

OSHA's Bloodborne Pathogens Standard

1910.1030

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Bloodborne Pathogens Standard

Federal Law 29 CFR 1910.1030

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051

Introduction

- Approximately 5.6 million workers in health care and other facilities are at risk of exposure to bloodborne pathogens such as human immunodeficiency virus (HIV – the virus that causes AIDS), the hepatitis B virus (HBV), and the hepatitis C virus (HCV)
- OSHA’s Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure

Who is covered by the standard?

- All employees who could be “reasonably anticipated” as the result of performing their job duties to face contact with blood and other potentially infectious materials, such as when providing first aid
- “Good Samaritan” acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure

How does exposure occur?

- Most common: needlesticks
- Cuts from other sharps contaminated with blood or other potentially infectious material (broken glass, etc.)
- Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with blood or other potentially infectious material

Bloodborne Pathogens Standard

- 29 CFR 1910.1030, Occupational Exposure to Bloodborne Pathogens
- Published December 1991
- Effective March 1992
- Scope
 - ALL occupational exposure to blood and other potentially infectious material (OPIM)

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- (a) Scope and Application
- (b) Definitions
- (c) Exposure Control –
 - (1) Exposure Control Plan, (2) Exposure Determination
- (d) Methods of Compliance –
 - (1) General universal precautions, (2) Engineering and work practice controls, (3) Personal protective equipment, (4) Housekeeping
- (e) HIV and HBV Research laboratories and production facilities

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- (f) Hepatitis B vaccination and post-exposure evaluation and follow-up
- (g) Communication of hazards to employees
 - (1) Labels and signs
 - (2) Information and training
- (h) Recordkeeping

BBP Definitions (b)

- **Bloodborne Pathogens** - Pathogenic bloodborne microorganisms including but not limited to HIV and HBV.
- **Other Potentially Infectious Material (OPIM)** -
 - (1) Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid visibly contaminated with blood, and all body fluids in situations where it is difficult to differentiate between body fluids.
 - (2) Unfixed tissue or organ from a human.
 - (3) HIV or HBV containing culture medium or tissues from experimental animals infected with HIV or HBV

BBP Definitions

- **Contaminated** - The presence or the reasonably anticipated presence of blood or OPIM.
- **Contaminated Laundry** - Laundry which is soiled with blood or OPIM or may contain sharps.
- **Contaminated Sharps** - Any contaminated object that can penetrate the skin.
- **Occupational Exposure** - Reasonably anticipated skin, eye, mucus membrane, or parenteral contact with blood or OPIM that may result from the performance of an employees duty.

BBP Definitions

- **Regulated Waste** - (1) Liquid or semi-liquid blood or OPIM. (2) Contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed. (3) Items that are caked with dried blood or OPIM and are capable of releasing these materials during handling. (4) Contaminated sharps. (5) Pathological and microbiological wastes containing blood or OPIM.
- **Universal Precautions** - An approach to infection control. All human blood and certain body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

(c)(1) Exposure Control Plan

The plan must be written, designed to eliminate or minimize employee exposure, accessible to employees, and reviewed and updated annually or when changes occur, the elements are:

- (A) Exposure Determination
- (B) Methods of Compliance and Schedule for Implementation -
 - (1) Methods of compliance, including, engineering and work practice controls, personal protective equipment, and housekeeping.

(c)(1) Exposure Control Plan

- (B) Methods of Compliance and Schedule for Implementation (cont.)
 - (2) HBV Vaccination and Post Exposure Evaluation and Follow-up, including, HBV vaccination, post exposure evaluation and follow-up, information to healthcare professional, healthcare professional's written opinion, medical recordkeeping.
 - (3) Communication of Hazards to Employees, including, labels and signs, information and training
 - (4) Recordkeeping, including, medical records, training records, and availability of records
- (C) Procedures for Exposure Incident Evaluations

Exposure Control Plan

- Identifies jobs and tasks where occupational exposure to blood or other potentially infectious material occurs
- Describes how the employer will:
 - Use engineering and work practice controls
 - Ensure use of personal protective equipment
 - Provide training
 - Provide medical surveillance
 - Provide hepatitis B vaccinations
 - Use signs and labels

Exposure Control Plan

- Written plan required
- Plan must be reviewed at least annually to reflect changes in:
 - tasks, procedures, or assignments which affect exposure, and
 - technology that will eliminate or reduce exposure
- Annual review must document employer's consideration and implementation of safer medical devices
- Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
- Plan must be accessible to employees

Engineering and Work Practice Controls

- These are the primary methods used to control the transmission of HBV and HIV
- When occupational exposure remains after engineering and work practice controls are put in place, personal protective equipment (PPE) must be used

Engineering Controls

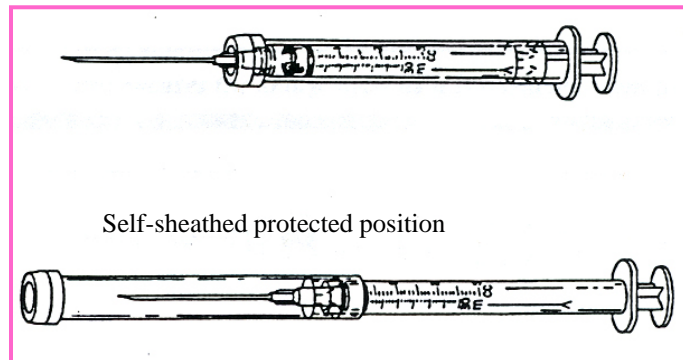
- Sharps disposal containers
- Self-sheathing needles
- Safer medical devices
 - Needleless systems
 - Sharps with engineered sharps injury protections



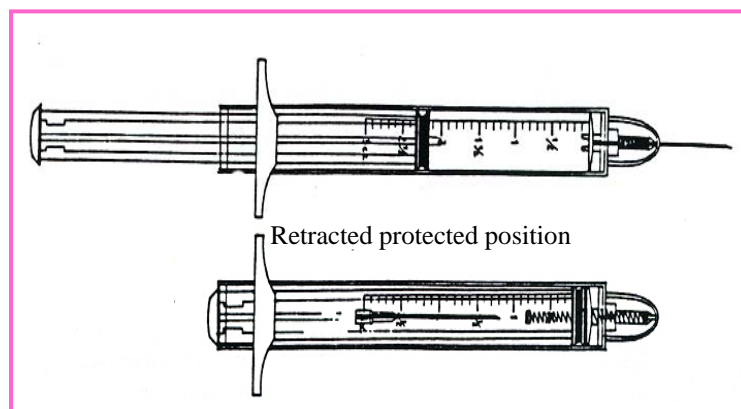
Safer Medical Devices

- *Sharps with Engineered Sharps Injury Protections:* a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident

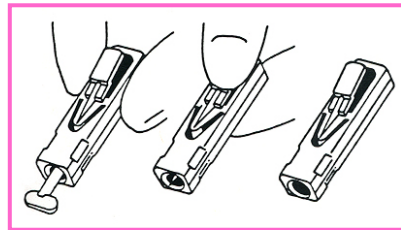
Hypodermic syringes with “Self-Sheathing” safety feature



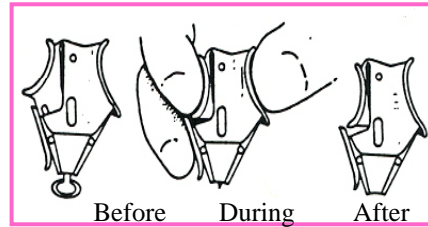
Hypodermic syringes with “Retractable Technology” safety feature



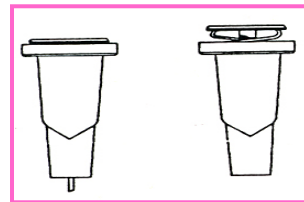
Retracting lancets with safety features



Before During After



Before During After



In use After use

Work Practice Controls

- Wash hands after removing gloves and as soon as possible after exposure
- Do not bend or break sharps
- No food or applying cosmetics in work areas where occupational exposure is likely



Personal Protective Equipment

- Specialized clothing or equipment worn by an employee for protection against infectious materials
- Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
- Must be removed when leaving area or upon contamination



Examples of PPE

- Gloves
- Eye protection
- CPR masks
- Splash resistant clothing
- Face shields



Housekeeping

- Location within the facility
- Type of surface to be cleaned
- Type of soil present
- Tasks or procedures being performed

Housekeeping (cont'd)

- After completion of tasks,
- When surfaces are contaminated, and
- At the end of the work shift





Pesticides: Regulating Pesticides

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Selected EPA-registered Disinfectants

Current as of January 9, 2009

EPA's Registered Sterilizers, Tuberculocides, and Antimicrobial Products Against Certain Human Public Health Bacteria and Viruses

These are listings of EPA's registered antimicrobial products effective against certain blood borne/body fluid pathogens, *Mycobacterium tuberculosis* (tubercle bacteria), human HIV-1 virus, Hepatitis B, Hepatitis C viruses, as well as products classified as sterilizers. The use of EPA registered products effective against human blood borne pathogens listed are in compliance with OSHA's (Occupational Safety and Health Administration) [Occupational Exposure to blood borne Pathogens \(29 CFR 1910\)](#).

Listings also include EPA registered products effective against Methicillin Resistant *Staphylococcus aureus* (MRSA), Vancomycin Resistant *Enterococcus faecalis* or *faecium* (VRE), *Legionella pneumophila*

Highlights

National Pesticide Information Center (NPIC) [\[EXIT Disclaimer\]](#) ;

- 1-800-858-7378
- 6:30am - 4:30pm PT (M-F)

Hot Topics:

- HVAC
- CCA (Wood Preservatives)
- Anthrax

Public Comment Periods

Registration Information Sources

Information on listed products are current as indicated by the dates on the respective lists.

- [List A: EPA's Registered Antimicrobial Products as Sterilizers \(PDF\)](#) (11 pp, 46k, [About PDF](#))
- [List B: EPA Registered Tuberculocide Products Effective Against *Mycobacterium tuberculosis* \(PDF\)](#) (33 pp, 162k, [About PDF](#))
- [List C: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 Virus \(PDF\)](#) (89 pp, 417k, [About PDF](#))
- [List D: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 and Hepatitis B Virus \(PDF\)](#) (30 pp, 128k, [About PDF](#))
- [List E: EPA's Registered Antimicrobial Products Effective Against *Mycobacterium tuberculosis* Human HIV-1 and Hepatitis B Virus \(PDF\)](#) (8 pp, 53k, [About PDF](#))
- [List F: EPA's Registered Antimicrobial Products Effective Against Hepatitis C Virus \(PDF\)](#) (22 pp, 94k, [About PDF](#))
- [List G: EPA's Registered Antimicrobial Products Effective Against *Norovirus* \(PDF\)](#) (7 pp, 51k, [About PDF](#))
- [List H: EPA's Registered Antimicrobial Products Effective Against Methicillin Resistant *Staphylococcus aureus* \(MRSA\) and Vancomycin Resistant *Enterococcus faecalis* or *faecium* \(VRE\) \(PDF\)](#) (40 pp, 566k, [About PDF](#))
- [List J: EPA's Registered Antimicrobial Products for Medical Waste Treatment \(PDF\)](#) (4 pp, 36k, [About PDF](#))

- Science Policy Documents
- Registration Policy Documents
- PR Notices

Only primary product names from the primary registrants are included in the lists. All EPA's registered pesticides must have an EPA registration number (EPA Reg#). Alternative brand names have the same EPA Reg# as the primary product name. The EPA Reg# of a product for primary registrants consists of two set of numbers separated by a hyphen (-). (for example EPA

The screenshot shows a web browser window displaying the FDA website. A context menu is open over the page, listing options like Back, Forward, Save Background As..., Select All, Paste, Create Shortcut, Add to Favorites..., View Source, Encoding, Print, Refresh, Export to Microsoft Excel, google search, Send To, Page Info, and Properties. The page content includes the FDA logo, navigation links for Medical Devices, Vaccines, Blood & Biologics, Animal & Veterinary, Cosmetics, Radiation, and Tobacco Products. The main heading is "FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices - March 2009". Below this is a table with columns for Manufacturer, Active Ingredient (s), Sterilant Contact Conditions, and High Level Disinfectant Contact Conditions.

Manufacturer	Active Ingredient (s)	Sterilant Contact Conditions	High Level Disinfectant Contact Conditions
K051305	TD-5 High-level Disinfectant		
CS Medical, L.L.C.	2.65% glutaraldehyde	No indication for device sterilization.	5 min at 37.8°C Single use to be used exclusively

Antimicrobials

- <http://www.epa.gov/oppad001/chemregindex.htm>
- <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ReprocessingofSingle-UseDevices/ucm133514.htm>
- OR use
- **Solution of household bleach (5.25% Sodium hypochlorite) diluted with water**

Regulated Waste

Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.



Laundry

- Handle contaminated laundry as little as possible and use PPE
- Must be bagged or containerized at location where used
- No sorting or rinsing at location where used
- Must be placed and transported in labeled or color-coded containers



Hepatitis B Vaccination Requirements

- Must make available, free of charge at a reasonable time and place, to all employees at risk of exposure within 10 working days of initial assignment unless:
 - employee has had the vaccination
 - antibody testing reveals immunity
- The vaccination must be performed by a licensed healthcare professional



Hepatitis B Vaccination Requirements (cont'd)

- Must be provided even if employee initially declines but later decides to accept the vaccination
- Employees who decline the vaccination must sign a declination form
- Employees are not required to participate in antibody prescreening program to receive vaccination series
- Vaccination booster doses must be provided if recommended by the U.S. Public Health Service

Collateral Duty Exception

- If providing first aid is a collateral duty to the normal work duties of an individual, then the hepatitis B vaccine does not have to be offered until an incident occurs where blood or other potentially infectious material is present

What to do if an exposure occurs?

- Wash exposed area with soap and water
- Flush splashes to eyes, nose, mouth, or skin with water
- Report the exposure to the employer
- Complete the post-exposure evaluation and follow-up procedures

Post-Exposure Follow-Up

- Document the routes of exposure and how exposure occurred
- Record injuries from contaminated sharps in a sharps injury log, if required
- Obtain consent from the source individual and the exposed employee and test blood as soon as possible after the exposure incident
- Provide risk counseling and offer post-exposure protective treatment for disease when medically indicated in accordance with current U.S. Public Health Service guidelines
- Healthcare professional to provide written opinion of findings to employer and copy to employee within 15 days of the evaluation

Biohazard Warning Labels

- Warning labels required on:
 - Containers of regulated waste
 - Sharps containers
 - Contaminated laundry containers
- Red bags or containers may be substituted for labels



Training Requirements

- Provide at no cost to employees during working hours
- Provide at time of initial assignment to a job with occupational exposure and at least annually thereafter
- Additional training needed when existing tasks are modified or new tasks are required which affect the worker's occupational exposure
- Maintain training records for 3 years



Training Elements

- Appropriate for educational level, literacy and language
- Content of the standard
- Explain symptoms and epidemiology of bloodborne disease
- Modes of transmission
- Details of Exposure Control Plan
- Explanation of method to identify tasks that may involve blood or OPIM
- Use and limitations of engineering, PPE and work practice controls
- Hepatitis B vaccine
- BBP Exposure & follow-up procedures
- Explanation of signs or labels used at facility
- Must be interactive, i.e. question and answer

Interactive Training

- The trainer must be knowledgeable in the subject matter as it relates to the workplace
- Unsupervised video tape and/or computer training classes are not appropriate

Recordkeeping

- Training Records
 - dates and summary of session
 - name of participants and trainers
 - maintained for 3 years
- Medical Records
 - for each employee with occupational exposure
 - HBV vaccine dates and status
 - Must be kept for duration of employment + 30 years

Medical Recordkeeping Requirements

- Employee's name and social security number
- Employee's hepatitis B vaccination status
- Results of examinations, medical testing, and post-exposure evaluation and follow-up procedures
- Health care professional's written opinion
- Information provided to the health care professional
- Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law)

Sharps Injury Log

- Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps
- The log must be maintained in a way that ensures employee privacy and must contain, at a minimum:
 - Type and brand of device involved in the incident
 - Location of the incident
 - Description of the incident

Summary

- OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure
- Implementation of this standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers contracting AIDS, Hepatitis C, or other bloodborne diseases

HBV Vaccinations

- Employer must provide hepatitis B vaccination to all employees who have an occupational exposure to BBP
- Employer must provide a post-exposure evaluation to all employees who have had an exposure incident.

Methods of Compliance

- Universal Precautions
- Engineering and Work Practice Controls
- Personal protective equipment
- Housekeeping

Universal Precautions

- Treat all human blood and certain body fluids as if they are infectious
- Must be observed in all situations where there is a potential for contact with blood or other potentially infectious materials

Thank you

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