



Bloodborne Pathogens

Lesson 9 Study Guide



LESSON PURPOSE:

The purpose of this lesson is to learn to recognize and avoid bloodborne pathogen hazards in the workplace, and learn the importance of an Exposure Control Plan.

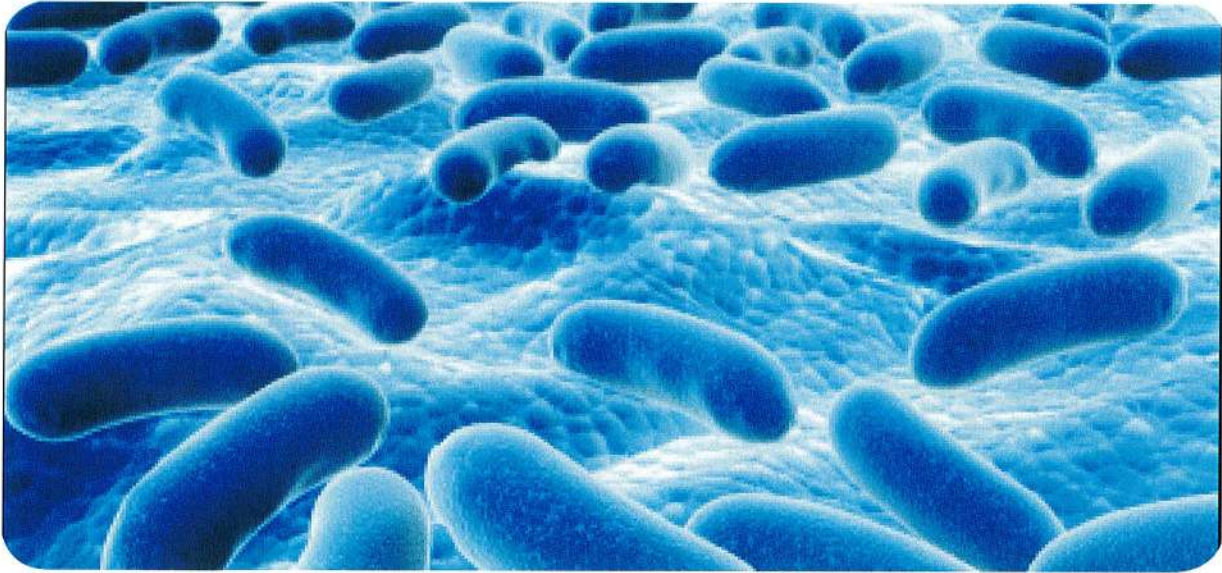


LESSON OBJECTIVES:

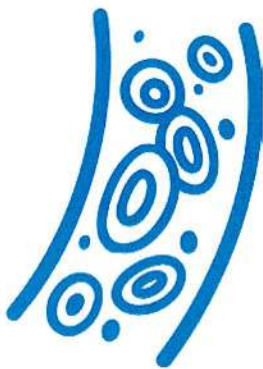
By the end of this lesson, you will be able to:

- Identify bloodborne pathogens
- Describe major types of bloodborne pathogens
- List ways to protect yourself from bloodborne pathogens
- Explain employer requirements to protect workers from bloodborne pathogens

Bloodborne Pathogens

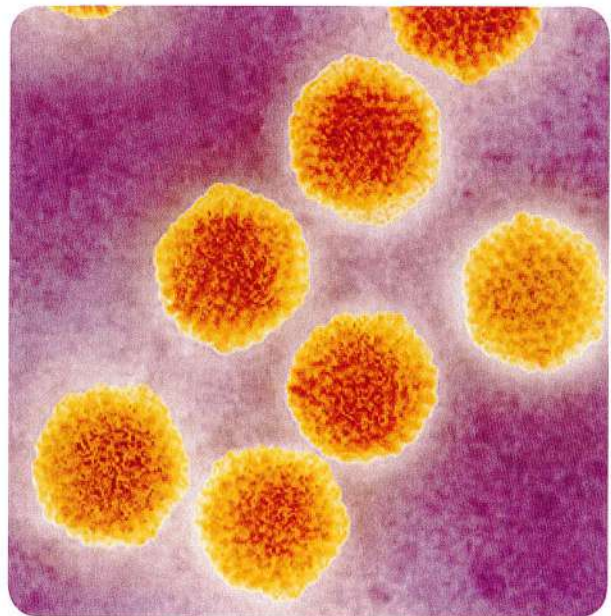


OSHA protects employees against bloodborne pathogens.



Bloodborne pathogens are infectious, disease-causing microorganisms present in human blood. Diseases caused by bloodborne pathogens are spread through contact with blood or other potentially infectious material (OPIM).

Some of the most common bloodborne pathogens and the illnesses they cause include Hepatitis B, Hepatitis C, and the Human Immunodeficiency Virus (HIV).



Pathogenic microorganisms that are present in human blood can cause disease.

Describing Bloodborne Pathogens

An estimated 5.6 million workers in the health care industry and related occupations are at risk of exposure to bloodborne pathogens.

Workers in many occupations, including healthcare and housekeeping, may encounter the risk of bloodborne pathogen transmission during the course of their work.

Occupational exposure to bloodborne pathogens is defined by OSHA as a "reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials (OPIM) that may result from an employee's duties."

Below is more detailed information regarding the most common bloodborne pathogens and the illnesses they cause:

Hepatitis B

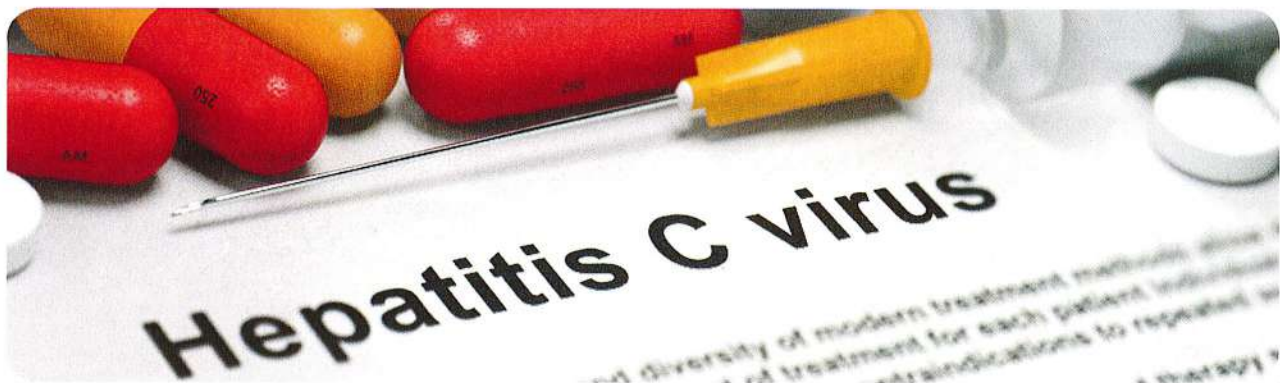
- Caused by the Hepatitis B virus (HBV)
- Attacks liver
- Can cause lifelong infection, scarring of liver, liver cancer, or death
- Transferred via blood or other bodily fluids
- Can be acute or long-term chronic infection
- Vaccination is best way to prevent transmission

Hepatitis C

- An infection of the liver caused by Hepatitis C virus (HCV)
- Becomes long-term, chronic illness for 70-85% of infected
- Can result in long-term health problems and even death
- No vaccine
- Transmitted through exposure to infected blood, including via needlesticks

HIV/AIDS

- Attacks the immune system
- Can eventually lead to Acquired Immune Deficiency Syndrome (AIDS)
- No vaccine or cure
- Transmitted when blood or another bodily fluid comes into contact with a mucous membrane or damaged tissue, or is introduced into the bloodstream (from a needle or syringe)



Protecting Yourself

Following proper precautions can greatly reduce the risk of exposure to bloodborne pathogens.

Universal precautions are methods of infection control where all human blood and potentially infectious materials are handled as if they are known to be infectious. The use of personal protective equipment (PPE) must be standard when exposure to blood or bodily fluids is likely.

Engineering controls are designed to isolate or eliminate employee exposure to bloodborne pathogens. Examples of engineering controls are:

- Disposable containers for sharps
- Self re-sheathing needles
- Safer medical devices, including:
 - Needleless systems - devices which do not use needles for the collection or withdrawal of body fluids or for the administration of medication or fluids, and
 - Sharps with engineered injury protection - examples of these are non-needle sharps, or needles with build in safety features or mechanisms that effectively reduce the risk of exposure incidents.



Work practice controls identify and alter the way a task is performed to minimize exposure to bloodborne pathogens. Examples of work practice controls include:

- Employees must be provided with hand washing facilities or another way to clean hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible, following contact of such body areas with blood or other potentially infectious materials (OPIM).
- Employees must wash their hands immediately or as soon as feasible after the removal of gloves or other PPE, and immediately after contact with potentially infectious materials, and
- All used instruments must be disposed of in puncture-resistant, leak-proof, closeable, biohazard-labeled containers immediately after use.

Some examples of **PPE** that are specialized to protect workers from exposure to blood and OPIM include:

- Gloves
- Gowns
- Laboratory coats
- Eye protection
- Face masks or shields



Protecting Yourself

Following proper precautions can greatly reduce the risk of exposure to bloodborne pathogens.

What do to if an exposure incident occurs

An exposure incident is any kind of contact with potentially infectious materials to the eyes, mouth, any mucous membrane, non-intact skin, or parenteral contact with blood that is a result of the employee's duties.

If an exposure incident occurs...

- Wash the area with soap and water
- Irrigate eyes with water and saline
- Flush splashes to the nose, mouth, or any other part of the skin that the infectious materials touched with water
- Report the incident immediately to the person named on the Exposure Control Plan
- Get to a healthcare professional as soon as possible for treatment



Employer Responsibilities

An Exposure Control Plan explains exactly what the employer will do to minimize exposure to bloodborne pathogens.

- Providing Hepatitis B vaccinations to employees
 - Usually given in three doses over six-month period
 - Must be made available, at no cost, to all workers who have received their training and within 10 working days of initial assignment
 - Employees who decline the Hepatitis B vaccination must sign a declination form.
 - Medical records of each employee must be kept, in accordance with OSHA requirements.
- Creating and maintaining a training program
- Using engineering and work practice controls to minimize risk
 - Must ensure that safe medical devices are always used and that they are appropriate, effective, and commercially available.
- Creating and maintaining an Exposure Control Plan
 - Must contain the following elements:
 - Identification of jobs and tasks where potential exposure to blood and other infectious materials is evident
 - Outline of the current protective measures being used, and
 - The procedure for the evaluation of circumstances surrounding exposure incidents as required by OSHA regulations
 - Must be reviewed and updated annually, as well as whenever necessary to reflect new/modified tasks and procedures
- Following proper housekeeping practices
 - Employers must ensure that the worksite is maintained in a clean and sanitary condition
 - General housekeeping includes:
 - Disinfecting contaminated areas
 - Correctly labeling and disposing of contaminated waste
 - Proper handling of other contaminated materials, such as laundry
- Ensuring proper labeling in the workplace
- Following proper post-exposure practices
 - The employee must immediately be sent to a healthcare professional for an evaluation following an exposure incident.
- Ensuring the availability of appropriate PPE
 - Must be made readily accessible at the worksite or issued to employees at no cost to them
 - Remember: It is the employer's responsibility to ensure proper use of PPE, unless it is determined that the use of PPE would have posed an increased hazard to the safety of the worker or coworker.



REMEMBER

Remember, following precautions can greatly reduce the risk of exposure to bloodborne pathogens!