

## ***BLOODBORNE QUESTIONS & ANSWERS***

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 contact with blood or other potentially infectious materials or contaminated surfaces, he/she must wear gloves. Single use 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 latex gloves, the employer must provide hypoallergenic gloves or similar alternatives.

Routine gloving is not required for phlebotomy in voluntary blood donation centers, though it is necessary for all other phlebotomies. In any case gloves must be available in voluntary blood donation centers for employees who want to use them. Workers in voluntary blood donation centers must use gloves (1) when they have cuts, scratches or other breaks in the skin, (2) while they are in training; and (3) when they believe contamination might occur.

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

Employers must provide the PPE and ensure that their workers wear it. This means that if a lab coat is considered PPE, it must be supplied by the employer rather than the employee. The employer also must clean or launder clothing and equipment and repair or replace it as necessary.

### **AN EXCEPTION?**

There is one exception to the requirement for protective gear, an employee may choose, temporarily and briefly, under rare and extraordinary circumstances, to forego the equipment. It must be the employee's professional judgment that using the protective equipment would prevent the delivery of health care or public safety services or would pose an increased hazard to the safety of the worker or co-worker. When one of these excepted situations occurs, employers are to investigate and document the circumstances to determine if there are ways to avoid it in the future. For example, if a nurse's resuscitation device is damaged, perhaps another type of device should be used or the device should be carried in a different manner. Exceptions must be limited-this is not a blanket exemption.

### **IS DECONTAMINATING AND DISPOSING OF PPE IMPORTANT?**

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.

### **HOW ABOUT OTHER PROTECTIVE PRACTICES?**

If an employee's skin or mucous membranes come into contact with blood, he or she is to 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 hand washing 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.

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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 tongs 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.

### **WHAT IS REGULATED WASTE?**

In addition to effective decontamination of work areas, proper handling of regulated waste is essential to prevent unnecessary exposure to blood and other potentially infectious materials. Regulated waste must be handled with great care—i.e., liquid or semi liquid blood and other potentially infectious materials, items caked with these materials, items that would release blood or other potentially infected materials, items that would release blood or other potentially infected materials if compressed, pathological or microbiological wastes containing them and contaminated sharps.

Containers used to store regulated waste must be closable and suitable to contain the contents and prevent leakage of fluids. Containers designed for sharps also must be puncture resistant. They must be labeled or color coded to ensure that employees are aware of the potential hazards. Such containers must be closed before removal to prevent the contents from spilling. If the outside of a container becomes contaminated, it must be placed within a second suitable container.

Regulated waste must be disposed of in accordance with applicable state and local laws.

### **WHAT'S THE SCOOP ON LAUNDRY CONTAMINATION?**

Laundry handlers must wear gloves and handle contaminated laundry as little as possible, with a minimum of agitation. Contaminated laundry should be bagged or placed in containers at the location where it is used, but not sorted or rinsed there.

The worker must use Standard Precautions when handling all soiled laundry. If laundry is wet and it might soak through laundry bags, then workers must use bags that prevent leakage.

## **PERSONAL PROTECTIVE EQUIPMENT CUTS RISK**

Wearing gloves, gowns, masks, and eye protection can significantly reduce health risks for workers exposed to blood and other potentially infectious materials. The 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 any other potentially infectious materials on their jobs run the risk of contracting bloodborne infections from hepatitis B (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 occupation exposure is much lower, wearing proper personal protective equipment can greatly reduce potential exposure to all bloodborne infections.

### **HOW IMPORTANT IS 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.

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### **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 such as a needle stick or a blood splash in the eye, he/she must receive confidential medical evaluation from a licensed health care professional with appropriate follow-up. To the extent possible by law, the employer is to determine the source individual for HBV as well as human immunodeficiency virus (HIV) infectivity. The worker's blood will also be screened if he/she agrees.

The healthcare professional is to follow the guidelines of the U.S. Public Health Service in providing treatment. This would include hepatitis B vaccination. The health care professional must give a written opinion on whether or not vaccination is recommended and whether the employee received it. Only this information is reported to the employer. Employee medical records must remain confidential. HIV or HBV status must NOT be reported to the employer.

## **HOLDING THE LINE ON CONTAMINATION**

Keeping work areas in a clean and sanitary condition reduces employees risk of exposure to bloodborne pathogens. Each year about 8,700 health care workers are infected with hepatitis B virus, and 200 die from contracting hepatitis B through their work. The chance of contraction of 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.

### **WHY IS DECONTAMINATION IMPORTANT?**

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 operatory and patient room. Similarly, hard surfaced flooring and carpeting require separate cleaning methods. More extensive efforts will be necessary for gross contamination than for minor spattering. Likewise, such varied tasks as laboratory analyses and normal patient care would require different techniques for clean-up.

Employees must decontaminate working surfaces and equipment with an appropriate disinfectant after completing procedures involving exposure to blood. Many laboratory procedures are performed on a continual basis throughout a shift. Except as discussed below, it is not necessary to clean and decontaminate between procedures. However, if the employee leaves the area for a period time, for a break or lunch, then contaminated work surfaces must be cleaned.

Employees also must clean (1) when surfaces become obviously contaminated; (2) after any spill of blood or other potentially infectious material; 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

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**Who Maintains employee medical and training records?** The employer also must maintain a Sharps Injury Log unless classified as an exempt industry under OSHA's standard on Recording and Reporting Occupational Injuries and Illnesses.

### **HEPATITIS B VACCINATION PROTECTION FOR YOU**

#### **WHAT IS HBV?**

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

Approximately 8,700 health care workers each year contract hepatitis B, and about 200 will die as a result. In addition, some who contract HBV will become carriers, passing the disease on to others. Carriers also face a significantly higher risk of other liver ailments which can be fatal, including cirrhosis of the liver and primary liver cancer.

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

Employers must provide engineering controls; workers must use work practices and protective clothing and equipment to prevent exposure to potentially infectious materials. However, the best defense against hepatitis B is vaccination.

#### **WHO NEEDS VACCINATION?**

The 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 health care workers, emergency responders, morticians, first-aid personnel, law enforcement officers, correctional facilities staff, launderers, 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."

#### **WHAT DOES VACCINATION INVOLVE?**

The hepatitis B vaccination is a noninfectious, 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 individuals 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 those who may be HBV carriers. Although employees may opt to have their blood tested for antibodies to determine need for the vaccine, employers may not make such screening a condition of receiving vaccination nor are employers required to provide prescreening.

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

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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.

## **WHAT ARE BLOODBORNE PATHOGENS?**

Bloodborne pathogens are infectious materials in blood that can cause disease in humans, including hepatitis B and C and human immunodeficiency virus, or HIV. Workers exposed to these pathogens risk serious illness or death.

**What protections does OSHA's Bloodborne Pathogen standard provide?** The full text of OSHA's Bloodborne Pathogens standard, published in Title 29 of the Code of Federal Regulations 1910.1030, details what employers must do to protect workers whose jobs put them at a reasonable risk of coming into contact with blood and other potentially infectious materials. The standard requires employers to do the following.

**What is an established exposure control plan?** This is a written plan to eliminate or minimize employee exposures. Employers must update the plan annually to reflect technological changes that will help eliminate or reduce exposure to bloodborne pathogens. In the plan, employers must document annually that they have considered and implemented safer medical devices, if feasible and that they have solicited input from frontline workers in identifying evaluating, and selecting engineering controls.

**Why Use engineering control?** These are devices that isolate or remove the bloodborne pathogen hazard from the workplace. They include sharps disposal containers, self-sheathing needles, and safer medical devices such as sharps with engineered sharps-injury protection and needless systems.

**What are work practice controls?** These are practices that reduce the likelihood of exposure by changing the way a task is performed. They include appropriate procedures for hand washing, sharps disposing, label specimen packaging, laundry handling, and contaminated material cleaning.

**Who provides personal protective equipment?** Such as gloves, gowns, and masks. Employers must clean, repair, and replace this equipment as needed.

**Who should make available Hepatitis B vaccinations?** Employers to all employees with occupational exposure to blood borne pathogens with 10 days of assignment.

**What is post-exposure follow up?** To any worker who experiences an exposure incident, at no cost to the worker. This includes conducting laboratory tests; providing confidential medical evaluation, identifying, and testing the source individual, if feasible; testing the exposed employee's blood, if the worker consents; performing post-exposure prophylaxis; offering counseling; and evaluating reported illnesses. All diagnoses must remain confidential.

**Why Use labels and signs to communicate hazards?** The standard requires warning labels affixed to containers of regulated waste, refrigerators and freezers, and other containers use to store or transplant blood or other containers instead of labels. Employers also must post signs to identify restricted areas.

**Who should provide information and training to employees?** Employers must ensure that their workers receive regular training that covers the dangers of bloodborne pathogens, preventative practices, and post-exposure procedures. Employers must offer this training on initial assignment, then at least annually. In addition, laboratory and production facility workers must receive specialized initial training.

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### **REPORTING EXPOSURE INCIDENTS**

OSHA's 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. Although few cases of AIDS are directly traceable to workplace exposure, every year about 8,700 health care workers contract hepatitis B from occupational exposures. Approximately 200 will die from this bloodborne infection. Some will become carriers, passing the infection on to others.

#### **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 results.

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 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 the time. The employer must maintain the employees' 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 HBV 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 negative, and the employee has not been vaccinated or does not have immunity based on her 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 test 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

**BLOODBORNE QUESTIONS & ANSWERS****BLOODBORNE PATHOGENS QUIZ**

Employee: \_\_\_\_\_ Date: \_\_\_\_\_

Graded By (RN): \_\_\_\_\_ Grade: \_\_\_\_\_

1. After an exposure incident, the employee who suffered the occupational exposure has the right to receive.
  - (a) testing of his or her blood for HIV or HBV infection
  - (b) post-exposure counseling
  - (c) post-exposure medical evaluation by a health care professional
  - (d) all of the above
2. Employers must ensure that their workers receive regular training that covers the dangers of bloodborne pathogens, preventative practices, and post-exposure procedures. Employers must offer this training on initial assignment, then at least:
  - (a) every five years
  - (b) annually
  - (c) twice a year
  - (d) not required after initial training
3. The Bloodborne Pathogen Standard:
  - (a) applies to all employees with occupational exposure to bloodborne pathogens
  - (b) requires an exposure control plan (ECP) to protect covered employees
  - (c) applies only to medical personnel
  - (d) a and b
4. To protect employees from exposure to bloodborne pathogens, employers must:
  - (a) charge employees for receiving the hepatitis B vaccine
  - (b) use a 100% bleach solution to clean contamination sites
  - (c) require employees to use goggles or other eye protection if the eye's mucous membrane may be splashed with blood
5. Sharps containers should be:
  - (a) labeled with the universal biohazard symbol and the word "Biohazard"
  - (b) kept as far away from employees as possible
  - (c) stuffed with sharps (overflowing if possible)
  - (d) all of the above
6. Bloodborne pathogens are infectious materials in blood that can cause disease in humans, including:
  - (a) hepatitis B
  - (b) hepatitis C
  - (c) human immunodeficiency virus, or HIV
  - (d) all of the above

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7. The preferred method of preventing exposure to bloodborne pathogens is through the use of :
- (a) antiseptic cleaners
  - (b) engineering controls
  - (c) personal protective equipment
  - (d) none of the above
8. The vaccine for the hepatitis B virus must be provided to:
- (a) all employees who have occupational exposure to bloodborne pathogens
  - (b) employees applying soap and water to any spilled blood
  - (c) employees placing wet laundry in flimsy bags
  - (d) a and c
9. If a worker experiences an exposure incident such as a needle stick or a blood splash in the eye:
- (a) he/she must receive confidential medical evaluation from a license health care professional
  - (b) he/she must receive appropriate follow-up
  - (c) he/ she must be terminated
  - (d) a and b
10. Any exposure incident involving sharps must be recorded:
- (a) within 7 calendar days
  - (b) only after the victim has been diagnosed with a serious disease
  - (c) within 14 working days
  - (d) within 24 hours