

MAJOR PROGRAM POINTS

"BLOODBORNE PATHOGENS IN FIRST RESPONSE ENVIRONMENTS"

**Training for
THE OSHA BLOODBORNE PATHOGENS STANDARD**

Quality Safety and Health Products, for Today... and Tomorrow

Outline of Major Points Covered in the "Bloodborne Pathogens in First Response Environments" Course

The following outline summarizes the major points of information presented in the course on Bloodborne Pathogens in First Response Environments. The outline can be used to survey the course before taking it on a computer, as well as to review the course when a computer is not available.

- **Exposure to bloodborne diseases is a serious concern for First Responders**
- **OSHA created a regulation dealing with Bloodborne Pathogens in 1991.**
 - Bloodborne Pathogens are the disease-causing microorganisms found in human blood, as well as human blood components and products.
- **This course will show you how exposure to Bloodborne Pathogens occurs.**
 - So you can help protect yourself and coworkers.
 - You may also want to read the actual regulation.
 - Your course instructor will tell you where to find the nearest copy.
- **While there are a number of Bloodborne Pathogens, those causing Hepatitis B, Hepatitis C, and the Human Immunodeficiency Virus (HIV) pose the greatest threat.**
- **HIV is the "newest" of the Bloodborne Pathogens and is spreading rapidly.**
 - It is believed that over one million people in the U.S. have already been infected.
 - Currently, no vaccine exists to prevent infection of HIV.
 - There is no known cure.

- **Symptoms experienced at the onset of HIV infection can vary. They include:**
 - Weakness.
 - Fever.
 - Sore throat.
 - Nausea.
 - Headaches.
 - Diarrhea.
 - Other flu-like symptoms.

- **However, many people with HIV virus show no apparent symptoms for years after their initial infection.**

- **Controlling the spread of HIV is very important. It is generally believed that those who contract the HIV virus will ultimately develop Acquired Immunodeficiency Syndrome (AIDS).**
 - AIDS results in a breakdown of the immune system, canceling out the body's ability to fight off other diseases.

- **Hepatitis is a liver disease. It usually results in an inflammation of the liver, and frequently progresses to more serious conditions such as:**
 - Cirrhosis.
 - Cancer.

- **Each year in the U.S. there are over 70,000 new cases of Hepatitis B, and it is estimated that more than 3 million people are carrying the Hepatitis C virus.**
 - While there is no cure for Hepatitis B or C, a vaccine does exist that can prevent Hepatitis B infection.
 - The prevalence of Hepatitis is so widespread that it is quickly becoming a larger transmission hazard than HIV.

- **After exposure, it can take four weeks to six months for Hepatitis to develop.**
 - Early detection is extremely important, since vaccinations begun immediately after exposure to HBV can often prevent infection.

- **The initial symptoms of both Hepatitis B and Hepatitis C resemble those of a mild "flu":**
 - Fatigue.
 - Nausea.
 - Loss of appetite.
 - Possible stomach pain.
 - Jaundice (a yellowing of the skin).
 - Darkening of the urine.

- **However, as with HIV, people infected with Hepatitis will frequently fail to show symptoms for weeks or even months.**

- **Bloodborne diseases are most often transmitted through "Parenteral" exposure.**
 - This is where microorganisms enter the body through breaks in the skin or through mucous membranes.

- **These exposures most often occur through:**
 - Punctures from infected needles.
 - Human bites.
 - Skin abrasions or cuts that come into contact with potentially infectious material.

- **Infectious material can include:**
 - Blood.
 - Human tissue.
 - Vaginal secretions from discarded hygiene products.
 - Other body substances with blood in them.

- **Preventing parenteral exposures to these materials is one of the major parts of the OSHA Bloodborne Pathogens regulation.**

- **The Exposure Control Plan spells out how your facility will address the requirements of the regulation itself, and includes:**
 - A determination of each employee's potential exposure to Bloodborne Pathogens.
 - An examination of ways to limit or eliminate exposure.

- **The Exposure Control Plan also deals with:**
 - Setting up a Hepatitis B Vaccination Program.
 - Procedures to be followed whenever an accidental exposure occurs.
 - Warning signs and labels.
 - Employee training.
 - Recordkeeping for exposure, vaccination and training.

- **The Plan must also incorporate the use of "Standard Precautions".**
 - Treating all human blood and other body substances as if they are known to be infectious.

- **If you work as a First Responder, one of the most critical issues the Plan addresses is how to reduce the risk of needlesticks and other sharps injuries.**
 - The Centers for Disease Control estimates that there are over 500,000 injuries from contaminated sharps each year.
 - When these injuries involve infectious agents such as Hepatitis or HIV, the affected workers are at risk of contracting bloodborne diseases.

- **One of the things OSHA has done to help combat the danger of needlesticks is to mandate that Exposure Control Plans be reevaluated at least once a year.**

- **A major focus of these reviews is to make sure that your group is using every means available to keep you safe, including:**
 - Updated work practices.
 - The use of the latest needleless technologies.

- **As a rule, the review must show that the Exposure Control Plan:**
 - Reflects changes in technology that can eliminate or reduce exposure.
 - Documents investigation and implementation of new medical devices that are designed to reduce or eliminate exposure.
 - Incorporates the opinions of frontline employees whose interactions with patients expose them to potentially contaminated sharps.

- **If you would like to look at your facility's Plan, see your training instructor or supervisor.**

- **Labeling is the most "visible" requirement in the regulations.**
 - Containers carrying any potentially infectious materials, such as blood, must be marked with a biohazard label.

- **Labels must also appear on any equipment and materials suspected of being contaminated, such as:**
 - Stretchers.
 - Air packs.
 - Police evidence.

- **The word "contaminated" indicates the presence or anticipated presence of potentially infectious materials on an item or surface.**

- **Biohazard labels are fluorescent orange/red with the biohazard symbol in a contrasting color.**
 - The word "Biohazard" is also marked on the lower portion of the label.
 - Red bags or red containers can substitute for these labels.

- **There are several exceptions to these labeling requirements:**
 - Individual containers of blood do not have to be labeled if they are placed inside another labeled container for transport or storage.
 - Labeled blood products released for transfusion or other clinical use are also exempt if these specimens remain in the facility.

- **Common places that you will see biohazard labels include:**
 - Refrigerators and freezers containing blood or other potentially infectious materials.
 - Containers used to store, transport or ship materials.
 - Contaminated equipment awaiting cleaning.
 - Containers of "Regulated Waste".
 - Contaminated items such as bandages, bedding and towels.
 - Contaminated sharps, including needles, scalpel blades and broken glass.
 - Containers which may have infectious material in them.

- **There are a number of ways that you can recognize activities that might involve exposure to Bloodborne Pathogens.**
 - The most obvious is to look for biohazard signs and labels.
 - If you are not sure what areas or materials need labeling, ask your supervisor.

- **You should also be aware of all of the tasks that you perform which deal with:**
 - Blood.
 - Other body substances.
 - Tissues where blood could be present.

- **In addition to encountering victims of accidents or violence, activities where you might reasonably expect to encounter Bloodborne Pathogens include:**
 - Handling blood products.
 - Emptying trash and performing other cleaning duties.
 - Changing linens on beds, stretchers or examination tables.
 - Refilling first aid cabinets.
 - Working with soiled laundry.
 - Handling contaminated equipment.
 - Examining crime scenes and preserving evidence.

- **Your employer has compiled lists of job classifications and activities that may present risk of exposure.**
 - These lists can be found in your facility's Exposure Control Plan.

- **There are many ways that you and your employer can work to reduce exposure to Bloodborne Pathogens. These include the use of:**
 - "Standard Precautions."
 - Engineering controls.
 - Work practice controls.
 - Personal protective equipment (PPE).
 - Good housekeeping practices.

- **"Engineering Controls" refer to equipment or machinery that minimize exposure. You may use a number of these, such as:**
 - Puncture-resistant "sharps" containers.
 - Tongs to pick up contaminated broken glass.
 - Sharps with engineered injury protections such as self-sheathing needles.

- **"Work Practice Controls" reduce the potential for exposure by focusing on the safest ways to perform tasks.**

- **Hand washing is one of the most important.**
 - If you have been involved in an exposure situation, OSHA requires that you wash your hands immediately after removing gloves and PPE.
 - Remember to wipe the spigot with your towel when turning it off, to avoid recontamination.

- **You must also wash your hands immediately after contact with blood or other potentially infectious material, as well as rinse other areas with generous amounts of water:**
 - Eyes.
 - Nose.
 - Other mucous membranes.

- **OSHA considers housekeeping practices to be very important to the control of exposure situations.**
 - Written cleaning schedules that specify methods of decontamination must be maintained to keep all areas clean and sanitary.

- **Equipment and surfaces must be cleaned and decontaminated after contact with blood or other potentially infectious materials.**
 - If they are obviously contaminated, work surfaces must be cleaned immediately with disinfectant.
 - Otherwise, this should be done at the end of each work shift.
 - Protective coverings on equipment, as well as trash liners, must also be replaced when contaminated.

- **There are several work practice control requirements that apply to contaminated needles and sharps:**
 - They must not be bent.
 - They can not be recapped or removed unless there is no feasible alternative.
 - If they have to be recapped or removed, you must use a one-handed technique or a mechanical device.

- **Broken glassware is not to be picked up by hand, but by using:**
 - A brush and dustpan.
 - Tongs.
 - Other tools.

- **Contaminated sharps must be discarded as soon as possible into appropriately labeled containers that are:**
 - Closeable.
 - Puncture-resistant.
 - Leak-proof.

- **These containers should be easily assessable and must be:**
 - Left upright.
 - Replaced routinely.
 - Never overfilled.
 - Closed when handled.
 - Subject to the same secondary container requirements as specimens.

- **Rules also govern the handling of other Regulated Waste, including contaminated:**
 - PPE.
 - Bandages.
 - Linens.
 - Other potentially infectious materials.

- **These must be placed in appropriately labeled, closeable and leak-proof containers.**
 - Containers must be closed and secured during handling.
 - If the outside surface of the primary container is contaminated, an appropriately labeled secondary container must be used as well.
 - If there is danger that the items could puncture the primary container, the secondary container must be puncture-resistant as well as leak-proof.

- **Another part of the regulation concerns contaminated laundry.**
 - It should be handled as little as possible and always bagged appropriately.
 - It must never be sorted or rinsed at its originating location.

- **Labeled or color-coded bags are required to transport laundry.**
 - Bags must be leak-proof if the laundry is wet.
 - All laundry must be handled with gloves and other appropriate PPE.

- **Never eat, drink or smoke in work areas where exposure may occur.**
 - Never apply cosmetics, lip balm or contact lenses in these areas.
 - Food and drink should never be stored in laboratory refrigerators or freezers.

- **The last type of workplace control the regulation addresses concerns equipment.**
 - Before any piece of equipment is serviced or shipped it must be inspected for contamination with body substances.

- **Any required disinfection should be completed as soon as possible.**
 - If the equipment cannot be totally decontaminated, it must remain labeled as a Biohazard.
 - All employees or service personnel who may come in contact with the equipment must be notified of the location and type of contamination.

- **The use of PPE is another important part of the Bloodborne Pathogens Regulation.**
 - It must be worn whenever there is a chance of exposure to blood or other potentially infectious material.
 - Gloves are mandatory in these situations.

- **Disposable gloves should be replaced as soon as possible after becoming contaminated.**
 - Never attempt to decontaminate and reuse them.
 - Replace disposables immediately when they are torn or otherwise damaged.
 - Removing rings before putting on gloves will help keep them from tearing.

- **Utility gloves... usually rubber or vinyl... are heavier and can be reused after decontamination.**

- However, they must be discarded if they are cracked, peeling or damaged.
- **You must change gloves and wash your hands after each exposure.**
 - If you are sensitive to latex, talk to your supervisor.
 - Non-latex PPE will be made available to workers with documented latex allergies.
- **Masks and eye protection should be worn whenever there is a chance that fluids may splash or splatter.**
 - Standard safety glasses protect the eyes from direct exposure from the front.
 - Side shields provide added coverage.
 - Safety goggles fit snugly and provide complete eye protection.
- **Face shields protect not only the eyes, but the rest of your face as well.**
 - However, you may also need to wear goggles or safety glasses if there is a threat that splashing or spraying could occur up under the shield.
- **Pocket and other face masks are designed to protect the mouth and lip area.**
 - They should be worn whenever eye protection is used.
- **Coats and other protective clothing provide protection for much of the body.**
 - They should be selected based on the degree and circumstance of anticipated exposure.
 - They must effectively prevent the pass-through of fluids and materials.
- **Your group has PPE available for you to use.**
 - If you are unsure of its location, ask your supervisor.

- **Be aware of your facility's procedures for handling PPE once it has been worn.**
 - Know the location of collection and disposal points and use them.
 - You must take off your PPE before leaving the work area.

- **Good work practices and the use of PPE can substantially reduce the risk of exposure.**

- **Vaccination, however, can be the first line of defense against infection. While there is no vaccine for HIV or Hepatitis C, a vaccine for Hepatitis B has been available for some time.**
 - The vaccine is administered in three injections, given several months apart.
 - Hepatitis B vaccines are safe. There is no possibility of infection through the vaccine itself.
 - Over the years, vaccination has proven to be very effective in preventing Hepatitis B infection.

- **Your employer has set up a free Hepatitis B Vaccination Program for all employees who are at risk of exposure.**
 - Your training instructor can give you more information.
 - If you are at risk, it is important that you be vaccinated.
 - It is so important that OSHA requires you to sign a form if you decline the vaccination.

- **If you are accidentally exposed to Hepatitis B infected blood and have not been vaccinated, your employer will offer you an accelerated vaccination series at no cost.**
 - This "after the fact" vaccination will not always prevent you from developing the disease.
 - However, many forms of Hepatitis B are slow to develop.
 - Given in time, vaccination may prevent the infection.

- **As careful as we may be, needlesticks, blood leakage and spills can occur.**
 - You need to know what to do in case of such an emergency.

- **First, if you come into contact with any potentially contaminated material, you should wash the affected area with soap and water as quickly as possible.**
- **If the incident involves a spill or leakage, you should soak up the material or contain it using absorbent barriers.**
- **Then immediately take the following steps:**
 - The area should be cleaned with your facility's approved disinfecting solution, such as diluted bleach.
 - Once the spill or leak has been cleaned, any contaminated materials should be disposed of in an approved waste disposal container.
 - Discard any contaminated PPE.
 - Reusable equipment should be recycled for decontamination.
- **A number of people will need to be notified about the incident, including:**
 - Your supervisor.
 - Your environmental services department.
 - The infection control group.
- **You may also need to complete an "Incident Report."**
- **If the injury was caused by a contaminated sharp, your facility will record it in a special "Sharps Injury Log."**
 - This log is specifically set up to keep track of percutaneous injuries from contaminated sharps.
- **Every entry into the log must include the following information:**
 - The type and brand of device involved in the incident.
 - The department or work area where the accident took place.
 - An explanation of what happened.

- **Immediately following the exposure, your employer will give you a written description summarizing:**
 - The routes of exposure that you experienced.
 - The circumstances under which the exposure occurred.

- **If possible, the identity of the individual from whom the potentially infectious material originated will be established.**
 - Your employer will also try to determine if the source individual's blood is infected with Hepatitis B, Hepatitis C or HIV.

- **An appointment will be arranged for you with a healthcare professional to review the medical ramifications of what took place. Your employer will provide the healthcare professional with information such as:**
 - The type of work you were doing when the incident occurred.
 - The result of the source individual's blood test.
 - Any of your medical records which are relevant to possible treatment.

- **With your permission, your blood will also be tested to determine if an infection has occurred.**
 - Your situation will then be evaluated and discussed with you.
 - If appropriate, medical treatment may then be recommended.
 - If Hepatitis B vaccination is called for, it will be provided by your employer at no cost to you.

- **The healthcare professional is also required to verify four things with your employer:**
 - That you have been informed of the results of their evaluation.
 - That they have discussed any medical condition resulting from the exposure which would require follow up with you.
 - Whether Hepatitis B vaccination is recommended.
 - Whether you have received the first part of the vaccination series.

- **All other information that results from your medical evaluation will remain confidential.**
- **Bloodborne Pathogens are dangerous. But by combining engineering controls, good work practices, Hepatitis B vaccinations, and the use of PPE... we can protect ourselves, and others, from exposure!**