

BLOOD BORNE PATHOGENS



Grambling State University
Grambling, LA

Blood Borne Pathogens (BBP)

∞ Purpose of Training

- To provide a better understanding of what blood borne pathogens are, common modes of transmission and how to protect yourself from possible exposure.
- You will learn which ways are viable means of transmission for the blood borne pathogens in the workplace, and which are not.

Blood Borne Pathogens Pretest

1) Which of the following could contain BBP?

- a) Urine
- b) Semen
- c) Bloody Saliva
- d) Vomit
- e) All of the Above

Answer: _____

2) The wearing of gloves is an effective alternative to hand washing?

- a) True
- b) False

Answer: _____

3) BBP may enter your system through...

- a) Open sore
- b) Sexual contact
- c) Mucous membrane (i.e. nose, mouth, eyes)
- d) Human bite
- e) All of the above

Answer: _____

4) You should always treat bodily fluids as if they are infectious?

- a) True
- b) False

Answer: _____

5) Smoking, eating, drinking and applying cosmetics is allowed in areas where potential exposure to BBP may occur?

- a) True
- b) False

Answer: _____

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6) Sharing infected needles, razors, toothbrushes, or other personal care items is considered an indirect route of transmission for BBP?

- a) True
- b) False

Answer: _____

7) All surfaces, tools, equipment and other objects that come in contact with blood or other potentially infectious material (OPIM) must be decontaminated and/or sterilized as soon as possible?

- a) True
- b) False

Answer: _____

8) Which of the following are examples of personal protective equipment (PPE)?

- a) Gloves
- b) Goggles
- c) Aprons/gowns
- d) Face shields
- e) All of the above

Answer: _____

9) The "universal" agent that can be used to decontaminate all surfaces of all known Blood Borne Pathogens is a solution of 10 parts water and 1 part bleach.

- a) True
- b) False

Answer: _____

10) It is okay to touch blood if it is that of your supervisor or coworkers that you know and trust.

- a) True
- b) False

Answer: _____

Definition of Blood Borne Pathogen

- Blood borne pathogens are microorganisms that are present in human blood and can infect and cause disease in people who are exposed to blood containing the pathogen. These microorganisms can be transmitted through contact with contaminated blood and body fluids. Those which are carried in the blood or in other potentially infectious materials are considered blood borne.

Blood Borne Pathogens

∞ Blood borne pathogens include, but are not limited to:

- Human Immunodeficiency Virus (HIV)
- Hepatitis B (HBV)
- Hepatitis C (HCV)
- Non A, Non B Hepatitis
- Syphilis
- Malaria
- Babesiosis
- Brucellosis
- Leptospirosis
- Arboviral infections
- Relapsing fever
- Creutzfeld-Jakob disease
- Human T-lymphotrophic Virus Type 1
- Viral hemorrhagic fever

*** Other potentially infectious material can include saliva, vomit, urine, semen/vaginal secretions, skin tissue, and cerebrospinal fluid.*

HIGH RISK OCCUPATIONS

One is considered a high risk employee if they can reasonably anticipate having contact with blood or other potentially infectious material as part of their regular job duties. Examples include employees hired in the following occupations:

- ☞ Healthcare Workers
- ☞ Lab Technicians
- ☞ Policed Officers
- ☞ First Responders
- ☞ Fire Fighters
- ☞ Custodial Staff
- ☞ Cafeteria Staff
- ☞ Public Safety Workers
- ☞ Plumbers

Common Symptoms

- ☞ Unplanned weight loss
- ☞ Loss of appetite
- ☞ Nausea
- ☞ Fatigue
- ☞ Weakness

Modes of Transmission

Blood Borne Pathogens are acquired through **specific exposure incidents**, and can be transmitted by both “*direct*” and “*indirect*” modes.

- **Direct Modes of Transmission** - Unbroken skin forms an impervious barrier against Blood Borne Pathogens. However, Blood Borne Pathogens can enter the body directly through the mucous membranes of the eyes, nose, mouth, and genitals and via sexual contact. Also, open sores, cuts, abrasions, acne, human bites, punctures and/or broken skin are modes of transmission. Pregnant mothers can also transmit Blood Borne Pathogens to their baby at or before birth.

- **Indirect Modes of Transmission** –
 - Contact with contaminated or infected needles, razors, toothbrushes, or other personal care items
 - Coming into contact with a contaminated surface and then touching broken skin or mucous membranes
 - Tattooing or body piercing tools

Prevention

- ∞ Universal Precautions – The practice of treating all blood and other potentially infectious materials as if they are contaminated or infectious.
- ∞ Sterilization & Decontamination – All surfaces, tools, equipment and other objects that come into contact with blood or other potentially infectious materials must be decontaminated and/or sterilized as soon as possible.
 - Sterilization – The use of a physical or chemical procedure to destroy microbes and highly resistant bacteria.
 - Decontamination – The use of a physical or chemical means to remove, inactivate, or destroy Blood Borne Pathogens on a surface or item so that it can no longer transmit pathogens. (Ex: 10 parts bleach to 1 part water)

Personal Protective Equipment

∞ The type of protective equipment appropriate for your job or research varies with the task and the degree of exposure you anticipate. Equipment that protects you from contact with blood or other potentially infectious materials (OPIM) may include: gloves, goggles, masks/respirators, aprons/gowns, lab coats and face shields.

- **Gloves**

- should be made of latex, nitrile, rubber, or other water impervious materials. If gloves are particularly thin or flimsy, double gloving can provide an additional layer of protection as an additional precaution before donning your gloves.
- Always inspect your gloves thoroughly before putting them on. Never use gloves that are damaged (torn or punctured).
- Remove contaminated gloves carefully, avoiding touching the outside of the gloves with bare skin. Contaminated gloves should be disposed of in a proper container.



Personal Protective Equipment continued

- **Eye Protection**

- Blood borne pathogens can be transmitted through the mucous membranes of the eye. Consequently, you should use eye protection whenever there is a risk of splashing or vaporization of contaminated fluid, such as while cleaning up spills or during certain laboratory procedures.



Signs, Labels and Color Coding

- ☞ Signs and labels in the workplace communicate blood borne pathogen hazards to employees. The warning label must include the universal biohazard symbol and the term “biohazard” in a color that contrasts with the fluorescent orange, orange-red background.
- ☞ Warning labels must be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material, and other containers used to store, transport, or ship blood or other potentially infectious materials. Red bags or red containers can be substituted for labels.
- ☞ Contaminated equipment which is to be serviced or shipped must also have a warning label and a statement regarding which portions of the equipment remain contaminated.



Housekeeping and Waste Disposal

- ∞ Keeping the worksite clean and sanitary is a necessary part of controlling worker exposure to blood borne pathogens. Cleaning schedules and decontamination methods depend on the type of surface to be cleaned, the type of soil that is present, and the particular tasks or procedures that are being performed.
- ∞ General housekeeping guidelines are:
 - Clean and decontaminate all equipment and working surfaces after contact with blood or other potentially infectious materials
 - Contaminated work surfaces, such as counters, fume hoods, or biosafety cabinets, should be decontaminated with an appropriate disinfectant as follows:
 - After completing procedures
 - Immediately or as soon as feasible if they are heavily contaminated or if there has been a spill of blood or other potentially infectious materials
 - At the end of the work shift if the surface may have become contaminated since the last cleaning.
 - Inspect and decontaminate bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious substances on a regularly scheduled basis.
 - Clean and decontaminate receptacles immediately or as soon as feasible upon visible contamination.

Hand Washing

- ✎ Proper hand washing is one of the easiest and most effective infection control measures. When possible, use soft antibacterial soap. Avoid harsh, abrasive soaps that may cause skin abrasions.
- ✎ For basic hand washing, hands should be washed thoroughly for at least 1-15 seconds, with vigorous friction on all surfaces (i.e., wrists, palms, back of hands, in between fingers and nail beds). To ensure washing for 15 minutes, sing the “Happy Birthday” song.

General Hygiene Practices

- ☞ You should never eat, drink, smoke, apply cosmetics, or handle contact lenses while working in an area where there is a reasonable likelihood of exposure. These actions could provide a route of entry for infections.
- ☞ Food and drink should be stored separately from all potentially infectious material.



Handling and Disposing of Broken Glassware

- ☞ Do not pick broken glassware up directly with your hands. Instead, use items such as a brush and dust pan, tongs, or forceps to clean it up.
- ☞ Sterilize broken glassware that has been visibly contaminated with blood with an approved disinfectant solution before disturbing it or cleaning it up.
- ☞ Dispose of decontaminated glassware in an appropriate sharps container. Sharps containers should be closable, puncture-resistant, leak-proof on sides and bottom, and appropriately labeled.
- ☞ Dispose of uncontaminated broken glassware in a closable, puncture-resistant container such as a cardboard box or coffee can.

Exposure

There are two categories of exposure: occupational exposure and exposure incident.

- ⌘ *Occupational exposure* is a **reasonably anticipated** skin, eye, mucus membrane, or parenteral* contact with blood or other potentially infectious material that **may** result from the performance of an employee's duties. * *Parenteral means piercing a mucus membrane, such as eyes, nose, mouth and genitals or the skin barrier through events such as needle sticks, human bites, cuts, and abrasions.*
- ⌘ *Exposure incident* is a **specific** eye, mouth, other mucus membrane, non-intact skin, or parenteral* contact with blood or other potentially infectious material that results from the performance of an employee's duties.

⌘

After Exposure

- ☞ **What to do after an exposure?** Wash the exposed area thoroughly with soap and running water. Use non-abrasive, antibacterial soap, if possible. If blood or other potentially infectious materials are splashed in the eye or mucous membrane, flush the affected area with running water for at least 15 minutes.
- ☞ **Reporting** Report the exposure to your supervisor as soon as possible. Follow procedures for medical assistance.
- ☞ **Post Exposure Evaluation & Follow up**
Document the exposure incident, including the route of exposure and the circumstances under which the exposure incident occurred.
- ☞ Identify the source individual, if possible.
- ☞ If consent can be obtained, test the source individual's blood.

Answers to Pretest

1. E
2. B
3. E
4. A
5. B
6. A
7. A
8. E
9. A
10. B

Certificate of Completion

This is to certify that

_____ has successfully completed the

Blood Borne Pathogens Safety Training

facilitated by the Office of Human Resources

Grambling State University

Grambling, LA

on this

_____ day of _____, 20__

Carmen J. Copes, Facilitator

Monica Bradley, AVP for Human Resources

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