

## Bloodborne Pathogens

Employee training on the hazards of bloodborne pathogens in the workplace



Division of Occupational Safety and Health



[www.Lni.wa.gov/Safety](http://www.Lni.wa.gov/Safety)



1-800-423-7233

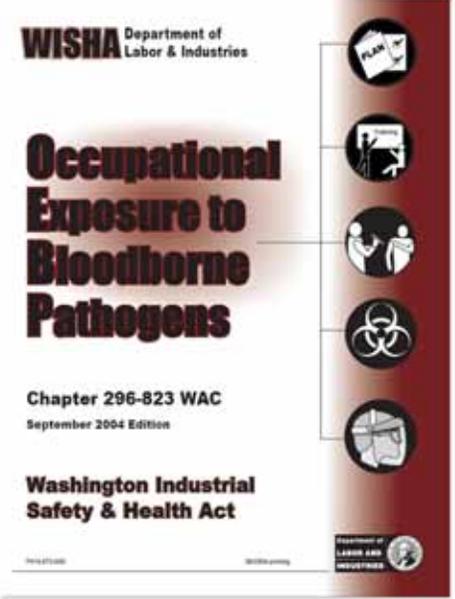
## Bloodborne Pathogens (BBP) Training

Washington Industrial Safety and Health Rules

Department of Labor & Industries

Division of Occupational Safety and Health (DOSH)

[Link to Bloodborne Pathogen Rule](#)



**WISHA** Department of Labor & Industries

### Occupational Exposure to Bloodborne Pathogens

Chapter 296-823 WAC  
September 2004 Edition

Washington Industrial Safety & Health Act

“You are attending this training program because it has been determined that you could be exposed or work with blood or other potentially infectious materials that may contain bloodborne pathogens. This training is required by the Dept. of Labor & Industries Rule on Bloodborne Pathogens.

Each of you has received a copy of the rule Chapter 296-823, Occupational Exposure to Bloodborne Pathogens” *(or if you are not distributing copies, describe where employees can access a copy).*

“Briefly, the rule contains requirements for protecting you from the risk of exposure to bloodborne pathogens while you perform your work. This includes:

1. control methods that have been implemented to minimize or reduce the risk of exposure;
2. Hepatitis B vaccination at no cost to you;
3. procedures for what to do if you are exposed; and
4. records that must be maintained.”

## **What this training will cover**

What are bloodborne pathogens and how are they transmitted

Our exposure control plan to protect you from BBP

How to recognize the workplace activities 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

General information about personal protective equipment

Hepatitis B vaccine

What to do if you are exposed to BBP

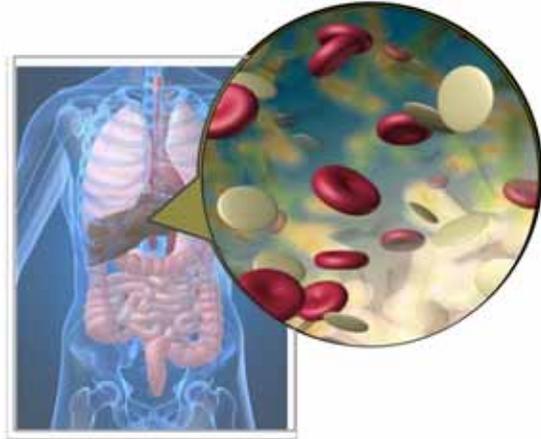
What BBP signs and labels mean

A question and answer session with our trainer

The bloodborne pathogen Rule requires that we provide you training on the following topics:

## Bloodborne Pathogens (BBPs)

BBPs are primarily Hepatitis B & C and HIV viruses present in blood, or in:



**O**ther  
**P**otentially  
**I**nfectious  
**M**aterials  
**(OPIM)**

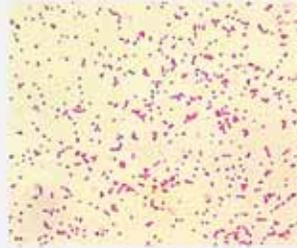
“Bloodborne Pathogens are microorganisms that are present in blood or other potentially infectious materials (shortened to “OPIM”) that can cause disease – primarily the Hepatitis B, Hepatitis C and HIV viruses.

Blood’ includes human blood, human blood components, products made from human blood, and also medications derived from blood (e.g., immune globulins, albumin, etc.).

## Lesser known Bloodborne Pathogens

Lesser known BBPs include:

- Syphilis
- Babesiosis
- Brucellosis
- Leptospirosis
- Arboviral infections
- Relapsing fever
- Creutzfeld-Jakob Disease
- Human T-lymphotrophic virus Type I
- Viral Hemorrhagic Fever



Brucellosis bacteria



Leptospira bacteria in kidney tissue

Usually when people talk about bloodborne pathogens, they are referring to those viruses that cause HIV or Hepatitis B & C infections. There are some other lesser known bloodborne pathogens which are listed here. [if your employees are exposed to any of these viruses, tell them which ones.]

## Bloodborne Pathogens - OPIM

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 (cell, tissue, or organ), culture medium, or other solutions
- Blood, organs, & tissues from animals infected with HIV, HCV HBV, or other BBPs

“OPIM include certain body fluids or tissues that may contain bloodborne pathogens, such as:*(Run through the list.)* Other body fluids and materials, such as saliva, tears, urine, and feces, are not considered OPIM unless they are contaminated with blood or with the OPIM body fluids or tissues listed on this slide.”

## Transmission of BBPs

Bloodborne pathogens can enter your body through:

- Contaminated instrument injuries
- A break in the skin (cut, lesion, etc.)
- Mucus membranes (eyes, nose, mouth)
- Other modes



Photo by Jason Higgins in Creative Commons



Photo by Sherron Oell in Creative Commons

Bloodborne pathogens can be transmitted from an infected person to you when infected blood or body fluids (OPIM) gains entry to your blood or mucus membranes. For example: if you get cut with an object (needle, scalpel, glass, etc.) that is contaminated with infected blood or OPIM, or if infected body fluid splashes into your eyes.

Intact skin will prevent the transmission of bloodborne pathogens because BBPs cannot penetrate intact skin. However if your skin is chapped, cracked or has cuts, abrasions, lesions, acne, or other openings, or is afflicted with dermatitis, the pathogens could be transmitted to you. You can also become infected if you get infected blood or OPIM on intact skin of your hand, and then rubbed your eyes, or put your fingers in your mouth or nose. Bloodborne pathogens can also be transmitted through sexual contact.

Next we will talk about the primary diseases caused by bloodborne pathogens, Hepatitis and HIV.

## Viral Hepatitis—General Facts

The virus attacks the liver causing inflammation, enlargement, and tenderness.

Infections can be acute or chronic.

Liver damage can range from mild to fatal.



The liver is a vital organ of your body that aids digestion, filters blood and fights infections. When it is damaged by hepatitis viruses, these functions are impaired. There are several types of viral hepatitis, but the two of concern here are Hepatitis B and C.

## Hepatitis B Virus - HBV

Can live for 7+ days in dried blood

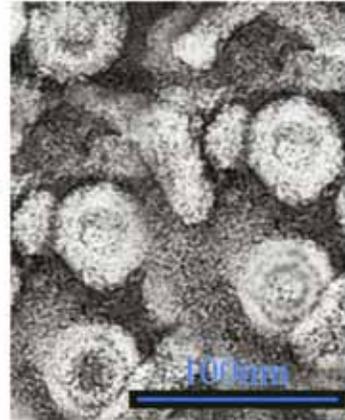
100 times more contagious than HIV

46,000 new infections per year

1.25 million carriers

3,000 deaths/year

No cure, but there is a preventative vaccine



The Hepatitis B virus can survive outside the body for more than seven days in a dry state on a surface, such as a counter top or in a discarded syringes. Hepatitis B is one hundred times more contagious than HIV. There are over one million chronically infected Americans who are carriers. Those with chronic hepatitis infection are at higher risk for liver diseases, such as cirrhosis and liver cancer. Approximately three thousand people die per year from the disease or later complications such as liver cancer in the U.S. There is no cure, but fortunately there is a vaccine that can prevent you from getting infected, and is effective before or after exposure. We will discuss the vaccine later in this presentation.

## Hepatitis B Transmission



Unprotected sex with infected partner

Sharing needles during injecting drug use

From infected mother to child during birth

Sharps/needle sticks



Hepatitis B is spread from one person to another through blood to blood and sexual contact. Sharing needles and syringes while injecting drugs is frequent means of transmission. Transmission can occur during birth from an infected mother to her infant, usually during delivery. Transmission of HBV may occur by needlesticks or other injuries from sharp instruments on the job. Other skin piercing procedures such as tattooing, ear piercing, and acupuncture account for only a small proportion of reported cases in the United States. Tears, sweat, urine, feces, and breast milk have not been associated with transmission.

## Hepatitis B Symptoms

- Flu-like symptoms
- Fatigue
- Abdominal pain
- Loss of appetite
- Nausea, vomiting
- Joint pain
- Jaundice

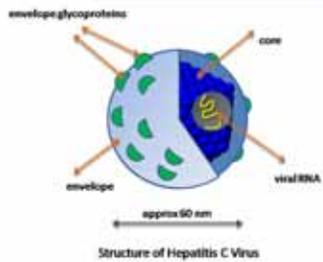
[More information about Hepatitis B](#)



“People infected with Hepatitis B usually have the symptoms shown here within about 3 months of exposure. These initial symptoms can range from very mild to severe requiring hospitalization. Some people have no symptoms. Some people can then fight the infection and clear the virus out of their body. Others - about 15% to 25% - may develop a chronic condition which can lead to more serious complications up to 30 years later such as liver damage, cirrhosis, liver failure and liver cancer. The disease can be prevented with a vaccine, as mentioned earlier. *[The link is to a handout on hepatitis B]*”

# Hepatitis C Virus (HCV)

The most common chronic bloodborne infection in the U.S.  
12,000 deaths from HCV infections each year  
No vaccine currently available



## Progression of Hepatitis C



From CDC 2010 Hepatitis C Fact Sheet

Hepatitis C is the most common chronic bloodborne infection in the United States. An estimated 3.2 million people in the U.S. have chronic hepatitis C infections and each year about 17,000 new people become infected.

It may be as important as alcohol as a cause of chronic liver disease and is the leading reason for liver transplants in the U.S. An estimated 12,000 deaths may be related to chronic hepatitis C infection each year---about three times the number from chronic Hepatitis B infection (3,000/year). There is no vaccine yet available, but new treatments are becoming more effective in controlling the infection.

## Hepatitis C Symptoms

Flu-like symptoms

Jaundice

Fatigue

Dark urine

Abdominal pain

Loss of appetite

Nausea



Many people with Hepatitis C don't have any symptoms and don't know they are infected until it is detected in the blood with lab tests. Some people may develop an acute infection within 2 weeks to 6 months with the symptoms shown here. Others may develop a chronic infection with no symptoms for up to 30 years. When symptoms finally do occur, they are often a sign of advanced liver disease.

## Hepatitis C Transmission

Transmitted by:

Injecting drugs

Hemodialysis (long-term)

From infected mother to child during birth

Occupational exposure to blood—  
mostly needlesticks

Sexual or household exposures—rare

[More information about Hepatitis C](#)



Like hepatitis B, hepatitis C is spread through blood to blood contact. Most infections (60%) are due to drug use from syringes, and contaminated drug paraphernalia. Hepatitis C transmission from injecting drug use is four times more common than HIV. People requiring long-term kidney dialysis are at risk of being infected by the Hepatitis C virus. About 5 out of every 100 infants born to HCV-infected women become infected at the time of birth, Hepatitis C transmission may occur through needlestick injuries and sharps exposures on the job. HCV can be spread by sex, but this is very rare. HCV is not spread by kissing, hugging, sneezing, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact. There is little evidence that Hepatitis C is spread through licensed, commercial tattooing facilities. *[The link is to a handout on Hepatitis C]*

## Human Immunodeficiency Virus (HIV)

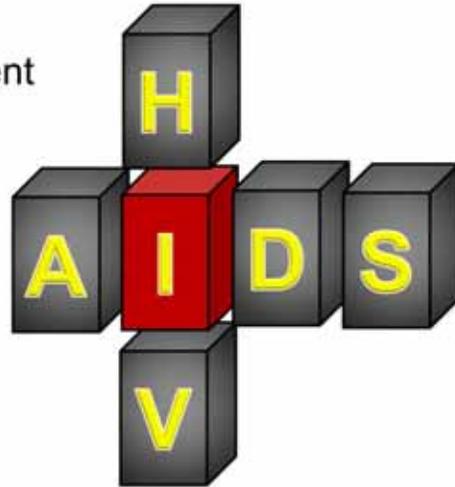
Fragile—survives only  
a few hours in dry environment

Attacks the human immune  
system

One million+ infected in U.S

Cause of AIDS

Vaccine not yet available



The Human Immunodeficiency Virus, HIV, is fragile compared to the hepatitis viruses. It does not survive well outside the body and can live in a dry environment for only a few hours. HIV attacks your body's ability to protect itself from disease. It destroys the human immune system by attacking certain cells known as T cells, which are part of the first line of defense that our immune system has to fight infection. HIV is the cause of Acquired Immunodeficiency Syndrome, or AIDS. There are now more than one million HIV-infected persons in the US. There is no cure and no vaccine available yet, although current drug treatments have greatly increased survivability of infected people in the U.S.

## HIV infection = AIDS

Many have no symptoms or mild flu-like symptoms

Most infected with HIV eventually develop AIDS within 10-12 years

Opportunistic infections & AIDS-related diseases—TB, toxoplasmosis, Kaposi's sarcoma, oral thrush

Available treatments do not yet cure



Many people who are infected with HIV do not have any symptoms at all for many years or may only have mild flu-like symptoms at first. Most persons who become infected with HIV will eventually develop AIDS, which is the most advanced stages of the infection. Some people develop AIDS within 2-3 years after infection while very few have had no symptoms after 12 years. The time varies greatly from person to person and can depend on many factors, including a person's health status and health-related behaviors. The only way to know for sure whether you are infected is to be tested for HIV. You can't rely on symptoms to know whether or not you are infected. The HIV virus usually weakens the immune system to the point that it has difficulty fighting off certain opportunistic infections and cancers which overwhelm the immune system and cause life-threatening illnesses.

## How is HIV transmitted?

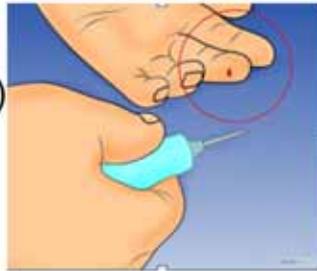
Sharing needles or syringes

Sexual contact

From HIV-infected women to their babies during pregnancy or delivery

Breast-feeding

Needlesticks (rare)



“HIV is spread from one person to another through blood to blood and sexual contact in blood, semen, vaginal fluid, breast milk, and other body fluids containing blood (CSF, synovial fluid, and amniotic fluid).

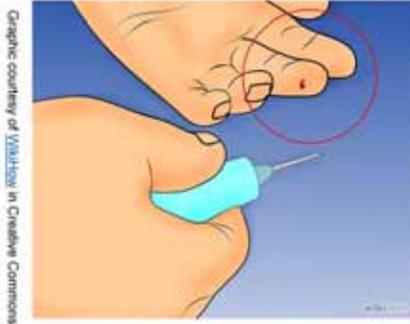
Transmission through transfusions of infected blood or blood clotting factors is less common and now very rare in countries where blood is screened for HIV antibodies.

Fortunately most occupational exposures do not result in HIV infection. There are only a few documented cases of HIV infection from needlesticks. Casual contact is not a risk for transmission of HIV.”

## Exposure to BBPs at Work

### Some 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.

“ These two terms can sometimes be confusing. At the workplace, Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or contact through a piercing of the skin, such as by needlesticks or other Sharps, contact with blood or OPIM that may result while an employee is doing his or her job duties. Another way of saying it, is that you work around or with blood or OPIM. ‘Reasonably anticipated’ contact means potential contact as well as actual contact with blood or other potentially infectious materials. In other words, blood or OPIM actually got into your body through a needlestick, a splash into your nose and eyes or through a cut or other opening in your skin.

## How people can be exposed to BBPs at work

Handling syringes or other sharps

Cleaning up broken containers containing blood or OPIM

Transferring a body fluid from a container

Dental work involving blood exposure

Surgery or any other healthcare work involving exposure to body fluids

Restraining an infected combative patient, suspect, or inmate

Handling laundry contaminated with blood or OPIM

Cleaning surfaces contaminated with blood or OPIM

Disposing of bloodborne pathogen hazardous waste

Picking up discarded syringes in public places

Providing emergency first-aid treatment

[This is where you discuss your employees how they are exposed at their job.]

## What are “Sharps”?

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



You will probably hear the word "sharps" in relation to bloodborne pathogens. Sharps means needles of all kinds injected into the body as well as scalpels or other blades used on the body. Broken glass or plastic containers contain OPIM are also considered as sharps. Anything that could cut or pierce the skin and is contaminated with blood or OPIM is considered a sharps hazard.

## **Risk of Infection** **(from a contaminated sharps injury)**

HIV —————> 0.3 % (1 in 300)

Hepatitis C —————> 1.8 % (5.4 in 300)

Hepatitis B —————> 23-62% (69-186 in 300)

(HBV vaccine is 90% effective)

Source: CDC

*Preventing sharps injuries is the best way  
to protect yourself from infection*

Contact with blood or OPIM from a sharps injury does not automatically mean you will be infected. Nevertheless, the risk is still there. The information here is from the Center for Disease Control - CDC - as part of their "Stop Sticks" campaign from 2013.

## Our BBP Exposure Control Plan

The purpose is to eliminate or minimize your risk of exposure

The Control Plan includes:

- Exposure determination
- Exposure controls
- Training and hazard communication
- Hepatitis B vaccine
- Post exposure evaluation & follow-up
- Recordkeeping



Copies of our plan are located at:

"A copy of our written Exposure Control Plan is located at *(describe the exact location(s) where employees can access it)*. The Exposure Control Plan is designed to eliminate or minimize your risk of exposure to BBPs at work. It includes our policies and procedures, and also identifies persons or departments with specific responsibilities. You should familiarize yourselves with it and refer to the procedures to follow if an exposure incident occurs. If you have any questions concerning the Exposure Control Plan, see *(state the name of the responsible person or department)*.

"Briefly, the Exposure Control Plan contains the following elements:

- An exposure determination to identify employees who are at risk for exposure
- The methods and controls we use to protect you from exposure to bloodborne pathogens
- Offering Hepatitis B vaccine
- Training and Hazard Communication requirements
- Post-exposure evaluation and follow-up procedures if you experience an exposure incident
- Record keeping, including documentation of any occupational exposure incidents

## Exposure Determination

At our site ALL employees have occupational exposure to bloodborne pathogens in the following job classifications:

Job Title	Department/Location
<i>(example: Phlebotomist)</i>	<i>(example: Clinical Lab)</i>

The following are job classifications in our establishment in which SOME employees have occupational exposure to bloodborne pathogens:

Job Title	Department/Location	Task/Procedure
<i>(example: Housekeeper)</i>	<i>(Environmental services)</i>	<i>(Handling Regulated Waste)</i>

*(You can choose to use this slide. Modify it as needed and fill in the tables.)*

*(Encourage discussion. Explain how to recognize the tasks and other activities that could involve exposure to blood and OPIM.)*

## **BBP Exposure Controls**

Universal precautions (or an equivalent system)

Equipment and safer medical devices

Safe work practices

Personal protective equipment

Housekeeping

Laundry handling

Handling BBP waste materials



The risk of exposure to BBPs at work can be reduced or prevented by the measures shown on this slide. The next several slides will cover these methods in more detail.

## **Exposure Controls**

### **Universal precautions**

A system of infection control that treats all human blood and OPIM as if it is infected with a bloodborne disease.



“We follow Universal Precautions. The concept of universal precautions is an infection control system that considers blood and other potentially infectious materials (OPIM) from all persons as containing a bloodborne disease, whether or not the person has been identified as having a bloodborne disease. Therefore, you must handle all such materials using methods that prevent or reduce the risk of exposure to yourself. Observe and follow Universal Precautions in all situations where there is a potential for contact with blood or OPIM.”

*(\*Modify this slide if your company follows Standard Precautions, Blood-body Fluid Precautions, or Body Substance Isolation system.)*

## Exposure Controls

### Equipment and safer medical devices

Sharps with engineered sharps injury protections (SESIP)

Needleless systems

Self-blunting needles

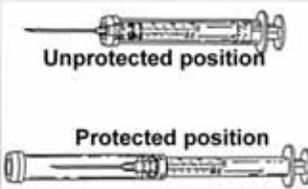
Plastic capillary tubes



Photo by Richard L. Anderson, M.D., M.P.H., Virginia Commonwealth University School of Public Health

Vacutainer kit

Example of needle guard with protected sliding sheath that is pushed forward after use and locks



“Safer medical devices have been developed to help prevent needle-stick injuries. They must be used where they can prevent or minimize occupational exposure to BBPs.

Examples of safer medical devices may include

Sharps with engineered sharps injury protections, or SESIP. These are non-needle sharps or needle devices that have a built-in safety feature or mechanism that reduces the risk of an exposure incident, e.g., syringes with a hinged or sliding sheath that shields the attached needle after use; needles that retract into a syringe after use; shielded or retracting catheters; IV delivery systems that use a catheter port with a needle housed in a protective covering.

Needle-less systems, such as an IV system or jet injection system, that do not use needles for the collection or withdrawal of body fluids or for the administration of medication or fluids.

Self-blunting needles: after the final tube of blood is drawn, a blunt internal hub is activated by forward pressure of the vacuum tube, blunting the needle before it is removed from the patient.

Plastic capillary tubes, or capillary tubes that are coated with a special film to prevent shattering.

*(It is the employer’s responsibility to keep up to date on feasible and newer devices that prevent needlesticks and other injuries to reduce the risk to employees. [Additional Information About Safety Devices Available At...](http://www.med.virginia.edu/~epinetwww.tdict.org) [www.med.virginia.edu/~epinetwww.tdict.org](http://www.med.virginia.edu/~epinetwww.tdict.org) [www.osha.gov](http://www.osha.gov) [www.lni.wa.gov/wisha/](http://www.lni.wa.gov/wisha/)*

*[Device drawings courtesy of International Health Care Worker Safety Center, University of Virginia]*

## Safe needle handling practices

Do the job/task in safer ways to minimize any exposure to blood or OPIM.



No recapping!

- Don't bend, recap, or remove needles or other sharps.
- Don't shear or break needles.
- Place contaminated reusable sharps immediately in appropriate containers until properly decontaminated.

“Safe work practices are steps, procedures, or ways in which a job or task can be done more safely to minimize any exposure to blood or OPIM. Our safe work practices are as follows:

*(Work practices must be specific to each workplace and sets of procedures. Do not use generic language. There must be enough specific directions with different sorts of procedures to ensure uniformity. Every single procedure may not need a separate set of directions; you can combine similar tasks.)*

Don't let this happen to you!



Video Clip

This a video clip of what a janitor should not do in a public bathroom when he sees a discarded syringe. (*In this staged video clip, the janitor is about to pick up the syringe with his bare hands when he is interrupted by a customer, accidentally sticking himself on the needle.*)

## Handling Discarded Syringes



Photo by VVA Services in Creative Commons

[Picking up discarded syringes](#)



Image by Massachusetts Dept. of Labor Standards

*[skip this slide if you do not have employees doing this task.]* Custodians, public park workers or other workers who come across discarded needles in public places should not pick them up with bare hands or toss them into general garbage. Using pliers or tongs to pick them up is safer and they should then be placed in a sharps container or other strong container with a lid. Follow your employer's procedures if they exist. The actual risk of contracting hepatitis or HIV from discarded needles is low, but if you are pricked or scratched with a discarded needle you should tell your employer and get yourself tested for hepatitis or HIV. *(click on the link for further information on picking up discarded syringes/needles)*

## Needle/Sharps Disposal

Sharps disposal containers must be:

Closable

Puncture-resistant

Leak-proof

Labeled or color-coded

Upright, conveniently placed in area where sharps used



Sharps disposal containers should always be available where you handle needles. They must be closeable, puncture resistant, leak-proof, and labeled or color coded. During use, place them as close as feasible to the immediate area where sharps are used or anticipated to be found, keep them upright, and don't allow them to overfill. Replace them regularly or sooner if necessary. If they need to be replaced or moved somewhere else, close them securely before you move them and place them in a larger secondary container if leakage is possible.

## Barriers and shields for laboratory workers

Hood Barrier



Centrifuge Shield



Photos courtesy of WA State Department of Labor & Industries, DO5H Lab, Photographer Victoria Jenichen

“Barriers protect you by providing a shield between you and an action that could cause an aerosol or splatter. This slide shows two types of shields.

“On the left is a simple, clear plastic panel that provides a barrier between the activity of opening tubes that contain blood.

“The other protective device is a shield over the opening of a centrifuge. This will help prevent splashing and splattering of material if a centrifuge tube breaks and loses its contents.”

## Hoods and Biological Safety Cabinets

A barrier plus ventilation control provides added protection.



Photo by Simoni Pastore in Creative Commons

Hoods and biological safety cabinets combine ventilation control and a barrier and provide added protection for a worker handling OPIM. Note the gloves and protective clothing worn by the worker in this photo

## Other Safe work practices

Don't ever pipette or suction blood or OPIM by mouth.



Remove gloves or other protective clothing before leaving work area.



Wash hands after each glove use immediately after an exposure.



If handwashing facilities are not possible or immediately available, waterless antiseptic hand cleanser and towels or towelettes must be available. When hands are visibly contaminated, follow with washing using soap and water as soon as possible.

## More 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.



Photo courtesy of Lorna Wang - Dept. of Labor & Industries

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.



These common sense work practices help minimize your exposure to blood or OPIM.

## 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 or according to our written schedule as follows:



Photo courtesy of Center for Disease Control

*[describe your housekeeping/cleanup schedule.]*

## 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.



*[You can cover your specific spill procedures here in lieu of the procedures shown on this slide, but they should be similar.]*

## Spills and Sharps Cleanup

During clean-up of spills and broken glassware/sharps contaminated with blood or OPIM:

Wear protective eyewear and mask if splashing is anticipated.

Remove glass and other sharps materials using a brush and dust pan, forceps, hemostat, etc. Don't use your hands.

Properly discard all materials into a sharps or puncture-resistant biohazardous waste container.



Photo by Emily Hooper in Creative Commons



Photos courtesy of Kenyon City Fire Hall

*[You can cover your specific spill procedures here in lieu of the procedures shown on this slide, but they should be similar.]*

## Personal protective equipment (PPE)

You must wear all required PPE. We provide you with all necessary PPE at no cost including one or more of the following:

Gowns

Face shields or masks

Gloves

Eye protection

Lab coats

Resuscitation devices

Shoe covers



Photo by "Hospital" in Creative Commons

Our PPE contact person is:

“When equipment, safer devices, and safe work practices do not eliminate exposure, the use of personal protective equipment, or PPE, is required. PPE that is “appropriate” will not permit blood or other OPIM to pass through or reach your clothes, skin, eyes, mouth, or other mucous membranes.

“We provide you with these PPE at no cost:

*(Run through list; include those PPE and any additional types required at you workplace. Mention their locations.)*

*“(State name of responsible person or department) is responsible for maintaining supplies and providing PPE. See (person or department) if you need PPE or have any concerns regarding PPE types, use, sizes, etc.*

## 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



Photo courtesy U.S. Navy

“Gloves must be worn when hand contact with blood or OPIM can be reasonably anticipated or when you handle or touch contaminated items or surfaces. You must wear gloves when doing the following tasks/procedures: *(list/describe the tasks/procedures; for example, drawing blood, inserting IVs, etc.)*

“The types of gloves and other hand protection that we provide are: *(list or describe.)* We have non-latex gloves for those who are sensitive to latex.

“You cannot reuse disposable gloves. Change gloves frequently because they might develop pinhole leaks that are not visible but can allow passage of microscopic organisms. If you tear or damage your gloves, remove them and wash your hands thoroughly with soap and water before putting on a new pair and also between each glove use.

*(Discuss other types of gloves, such as reusable gloves, that are used at your workplace. Make sure to talk about when these are used, and about disinfecting in between uses and replacing them before they start to show wear.)*

## Removing Gloves Safely



Video clip

“Make sure you remove your gloves safely and properly to avoid possible contact with blood or OPIM-contaminated gloves.

“Remove the glove of one hand with the other by grasping near the cuff and turning the glove inside out. Hold it in the gloved hand.

“Place the fingers of the bare hand inside the cuff of the gloved hand and also turn that inside out and over the first glove.

“Dispose gloves into the proper waste container.”

“Clean your hands thoroughly after each glove use with soap and water, or use an antiseptic hand rub product (“hand sanitizers”) if hand washing facilities aren’t immediately available. [If your hands are visibly contaminated and there are no washing facilities, use the antiseptic hand rub product followed by washing with soap and water as soon as possible.](#)”

## PPE – Eye/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.



“Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth. Face shields would be needed if the risk and amount of potential splash or splatter to the face is substantial. If the risk of splash is minimal, glasses with side shields may be adequate. Splash goggles or the use of a mask in combination with an eye protection device may be required in higher risk situations.” *[describe your specific procedures here]*

## PPE - 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
- Clinic jacket
- Surgical cap or hood
- Shoe cover or boot



*“(State the types of protective clothing provided at your workplace) are provided to you. You must wear them in the following areas: (state the specific work areas.) Remove your protective clothing as soon as possible if blood or other potentially infectious materials (OPIM) penetrate it.”*

*We launder the following contaminated articles: (List items laundered, e.g., lab coats, etc. and also the laundering schedule – time, location, etc.)*

*(The amount of protection will depend on the risk and degree of potential splash. This requirement is performance-based. Caps or hoods and/or shoe covers have to be worn in instances when gross contamination can reasonably be anticipated.)*

## Workers Who Perform Resuscitation Procedures

Appropriate resuscitation equipment is provided, either:

Masks,

Mouthpieces,

Resuscitation bags, or

Shields/overlay barriers



Photo courtesy of IAN/PA in Ontario, Ontario



Photo by Rene Fessard in Ontario, Ontario

[Procedures for paramedics](#)

*[If you have employees who perform or may perform resuscitation, tell them what equipment you provide and where it is located.]* This would be especially important for paramedics or anyone performing CPR or other first aid measures.

## Handling Contaminated Laundry

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 or bags



“We launder the following contaminated articles: *(List items laundered, e.g., lab coats, etc. and also the laundering schedule – time, location, etc.)*

Contaminated laundry needs to be handled as little as possible and bagged or containerized where it was used. Don't sort or rinse where items were used. Containers or bags must be labeled or red color-coded.

At a minimum gloves and gown should be worn when handling and/or sorting contaminated laundry.

## Handling regulated 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.



Photo by Brian Hartz at Creative Commons

*[Describe your procedures here.]*

## Hepatitis B Vaccine for exposed workers

No cost to you

3 shots: 0, 1, & 6 months

Effective for 95% of adults

Post-vaccination testing for high risk workers

If not vaccinated, post-exposure treatment with Immune globulin & vaccination shots is done

If you decline, you must sign a "Declination Form"

Vaccine available at later date if desired



Photo courtesy U.S. Navy

"Hepatitis B vaccine is provided free of charge to all employees at risk for exposure to BBP. Our procedures for getting the vaccine are as follows: *(Describe your procedures here)*. The vaccination consists of a series of three different shots given at 0, 1 and 6 months and is highly effective. Post-vaccination testing will be given 1-2 months after the third vaccine dose for high risk health care workers (i.e., those who are at risk for sharps injury) If you have had an exposure incident and have not been vaccinated, the treatment will usually include Hepatitis B immune globulin and the vaccination series which is more than 90% effective in preventing HBV infection. If you choose to decline the vaccination now, you must sign a Declination Statement. However, if you decide later at any time that you would like to have the Hepatitis B vaccination, it will still be available under these same conditions."

If you have an exposure to blood or OPIM, immediately do the following:



Photo from Wikipedia and created someone

Thoroughly clean the affected area.

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, or the person responsible for managing exposures.

If blood or OPIM splashes on you, gets in your eyes, nose or mouth or you accidentally stick yourself with a contaminated needle, you should do the following:

First, don't panic, remain calm. Actual infections from a splash or needle stick are quite low - less than 2%. Intact skin is an excellent barrier. Nevertheless the following steps should be taken [read slide]

These are the immediate steps. After this you should see a doctor as soon as possible and we will cover all the medical costs for you as outlined in the next slide.

## Post-Exposure Evaluation

We will provide the following:

A post-exposure medical evaluation and follow-up to for you:

- at no cost
- confidential
- to include testing for HBV, HCV, HIV
- preventive treatment when indicated



With their consent, we will test blood of source person if their HBV/HCV/HIV status is unknown, and provide the results to you.

If you are actually exposed to bloodborne pathogens, we will send you to a doctor or clinic for evaluation, at no cost to you. The evaluation is confidential and must include testing for HIV, or hepatitis B and C. We will provide the doctor or clinic with a description of your job duties and how you were exposed. If the source person consents to being tested for HIV or hepatitis, their identity is protected by disclosure laws and can't be disclosed to you, but of course those test results would be given to you and your doctor. We are not allowed to see any other of your medical findings or diagnosis other than that you are positive for HIV or hepatitis.

## 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 are posted at entrance to specified work areas



“Containers containing blood or OPIM, or equipment contaminated with blood/OPIM must have this orange/red label with the biohazard symbol. The following must be labeled:

- regulated waste
- sharps containers
- containers used to store, transport or ship (e.g., freezers)
- laundry
- contaminated equipment

The labels must be attached with string, wire, adhesive, or other method so they can't become lost or accidentally removed.

“Red bags or red containers may be substituted for labels. We use red bags for (*list, e.g., laundry, etc.*)”

## Recordkeeping –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



“Medical records maintained by our company or business do not contain any confidential medical information, except for the HBV vaccination status and Declination Form, if you choose to waive being vaccinated.

The HCP's written opinions contain generic information. They may not contain any medical diagnosis or disease testing results; that information is only kept in your personal confidential medical information.”

## Sharps Injury Log

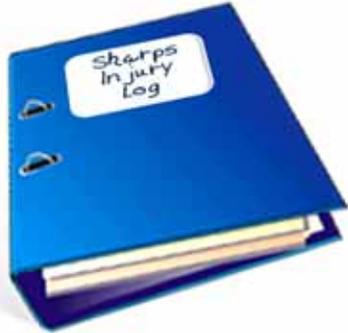
We document sharps injuries in a separate sharps injury log. The injury is recorded as a confidentiality case.

The following information is recorded in the log:

Type and brand of device involved.

Work area where exposure occurred.

An explanation of how the incident occurred.



“We maintain a sharps injury log for the recording of injuries from contaminated sharps. The information in the sharps injury log does not include the name of the injured employee.”

## **Recordkeeping**

### Training records

Dates of training

Content summary

Trainer name & qualifications

Attendee's names & job titles

Maintained for 3 years



“We are required to keep records of this training. These records must include the following: (list from slide) This is why we had you sign in.”

# More information

[L & I Bloodborne Pathogen Webpage](#)

[CDC Bloodborne Pathogen Webpage](#)



The L & I bloodborne pathogen rule has been in effect since 1992 with several revisions since then. The L & I webpage and CDC webpage on bloodborne pathogens have a wealth of additional information for both workers and employers.

## Additional Information for specific jobs



[Tattoo artists](#)



[Paramedics](#)



I am a correctional health care worker. What can I do to lower my chance of exposure?

[Correctional Healthcare Workers](#)



[Dentistry](#)

## Exposure to Blood

What Healthcare Personnel Need to Know



Department of Health & Human Services CDC

[General Healthcare Workers](#)

[These websites contain printable information that can be handed out to attendees at the end of training.]

## Quiz Question 1

Which of the following is not considered OPIM?

- a) Blood
- b) Tears
- c) Body fluids containing blood
- d) Semen

b) is the correct answer

## Quiz Question 2

Which of the following infections can be prevented with a vaccine?

- a) HIV
- b) Hepatitis A
- c) Hepatitis B
- d) Hepatitis C

c) Is the correct answer.

## Quiz Question 3

What are Universal Precautions?

- a) What everybody does with bloodborne pathogens
- b) Protective methods used throughout the world
- c) treating all blood as if it is contaminated with BBP
- d) Methods used to treat someone with Hepatitis C

c) Is the correct answer.

## Quiz Question 4

When does a face shield have to be worn?

- a) when handling blood sample vials
- b) When there is a risk of splash to the eyes
- c) In a medical laboratory setting
- d) Around patients known to be HIV positive

b) Is the correct answer

## Quiz Question 5

When is a post-exposure medical evaluation required?

- a) Whenever you have a needlestick
- b) After having the hepatitis B vaccination
- c) Whenever you have to pick up contaminated syringes
- d) After you handle blood-contaminated laundry

a) Is the correct answer unless the needle had no blood in it or it is positively known that the blood is not contaminated with BBP



*[This is the time to answer any questions from attendees in the training session.]*