



## ***ABOUT BLOODBORNE PATHOGENS***

**LENGTH: 12 MINUTES**

### **PROGRAM SYNOPSIS:**

Our workplace is full of hazards, hazards that can hurt us or kill us. Controlling these hazards and preventing injuries or illnesses is the point of our safety and health program. One such hazard is the one presented by bloodborne pathogens. Bloodborne pathogens are tiny microorganisms found in human blood or other bodily fluids that can cause diseases in humans. Controlling our exposure to bloodborne pathogens can prevent these diseases and save lives. That is the point of our facility's Bloodborne Pathogens Exposure Control Program and that is the point of this program.

Topics include the exposure control plan, occupational exposure, routes of entry, universal precautions, use of barrier devices, safe handling of potentially infectious material, decontaminating a potentially infected work area and how to respond to an exposure.

### **PROGRAM OBJECTIVES:**

After watching the program, the participant will be able to explain the following:

- How the Bloodborne Pathogens Exposure Control Plan works;
- How bloodborne pathogens can enter our bodies;
- What universal precautions are and why it is important to follow them;
- How to safely handle potentially infectious material;
- How to respond to an exposure.

### **INSTRUCTIONAL CONTENT:**

#### **BLOODBORNE DISEASES**

- A worker needs first aid. A used needle is improperly discarded in a restroom. After an incident, a work area is contaminated with blood. Each of these scenarios represents a potential workplace exposure to bloodborne pathogens.
- Bloodborne pathogens can cause serious diseases such as Hepatitis and HIV, the virus that causes AIDS.
- HIV attacks the body's immune system leaving it vulnerable to other infections. The symptoms of HIV include weakness, fever, sore throat, diarrhea, and nausea.
- Hepatitis is a disease that attacks the liver and can be fatal. There are various types of Hepatitis; each different strain carries a unique letter designation. The strains most likely transmitted by bloodborne pathogens include type B, C, and D. The symptoms of Hepatitis include fatigue, stomach pain, jaundice, darkening of the urine and loss of appetite. However, victims of Hepatitis C often show no symptoms until later stages of the disease.

#### **THE EXPOSURE CONTROL PLAN & OCCUPATIONAL EXPOSURE**

- Our organization has developed a Bloodborne Pathogens Exposure Control Plan as required by the Occupational Safety and Health Administration, OSHA, in their standard 1910.1030 titled Bloodborne Pathogens. The point of the exposure control plan is to prevent the spread of diseases due to contact with contaminated blood or other bodily fluids.
- The Exposure Control Plan includes a list of job functions considered to have occupational exposure to bloodborne pathogens. Occupational exposure means jobs where workers may reasonably be expected to handle or contact blood or other bodily fluids.
- Some examples of jobs with occupational exposure include custodial staff who may be exposed to broken glass, soiled bandages, or other contaminated items; company authorized first responders who offer first aid to injured workers; occupational health nurses or other health care providers who are exposed to bodily fluids or used needles and laundry personnel who may contact contaminated uniforms, linens, or other materials.
- Workers who have occupational exposure to bloodborne pathogens are eligible to receive the Hepatitis B vaccine at no cost to the employee.
- The exposure control plan also contains descriptions of engineering and work practice controls, employee training, medical and vaccination information and a listing of the signs and labels used to identify biological hazards on-site. The Written Exposure Control Plan is available for employee review.

#### **ROUTES OF ENTRY**

- The means by which bloodborne pathogens can enter the body of an unprotected person are called "routes of entry." Sexual contact is one route of entry for bloodborne pathogens.
- Other routes of entry include ingestion, which occurs when infected material is eaten or swallowed; absorption, which occurs when infectious material is absorbed into the body through contact with open cuts, sores or contact with mucus membranes; and injection, which occurs when a

contaminated sharp object punctures the skin. Understanding these "routes of entry" is the first step towards controlling exposure to bloodborne pathogens.

### **UNIVERSAL PRECAUTIONS**

- You must also understand that infected blood looks identical to non-infected blood and that a contaminated needle looks identical to a non-contaminated needle.
- In other words, you cannot determine simply by looking whether something is contaminated with bloodborne pathogens. This is why our Exposure Control Plan implements the concept of Universal Precautions.
- Universal Precautions means treating all blood, bodily fluids, and potentially infectious material as if they are infected with bloodborne pathogens.
- Those employees with occupational exposure to bloodborne pathogens will receive specific training in the universal precautions specifically related to their job function; however, all employees should understand and follow the basic concepts of universal precautions.
- The first rule of universal precautions is to avoid contact or exposure altogether. Recall the routes of entry we discussed earlier. Preventing exposure means not allowing contaminated material access to these routes of entry.

### **AVOIDING CONTACT TO PREVENT EXPOSURE**

- Exposure due to ingestion can be prevented by thoroughly washing your hands prior to eating; by not eating, drinking or applying makeup in areas containing potentially infectious materials and by not storing food or drinks in areas containing potentially infectious materials.
- The most effective way to prevent exposure due to absorption or injection is to avoid direct contact with all potentially infected materials and sharp objects. For most employees this simply means not touching such objects but reporting them to the proper authority instead.
- This also means avoiding any direct contact with an injured or bleeding co-worker while immediately activating the facility's emergency plan to respond to an injury.
- Avoiding contact and reporting the situation is the best course of action because it allows properly trained personnel to respond quickly, render assistance, properly dispose of the contaminated materials and decontaminate the area.

### **USE OF BARRIER DEVICES**

- If avoiding contact is not possible or your job duties require contact, then following Universal Precautions requires that a barrier device be used. A barrier device is a piece of protective equipment designed to reduce or prevent direct contact with contaminated items, blood or other bodily fluids.
- Latex or rubber gloves are a common example of a barrier device. Other examples of barrier devices include masks, goggles, face shields and lab coats. The type of barrier device required will depend on the potential for exposure.
- Situations which involve a greater risk of exposure will require more protection while simple exposure situations require less protection.
- Gloves and all other barrier devices must be inspected for cracks, holes or tears before use.

### **SAFE HANDLING OF POTENTIALLY INFECTIOUS MATERIAL**

- Using these types of barrier devices provides protection from the absorption of bloodborne pathogens; however, sharp objects still present an injection hazard or may cut through the barrier device, making it ineffective while also leaving an open wound. This is why following universal precautions requires never directly contacting needles, broken glass or similar sharp objects. Use tongs, a broom and dustpan or similar objects to avoid contact with sharps.
- In addition to following universal precautions, the proper disposal of potentially contaminated items is an important part of our Exposure Control plan. Proper disposal is essential to controlling employee exposure to bloodborne pathogens.
- Our exposure control plan requires that all potentially infectious material be placed into approved biohazard containers. Approved biohazard containers are usually red in color and labeled with a biohazard symbol.
- Some potentially infected materials that must be disposed of properly include disposable gloves, dressings, bandages or any similar items.
- Potentially contaminated sharp objects such as needles or broken glass present an increased hazard and must be disposed of in an approved biohazard "sharps" container. These rugged containers allow handling without the risk of being cut or punctured.
- Tossing contaminated sharps into the regular trash places other workers at risk of exposure.

### **DECONTAMINATING A POTENTIALLY INFECTED WORK AREA**

- The exposure control plan also requires that potentially contaminated work areas and non-disposable protective equipment be thoroughly cleaned and decontaminated before being put back into service.
- Simply cleaning contaminated objects with soap and water is not sufficient against bloodborne pathogens. A 10% solution of bleach and water or an EPA approved disinfectant must be used to kill any infectious materials that may be present.

### **RESPONDING TO AN EXPOSURE**

- In the event you come in direct contact with blood or other bodily fluids, immediately wash the affected area thoroughly with warm water and an anti-bacterial soap. If potentially infected material splashes into your eyes, rinse them thoroughly using an eye wash station for 15 minutes.
- The exposure control plan contains a plan of action which must be followed if an exposure occurs. This is why all exposures must be reported as soon as possible.
- Reporting an exposure right away allows any necessary medical testing, treatment, and record keeping to promptly take place. With employee consent, blood tests may be performed to determine if an infection has occurred. In addition, the source material may be tested to determine if it was contaminated with bloodborne pathogens. Exposed employees may also be eligible to receive the Hepatitis B vaccine which can still be effective even after an exposure has occurred.