



DEPAUL UNIVERSITY  
ENVIRONMENTAL HEALTH & SAFETY

# Bloodborne Pathogens Training



# What are BBPs?

Bloodborne pathogens (BBPs) are microorganisms in human blood that can cause disease.

The BBPs we are most concerned about in the US are:

**Human Immunodeficiency Virus (HIV)**

**Hepatitis B Virus (HBV)**

**Hepatitis C Virus (HCV)**



## Other Potentially Infectious Materials (OPIM)

- Other than blood, certain body fluids can also carry BBPs. We call these “other potentially infectious materials” (OPIM).
- OPIM are mainly internal body fluids that you are highly unlikely to encounter.
- More common fluids like urine, vomit, sweat, tears, and saliva are **NOT** OPIM and pose no BBP risk **UNLESS** they also contain visible blood.
- In any situation where it is impossible to distinguish between body fluids, treat them all as blood/OPIM.
- Human cell lines are also OPIM unless they have been characterized by testing to be free of BBPs.

A red speech bubble graphic with a white outline, containing the text 'Your occupational exposure'. The bubble has a tail pointing towards the bottom left.

## **Your occupational exposure**

You are required to take this training because you have occupational exposure to blood/OPIM. That means your job duties include task(s) that could expose you to blood/OPIM, such as:

- Performing first aid or CPR
- Cleaning up blood/body fluids
- Working with human cell lines in a laboratory



**Even if you are not usually  
exposed to blood/OPIM in  
your job, it is still important  
to be aware of the hazards  
and know how to react if  
you find yourself in such a  
situation.**

# OSHA's Bloodborne Pathogens Standard

OSHA's BBP Standard was created to protect employees with occupational exposure to BBPs.

DePaul has many requirements under this standard:

- Providing this training annually
- Providing employees with proper personal protective equipment (PPE)
- Maintaining a written Exposure Control Plan
- Offering employees hepatitis B vaccination for free
- Covering the cost of any medical treatment needed due to an exposure

**OSHA = Occupational Safety and Health Administration**

You can view the full text of the BBP Standard at

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030>

## DePaul's Exposure Control Plan (ECP)

- The DePaul ECP is maintained on the EHS website
- Provides guidance for identifying positions and tasks with occupational exposure at the unit level
- Describes general safe work practices and procedures
- Outlines employees' rights to receive the hepatitis B vaccination as well as confidential medical evaluation and follow up in case of an exposure, at DePaul's expense
- Some departments maintain their own ECP specific to their operations
- Others use the DePaul ECP along with Appendix A which contains unit-specific information
- The DePaul ECP **must be** supplemented with Appendix A in order to serve as a complete ECP for a unit
- Ask your supervisor how to access your unit's ECP

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A large red speech bubble is centered on the page, containing the main text.

# **Bloodborne Diseases**

Before we go over how to protect ourselves from BBPs, let's learn more about the diseases they can cause.

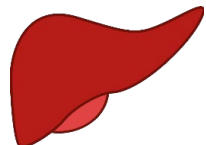




# HIV

- Virus that affects the immune system
- Some people develop flu-like symptoms initially, but many do not have symptoms
- The virus can lay dormant for a decade or more (but does not always)
- HIV is a manageable health condition; early treatment is important
- If untreated, it will eventually progress to Acquired Immunodeficiency Syndrome (AIDS)
- The only way to know if you have HIV is to get tested

# Hepatitis B & C

- Viruses that affect the liver 
- As with HIV, Hepatitis B and C often cause no symptoms. If symptoms are present, they can include common things like: fever, fatigue, loss of appetite, nausea, abdominal pain and vomiting
- Some stranger symptoms are dark urine, gray stools, joint pain and jaundice (yellowing of the skin and eyes)
- Some people are able to clear these viruses without treatment
- Others will develop a chronic (lifelong) infection which can cause cirrhosis (scarring of the liver), liver cancer, or even death
- As with HIV, testing is required to diagnose

# Hep B & C differences

## Hepatitis B

- 2-6% of adult cases become chronic
- Safe and effective vaccine available

## Hepatitis C

- More than 50% of cases become chronic
- No vaccine, but treatment now cures over 90% of people

# Hepatitis B Vaccination

- Typically a series of 3 shots in the arm over the course of
- ~6 months
- Yeast-based vaccine, contains no live virus
- Immunity is thought to last at least 30 years; studies are ongoing
- The CDC now recommends this vaccination for all adults ages 19-59, and adults 60+ with risk factors (in addition to existing recommendation for all infants-age 18)
- [Learn more about Hepatitis B vaccination and its benefits](#)

# Hepatitis B Vaccination

- If you were vaccinated ~30 years ago, you can schedule an appointment to discuss if revaccination is recommended
- **If you decline vaccination:** You can still choose to receive it any time you wish while in a position with occupational exposure. Notify your supervisor and EHS at any time if you want to get vaccinated.

If this is your **FIRST TIME** taking this training, you must also complete a Hepatitis B Statement indicating your choice.

# How do BBPs spread?

For BBPs to spread from person to person, infected blood/OPIM from one person must enter the bloodstream of another person.

This is called an **exposure incident**.

In the workplace, this can happen in 3 ways:

1. Through non-intact skin: areas with cuts, rashes, acne, etc.
2. Through mucous membranes (tissues of the eyes, nose and mouth)
3. By puncture with a contaminated object (like a used needle)

## Exposure Incident Example

You find a used bandage on the floor. You don't want to go get gloves, so you pick it up with bare hands. You then realize that some of the blood from the bandage has smeared onto a small cut on your hand. **This is an exposure incident!**

Note that wearing gloves when picking up anything that may contain blood/body fluids and covering your own cut with a bandage would have prevented this exposure incident.



BBPs are **NOT spread** through:

- casual contact like shaking hands, hugging, drinking from the same glass, or using the same toilet
- the air (i.e. coughing, sneezing)



## **Remember:**

**Anyone's  
blood/OPIM  
can carry  
BBPs**



- A person you know well
- A person who does not appear to be ill



# **Exposure $\neq$ Disease**

- It's important to note that if an exposure incident occurs, it doesn't necessarily mean that infection (and thus, disease) will.
- In fact, the chance of getting a bloodborne disease from a typical workplace incident is actually very low.
- These are not primary ways BBPs are spread.

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**How can we  
prevent exposure  
to BBPs?**

# Universal Precautions

One of the most important things you can do is practice universal precautions. This means treating all blood and OPIM as if they are known to contain BBPs.

**In practice, this means:**

- Responding promptly to situations that could lead to an exposure, like finding a needle or blood on the floor
- Not attempting to provide first aid or clean up blood/OPIM unless you've been trained to do so

# **Blood/OPIM Clean Up**

- Blood and OPIM spills and any items contaminated with them must be cleaned and decontaminated promptly.
- If you encounter blood or other body fluids on campus, immediately notify Facility Operations (unless you have been given other instructions by your department).
- Our custodians are trained to handle these situations.
- If possible, secure the area so no one else can come into contact with the spill/contaminated item(s) until a custodian arrives.

## **Facility Operations:**

**Lincoln Park: (773) 325-7377   Loop: (312) 362-8682**

**If after 3:30pm, call Public Safety:**

**Lincoln Park: (773) 325-7777   Loop: (312) 362-8400**

# General Clean Up Procedures

1. Block off access to the area.
2. Gather supplies and put on PPE (at a minimum, gloves. Wear eye protection if splashing is possible.)
3. Use a tool to pick up sharp objects, if present.
4. Use absorbent towels or solidifying powder to clean up the spill and discard in trash or biohazard container (when biohazard containers are required is covered in an upcoming slide.)
5. Spray a 10% bleach solution made fresh on the spill area and let it dry (other appropriate disinfectants may also be used. Follow all instructions on the label.)
6. Discard gloves in trash.
7. Wash your hands!

**\*Do not clean up blood/OPIM unless you've been trained on specific procedures and supplies used by your department.\***

# Found Needle Response

If you find a needle on campus, **immediately call Public Safety** and if you can, remain in the area until an officer arrives to prevent anyone else from coming into contact with it.

Do not touch the needle or attempt to dispose of it yourself. All needles must be placed in biohazardous sharps containers for disposal.



**Public Safety:**

**Lincoln Park: (773) 325-7777    Loop: (312) 362-8400**

## When should red bags/bins be used?

Certain materials must be disposed of as biohazardous waste. Biohazardous waste is placed in red bags that go into red bins. Biohazardous sharps go directly into a biohazardous sharps container. Both the bags and bins are labeled with the word “Biohazard” and the symbol below.

This includes:

- Any items saturated with blood/OPIM (such that they could be squeezed out and release it), or containing an amount of dried blood/OPIM that could flake off
- Certain materials generated by labs per IBC protocol
- Biohazardous sharps (see next slide)



**Bio Bin**



EHS can provide you with a 40 gal bio bin – other sizes may be available through our vendor or departments may purchase their own



## BIOHAZARDOUS SHARPS

### ALWAYS\* (even if unused):

- Hypodermic, intravenous, and other medical needles (e.g. lancets)
- Hypodermic or intravenous syringes
- Scalpel blades

### IF USED with biohazards:

- Pasteur pipettes
- Slides and cover slips
- Broken glass
- Broken rigid plastic (e.g. petri dishes)
- Capillary tubes
- Blood vials
- Razor blades

## SHARPS CONTAINERS

Closable  
Puncture resistant  
Leakproof on sides/bottom  
Labeled or color-coded



When almost full,  
place in bio bin or  
request pick up by EHS

**Do not overfill any containers**  
**Keep lids closed**

\*Chemically contaminated items must be collected separately

Biohazards = Blood, OPIM, BSL 1 or  
2 materials, recombinant or synthetic  
DNA/RNA

## USE EXTRA CAUTION

### IF USED with biohazards:

- Serological pipettes
- Pipette tips
- Test tubes
- Swabs
- Any other items that could puncture a bag

Consider placing in sharps  
container or alternative puncture  
resistant container first

## BIO BIN



## NON-HAZARDOUS BROKEN GLASS & SHARP/POINTY OBJECTS

**NOT CONTAMINATED\***  
with biohazards/chemicals/etc.  
**but could puncture a bag:**

- Broken/chipped glass
- Fragile glass items
- Broken rigid plastic
- Pipettes and tips
- Slides and cover slips
- Test tubes
- Capillary tubes
- Razor blades

## BROKEN GLASS BOXES (LABS)

Or any sturdy box  
Label "broken glass"

Tape securely



Place in TRASH DUMSPTER ONLY  
(NOT RECYCLING) or

Request pick up via FO work order  
Leave in lab – do not move to hallway



# Sharp Objects

- Never use your hands to pick up sharp objects – use an appropriate tool (hand broom, tongs, forceps, etc.)



- Do not dispose of sharp objects (e.g. broken glass) loosely in the trash where they can injure workers.



**Handwashing is a simple and effective way to prevent transmission of pathogens including BBPs**

- Using good technique as described above
- Immediately after an exposure or being contaminated
- If using gloves, after removing them properly
- If handwashing facilities are not available, use hand sanitizer and wash your hands as soon as possible

**Familiarize yourself with the nearest handwashing facilities and if needed, location of hand sanitizer**

**If an exposure incident does happen, follow these steps:**

## **Exposure Incident Response**



- Flush the exposed area with large amounts of water (and soap if contact was made with skin – do not put soap in eyes, nose or mouth).
- Alert a supervisor and call Public Safety for transport to nearest emergency room (ER).
- If a source individual (the person whose blood/OPIM got on someone else) is identified and agrees, they should also be transported for evaluation.
- Public Safety will make a report of the incident and promptly notify EHS and Insurance.
- Insurance will file a worker's compensation claim. Do not provide personal health insurance to the ER – tell them DePaul will cover the cost through worker's compensation.

# Resources

Human Immunodeficiency Virus (HIV):

[CDC](#)

[Chicago Department of Public Health](#)

Hepatitis B:

[CDC](#)

[Hepatitis B Foundation](#)


Hepatitis C:

[CDC](#)

# Questions?

If you have questions about your department's specific procedures, please talk to your supervisor.

If you have any general questions regarding this training, please reach out to EHS!

 (773) 325-3344

 [ehsoffice@depaul.edu](mailto:ehsoffice@depaul.edu)

 Visit [ehs.depaul.edu](https://ehs.depaul.edu) to learn more