



Blood-borne Diseases

Objectives

- **Define blood-borne pathogens**
- **Transmission mode**
- **Who is at risk**
- **Possible causes**
- **Symptoms**
- **Recognize OSHA standards related to blood-borne pathogens.**
- **Prevention modes**

Definition

- Pathogenic microorganisms that are present in human blood or other potentially infectious materials **and can cause disease in humans**
- **Septicemia**

Potentially Infectious Materials

- **Blood**
- **Human bodily fluids such as:**
 - **Semen, vaginal secretions, lung fluid**
- **Any bodily fluid containing visible blood**
- **Any bodily fluid that cannot be identified**

Transmission

- Puncture wounds caused by sharp objects
- Infectious materials contacting open wounds, cuts, or broken or damaged skin
- Infectious materials contacting mucous membranes of eyes, nose and mouth
- During an accident
- While administering First Aid
- During post-accident clean-up
- When performing routine maintenance or janitorial work



Who is at risk??

Common causes

- **Pathogens include but are not limited to:**
 - **Human Immunodeficiency Virus (HIV)**
 - **Hepatitis B Virus (HBV)**
 - **Hepatitis C Virus (HCV)**
 - *Treponema pallidum*
 - human T-cell lymphotropic virus type 1

Common symptoms

- Like a mild "flu
- A sense of fatigue
- Weakness
- chills
- Fever

Blood-borne Pathogen Standard

- **Required by OSHA**
(29 CFR 1910.1030)
- **Applies to employees in all industries who may be exposed to blood or other potentially infectious materials (OPIM)**

Exposure Control Plan

- 1. Universal precautions**
- 2. Engineering controls**
- 3. Work practice controls**
- 4. Post-exposure follow-up**

Universal Precautions

- **Treat all human blood and bodily fluids as if they are infected with HIV, HBV, HCV and other bloodborne pathogens.**

Engineering & Work Practice Controls

○ Engineering Controls

- Handwashing facilities
- Biohazard waste bags

○ Work Practice Controls

- Personal protective equipment (PPE)
- First aid response
- Spill clean-up
- Laundry
- Waste disposal
- Exposure response

Personal Protective Equipment

- **First line of defense**
- **Limitations**
- **Rules:**
 - **Remove before leaving work area**
 - **Wash hands after removing**
 - **Properly dispose of contaminated PPE**



First-Aid Response

- **Adopt Universal Precautions**
- **Encourage self-care**
- **Use PPE**
- **Avoid applying pressure without barrier**



Housekeeping: Spill Clean-up

- **Use PPE & Universal Precautions**
- **Cover spill or area with paper towel or rags**
- **Pour disinfectant solution over towels or rags**
- **Leave for at least 10 minutes**
- **Place materials in appropriate container**
- **Arrange for pick-up and disposal**

Housekeeping: Waste Disposal

- **Use PPE when handling**
- **Leak-proof containers**
- **Proper labeling**
 - **Labels**
 - **Red Bags or Containers**
- **Drop-off sites**



Housekeeping: Contaminated Laundry

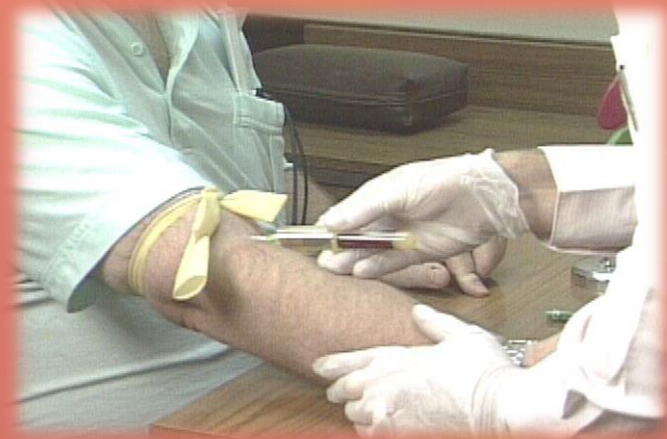
- **Laundry soiled with blood or OPIM**
- **Use PPE**
- **Handle as little as possible**
- **Pre-soak all contaminated clothing**
- **If blood or OPIM gets on clothing, remove and thoroughly wash with detergent ASAP**

Exposure Incident Response

- ***Contact with skin:*** wash exposed areas with antibacterial soap and running water
- ***Contact with eyes or mucous membranes:*** flush affected area with running water for at least 15 minutes
- ***Contact with clothing:*** remove contaminated clothing, wash underlying skin
- **Report exposure to supervisor immediately**

Post-Exposure Evaluation

- Confidential medical evaluation and follow-up after exposure incident
 - Identify and document source and circumstances of exposure
 - Test source individual's blood for HIV/HBV
 - Provide blood sample
- Healthcare professional's written opinion



Prevention

Hepatitis B Vaccination

- Made available after exposure incident