

Bloodborne Pathogens (BBP)

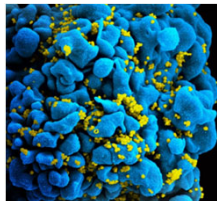
Training for employees



What this training will cover

- What are bloodborne pathogens and how are they transmitted
- Workplace job duties that could expose you to blood and other possibly infectious materials
- Methods that will prevent or reduce exposure including equipment and safer medical devices, work practices and personal protective equipment
- Personal protective equipment for BBP
- BBP signs and labels
- What to do if you are exposed to BBP
- Hepatitis B vaccine
- Our exposure control plan to protect you from BBP
- A question and answer session with our trainer

What are bloodborne pathogens?



HIV infected T-cell

Bloodborne pathogens (BBP) are viruses that can be present in blood or in "Other Potentially Infectious Material" (OPIM) and cause serious diseases.

HIV and Hepatitis B and C are the main viruses of concern.

Other less common bloodborne pathogens

- Ebola
- Syphilis
- Babesiosis
- Brucellosis
- Leptospirosis



Marburg virus

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- Arboviral Infections
- Relapsing Fever
- Creutzfeldt-Jakob Disease
- Viral Hemorrhagic Fever
- Zika

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OPIM includes the following:

- Semen
- Vaginal secretions
- Pleural, cerebrospinal, pericardial, peritoneal, synovial, and amniotic body fluids,
- Saliva with blood in dental procedures
- Any body fluids visibly contaminated with blood
- Undifferentiated body fluids
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead)
- HIV, HCV, or HBV-containing cultures, culture medium, or other solutions
- Blood, organs, and tissues from animal infected with HIV, HCV, HBV, or other BBPs

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Bloodborne pathogens can enter your body by:

- contaminated instrument injuries,
- a break in the skin (cut, lesion),
- mucus membranes (eyes, nose, mouth),
- sexual contact



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Hepatitis and the liver

The liver is a vital organ of your body that aids digestion, filters blood and fights infections.

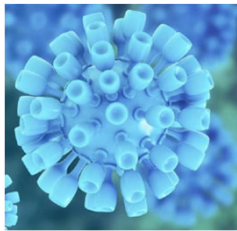
The hepatitis viruses infect the liver, causing inflammation, enlargement and tenderness.



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Hepatitis B Virus - HBV

- Can live for 7+ days in dried blood
- 100 times more contagious than HIV
- 1.25 million carriers
- 3,000 deaths each year
- No cure, but there is a vaccine



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How is hepatitis B transmitted?

- Unprotected sex with an infected partner
- Sharing needles during injection drug use
- Sharps/needlesticks
- From infected mother to child during birth



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What are the symptoms of a hepatitis B infection?

Flu-like symptoms:

- Fatigue
- Abdominal pain
- Loss of appetite
- Nausea, vomiting
- Joint pain
- Jaundice
- Long-term effects



Photo by Getty Images/Chris Green

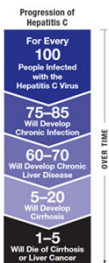
Hepatitis C Virus - HCV

The most common bloodborne infection in the U.S. with 2.4 million being infected

12,000 deaths from HCV infections each year

There is currently no vaccine

Drugs are now available to treat infected people



Hepatitis C symptoms

Flu-like symptoms:

- Jaundice
- Fatigue
- Dark urine
- Abdominal pain
- Loss of appetite
- Nausea
- Long-term effects

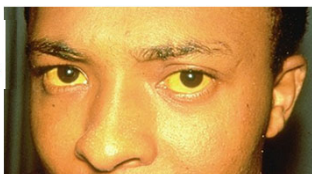


Photo from CDC

Hepatitis C transmission

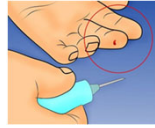
Injecting recreational drugs

Hemodialysis (long-term)

From infected mother to child during birth

Needlesticks on the job

Sexual or household exposures - rare



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HIV

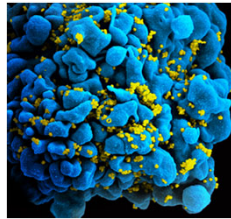
Fragile—survives only a few hours in dry environment

Attacks the human immune system

One million+ infected in U.S.

Cause of AIDS if untreated

No vaccine yet, but drug treatments have prolonged life of infected people



HIV infected T-cell

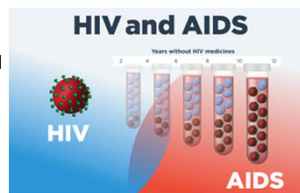
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Untreated HIV infections can lead to AIDS

Most infected with HIV can develop AIDS within 10-12 years if not treated early with antiretroviral drugs.

AIDS-related symptoms include TB, skin tumors, weight loss, mental impairment and many others.

Death from AIDS occurs within 3 years.



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How is HIV transmitted?

- Sharing needles or syringes
- Sexual contact
- From HIV-infected women to their babies during pregnancy or delivery
- Breast-feeding
- Needlesticks (rare)



Workplaces where BBP exposures may exist

- | | |
|-----------------------------|--------------------------|
| Hospitals & medical clinics | Paramedics |
| Medical laboratories | Law enforcement |
| Nursing homes | Jails and prisons |
| Adult family homes | Funeral homes/mortuaries |
| Dental offices | Motels/Hotels |

Job duties that can have BBP exposure

- | | |
|------------------------------------------------------------------------|---------------------------------------------------------------|
| Handling syringes or other sharps | Restraining an infected combative patient, suspect, or inmate |
| Cleaning up broken containers containing blood or OPIM | Handling laundry contaminated with blood or OPIM |
| Transferring a body fluid from a container | Cleaning surfaces contaminated with blood or OPIM |
| Dental work involving blood exposure | Disposing of bloodborne pathogen hazardous waste |
| Surgery or any other healthcare work involving exposure to body fluids | Picking up discarded syringes in public places |
| Providing first aid treatment | |

Bloodborne pathogen worksite exposure

Potential exposures at our workplace are found in the following jobs or locations:

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Two definitions

“Occupational Exposure” means *reasonably anticipated* skin, eye, mucous membrane, or piercing of the skin, contact with blood or OPIM that may result from the performance of an employee's duties.



“Exposure Incident” means an *actual* eye, mouth, other mucous membrane, non-intact skin or skin piercing contact with blood or OPIM while performing your work duties.

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Bloodborne pathogen exposure controls

Universal precautions (or standard precautions)

Equipment and safer medical devices

Safe work practices

Personal Protective Equipment (PPE)

Laundry handling

Handling BBP waste materials

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Universal precautions/Standard precautions

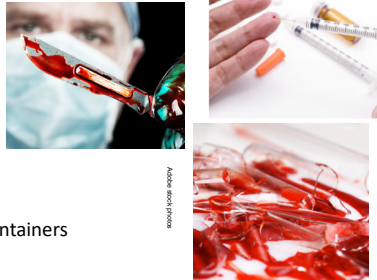
Universal Precautions means treating all human blood and body fluids as if infected with BBP whether actually known or not.

Standard Precautions combine the major features of Universal Precautions and Body Substance Isolation and are based on the principle that all blood, body fluids, secretions, and excretions except sweat, may contain transmissible infectious agents. Standard Precautions include a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered.

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What are "sharps"?

- Needles
- Syringes
- Lancets
- Auto Injectors
- Infusion Sets
- Connection needles/sets
- Scalpels
- Razors or other blades
- Broken glass or plastic containers



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Exposure controls – sharps safety devices

Types of sharps safety devices that can be used to protect workers:

- Needle-free IV systems
- Sheathed, blunting, or retractable needles
- Blood transfer adapters
- Non-breakable plastic vacuum and capillary tubes
- Sharps disposal containers



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Needles and Sharps Disposal

Sharps disposal containers must be:

- Closable
- Puncture-resistant
- Leak-proof
- Labeled or color-coded
- Upright, and placed in area where sharps are used



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Handling discarded syringes



Don't handle discarded syringes with bare hands.

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Disposing discarded syringes



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Safe work practices

Don't eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses in any work areas where there is the possibility of exposure to blood or OPIM.



L & I photos

Don't place food or drink in refrigerators, freezers, shelves, cabinets, countertops or bench tops in any other work areas where blood or OPIM is located.



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Cleaning Contaminated Surfaces

All work surfaces and equipment contaminated with blood or OPIM must be cleaned up with an appropriate disinfectant as soon as possible.



© CDC/PHOTO

Our routine cleaning schedules are as follows:

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Clean-up of spills and broken glassware/sharps

Use paper/absorbent towels to soak up the spilled materials.

Clean the area with 10% bleach or EPA-registered disinfectant.

Saturate the spill area with disinfectant. Leave for 10 minutes (or as specified by product manufacturer) or allow to air dry.

Properly dispose of paper towels and cleaning materials into proper waste containers.



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Personal protective equipment

Includes the following:

- Protective clothing
- Gloves
- Face shields or masks
- Eye/face protection
- Resuscitation devices



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Gloves must be worn whenever:

- you have hand contact with blood, OPIM, mucous membranes or non-intact skin,
- you draw blood, insert an IV or do other vascular access procedures,
- you handle or touch items or surfaces contaminated with blood or OPIM.

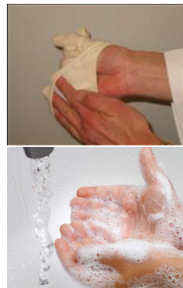


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Safe glove work practices

Remove gloves or other protective clothing before leaving work area.

Wash hands immediately after gloves are removed or soon as possible if blood or OPIM got on the gloves.



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Removing gloves safely



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Eye and face protection

You must wear either a full face shield or combination of eye protection and mask if splashes, sprays or spatters of blood or OPIM to the face could occur.



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Protective clothing

Appropriate protective clothing must be worn if splashes to skin or regular clothes could occur. They include one or more of the following:

- Lab coat
- Gown
- Apron
- Surgical cap or hood
- Shoe cover or boot



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Workers doing resuscitation procedures

Use one of the following for resuscitation:

- Masks
- Mouthpieces
- Resuscitation (ambu) bags
- Shields/overlay barriers



credit: iStock.com

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Medical labs – hoods and biological safety cabinets



Clear barriers and ventilation provide protection

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Motel/Hotel workers

Motel/hotel staff can be exposed to bloodborne pathogens when cleaning motel/hotel rooms.



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Laundry contaminated with blood or OPIM

Handle as little as possible

Bag/containerize at point of use

Don't sort or rinse at point of use

Place wet laundry in leak-proof, labeled or color-coded containers/bags



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Handling BBP waste containers

Close immediately before removing or replacing.

Place in second container if leaking possible or if outside contamination of primary container occurs.

If reusable: open, empty and clean it in a manner that will not expose you and other employees.



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Biohazard labels and signs

Containers with blood or OPIM must have the biohazard symbol.

Labels attached securely to any containers or items containing blood/OPIM.

Red bags/containers may substitute for labels.

Signs posted at entrance to specified work areas.



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What to do if you are exposed to blood or OPIM

Wash needlesticks, cuts, and skin with soap and water.

Flush splashes to the nose and mouth with water.

Irrigate eyes with clean water, saline, or a sterile irrigant.

Report exposure to your supervisor.

Schedule visit to doctor as soon as possible.



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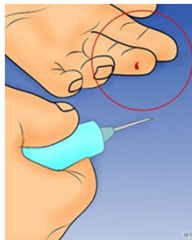
Actual contact: What we must do for you

Offer Hepatitis B vaccine

Pay for your medical costs if you are exposed

Keep confidential medical records

Provide a post-exposure medical exam



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Hepatitis B vaccine for exposed workers

Provided at no cost to you

Three shots at 0, 1, & 6 months

Effective for 95% of adults

Also protects after exposure



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BBP exposure medical records

These records are confidential and include:

- Hepatitis B vaccination and post-exposure evaluations
- Health care provider's written opinions
- Information provided to healthcare provider as required

Must be maintained for length of employment + 30 years

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Our BBP exposure control plan

Give all exposed employees a copy of your exposure control plan and discuss as needed.

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Our personal protective equipment requirements

Optional Slide: This should be covered in your BBP exposure control plan, but you could also outline it here.

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Questions and answers



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