



Bloodborne Pathogens Safety Training Program



Goal

The goal of this program is to provide information about the requirements of the Occupational Health and Safety Administration (OSHA) Bloodborne Pathogens Standard, [29 Code of Federal Regulations \(CFR\) 1910.1030](#). Information about the [Needlestick Safety and Prevention Act](#) will also be provided.

Objectives

Readers will understand the following requirements of the OSHA Bloodborne Pathogens Standard, including:

- Definitions.
- Minimum elements of an exposure control plan (ECP).
- Engineering and work practice controls.
- Methods of compliance.

- Use and availability of the hepatitis B vaccine (HBV).
- Actions required in an exposure and post-exposure follow-up.
- Labeling requirements.
- Training in workplace communication and hazards.
- Required recordkeeping.

Background

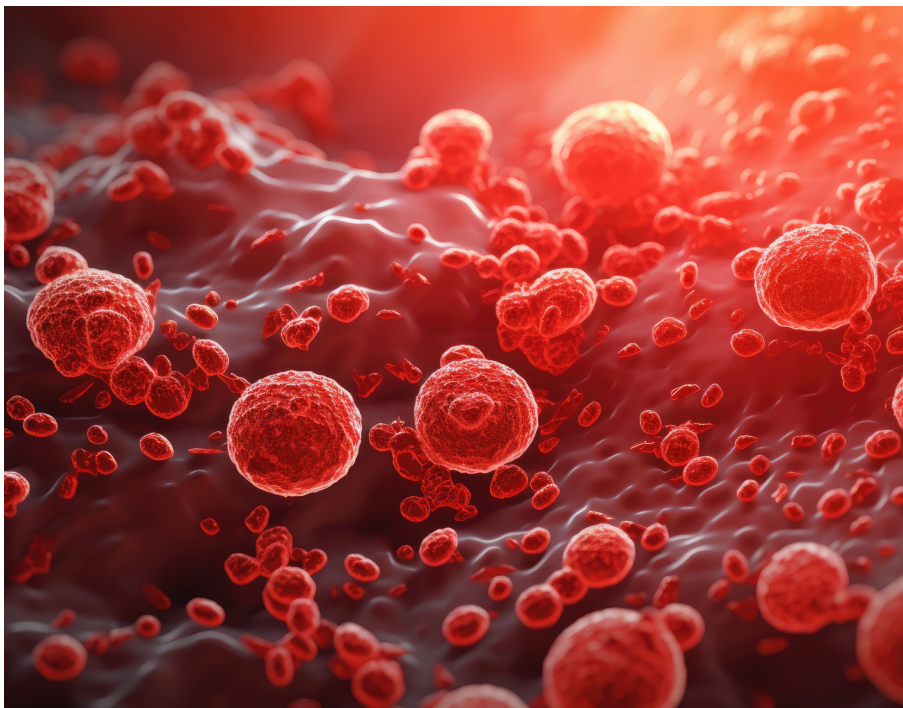
The Bloodborne Pathogens Standard, published in 1991 and revised in 2001, addresses occupational exposure to body fluids, protecting health care workers and others at risk, such as first aid responders and laundry workers.¹ The standard is based on the Centers for Disease Control and Prevention's (CDC) 1987 Universal Precautions, which treat all blood and

specified human body fluids as potentially infectious.² Approximately 5.6 million workers are at risk,³ with 600,000-800,000 sustaining needlesticks injuries annually.⁴ The Needlestick Safety and Prevention Act, signed into law in November 2000, requires employers to utilize safer medical devices.⁵

Definitions

- **Blood.**
Human blood, human blood components, and products derived from human blood.
- **Bloodborne pathogens.**
Microorganisms in human blood that can cause disease, including but not limited to hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).
- **Contaminated.**
Presence of blood or other potentially infectious materials (OPIM) on an item or surface.

- **Contaminated sharps.**
Contaminated objects that can penetrate the skin including, but are not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.
- **Engineering controls.**
Devices that isolate or remove bloodborne pathogen hazards (e.g., sharps disposal containers and self-sheathing needles).
- **Exposure incidents.**
Contact with blood or OPIM during work duties.
- **Needleless systems.**
Devices that do not use needles for fluid collection or medication administration
- **Occupational exposure.**
Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM due to job duties.



- **Other Potentially Infectious Materials (OPIM).**
Human body fluids that may be infectious including but are not limited to semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any bodily fluid visibly contaminated with blood.
- **Parenteral.**
Contact through breaks in the skin or mucous membranes.

- **Sharps.**
Medical items with sharp points or edges that can cause injury.
- **Work practice controls.**
Procedures that reduce exposure risk by altering task performance.

Exposure Control Plan (ECP)

Employers with at-risk employees must create a written ECP to eliminate or reduce exposure to bloodborne pathogens. The plan must include:

1. Identification of employees at risk.
2. Implementation schedule for safety measures, including:
 - Compliance methods.
 - Rules for HIV and HBV research labs.
 - Hepatitis B vaccination program.
 - Post-exposure follow-up procedures.
3. Procedures to evaluate exposure incidents.
4. Recordkeeping processes for training, hazard identification, and exposure prevention methods.
5. Annual review and updates to the ECP.
6. Documentation of safer medical devices considered.
7. Non-managerial employees input about safety measures.
8. Revisions when job tasks or exposures change.



9. Easy access to the ECP for all employees.

Exposure Determination

The employer needs to check every job to see if workers might come into contact with blood or other body fluids that could carry diseases. This check should be done even if workers use personal protective equipment (PPE). The exposure determination should list:

1. Jobs where all workers might be exposed to these fluids.
2. Jobs where some workers might be exposed, along with a list of the tasks that could lead to exposure.

Specific tasks must be listed because not all workers in the same job do the same things. For example, in a hospital laundry room, some workers might handle dirty, contaminated sheets, while others might not.

Methods of Compliance

To prevent disease transmission, employers should implement:

- **Engineering controls.**
Changing workplace setups to reduce exposure risks.

- **Work practice controls.** Changing how tasks are performed.

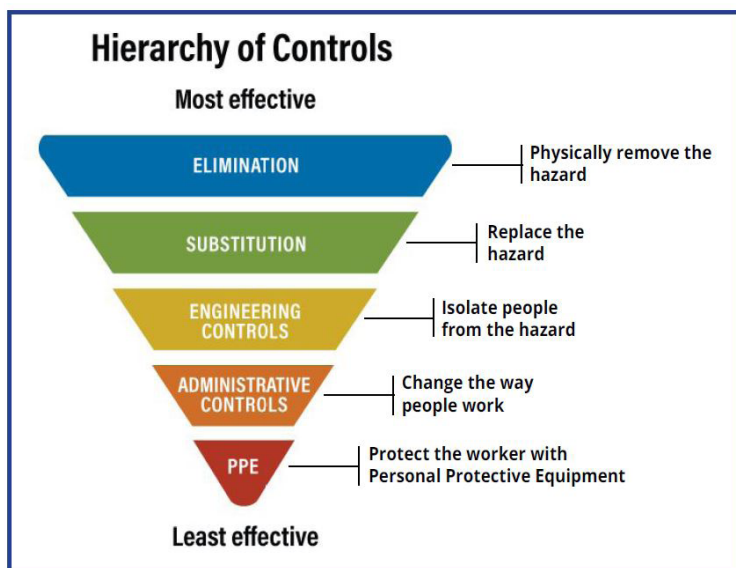
Engineering controls

Employers must:

1. Identify workers who might encounter blood or OPIM.
2. Evaluate available safety tools.
3. Train workers on safe tool usage and disposal.
4. Implement appropriate safety tools.
5. Conduct annual training on new tools and technologies.
6. Review potentially dangerous work steps annually.
7. Document processes in the ECP.
8. Reassess when new procedures are introduced.

Examples of engineering controls:

- Self-sheathing needles.
- Needleless systems.
- Puncture-resistant disposal containers for contaminated sharps.
- Hand washing facilities.



- Resuscitation bags.
- Ventilation devices.

Work practice controls

Examples include:

- Prohibiting eating, drinking, and smoking in work areas.

- Avoiding mouth pipetting.
- Decontaminating equipment before servicing.
- Washing skin immediately after contact with blood or OPIM.
- Using one-handed techniques for recapping needles.

If there is still danger after using engineering and work practice controls, workers also need to wear PPE.

Personal Protective Equipment

PPE must prevent blood or OPIM from contacting skin, clothes, or mucous membranes. Employers must provide PPE at no cost, ensuring appropriate sizes and hypoallergenic options for sensitive employees. Proper handling of PPE includes:

- Removing contaminated PPE before leaving work areas.
- Placing used PPE in designated containers.
- Wearing gloves and replacing them if compromised.

- Using face and eye protection against splashes.

Involve Non-Management Employees

Non-management employees should participate in identifying and evaluating engineering controls. Employers must document employee input in the ECP.

Housekeeping

Employers must maintain a clean and sanitary workplace, developing a written housekeeping schedule based on:

- Facility location.
- Surface types.
- Contamination levels.
- Task types.

Housekeeping procedures:

- Clean and decontaminate equipment after contact with blood or OPIM.
- Regularly inspect and decontaminate reusable receptacles.
- Use tongs or forceps for handling contaminated glass.

Biosafety containers (Sharps containers)

Sharps containers, typically red and labeled with biohazard symbols, must be used for disposing of contaminated items. Guidelines include:

- Avoiding opening or emptying containers.

- Transporting waste in leak-proof containers.
- Placing containers near waste generation points.
- Inspecting and replacing containers routinely.
- If leakage is possible, place the container in a secondary leak-resistant, closable, and labeled or color-coded container.

Needlestick injuries

Common practices leading to needlestick injuries include administering injections and disposing of needles. If a needlestick occurs:

1. Wash the area with soap and water for 10 minutes.
2. Notify a supervisor immediately.

Laundry

Contaminated laundry must be transported in labeled or color-coded bags. Employers must ensure employees wear appropriate PPE when



handling contaminated laundry. Always:

- Bag-contaminated laundry at the location of use.
- Never sort or rinse contaminated laundry in the location of use.
- Place contaminated laundry in leak-proof, labeled, or color-coded containers before transporting.

Hepatitis B Vaccination

Employers must provide hepatitis B vaccinations at no cost to at-risk employees, with key points including:

- A licensed physician or healthcare provider must perform or supervise the vaccination.
- The vaccination must be offered within 10 working days of initial assignment to a position with occupational exposure.
- Vaccination is not required if the employee has already received the complete series, has proven immunity, or cannot receive the vaccine for medical reasons.

- Employees may decline the vaccination but must complete a declination form.

Information and Training

Employers must provide free training during normal working hours:

- Upon initial assignment.
- Annually thereafter.
- When changes occur in exposure potential, tasks, or procedures.

Training must cover:

- The Bloodborne Pathogen Standard and its contents.
- Epidemiology, symptoms, and transmission of bloodborne diseases.
- Recognition of tasks that might result in occupational exposure.
- The employer's ECP.
- Use and limitations of work practices, engineering controls, and PPE.
 - Selection, use, and handling of PPE.
- Hepatitis B vaccination information.
- Emergency procedures and contacts.
- Post-exposure evaluation and follow-up procedures.
- Warning labels, signs, and color-coding.

Training should conclude with a question-and-answer session.



Recordkeeping

Employers must maintain several types of records:

1. Sharps Injury Logs:

- Required for employers covered by 29 CFR 1904.
- Must include type and brand of device, location, and incident description.
- Must be kept confidential and reviewed regularly.

2. Medical Records:

- Must be kept for the duration of employment plus 30 years.
- Must include employee details, HBV vaccination status, medical test results, and post-exposure information.

3. Training Records:

- Must be kept for 3 years.
- Must include training dates, content summary, trainer information, and attendee details.

Labeling Requirements			
Item	Biohazard Label		Red Container
Regulated waste container (contaminated sharps containers).	✓	or	✓
Reusable contaminated sarps containers (surgical instruments soaking in a tray).	✓	or	✓
Refrigeration/freezer holding blood or other potentially infectious materials.	✓		✓
Containers used for storage, transport or shipping of blood.	✓	or	✓
Blood/blood products for clinical use.	No labels required.		
Individual specimen containers of blood or othr potentially infectious materials remaining in facility	✓	or	✓
Contaminated equipment needing service (dialysis equipment, suction apparatus).*	✓		✓
Specimens and regulated waste shipped from the primary facility to another for service or disposal.**	✓	or	✓
Contaminated laundry.	✓	or	✓
Contaminated laundry sent to another faciliy that does not use Universal Precautions.	✓	or	✓

* No label is needed if Universal Precautions are used and specific use of container or item is known to all employees.
 ** Include a label specifying where the contanimation exists.
 *** Alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

Review Questions

1. Occupational exposure is defined as reasonably anticipated contact with blood or OPIM.

True or False?
2. Employees should practice universal precautions when handling used blood-drawing equipment.

True or False?
3. Employees must provide their own protective equipment.

True or False?
4. Can an employee store lunch in a lab refrigerator labeled "biohazard?"

Yes or No?
5. Employers can charge employees for hepatitis B vaccinations.

True or False?

References

- ¹ Occupational Safety and Health Administration, "Revision to OSHA's Bloodborne Pathogens Standard: Technical Background and Summary," Web. <https://www.osha.gov/bloodborne-pathogens/needle-fact>. Accessed August 29, 2024.
- ² Centers for Disease Control and Prevention, "Perspective in Disease Prevention and Health Promotion Update: Universal Precautions for Prevention of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodborne Pathogens in Health-Care Settings." Web. <https://www.cdc.gov/mmwr/preview/mmwrhtml/00000039.htm>. Accessed August 29, 2024.
- ³ Occupational Safety and Health Administration, "Bloodborne Pathogens and Needlestick Prevention." Web. [https://www.osha.gov/bloodborne-pathogens/hazards#:~:text=The%20CDC%20estimates%20that%205.6,\(HCV\)%2C%20and%20others](https://www.osha.gov/bloodborne-pathogens/hazards#:~:text=The%20CDC%20estimates%20that%205.6,(HCV)%2C%20and%20others). Accessed September 5, 2024.
- ⁴ National Institutes of Occupational Safety and Health, "Alert: Preventing Needlestick Injuries in Health Care Settings." PDF. <https://www.cdc.gov/niosh/docs/2000-108/pdfs/2000-108.pdf?id=10.26616/NIOSH PUB2000108>. Accessed September 5, 2024.
- ⁵ Occupational Safety and Health Administration, "Needlestick Safety and Prevention Act Interpretation Letter," Web. [https://www.osha.gov/laws-regs/standardinterpretations/2003-02-20#:~:text=The%20Needlestick%20Safety%20and%20Prevention%20Act%20\(NSPA\)%20was%20signed%20into,specific%20additional%20definitions%20and%20requirements](https://www.osha.gov/laws-regs/standardinterpretations/2003-02-20#:~:text=The%20Needlestick%20Safety%20and%20Prevention%20Act%20(NSPA)%20was%20signed%20into,specific%20additional%20definitions%20and%20requirements). Accessed Aug. 29, 2024.

Review Question Answers 1. True; 2. True; 3. False; 4. No; 5. False.



www.txsafetyatwork.com

1-800-252-7031, Option 2

*The Texas Department of Insurance,
Division of Workers' Compensation (DWC)-Workplace Safety
P.O. Box 12050
Austin, TX 78711-2050*

Disclaimer: Unless otherwise noted, this document was produced by the Texas Department of Insurance, Division of Workers' Compensation using information from staff subject specialists, government entities, or other authoritative sources. Information contained in this fact sheet is considered accurate at the time of publication. For more free publications and other occupational safety and health resources, visit www.txsafetyatwork.com, call 800-252-7031, option 2, or email resourcecenter@tdi.texas.gov.