

Bloodborne Diseases

There are many diseases carried by blood. The two most common are the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV).

HBV: Hepatitis means "inflammation of the liver." Hepatitis B Virus (HBV) is the major infectious bloodborne hazard you face on the job.

If you become infected with **HBV**:

- ✓ *You may suffer from flu-like symptoms becoming so severe that you may require hospitalization.*
- ✓ *You may have no symptoms at all, being unaware that you are infected.*
- ✓ *Your blood, saliva and other body fluids may be infected.*
- ✓ *You may spread the virus to sexual partners, family members and even unborn infants.*

Many people are unaware that they've been infected with **HBV**. However, **HBV** may severely damage your liver, leading to cirrhosis and almost certain death.

HIV: The Human Immunodeficiency Virus attacks the body's immune system, causing the disease known as AIDS. Currently there is no vaccine to prevent infection.

A person infected with **HIV**:

- ✓ *May carry the virus without developing symptoms for several years.*
- ✓ *May suffer from flu-like symptoms, fever, diarrhea and fatigue.*
- ✓ *Will eventually develop AIDS.*

- ✓ *May develop AIDS-related illnesses including neurological problems, cancer and other opportunistic infections.*

HIV is transmitted primarily through sexual contact, but also may be transmitted through contact with blood and some body fluids. **HIV** is not transmitted by touching or working around people who carry the disease.

Transmission of Pathogens

HBV, HIV and other pathogens may be present in blood and other materials, such as:

- ✓ *Semen and vaginal secretions*
- ✓ *Torn or loose skin*
- ✓ *Unfixed tissue or organs*

Bloodborne pathogens can cause infection by entering your body in a variety of ways, including:

- ✓ *Open cuts*
- ✓ *Skin abrasions*
- ✓ *Acne*
- ✓ *Nicks*
- ✓ *Dermatitis*
- ✓ *The mucous membranes of your mouth, eyes or nose.*

Special-education employees should take extra caution while working with severely disabled children. Some disabled children:

- ✓ *May be more vulnerable to injury*
- ✓ *May have special medical needs*
- ✓ *Are more dependent on adults for personal care.*

Accident/Injury: You can become infected by accidentally injuring yourself with a sharp object that is contaminated. Sharp objects may be:

- ✓ *Broken glass*
- ✓ *Needles*
- ✓ *Exposed ends of orthodontic wires*
- ✓ *Sharp metal*
- ✓ *Knives*

Indirect Transmission: Bloodborne diseases can also be transmitted indirectly. This happens when you touch an object or surface contaminated with blood or other infectious materials and transfer the infection to your:

- ✓ *Mouth*
- ✓ *Nose*
- ✓ *Eyes*
- ✓ *Open Skin*

Contaminated surfaces are a major cause of the spread of hepatitis. HBV can survive on environmental surfaces dried and at room temperatures for at least one week.

What Are Universal Precautions

Universal precautions require that you consider every person, all blood and most body fluids to be potential carriers of infectious disease.

Things you should DO:

- ✓ Hands should be washed frequently as needed using soap and water, and should never be placed in the mouth or eyes.
- ✓ Gloves should be worn anytime a possible exposure may occur.
- ✓ Hands should be washed immediately after gloves are removed. A new set of gloves should be used for contact with each person. Gloves should never be washed or wiped with any substance.
- ✓ Use general purpose utility gloves (e.g., rubber household gloves) for housekeeping chores involving potential blood contact and for instrument cleaning and contamination procedures. Utility gloves may be decontaminated and reused but should be discarded if they are cracked or discolored, or if they have punctures, tears, or other evidence of deterioration.
- ✓ Needles and other sharp objects should be placed in a puncture resistant container immediately after use. Needles shall not be recapped, bent or broken prior to disposal.
- ✓ Health care workers with weeping or exudative lesions or dermatitis, which cannot be securely covered, shall refrain both from direct patient care and from handling clean or soiled patient equipment.
- ✓ First aid persons whose tasks include participation in cardiopulmonary resuscitation (CPR) should use a one-way mask when performing mouth-to-mouth resuscitation.

- ✓ Linens, clothing or other materials that are visibly contaminated with blood or body fluids shall be placed in bags or containers that are impervious to moisture before transporting for cleaning. Gloves should be worn while bagging these materials.
- ✓ Blood and other visibly blood-contaminated specimens of body fluids or tissues shall be handled appropriately.

Personal Protective Equipment Cuts Risks

Wearing gloves, gowns, masks, and eye protection can significantly reduce health risks for workers exposed to blood and other potentially infectious materials. The new OSHA standard covering bloodborne disease requires employers to provide appropriate personal protective equipment (PPE) and clothing free of charge to employees.

Workers who have direct exposure to blood and other potentially infectious materials on their jobs run the risk of contracting bloodborne infections from Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) which causes AIDS, and other pathogens. About 8,700 health care workers each year are infected with HBV, and 200 die from the infection. Although the risk of contracting AIDS through occupational exposure is much lower, wearing proper personal protective equipment can greatly reduce potential exposure to all bloodborne infections.

Selecting PPE: Personal protective clothing and equipment must be suitable. This means the level of protection must fit the expected exposure. For example, gloves would be sufficient for a laboratory technician who is drawing blood, whereas a pathologist conducting an autopsy would need considerably more protective clothing.

PPE may include gloves, gowns, laboratory coats, face shields or masks, eye protection, pocket masks, and other protective gear. The gear must be readily accessible to employees and available in appropriate sizes.

If an employee is expected to have hand contact with blood or other potentially infectious materials or contaminated surfaces, he or she must wear gloves. Single use gloves cannot be washed or decontaminated for reuse. Utility gloves cannot be washed or decontaminated for reuse. Utility gloves may be decontaminated if they are not compromised. They should be replaced when they show signs of cracking, peeling, tearing, puncturing, or deteriorating. If employees are allergic to standard gloves, the employer will provide hypoallergenic gloves or similar alternative.

Employees should wear eye and mouth protection such as goggles and masks, glasses with solid side shields, and masks or chin-length face shields when splashes, sprays, splatters, or droplets of potentially infectious materials pose a hazard through the eyes, nose or mouth. Extensive coverings such as gowns, aprons, surgical caps and masks, and shoe covers or boots are needed when gross contamination is caused. This often occurs, for example, during orthopedic surgery or accidents.

Avoiding Contamination: The key is that blood or other infectious materials must not reach an employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions for duration of exposure.

Decontaminating and Disposing of PPE: Employees must remove personal protective clothing and equipment before leaving the work area or when the PPE becomes contaminated. If a garment is penetrated, workers must remove it immediately or as soon as feasible. Used protective clothing and equipment must be placed in designated containers for storage, decontamination, or disposal.

Other Protective Practices: If an employee's skin or mucous membranes come into contact with blood, he or she must wash with soap and water and flush eyes with water as soon as feasible. In addition, workers must wash their hands immediately or as soon as feasible after removing protective equipment. If soap and water are not immediately available,

employers may provide other handwashing

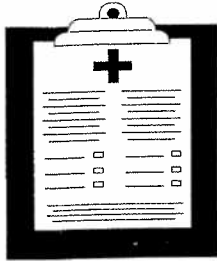
measures such as moist towelettes. Employees still must wash with soap and water as soon as possible. Employees must refrain from eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses in areas where they may be exposed to blood or other potentially infectious materials.

Procedures for handling unplanned or emergency situations where exposure to blood or body fluids occurs

- ✓ The employee must wash the affected area immediately and thoroughly. If an eye or mucous membrane (mouth) is contaminated, rinse with water for fifteen minutes.
- ✓ The incident must be reported to the immediate supervisor.
- ✓ The incident must be recorded in the appropriate log.
- ✓ The immediate supervisor will provide for an evaluation and follow-up of the employees. Employees will be counseled about risk of acquisition of HIV and other relevant communicable diseases, and be informed about the availability of serologic testing.



Reporting Exposure Incidents



OSHA's new bloodborne pathogens standard includes provisions for medical follow-up for workers who have an exposure incident. The most obvious exposure incident is a needlestick. But any specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials is considered an exposure incident and should be reported to the employer.

Exposure incidents can lead to infection from Hepatitis B Virus (HBV) or Human Immunodeficiency Virus (HIV) which causes AIDS.

Why Report? Reporting an exposure incident right away permits immediate medical follow-up. Early action is crucial. Immediate intervention can forestall the development of Hepatitis B or enable the affected worker to track potential HIV infection. Prompt reporting also can help the worker avoid spreading bloodborne infection to others. Further, it enables the employer to evaluate the circumstances surrounding the exposure incident to try to find ways to prevent such a situation from occurring again.

Reporting is also important because part of the follow-up includes testing the blood of the source individual to determine HBV and HIV infectivity if this is unknown and if permission for testing can be obtained. The exposed employee must be informed of the results of these tests.

Employers must tell the employee what to do if an exposure incident occurs.

Medical Evaluation and Follow-Up: Employers must provide free medical evaluation and treatment to employees who experience an exposure incident. They are to refer exposed employees to a licensed health care provider who will counsel the individual about what happened and how to prevent

further spread of any potential infection. He or she will prescribe appropriate treatment in line with current U.S. Public Health Service recommendations. The licensed health care provider also will evaluate any reported illness to determine if the symptoms may be related to HIV or HBV development.

The first step is to test the blood of the exposed employee. Any employee who wants to participate in the medical evaluation program must agree to have blood drawn. However, the employee has the option to give the blood sample but refuse permission for HIV testing at that time. The employer must maintain the employee's blood sample for 90 days in case the employee changes his or her mind about testing - should symptoms develop that might relate to HIV or HBV infection.

The health care provider will counsel the employee based on the test results. If the source individual was HIV positive or in a high risk category, the exposed employee may be given Hepatitis B immune globulin and vaccination, as necessary. If there is no information on the source individual or the test is negative, and the employee has not been vaccinated or does not have immunity based on his or her test, he or she may receive the vaccine. Further, the health care provider will discuss any other findings from the tests.

The standard requires that the employer make the Hepatitis B vaccine available, at no cost to the employee, to all employees who have occupational exposure to blood and other potentially infectious materials. This requirement is in addition to post-exposure testing and treatment responsibilities.

Written Opinion: In addition to counseling the employee, the health care provider will provide a written report to the employer. This report simply identifies whether Hepatitis B vaccination was recommended for the exposed employee and whether or not the employee received vaccination. The health care provider also must note that the employee has been informed of the results of the evaluation and told of any medical conditions resulting from exposure to blood which require further evaluation or treatment. Any added findings must be kept confidential.

Confidentiality: Medical records must remain confidential. They are not available to the employer. The employee must give specific written consent for anyone to see the records.

Records must be maintained for the duration of employment plus 30 years in accordance with OSHA's standard on access to employee exposure and medical records.

Hepatitis B - Vaccination Protection For You

What is HBV? Hepatitis B Virus (HBV) is a potentially life-threatening bloodborne pathogen. Centers for Disease Control estimates there are approximately 280,000 HBV infections each year in the U.S.

HBV infection is transmitted through exposure to blood and other infectious body fluids and tissues. Anyone with occupational exposure to blood is at risk of contracting the infection.



Who Needs Vaccination? The new OSHA standard covering bloodborne pathogens requires employers to offer the three-injection vaccination series free to all employees who are exposed to blood or other potentially infectious materials as part of their job duties. This includes special education personnel, physical education staff, school food service workers, certain transportation personnel, administrators, coaches, alternative education staff, certain vocational and lab instructors as well as others.

The vaccination must be offered within 10 days of initial assignment to a job where exposure to blood or other potentially infectious materials can be "reasonably anticipated". Vaccinations of those already on the job should be complete.

What Does Vaccination Involve? The hepatitis B vaccination is a non-infectious, yeast-based vaccine given in three injections in the arm. It is prepared from recombinant yeast cultures, rather than human blood or plasma. Thus, there is no risk of contamination from other bloodborne pathogens nor is there any chance of developing HBV from the vaccine.

The second injection should be given one month after the first and the third injection six months after the initial dose. More than 90 percent of those vaccinated will develop immunity to the Hepatitis B virus. To ensure immunity, it is important for an individual to receive all three injections. At this point it is unclear how long the immunity lasts, so booster shots may be required at some point in the future.

The vaccine causes no harm to those who are already immune or to those who may be HBV carriers. The Washington County School Board requires screening to determine if there is sufficient immunity to HBV. If not, the district will proceed with the vaccination.

Each employee should receive counseling from a health care professional when vaccination is offered. This discussion will help a employee to determine whether inoculation is necessary.

What If I Decline Vaccination? Workers who decide to decline vaccination must complete a declination form. Employers must keep these forms on file so that they know the vaccination status of everyone who is exposed to blood. At any time after a worker initially declines to receive the vaccine, he or she may opt to take it.

What If I am exposed but have not yet been vaccinated? If a worker experiences an exposure incident, he or she must follow the procedures for reporting an incident found in a previous section of this booklet.

Holding the Line on Contamination

Keeping work areas in a clean and sanitary condition reduces employees' risk of exposure to bloodborne pathogens. The chance of contracting human immunodeficiency virus (HIV), the bloodborne pathogen which causes AIDS, from occupational exposure is small, yet a good housekeeping program can minimize this risk as well.

Decontamination: Every employer whose employees are exposed to blood or other potentially infectious materials must develop a written schedule for cleaning each area where exposures occur. The methods of decontaminating different surfaces must be specified, determined by the type of surface to be cleaned, the soil present and the tasks or procedures that occur in that area.

For example, different cleaning and decontamination measures would be used for a surgical operator and a patient room. Similarly, vinyl surfaced flooring and carpeting require separate cleaning methods. More extensive efforts will be necessary for gross contamination less for minor spattering. Likewise, such varied tasks as laboratory analyses and normal patient care would require different techniques for clean-up.

Employees also must clean (1) when surfaces become obviously contaminated; (2) after any spill of blood or other potentially infectious materials; and (3) at the end of the work shift if contamination might have occurred. Thus, employees need not decontaminate the work area after each patient care procedure, but only after those that actually result in contamination.

If surfaces or equipment are draped with protective coverings such as plastic wrap or aluminum foil, these coverings should be removed or replaced if they become obviously contaminated. Reusable receptacles such as bins, pails, and cans that are likely to become contaminated must be inspected and decontaminated on a regular basis. If contamination is visible, workers must clean and decontaminate the item immediately, or as soon as feasible.

Should glassware that may be potentially contaminated break, workers need to use mechanical means such as brush and dustpan or thongs or forceps to pick-up the broken glass -- never by hand, even when wearing gloves.

Before any equipment is serviced or shipped for repairing or cleaning, it must be decontaminated to the extent possible. The equipment must be labeled, indicating which portions are still contaminated. This enables employees and those who service the equipment to take appropriate precautions to prevent exposure.