







Bloodborne Pathogens

General



Session Objectives

-  Identify bloodborne pathogens (BBPs)
-  Understand how diseases are transmitted
-  Determine your risk of exposure
-  Protect yourself from exposure through prevention
-  Respond appropriately if exposed
-  Understand your right to medical evaluations

What Are Bloodborne Pathogens?

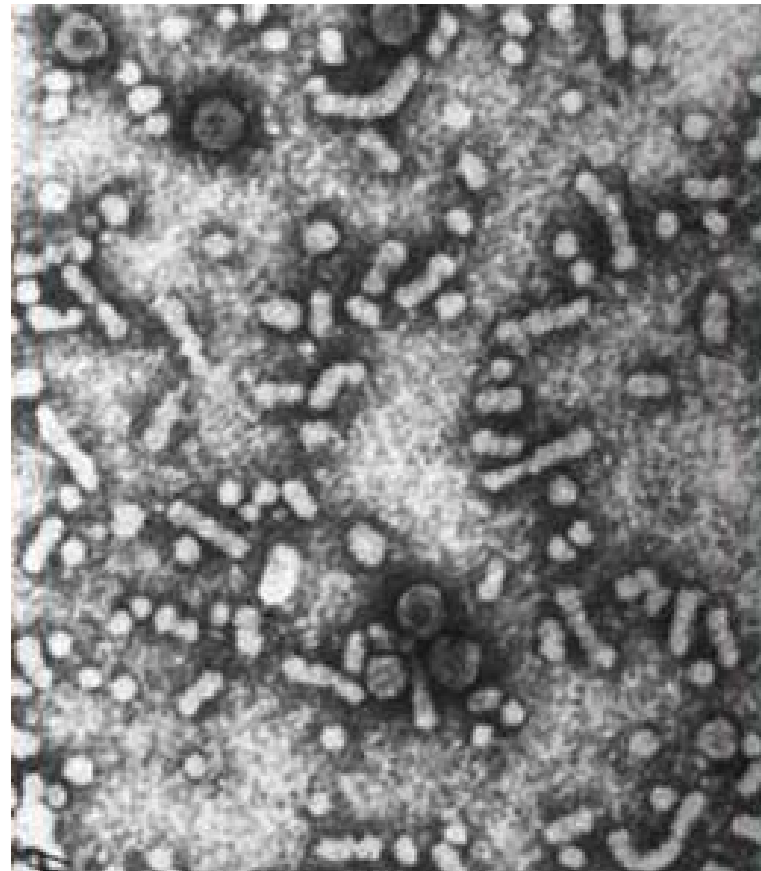
- Microorganisms present in human blood that can cause disease
 - Viruses, bacteria, parasites, fungi
- Primary workplace pathogens
 - Human immunodeficiency virus (HIV)
 - Hepatitis B virus (HBV)
 - Hepatitis C virus (HCV)

HIV and AIDS

- HIV leads to AIDS
- HIV attacks and depletes the human immune system
- Early HIV symptoms resemble flu virus
- HIV antibody test is the only way to know for sure
- HIV does not survive outside the body
- No cure yet

Hepatitis B Virus (HBV)

- 1.4 million people infected
- Symptoms
 - Jaundice, fatigue, and abdominal pain
 - No appetite, nausea, and vomiting
- Vaccine is available
- HBV can survive outside the body



Hepatitis C Virus (HCV)

- HCV is the most common chronic bloodborne infection—3.2 million infected
- Symptoms can take years to manifest
 - Flu-like symptoms, jaundice, dark urine, and fatigue
 - Loss of appetite, nausea and vomiting, and abdominal pain
- Treatment is marginally effective

Transmission of Pathogens

- Contaminated sharp objects or needles
- Broken skin, including rashes
- Mucous membranes
 - Eyes
 - Mouth
 - Nose



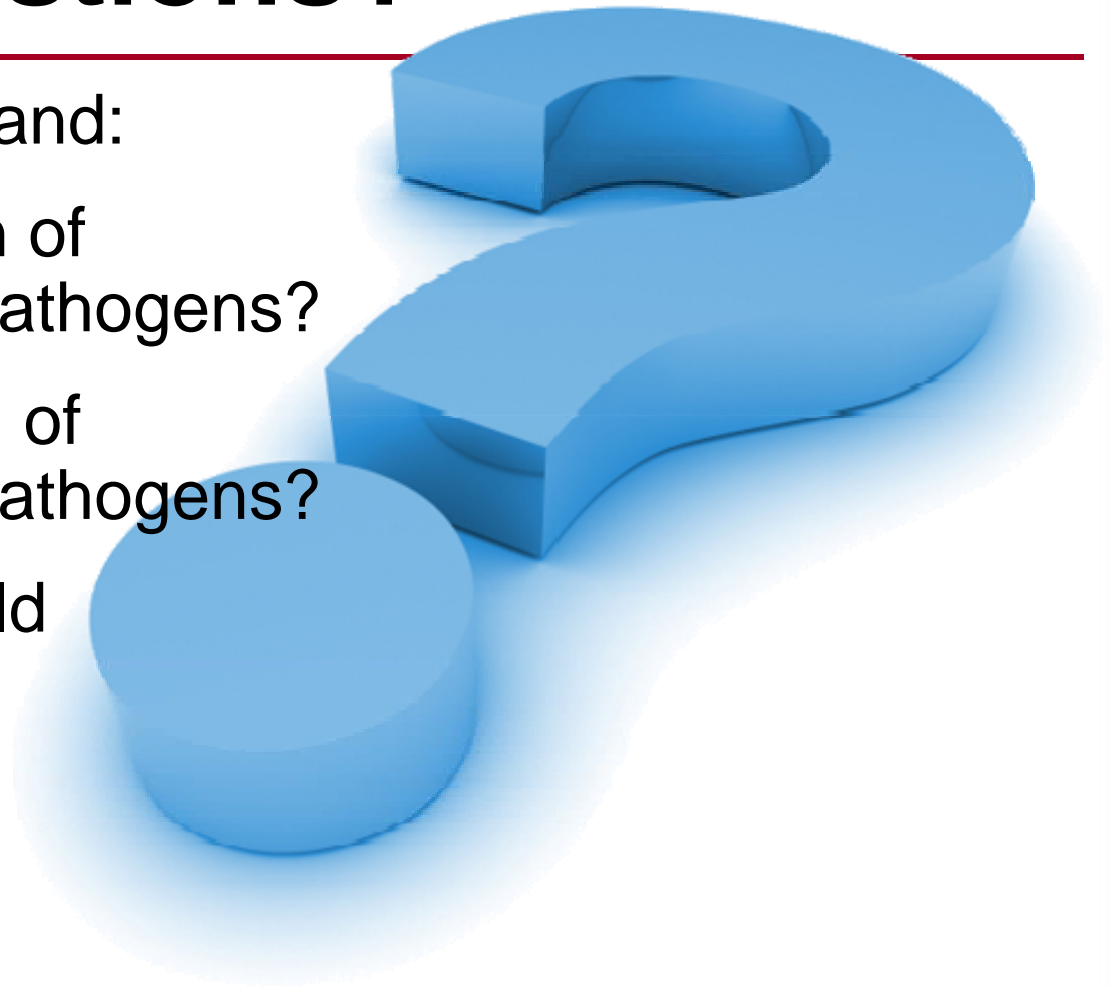
Routes of Exposure

- Contact with bleeding co-worker
- Contact with blood while administering first aid
- Touching a contaminated surface
- Assigned to clean up blood
- Contact with contaminated products or equipment in restrooms
- Using a tool covered in dried blood

Bloodborne Diseases— Any Questions?

Do you understand:

- The definition of bloodborne pathogens?
- Transmission of bloodborne pathogens?
- How you could be exposed?



Bloodborne Pathogens Law

29 CFR 1910.1030
requires:

- A written Exposure Control Plan (ECP)
- Engineering and work practice controls
- Personal protective equipment (PPE)
- Training



Bloodborne Pathogens Law (cont.)

- Medical surveillance
- Free hepatitis B vaccination
- Signs and labels
- Other equipment and procedures



Protect Yourself

- Review the ECP and OSHA regulation
- Take universal precautions
- Use personal protective equipment
- Follow safe work practices
- Get the hepatitis B vaccination
- Follow decontamination and disposal procedures



What is the ECP?

- Identifies jobs and tasks for potential exposure
- Describes engineering and safe work practices
- Outlines training requirements
- Identifies the placement and use of signs and labels
- Explains how to decontaminate equipment and work surfaces

ECP (cont.)

- Describes how biohazard waste is handled
- Explains the recordkeeping requirements
- Changes as practices and technology change



Take Universal Precautions

- Treat all blood and bodily fluids as if infected
- Use barrier protection to avoid contact with infected bodily fluids
- Immediately clean up and decontaminate surfaces and equipment



Image Credit: OSHA

Use Personal Protective Equipment

- Barrier protection prevents exposure
- Use gloves when applying bandages or cleaning up
- Eyewear or masks protect against splashes
- Protective clothing or aprons protect against spurting blood



PPE (cont.)

- Use a mask for nose and mouth protection
- Use a CPR mask to protect against vomit during CPR
- Be prepared to use impromptu barriers such as a garbage bag, plastic, paper, or your shirt

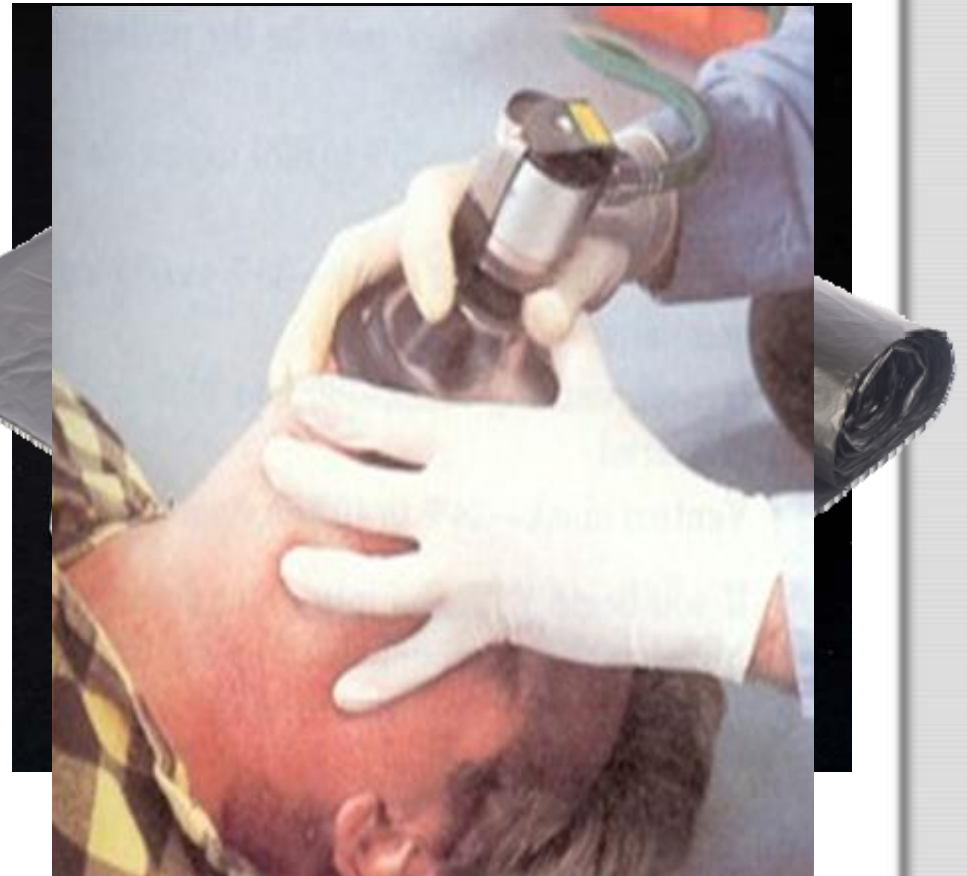


Image Credit: OSHA

Avoid Puncture Wounds

- Use tongs, forceps, or similar tools to pick up potentially contaminated items



Image Credit: State of WA-WISHA Services

Is This a Safe Work Practice?

Yes or No?



Removing contaminated PPE and clothing before leaving the work area



Seeking immediate medical attention



Eating, drinking, smoking, or applying cosmetics in any work areas where there is the possibility of exposure to blood



Wearing double gloves to reduce contamination risk

Is This a Safe Work Practice?

Yes or No? (cont.)



Disposing of contaminated items properly



Storing food in any work area where blood or bodily fluids may be present



Disinfecting contaminated equipment and work surfaces



Washing up immediately after exposure

ECP, Precautions, and Safe Practices—Any Questions?

- ECP?
- Universal precautions or PPE?
- Safe work practices?



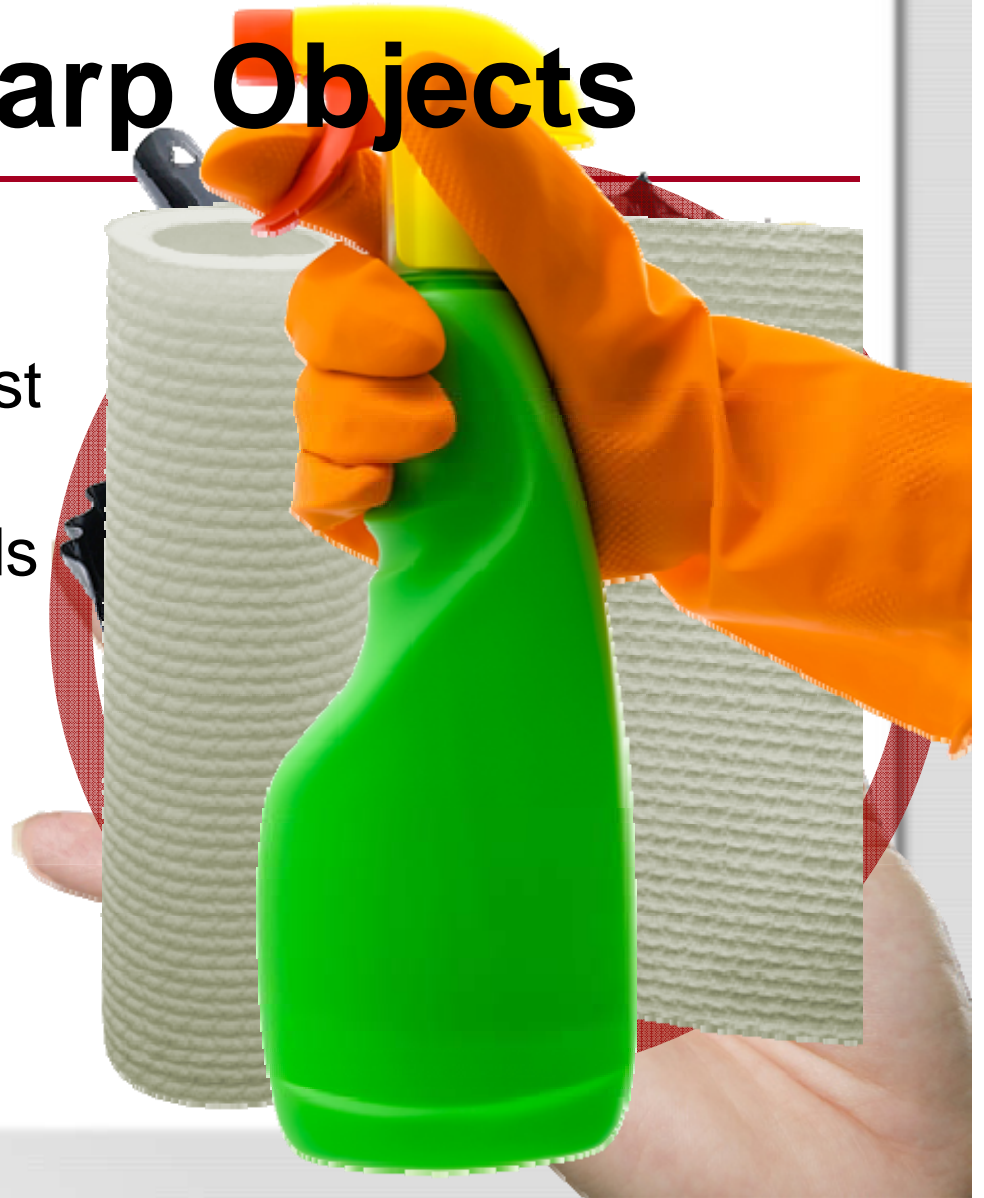
General Decontamination

- Wear appropriate gloves and glasses to protect eyes, nose, mouth, and skin
- Use a bodily fluid disposal kit
- Use 10% bleach or EPA-approved disinfectant for spills
- Dispose of contaminated items



Decontamination Involving Sharp Objects

- Remove glass and other sharp materials using a brush and dust pan, or tongs
- Do not use your hands
- Use paper/absorbent towels to soak up the residual liquids
- Disinfect all surfaces, and allow time to dry before using again



Biohazard Disposal— Regulated Waste

- Liquid or semi-liquid blood or other potentially infectious materials (OPIM)
- Contaminated items that would release blood or OPIM if compressed
- Contaminated sharp objects
- Items caked with dried blood or OPIM, capable of release during handling
- Pathological and microbiological wastes containing blood or OPIM

Label All Regulated Waste Containers

- Labels communicate a hazard
- Place regulated waste in containers that have the universal biohazard symbol
- The term “Biohazard” must be on the label



Image Credit:

Biohazard Disposal— Unregulated Waste

- Blood or OPIM absorbed without the release of liquid when compressed
- Adhesive bandages or tissues
- Gauze, paper towels, and disposable PPE
- Absorb all liquid
- Double-bag waste



Image Credit: OSHA

Unregulated Waste Labeling

- Labels not typically required but a good idea



Exercise

**Which of the following
is considered a regulated waste?**



Items caked
with dried blood



Adhesive bandages
or tissues



Contaminated
sharp objects



Liquid or
semi-liquid blood



Disposable PPE
that results from
the cleanup of a cut



Blood that is absorbed
without release of a
liquid when compressed



Pathological and
microbial wastes
containing blood or OPIM

Exposure Incident

- Wash cuts and skin thoroughly
- Rinse nose and mouth
- Flush eyes with clean water or sterile solution
- Clean all contaminated surfaces
- Report all incidents



Post-Exposure Evaluation

- Confidential medical evaluation
- Document route of exposure
- Identify source individual
- Test source person's blood
- Provide results to source and exposed employees



Image Credit: State of WA-WISHA Services

Exercise

What Steps Should You Take If You Have an Exposure Incident?

Put the response steps in their proper order

1. Clean and decontaminate all infected surfaces.
2. Report the incident.
Flush your eyes with clean water or sterile solution
3. if you were not wearing goggles or safety glasses.
Rinse your nose and mouth to remove any potential
4. splashes of blood or OPIM.
5. Wash cuts and skin thoroughly with soap and water.

Hepatitis B Vaccination

- Endorsed by medical communities
- Safe when given to infants, children, and adults
- Offered to all potentially exposed employees
- Provided at no cost
- You can decline and change your mind

Decon, Disposal, and Incidents—Any Questions?

Do you understand decontamination and disposal of blood or OPIM?

- Exposure incidents?
- The hepatitis B vaccination?



KEY POINTS To Remember!

- ☒ Bloodborne pathogens can cause fatal disease
- ☒ Be aware of exposure at work
- ☒ Take universal precautions
- ☒ Use PPE and safe work practices
- ☒ Decontaminate yourself and equipment
- ☒ Understand and follow exposure incident procedures
- ☒ Report exposure incidents