

Bloodborne Pathogen Training – Laboratory Personnel

EHS QuickNOTES...

Bloodborne pathogens are a sub-group of infectious agents that are present in human blood and body fluids of infected individuals. These pathogens, and the diseases caused by them, can be passed from one person to another through contact with infected human blood or other body fluids (anything other than sweat). The diseases caused can be life threatening.

Exposure - There are three ways for bloodborne pathogens to gain entry into the body and cause an infection:

- skin puncture with contaminated object
- splash to or contact with broken or non-intact skin
- splash to or contact with the eyes, nose or mouth (referred to as mucus membranes)

The most likely way to become infected is by being cut or punctured by a sharp object that is contaminated with a bloodborne pathogen - blood or other body fluid.

How to protect yourself...

- Pay attention to warning signs and biohazard labels
- Practice Standard Precautions (assume blood or other body fluids are infectious and wear personal protective equipment (or barrier protection) accordingly)
- Perform a risk assessment and contain your equipment and procedures accordingly (think Biological safety cabinet)
- Cover cuts or wounds with waterproof bandages before starting to work
- Put on the right personal protective equipment for the task performed
- Replace sharps with non-sharp or use safe sharps when possible
- Follow procedures for safe handling of sharps when they must be handled
- Use appropriate transport containers, splash guards and bench coats, plastic-backed towels and spill trays to contain spills and splashes and make them easier to clean up
- Use the proper contact time when disinfecting surfaces
- Remove your gloves and other personal protective equipment when your task is complete or when leaving a work area and follow good hygienic practices (wash your hands)
- Complete your Hepatitis B vaccination series

PPE Table – Recommended PPE when performing specific tasks

| Task | Personal Protective Equipment |
|--|---|
| Working with human blood, tissues, body fluids, human cell lines, or Risk Group 2 bloodborne pathogens utilizing Universal Precautions and BSL2 containment | Gloves – nitrile exam Safety glasses Mask/face shield where splashing possible Lab coat or gown |
| Cleaning up small spills of human blood, tissues, or body fluids, human cell lines or Risk Group 2 bloodborne pathogens <i>(Note: add additional PPE below where appropriate)</i> | Gloves –nitrile exam (consider double gloving) or utility Safety glasses Mask/face shield Lab coat or gown |
| Additional PPE to consider: | |
| Sleeve covers | when forearm contamination possible while working in BSC |
| Shoe covers | when shoe contamination possible |
| Solid-front gown with tight fitting wrist cuffs | when frontal contamination possible with high risk agent |
| Impervious gowns, coat or apron with head and shoe covers | When gross contamination possible |

When cleaning up a spill of blood or other body fluid do the following:

- Put on two pairs of gloves, face protection and a backfastened gown. If you likely to contaminate your shoes while cleaning up the spill wear booties
- Collect any sharp objects with a forceps or other device (never your hand) and discard in a sharps container
- Next, absorb the spill with paper towels and discard the materials in a biohazard bag
- Using a detergent solution, clean the spill site of all visible blood
- Spray the site with a 1:10 dilution of household bleach solution or other EPA approved tuberculocidal disinfectant and allow it to air dry
- After allowing the spill area to air dry, wipe the area down with disinfectant soaked paper towels. Discard all disposable materials in a biohazard bag, including your PPE and place this waste in a medical waste container
- Wash your hands thoroughly with soap and warm water

If exposed to potentially infectious material... do the following:

- Report exposure to your supervisor, manager or Principal Investigator immediately – you may need immediate therapy
- **Needlesticks/puncture wounds** – wash the affected area with antiseptic soap and water for 15 minutes
- **Splash or other contamination of eyes, nose, mouth** – flush the affected area for 15 minutes using an eyewash then wash thoroughly with soap and water

Medical services are provided at the following locations:**All Campus Areas:**

Employee Health: 203-432-7978

Acute Care: 203-432-0123

Yale Health Center

55 Locke Street

In Medical Area you may also select:

YNHH 203-688-2462

Personnel Health Services - CCSS Building

20 York Street

7:30 A.M. - 4:00 P.M.

After hours: YNHH Emergency Room 203-688-2222

All University Employees should receive follow-up through Yale Employee Health.

Information Regarding the Hepatitis B Vaccine**Effectiveness and what to expect**

The hepatitis B vaccine is 96-99% effective in preventing hepatitis B infection. The vaccine also protects against hepatitis D viral infection. The vaccine is a series of three shots given in your upper arm. The second shot is given one month after the first. The third shot is given 5 months after the second. Side effects to the vaccine are few. The most common side effects are redness and soreness around the area of the shot, low-grade fever, and headache or dizziness in 1-10% of vaccinated people. One to two months after the last shot you must make arrangements to have a blood test to check the hepatitis B antibody titer in your system. *Remember: All three shots must be given for the vaccination to be complete.*

Medical reasons for not receiving the vaccine

There are a couple of reasons for not getting vaccinated. If you have a history of allergy to yeast or any of the vaccine ingredients, you should not be vaccinated against hepatitis B virus. If you have a history of chronic illness or immunosuppression talk to the Employee Health physician or your own doctor before getting the vaccine. Pregnant women or nursing mothers should not receive the vaccine until they talk to their doctor. If you have a fever or other active infection, wait until you are better before getting the vaccine.

Getting vaccinated

Call Employee Health (432-0071) if you have other questions about the vaccine and to make an appointment to get vaccinated.