

# Bloodborne Pathogens

## Objectives:

Upon completion of this topic lesson, students will:

- ▶ Understand what a bloodborne pathogen is.
- ▶ Be able to explain the differences between HIV and HBV.
- ▶ Understand how bloodborne pathogens may be transmitted.
- ▶ Know how to protect themselves against bloodborne pathogens.



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# Bloodborne Pathogens

## What are Bloodborne Pathogens?

Pathogens are organisms that cause disease.

- **Bacteria**
  - Bacteria are single-celled organisms that appeared on earth billions of years ago and are found everywhere; in the ground, in the air, and in the bodies of most living things.
  - One thing to remember about bacteria is that it does not require a host organism to live and multiply.
- **Virus**
  - A virus is an organism capable of growth and multiplication only within the living cells of another living thing.
  - Viruses cause diseases in humans, animals, and plants. Although a virus requires a host to continue to live, viruses can remain viable on a surface for several hours or even days.



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# Bloodborne Pathogens

## Warning:

Blood can also be found in other body fluids. As a result, bloodborne pathogens can be transmitted through contact with these fluids as well.



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## Bloodborne Pathogens

Two specific bloodborne pathogens are:

- Hepatitis B Virus (HBV)
- Human Immunodeficiency Virus (HIV)
  
- Bloodborne pathogens are not limited to HBV and HIV



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## Routes of Transmission

Bloodborne pathogens can be transmitted in the following ways:

- Injection
- Mucous membrane exposure
- Sexual Contact



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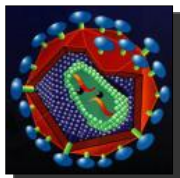
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## Who Is At Risk?

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At Risk?



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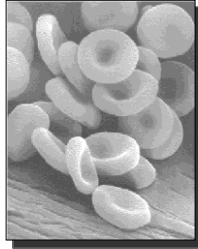
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## Reducing Risk

Both employees and employers need to work at reducing the risk of exposure to bloodborne pathogens.

To reduce your risk of exposure, you should:

- Know how bloodborne pathogens can affect you
- Know how you can become infected
- Know how to protect yourself



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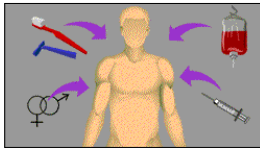
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## Reducing Risk

To reduce your risk of exposure, you should:

- Know how they can affect you
- Know how you can become infected
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## Universal Precautions

Your employer must reduce your risk of exposure through:

- Universal precautions
- Engineering controls
- Personal protective equipment
- Safe work practices



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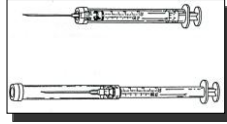
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## Engineering Controls

Your employer must reduce your risk of exposure through:

- Universal precautions
- Engineering controls
- Personal protective equipment
- Safe work practices



Hypodermic syringes with "Self-Sheathing" safety feature

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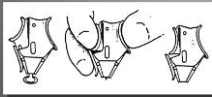
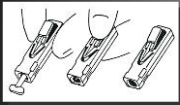
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## Engineering Controls

Engineering Controls Example



Retracting lancets with safety features

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## Engineering Controls

A container especially designed to accept sharps should be available to safely dispose of any device that may have been exposed to or cause exposure to bloodborne pathogens



Sharps Disposal Container

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## Safe Work Practices

Your employer must reduce your risk of exposure through:

- Universal precautions
- Engineering controls
- Safe work practices
- Personal protective equipment



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## Personal Protective Equipment

Your employer must reduce your risk of exposure through:

- Universal precautions
- Engineering controls
- Safe work practices
- Personal protective equipment



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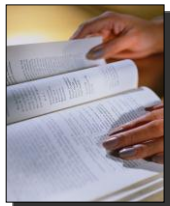
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## Summary – Employer Requirements

OSHA requires your employer to:

- Establish a written program
- Develop engineering controls
- Provide personal protective equipment
- Offer Hepatitis B vaccines
- Establish post-exposure procedures
- Conduct training annually



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## Summary – Your Responsibilities

You can protect yourself by:

- Learning about the hazards of bloodborne pathogens
- Making sure you understand your job
- Knowing what to do if you are exposed
- Treating all body fluids as being infectious
- Following safe work and personal practices
- Wearing the appropriate PPE



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