

BE SAFE - KNOW ABOUT...

# **Bloodborne Pathogens**

## **YOUR EXPOSURE CONTROL PROGRAM HANDBOOK**

This program was developed for “YOUR” protection!

# TABLE OF CONTENTS

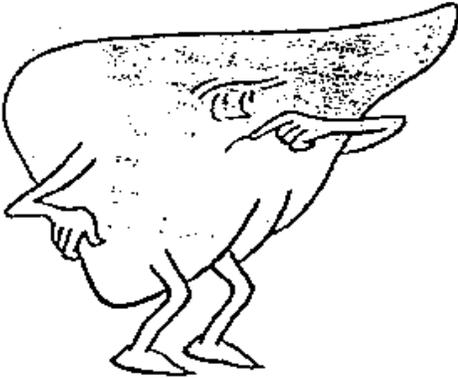
- ❖ Introduction
- ❖ Bloodborne Diseases
  - HBV
  - HIV
- ❖ Workplace Transmission
- ❖ Exposure Control Plan
- ❖ Universal Precautions/Body Substance Isolation
- ❖ Engineering Controls
- ❖ Work Practice Controls
  - Handwashing
  - Needle and Sharp Safety
  - Personal Hygiene
- ❖ Personal Protective Equipment (PPE)
  - Gloves
  - Glove Removal
  - Resuscitation Devices
  - Gowns /Aprons
  - Eye Protection
- ❖ Environmental Housekeeping
  - Laundry
- ❖ Hazard Communication – Medical Waste
- ❖ HBV vaccination
- ❖ Post Exposure Evaluation and Follow-up
- ❖ Medical Record Keeping
- ❖ Employee Training
- ❖ Compliance Monitoring

## INTRODUCTION

Welcome to YOUR Exposure Control Program Handbook! The handbook will assist you in understanding the OSHA Standard on Occupational Exposure to Bloodborne Pathogens issued on December 6, 1991. This standard is designed to protect you in the work place. You are covered by the Standard if it is reasonably anticipated that you could be exposed to blood-borne pathogens as a result of performing your job duties.

### BLOODBORNE PATHOGENS

The two most significant bloodborne diseases that you could be exposed to on the job are Hepatitis B (HBV) and human immunodeficiency virus (HIV).



### WHAT IS HEPATITIS B?

It's an inflammation of the liver -- one of your body's most vital organs

Hepatitis B is a serious risk for many health-care workers.

About 18,000 Health-care workers are infected with HBV each year - resulting in about 200-300 deaths.

HEPATITIS B is caused by a virus called 'HBV' (hepatitis b Virus).

It can result in:

- no symptoms
- mild illness
- acute (severe) illness•
- chronic infection
- liver damage, such as cirrhosis
- hepatitis D infection
- liver cancer
- death, due to liver failure

### SIGNS OF SYMPTOMS MAY INCLUDE

- tiredness
- loss of appetite/weight
- mild fever
- aching muscles and joints
- rash
- nausea, vomiting and diarrhea
- changed senses of taste and smell
- tenderness in the upper abdomen
- jaundice (yellow skin and whites of the eyes)
- dark-colored urine
- light colored feces.

HBV is spread by exposure to infected body fluids - mainly blood and blood products, but also semen and vaginal fluids.

Some people feel like they have the flu.

Depending on your job, you could be exposed to HBV through:

Injuries from sharps or needles, scalpels, broken glass etc., injuries can occur while drawing blood, disposing of syringes, collecting rubbish, or cleaning rooms.

Scratches or Cuts: coming in contact with contaminated bandages, linens, surfaces, equipment, etc.

Accidental Skin or Eye Contact: from splashes or spills while handling blood samples, or when cleaning surfaces and equipment.

Other Accidental Exposure: bites or wounds caused by an infected person who becomes violent.

## **HIV**

### **TRANSMISSION OF AIDS – FACTS**

Acquired Immune Deficiency Syndrome (AIDS) is caused by, the Human Immunodeficiency Virus (HIV). The Virus alters the body's natural defense against disease, making the host (person) susceptible to life-threatening opportunistic infections and malignancies (cancers) such as pneumocystis carinii pneumonia and Kaposi's Sarcoma.

HIV has been found in blood, semen and vaginal secretions. It has also been isolated in saliva, tears, breast milk, cerebrospinal and amniotic fluid. Evidence suggests, however, that the concentration of the virus is highest in secretions containing lymphocytes (white blood cells), specifically blood and semen.

Primary methods for transmission are:

1. Sexual contact with HIV infected person (homosexual or heterosexual).
2. Direct exposure to contaminated blood, blood components or body fluids.
  - a. Sharing of contaminated needles between intravenous drug users.
  - b. Needle-stick or sharp injuries
3. Transmission from infected mother to her infant.

To date, there have been no documented cases of HIV infection through casual contact or by the airborne/vectorborne transmission routes. This means that AIDS is not spread by shaking hands, hugging, mosquito bites, sharing a drinking fountain, telephone, or toilet seat.

People infected with HIV may experience symptoms, such as:

- recurrent fever, including "night sweats"
- rapid weight loss for no apparent reason
- swollen lymph glands in the neck, underarm or groin area
- constant fatigue
- diarrhea and diminished appetite
- white spots or unusual blemishes in the mouth.

In those infected persons who go on to develop AIDS, the two most common illnesses are:

- Kaposi's sarcoma - a fast-spreading form of a normally mild skin cancer, characterized by purplish blotches or bumps.
- Pneumocystis carinii pneumonia—a rare parasitic infection of the lungs, symptoms of which are fever, cough, and shortness of breath

## **WORK PLACE TRANSMISSION**

## Chain of Infection - the Infectious Process

Source → Reservoir → Portal of exit → Mode of Transmission → Susceptible Host

### HIV/HBV TRANSMISSION

HBV, HIV and other pathogens may be present in:

- Body fluids such as saliva, semen, *vaginal* secretions, cerebrospinal fluid, synovial fluid, pleural fluid, amniotic fluid, *and* any other body fluids visibly contaminated with blood, organ cultures, culture media or similar solutions.

Means of Transmission-Bloodborne pathogens may enter your body and infect you through a variety of means including:

- An accidental injury by a sharp object contaminated with infectious material. Sharps include:
  - Needles • Broken glass • Scalpels
  - Anything that can pierce, puncture or cut your skin.
- Open cuts, nicks and skin abrasions, even dermatitis and acne as well as the mucous membranes of your mouth, eyes, or nose,

### EXPOSURE CONTROL PLAN

Our office has developed a WRITTEN EXPOSURE CONTROL PLAN that identifies *all* employees *with* occupational exposure and a procedure for evaluating exposure incidents.

The plan consists of:

- Specific measures to take to minimize risk of exposure
- Procedures to follow if there is an exposure incident.

The methods used to **minimize** employee exposure to bloodborne pathogens on the job are:

- Universal Precautions/Body Substance Isolation - BSI. All Health Care workers should routinely use the appropriate barrier precautions to prevent skin and mucous membrane exposure when contact with blood or body fluids of any patient is anticipated.

#### Engineering Controls

The engineering controls include any controls that either remove the hazard or isolate the worker from the hazard, such as sharps disposal containers, re-sheathing devices, or biohazard storage areas.

#### Work Practice controls

##### Handwashing

###### HOW

- Use soap and warm water
- Rub hands together for 10-15 seconds
- Rinse thoroughly and dry

###### WHEN

- Before eating, drinking or handling food
- After using the toilet, blowing nose or covering a sneeze
- After handling garbage, diapers, etc.
- Before touching eyes
- After hands become obviously soiled

##### Needle and Sharp Safety

- Do not bend, hand-recap, shear or break contaminated needles and other sharps.

- Recap or remove contaminated needles from disposable syringes only when necessary.
- To recap needles, use a mechanical device or a one-handed technique.
- Place contaminated sharps in an appropriate puncture-resistant, leak proof container immediately after use.

### **Personal Hygiene**

- Do not eat, drink, smoke, apply cosmetics or lip balms, or handle contact lenses where you may be exposed to blood or other potentially infectious materials.
  - Avoid petroleum-based lubricants that may eat through latex gloves. Applying hand cream is OK if you thoroughly wash your hands first.
  - Never mouth pipette or suction blood or other potentially infectious materials. Don't keep food and drinks in refrigerators with specimens, or in freezers, cabinets on shelves, countertops or bench-tops where blood or other potentially infectious materials may be present.
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Bathe or shower every day</li> <li>• Keep nails trimmed and clean</li> <li>• Wear clean clothes</li> <li>• Keep your hair clean</li> <li>• Don't share eating utensils or lit cigarettes with others, especially if they are sick</li> <li>• Keep immunizations up to date.</li> </ul> | <ul style="list-style-type: none"> <li>• Eat a balanced diet</li> <li>• Get plenty of rest and exercise.</li> <li>• Don't share linens or clothes without laundering</li> <li>• Don't share combs, toothbrushes, hairbrushes, or make-up</li> </ul> |
|---|---|

### **Personal Protective Equipment (PPE)**

Equipment that protects you from contact with potentially infectious materials may include gloves, masks, gowns, aprons, lab coats, face-shields, protective eyewear, mouth-pieces, resuscitation or other ventilation devices.

Under normal work conditions, protective equipment must not allow potentially infectious materials to contact your work clothes, street clothes, undergarments, skin or mucous membranes. The type of protective equipment appropriate for a given task depends on the degree of exposure you anticipate.

**RISK:** Generation of splashes, spray, spatter or droplets of infectious material.

**PROTECTION:** Mask, gloves, eye protection, gown, and face shield.

**RISK:** Potential clothing or skin exposure.

**PROTECTION:** Gown, gloves, apron, and other protective body clothing.

### **Eye Protection:**

- Face and eye protection with side shields is required when there is a potential for splashing, spraying, or splattering of blood or other potentially infectious materials.

### **Environmental Housekeeping**

- Good housekeeping protects every health care worker and it is every worker's responsibility.

General rules include:

- Clean all equipment and environmental working surfaces as soon as possible after contact with potentially infectious materials.
- Pick-up broken glass with tongs, forceps, or a brush and dust pan.
- Place contaminated sharps and infectious wastes in designated sharps containers. Do not allow containers to over-fill.

- Handle contaminated laundry as little as possible and with minimal agitation. Place soiled laundry in leak-proof bags.

## Laundry

The standard requires identifying, bagging, and handling of all laundry. The office consistently handles all laundry using Universal Precautions/Body Substance Isolation.

- All soiled linen is placed in an impervious bag and tied securely.
- All laundry is washed on-site or done at a commercial laundry service. (This does not pertain to personal clothing, unless soiled beyond normal daily use.)

## PPE Guidelines:

- You must be trained to use equipment properly.
- Protective equipment must be appropriate for the task.
- You must use appropriate protective equipment each time you perform a task.
- Your equipment must be free of physical flaws that could compromise safety.
- Your gloves must fit properly.
- If, when wearing equipment, it is penetrated by blood or other potentially infectious materials, remove it as soon as possible and wash.
- Before leaving the work area, remove all protective equipment and place it in the designated area or container for washing, decontamination or disposal.

## Gloves

*Here's how to use them:*

Gloves act as a primary barrier between your hands and bloodborne pathogens.

Latex or vinyl gloves we used for procedures. Heavy duty utility gloves may be used for housekeeping duties.

- You must wear gloves when you anticipate hand contact with potentially infectious materials, mucous membranes or non-intact skin.
- If you are allergic to latex or vinyl gloves, hypo-allergenic gloves, glove liners, powder-less gloves or another alternatives should be provided.
- Since gloves can be torn or punctured by sharps, bandage any cuts before being gloved.
- Replace disposable single-use gloves, such as surgical or examination gloves, as soon as possible if contaminated, torn, punctured or damaged in any way. Never wash or decontaminate for reuse.
- Utility gloves may be decontaminated and reused unless they are cracked, peeling, torn, punctured, or no longer provide barrier protection.

## Glove removal

You must follow a safe procedure for glove removal being careful that no substances from the soiled gloves contact your hands.

- With both hands gloved, peel one glove off from top to bottom and hold *it in* the gloved hand.
- With the exposed hand, peel the second glove from the inside, tucking the first glove inside the second.
- Dispose of the entire bundle promptly.
- Remove gloves when they become contaminated, damaged or before leaving the work area.
- Wash your hands thoroughly.

## Resuscitation Devices

Mechanical emergency respiratory devices and pocket masks are types of personal protective equipment available. Avoid unprotected mouth-to-mouth resuscitation. The patient may expel saliva, blood or other fluids during resuscitation.

## **Hazard Communication**

- Specific labeling is required to alert employees of potential hazards.
- These warning signs protect you from bloodborne hazards:
- Bags or containers bearing the biohazard sign tell you when the containers hold blood or other potentially infectious materials. Warning labels are also used to mark contaminated equipment.

## **Regulated Waste**

Definition: Items that must be considered biohazardous when handling and disposing, these include items such as:

1. Disposable sharps (needles, syringes, blades, ampules. etc.)
2. Clinical, biological and pathological laboratory wastes.
3. Surgical waste.
4. Dialysis waste materials.
5. Blood and blood products.

## **HBV Vaccination**

If you may be exposed to HBV on the job, the office should make the hepatitis B vaccination available to you at no cost. The vaccine is administered by three injections over a six-month period. The vaccine is safe and effective.

- Those now used in the U.S. are made from yeast Over 2 million U.S. healthcare workers have already been vaccinated.
- The complete series of HBV vaccinations is 85 to 97 percent effective at protecting you from getting the disease or becoming a carrier.

## **Past Exposure Evaluation and Follow-up**

A confidential post-exposure medical evaluation and follow-up is required immediately following an exposure incident. It must include HIV and HBV testing of blood from the employee and the source patient, if known. Consent is given, and counseling, illness reporting, and post-exposure prophylaxis. All evaluations and follow-up services must be provided at a reasonable time and place, under the supervision of Employee Health Service, and according to the current recommendations of the USPHS.

## **Medical Recordkeeping**

The office will maintain records of all exposure incidents, post-exposure follow-up and hepatitis B vaccination status. These records will be kept confidential and retained for the duration of employment plus 30 years, which is consistent with other OSHA standards.

## **Employee Training**

Specific information and training about occupational hazards and required protective measures will be provided to new employees at the time of initial assignment and to current employees. Retraining on an annual basis is also provided. Training will be provided by an individual who is knowledgeable in the subject matter, at no cost to the employee, during regular working hours, and at a location reasonably accessible to employees. Appropriate training records will be kept for three years.

## **Compliance Monitoring**

All employees are responsible for adhering to the guidelines in the Exposure Control Plan. The MD is responsible for all compliance monitoring

## **REMEMBER...**

To be safe when you are at work:

- know about bloodborne pathogens;
- use precautions for **all** patient's blood and body fluids;
- report exposures promptly.

## **POST EXPOSURE EVALUATION AND FOLLOW-UP**

1. All exposure incidents must be reported by the employee, to their immediate supervisor;
2. All reported exposure incidents shall be reported, investigated and documented.
3. If an exposure incident occurs, defined by OSHA as a specific mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties, employees are entitled to a confidential medical evaluation and follow-up:
  - at no cost to the employee;
  - at a reasonable time and place;
  - performed by or under the supervision of a licensed physician;
  - provided according to the recommendations of the USPHS;
  - all lab tests performed in connection to the exposure incident will be conducted at an accredited laboratory.

## **All incidents must be reported to the employer.**

4. The employer will:
  - Document the route(s) of exposure and how exposure occurred.
  - Identify and document the source individual, unless the employer can establish that identification is infeasible, or prohibited by state or local law.
  - Obtain consent of the source individual and have the source individual's blood tested as soon as possible to determine HIV and HBV infectivity.
  - Document the source's blood test results.
  - If consent is not obtained, the employer must show that legally required consent could not be obtained.
  - Where law does not require consent, the source individual's blood, if available, must be tested and the results documented.
  - The source individual's blood need not be tested if the HIV and HBV status is known.
  - Provide the exposed employee with the source individual's test results and information about applicable disclosure laws and regulations concerning the source identity and infectious state.
5. Collection and testing of the exposed employee's blood shall comply with the following.

- Obtain consent as soon as possible. Employees may refuse testing.
- Obtain evaluation with the health care professional as soon as possible.
- If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample must be preserved for at least 90 days. If during this time the exposed employee elects to have the baseline sample tested, testing shall be done as soon as possible.

6. The Healthcare Professional responsible for the employee's evaluation shall be provided with the following by the employer.

- A copy of the OSHA regulations on occupational exposure to Bloodborne Pathogens.
- A description of the exposed employee's duties as they relate to the exposure incident.
- Written documentation of the route and circumstances of the exposure,
- Results of the source individual's blood testing, if available,
- Relevant employee medical records including vaccination status.

7. Post exposure prophylaxis must be offered to the employee as recommended by the USPHS.

- This includes immune globulin for Hepatitis B.
- The recommendations of the evaluating physician who is familiar with current CDC guidelines on post exposure prophylaxis treatment for HIV should be followed in the event of HIV exposure.

8. The employer shall obtain and provide the employee with a copy of the evaluating Healthcare Professional's written opinion within 15 days of completion of the evaluation.

9. The healthcare professional's written opinion for post exposure follow-up shall be limited to the following information.

- Whether vaccination is indicated for the employee and if employee has received such vaccination.
- A statement that the employee has been informed of the results of the evaluation.
- A statement that the employee has been informed of any medical condition resulting from exposure to blood or other potentially infectious material, which require further evaluation or treatment.
- **ALL OTHER FINDINGS AND DIAGNOSIS SHALL REMAIN CONFIDENTIAL AND SHALL NOT BE INCLUDED IN THE WRITTEN REPORT.**

## **EMPLOYEE INFORMATION AND TRAINING.**

1. The training program on occupational exposure to Bloodborne Pathogens shall be provided:

- To all employees with occupational exposure to Bloodborne pathogens during work hours at no cost to the employee and is tailored to the education and language level of the employee.
- is provided at the time of initial assignment to tasks where occupational exposure may occur.
- is provided annually within one year of previous training.
- At the time of modification of tasks or procedures or introduction of new tasks or procedures which affect an employee or employees' occupational exposure.

2. The training program shall contain and cover the following elements.

- An accessible copy of the text of the OSHA standard on Occupational Exposure to Bloodborne Pathogens and an explanation of its contents.
- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of this exposure control plan and the means by which the employee may obtain a copy of the plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices and PPE.
- Information on the types, proper use, location, handling, decontamination, and disposal of PPE.
- An explanation of the basis for selection of personal protective equipment.
- Information on the HBV vaccine, its efficacy, safety, method of administration, benefits of the vaccine, and the provision at no cost to the employee.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood and other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, the method of reporting, and the medical follow-up that is available.
- Information on the post- exposure evaluation and follow-up that is provided following exposure.
- An explanation of the signs/symbols and color coding of biohazards.
- A question and answer session between the trainer and employees.

3. The training will be conducted by a person knowledgeable in the subject matter of the training program as it relates to the medical office.

**EMPLOYEE NAME:**  
**DEPARTMENT:**

Please circle the correct answer.

	True	False	
1.	T	F	Hepatitis B is easily cured.
2.	T	F	HIV and HBV may be present in body fluids other than blood.
3.	T	F	Broken glass is considered a sharp.
4.	T	F	The eye is a potential route of entry into the body for bloodborne pathogens.
5.	T	F	Contaminated environmental surfaces are a major mode of HIV spread.
6.	T	F	To consult a copy of the hospital's Exposure Control Plan, check in your Life-Safety Manual
7.	T	F	Universal Precautions/Body Substance Isolation means treating the blood and body fluids of anyone aged 18—65 as if, they were known to be infected with HIV/HBV.
8.	T	F	The most important approach to controlling the spread of infection is handwashing.
9.	T	F	The hazardous label on biohazard containers must be visible.
10.	T	F	Every time you remove your gloves you must wash your hands with soap and water.
11.	T	F	Annually 200 healthcare workers die from Hepatitis B or Hepatitis B related liver disease
12.	T	F	You may store food next to blood if the food is in a bag or lunch box.
13.	T	F	The type of protective equipment appropriate for a given task depends on the degree of exposure you anticipate
14.	T	F	The hospital could receive an OSHA citation/fine if an employee does not use appropriate personal protective equipment (PPE).
15.	T	F	You do not have to wear personal protective equipment (PPE) if it is annoying or uncomfortable.
16.	T	F	It is the responsibility of every employee to adhere to the Exposure Control Plan.
17.	T	F	All healthcare workers with - exposure to blood and body fluids should receive Hepatitis B vaccine
18.	T	F	Eating and drinking in patient care areas is allowed when you do not have time to take a break
19.	T	F	Contaminated linen should be separated from regular linen and placed in an impervious bag.
20.	T	F	If you have exposure to blood or body fluids you should report the incident to your supervisor within 14 days.

I have read and understand the Exposure Control Program training handbook.  
 I have completed and passed the comprehensive quiz at the conclusion of the handbook.  
 I have had any questions regarding the Exposure Control Program answered.

Employee Signature

Date

Director/Manager Signature

Date