

Introduction

Welcome to the Bloodborne Pathogens 2015 Training Course (BIO315). This course is designed as an update/reminder of the standards, policies, and procedures for safe handling of pathogens or potentially infectious material.

This year's update course covers:

- The Bloodborne Pathogen Standard
- Key Elements of the Standard
- Other Potentially Infectious Material (OPIM)
- Exposure Determination
- Knowledge and implementation of proper glove use

The assessment will include general knowledge from the initial training course (content you should know and use every day when dealing with bloodborne pathogens) and the 2015 course update material.

A Basic Review

The Bloodborne Pathogen Standard was designed to reduce and minimize the potential for occupational exposure to...

- Human Immunodeficiency Virus (HIV)
- Hepatitis B Virus (HBV)
- Other human bloodborne pathogens

Each year before we go into our chosen topic we review the basics. By now you *should* know the four (4) key elements of The Standard.

The Standard

Key Elements

Key elements of the bloodborne pathogens regulations include:

- Written Exposure Control Plan – reviewed annually or when new tasks are added.
- Determine if employees are at risk
- Offer HBV vaccinations to those employees at risk for HBV exposure and post-exposure follow up procedures
- Offer Bloodborne Pathogen Training within 10 days of job assignment and annually thereafter

A copy of the UAB Biosafety Manual is available [here](#).

Other Potentially Infectious Materials (OPIM)

Other Potentially Infectious Materials (OPIM) include human body fluids such as...

- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Synovial fluid
- Pleural fluid
- Pericardial fluid
- Peritoneal fluid
- Amniotic fluid
- All body fluids that are of undetermined nature or where blood is present

Other OPIM

The following may also be considered OPIM...

- Unfixed tissue or organs
- Cells, tissues, or organ cultures containing HIV, HBV, or HCV

Bloodborne Pathogens 2015 Training Course Update (BIO315)

- Culture medium containing HIV, HBV, or HCV
- Blood, organs, and other items from animals with HIV, HBV, HCV or other bloodborne pathogens

Exposure Determination

Who is at risk?

If **YOU** are required to take Bloodborne Pathogens Initial Training course and the annual updates, you are likely to be considered at risk for exposure. **Anyone that comes in contact with human blood or OPIM is at risk!**



Consult your specific Exposure Control Plan for the exposure determination in your lab. A link to the template can be found on the [OH&S website](#).

2015 Featured Topic - Gloves

Each year Occupational Health and Safety's Biosafety Program chooses a topic for the annual update. The topic for 2015 is **Gloves – First Line of Defense**.

Objectives

At the end of this course, participants must be able to:

1. Identify the hazards that you will be working with directly or around in your environment.
2. Determine the different types of gloves used for specific situations.
3. Specify what to do if someone suffers from a latex allergy.
4. Demonstrate how to don and doff gloves properly.
5. Demonstrate how to dispose of gloves properly.

Influencing Factors

When you are deciding on the appropriate gloves, there are many things that you will need to think about:

1. The kind of exposure you will experience (e.g., touching, splashes, or spray)

2. The level of durability/appropriateness of gloves
3. The proper fit

Types

Healthcare personnel and other staff need to wear the appropriate type of glove to make sure they are operating at the best defense level against contamination. You can be exposed through contact with an individual's mucous membranes, bodily fluids, saliva, blood, and Other Potentially Infectious Materials (OPIM).

By properly wearing gloves, the health care personnel and staff greatly decrease the level of risk of microorganism being transmitted person to person or from their environment.

Anyone using gloves should look to the glove manufacturer guidelines for any questions. The following chart lists the various types of gloves that are used on campus at UAB and their advantages/disadvantages.

Bloodborne Pathogens 2015 Training Course Update (BIO315)

Type	Advantages	Disadvantages
<p>Latex (natural rubber)</p> 	<p>Good for biological and water-based materials</p>	<p>Poor for organic solvents, provides little chemical protection, hard to detect puncture holes, can cause or trigger latex allergies</p>
<p>Nitrile</p> 	<p>Excellent general use glove. Good for solvents, oils, greases, and some acids and bases.</p> <p>Clear indication of tears and breaks.</p> <p>Good alternative for those with latex allergies.</p>	
<p>Butyl Rubber</p> 	<p>Good for ketones and esters.</p>	<p>Poor for gasoline and aliphatic, aromatic, and halogenated hydrocarbons.</p>
<p>Neoprene</p> 	<p>Good for acids, bases, alcohols, fuels, peroxides, hydrocarbons, and phenols</p> <p>Good for most hazardous chemicals</p>	<p>Poor for halogenated and aromatic hydrocarbons</p>
<p>Viton</p> 	<p>Good for chlorinated and aromatic solvents</p> <p>Good resistance to cuts and abrasions</p>	<p>Poor for ketones</p> <p>Expensive</p>

Donning

After you have familiarized yourself with the appropriate glove needed for your work, it's time to put them on properly. You should insert each hand in the gloves and adjust them, if needed. The glove should not be too loose or too tight. Also, when putting them on, they should not tear or become damaged. If they become torn or damaged, they should be replaced immediately.

If your work requires you to wear a disposable gown, it is strongly recommended that you tuck the bottom of the gown sleeve into your gloves. By doing this, you will have one more layer of protection.



If you know you will be wearing your gloves for an extended time, make sure they will be able to last that long.

Doffing

After finishing your work, it is so important to take your gloves off properly to reduce the exposure of contamination to yourself and your environment. To doff your gloves properly, you should:

1. Take one of your gloved hands, and firmly grab the wrist of your other hand.
2. Gently pull off the glove at the grasped wrist. This should turn the glove inside out with the contamination facing inside.
3. Securely hold the removed glove in the other gloved hand.
4. Take one or two fingers from the ungloved hand and insert them under the wrist of the gloved hand.
5. Gently peel the 2nd glove off. This should contain both gloves.
6. Place in the proper disposal container.
7. Wash hands thoroughly.

Bloodborne Pathogens 2015 Training Course Update (BIO315)

Disposal

A part of working with bloodborne pathogens correctly requires you to know and implement the proper disposal procedures. The nature of your work is directly related to the disposal process.

Please refer to your lab's Exposure Control Plan for proper disposal of gloves. If you have any questions please contact UAB's Occupational Health and Safety at 205-934-2487.

Hand Hygiene



Gloves **DO NOT** take the place for handwashing!

Knowing and implementing good hand hygiene habits can greatly reduce chances of contamination, transmission, or infection. Proper handwashing is the main tool to proper hand hygiene.

You should wash your hands with warm water and soap (before and after gloving). However, when you wash your hands before putting on gloves, you will need to completely dry your hands first. Moist or wet hands can make donning gloves difficult and promotes the growth of bacteria under your glove.

Once your gloves are on, do not wash them. Washing your gloves can cause "wicking" to happen. Wicking is when liquids are able to penetrate the glove and reach your skin. Also, washing gloves can weaken or even put holes in them.

Do and Don'ts

Work from clean to dirty

While performing your work, you should **ALWAYS** work clean to dirty. Working clean to dirty means that you touch clean sites before touching an unclean/contaminated site.

Limit Opportunities

You should monitor the number of times that you touch a site or surface. By keeping this number low, you will greatly reduce your chances of contamination, transmission, or infection.

Bloodborne Pathogens 2015 Training Course Update (BIO315)

Avoid touching your face, adjusting your glasses, hands in your hair, or scratching an itch. Avoiding these actions, will provide protection for the patient, yourself, and your surroundings/environment.

Change as needed

Monitor your gloves while performing your work. If your gloves become soiled or get torn, you need to stop work immediately and change them. Continued work with soiled or torn gloves can put you at risk.



You should **ALWAYS** change your gloves and wash your hands before coming in contact with a new patient.

Latex Allergies

When choosing the right glove, a latex allergy should be considered. Whether you will be wearing the glove or coming in contact with a patient, latex can cause mild to severe problems.

<i>Types of Reactions</i>	<i>Symptoms</i>
Irritant Contact Dermatitis	Most common Dry, itchy, and irritated skin (mostly felt on the hands)
Allergic Contact Dermatitis	(Delayed Hypersensitivity) Rash similar to what is experienced with poison ivy Shows up 24-96 hours after exposure
Latex Allergy	(Immediate Hypersensitivity) Usually occurs immediately Mild – itching and red skin, hives Serious – trouble breathing, runny nose and sneezing, irritated throat. Very rarely shock can happen

Employers Should Provide:

- Non-latex gloves. (Vinyl, nitrile, reduced protein, powder-free, or polymers are an acceptable replacement.)
- Proper training on how to help someone with a latex allergy
- A personal assessment for any worker that has a latex allergy.



A worker who has been exposed to latex and develops a serious allergic reaction should be taken to the doctor immediately.

Employees Should:

- Request other non-latex gloves (reduced protein, powder free, vinyl, nitrile and polymer products are an acceptable replacement) if they suffer from an allergy.
- Avoid the use of lotions and creams before putting on gloves. The ingredients can damage or even break down the gloves.
- Wash your hands after using gloves with warm water and soap.
- Know what the allergic reaction symptoms are: itching in nose and eyes, rash or hives, asthma and even shock.

If You Suffer from a Latex Allergy

- Avoid any contact with any latex products
- Tell your employer immediately that you have an allergy
- Invest in and wear a medical ID bracelet
- Listen to the advice of your doctor

Conclusion

This concludes the Bloodborne Pathogens 2015 Update (BIO 315) Training course.

If you have not taken the assessment, please do so now. You must score at least 80% or higher to pass.

Retain the certificate in your lab file. You may be asked to present proof of your training.



If you have any questions about Bloodborne Pathogens, UAB Policies and Procedures pertaining to Biological Safety, or other topics related to BBP, please feel free to contact UAB's Occupational Health and Safety at 205-934-2487.