoroughly with soap and running water immediately after contact with blood or other body fluids.
- When running water is not available, waterless, hand-wash substitute should be used.

Needles and sharps disposal

- Do not recap, bend, or break needles or manipulate them by hand in any way.
- Place all needles and other sharp objects in puncture-resistant containers.
- Place these containers as close as possible to the area where sharps are used.
- Remove disposal containers when they are full.



Cleaning up blood spills

- Always wear gloves. Wear eye and face protection if splashes could occur.
- Clean up spills with disposable towels saturated with a germ killer or bleach-and-water solution.



- Wipe area with clean towels and let air-dry.
- Place all infected items for disposal in a leakproof container identified as medical waste. Remove gloves last and wash hands.

Cleaning your clothes

- Wear gloves; handle soiled items as little as possible.
- Carry clothing in bags or in other containers that do not leak.
- Place all items in a second bag if the first bag gets torn or has blood or other body fluids on it.
- Wash and dry uniforms according to directions on the label.

Equipment disposal

- Dispose of face mask or clean and disinfect face shields immediately after use, following universal precautions.
- Use an area specifically set aside for cleaning and disinfecting emergency equipment at your workplace.

Labeling Infectious waste

Put infectious waste in special color-coded bags labeled "BIOHAZARD." Your state, city/town, facility, or department may also have rules you must follow. Find out what kind of color or tag system is used where you work. The tag should carry a BIOHAZARD message in words and/or pictures. Attach the tag securely to the container holding the infectious waste.



HEPATITIS B VACCINE

While there is no medical way to prevent AIDS, vaccines are available to help prevent hepatitis B infection. Discuss with your doctor whether you are an appropriate candidate for vaccination against hepatitis B.



**FOR MORE INFORMATION
CONTACT YOUR MEDICAL DIRECTOR.**

For additional information you may wish to contact:

- Your professional association
- OSHA Publications Office, Room N-3101,
200 Constitution Avenue, NW, Washington, DC
20210; (202) 523-9667
- Office of Information, OSHA, U.S. Department of
Labor, Washington, DC 20210; (202) 523-6027
- Centers for Disease Control, U.S. Department of
Health and Human Services, Atlanta, GA 30333;
(404) 639-3311

