

# University of Florida

## Environmental Health & Safety Biological Safety Office

### 2020 Bloodborne Pathogen Program Exposure Control Plan

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## Introduction

The UF Bloodborne Pathogen (BBP) Program requires participation **by all employees and non-employees** (students, volunteers, affiliates, etc.) who have occupational exposure to bloodborne pathogens. Non-employees may be required to provide hepatitis B (HBV) vaccination records **prior to** their acceptance into a project or program. For example, College of Medicine provides initial and annual BBP training to medical students but requires that medical students have HBV vaccinations prior to entering their program. Please contact the dean's office for College-specific information.

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## Responsibility

**Department chairpersons** and/or **directors** are responsible for ensuring that individual departments and divisions are in compliance with the bloodborne pathogen standard.

**Faculty members, principal investigators** or **laboratory supervisors** are responsible for ensuring that the requirements and procedures outlined in the Exposure Control Plan that are appropriate to the individual work areas are carried out.

**Employees** are responsible for reporting exposures to their supervisors and complying with all components of the Exposure Control Plan.

**The Student Health Care Center (SHCC) on campus and Employee Health in Jacksonville** are responsible for providing immunizations, post-exposure follow-up, and keeping medical records for employees.

**Environmental Health & Safety (EH&S)** is responsible for reviewing and overseeing the Exposure Control Plan. This includes coordinating compliance efforts for UF, acting as a consultant for departments regarding implementation and enforcement, evaluating work practices and personal protective equipment, providing educational materials to departments, tracking employee training, and tracking medical monitoring.

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## Definitions

### Blood

Blood refers to human blood, human blood components, and products made from human blood.

### Bloodborne Pathogens

Bloodborne Pathogens are pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus, and human immunodeficiency virus (HIV).

### Decontamination

Decontamination is the use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

## **Engineering Controls**

Engineering controls are those controls (e.g. sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

## **Exposure Incident**

An exposure incident is a specific cut or puncture with a contaminated sharp object, or mucous membrane (eye, mouth, nose, etc.) or non-intact skin contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

## **Needle-less systems**

A device that does not use needles for (A) the collection of bodily fluids or withdrawal of bodily fluids after initial venous or arterial access is stabled, (B) the administration of medications or fluids, or (C) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

## **Occupational Exposure**

Occupational exposure means **reasonably anticipated** parenteral, mucous membrane or non-intact skin contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

## **Other Potentially Infectious Materials (OPIM)**

Materials other than human blood are potentially infectious for bloodborne pathogens. These include 1) the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; 2) any unfixed tissue or organ (other than intact skin) from a human (living or dead); 3) HIV or HBV-containing cell or tissue cultures, organ cultures, culture medium or other solutions; and 4) blood, organs, or other tissues from experimental animals infected with HIV or HBV.

## **Parenteral**

Parenteral means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, or abrasions.

## **Personal Protective Equipment**

Personal protective equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

## **Sharps with Engineered Sharps Injury Protections**

A non-needle sharp or needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety or mechanism that effectively reduces the risk of an exposure incident.

## Universal Precautions

Universal Precautions are an approach to infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens (see policy, pg. 10).

## Work Practice Controls

Practices that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles).

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# Training

## Scope

1. All employees with reasonably anticipated exposure to bloodborne pathogens shall receive annual training regarding the prevention and control of bloodborne pathogens.
2. New employees with reasonably anticipated exposure to bloodborne pathogens shall receive training upon assignment.
3. Additional training shall be provided to employees as their job duties change. This is the responsibility of the employees' direct supervisor.

## Record-keeping

1. Records for BBP/BMW training taken through myTraining (<http://mytraining.hr.ufl.edu/>) are maintained indefinitely by HR and are available through myTraining to the trained individual and the departmental BBP trainers.
2. Departments that conduct their own in-person training sessions must keep the dates of the training sessions, content outline, attendees list, and presenters for 3 years and submit the list of those trained to the Biosafety Office following each training session.
3. Departmental compliance with the training requirement will be monitored by EH&S.

## Content

The training program shall contain the following elements:

1. An accessible copy of the Bloodborne Pathogen standard ([29 CFR 1910.1030](#)) and an explanation of its contents.
2. A general explanation of the epidemiology and symptoms of bloodborne diseases.
3. An explanation of modes of transmission of bloodborne pathogens.
4. A review of the exposure control plan and how employees can obtain a copy of the plan.
5. An explanation of the appropriate methods for recognizing procedures and other activities that may involve exposure to blood and OPIM.
6. An explanation of the use and limitations of practices that will prevent or reduce the likelihood of exposure including engineering controls, personal protective equipment and proper work practices.
7. Information on the types, proper use, location, removal, handling, decontamination, and/or disposal of personal protective equipment.
8. An explanation of the rationale for selecting personal protective equipment.
9. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration and the benefits of being vaccinated.

10. An explanation of the post-exposure evaluation in the event of an exposure including reporting mechanisms, time frame for reporting and the medical management that is available.
  11. Information on the management of emergencies associated with bloodborne pathogens including persons to contact and precautions.
  12. Review of signs, labeling, and containment procedures associated with prevention and control of bloodborne pathogens.
  13. Handling, use and disposal of bloodborne pathogens, syringes, safety syringe devices and biomedical wastes. Note that a standalone, comprehensive biomedical waste (BMW) training program has been developed and is available from Environmental Health & Safety for those that do not require BBP training.
  14. **A post-training test is a required component of the training session.**
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## Hepatitis B Vaccination

The hepatitis B vaccine has been available since 1982 and studies indicate that immunologic memory remains intact for at least 20 years. Additional studies are on-going to determine whether booster doses of hepatitis B vaccine will be needed in the future but currently booster doses are not recommended.

Adults with occupational exposure to bloodborne pathogens should receive a 3-dose series of hepatitis B vaccine at 0-, 1-, and 6-month intervals. The vaccine is administered intramuscularly.

The vaccine for hepatitis B is offered at no cost to employees identified as at-risk for occupational exposure to bloodborne pathogens.

Vaccine refusal shall be documented by the employee signing the Hepatitis B Vaccine Declination statement on the [Training and Vaccination form](#). The statement shall be maintained in the employee's medical record.

Refusal of the vaccine is not final and the employee may request vaccination at any future time.

Per CDC recommendations, for individuals with a high risk of exposure (e.g. health care and public safety workers with risk of continuous exposure to blood or OPIM, HBV research laboratory workers) the 3-dose vaccination series should be followed by testing for hepatitis B surface antibody (anti-HBs) to document immunity 1–2 months after dose #3. Anti-HBs testing (e.g. “titering”) is not recommended routinely for previously vaccinated persons who were not tested 1–2 months after their original vaccine series. These individuals should be tested for anti-HBs if they have an exposure to blood or body fluids. If found to be anti-HBs negative, the individual should be treated as if susceptible.

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## Medical Record-keeping

Employee medical records shall be maintained by SHCC for the duration of employment, plus 30 years.

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## Exposure Prevention

### Universal Precautions

Universal Precautions shall be practiced to prevent employee exposure to blood and other potentially infectious materials (see policy, pg. 10).

### Engineering and Work Practice Controls, Personal Protective Equipment

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Personal protective equipment shall be used when occupational exposure may occur even though the engineering and work practice controls are in place.

Engineering controls shall be examined and maintained or replaced on a regular schedule.

1. Hand washing facilities shall be provided and maintained with adequate supplies.
2. Contaminated sharps and needles shall be disposed of in puncture resistant, color-coded or labeled, leak-proof containers.
3. Resuscitation devices including mouthpieces or resuscitation bags shall be available for use in areas where the need for resuscitation is predictable.
4. All specimens of blood or OPIM shall be placed in closable, labeled or color-coded, leak-proof containers prior to transport. If contamination of the outside of the primary container occurs, the primary container should be placed in a secondary container which prevents leakage during handling, processing, storage, or shipping.
5. Eye wash stations shall be easily accessible and functional.
6. Syringes, safety syringes and needle-less systems used for direct patient care: Safety devices such as self-sheathing needles and needle-less systems will be used for staff protection whenever possible. These devices will be reviewed by non-managerial staff representatives and chosen by consensus for ease of use and engineering controls.

Work practice controls include general and site-specific safety practices. Examples include:

1. Hand washing shall be performed after removal of gloves and after contact with blood or OPIM.
2. Employees who have exudative lesions or weeping dermatitis shall refrain from handling blood or OPIM until the condition resolves.
3. Contaminated sharps and needles shall not be bent, recapped, or sheared.
4. Eating, drinking, smoking, handling contact lenses, and applying cosmetics are prohibited in work areas where there is a potential for blood or OPIM exposure.
5. Food and drink are prohibited in work areas where blood or OPIM are present.

6. All procedures involving blood and OPIM shall be performed in such a manner to minimize splashing, spraying, spattering, generation of droplets, or aerosolization of these substances.
7. Mouth pipetting and suctioning are not allowed. Mechanical pipetting devices must be used.

Personal protective equipment, including gloves, gowns, laboratory coats, face shields, face masks, eye protection, foot coverings and other items shall be provided to employees, as appropriate, to prevent exposure to blood or OPIM. These items shall be worn selectively, as needed for the task involved. PPE shall be considered "appropriate" if it does not permit the passage of blood or OPIM through to an employee's skin, mucous membranes or street clothes.

### **Gloves**

1. Disposable gloves shall be worn when it is reasonably anticipated that the employee will have hand contact with blood or OPIM. The gloves shall be replaced when worn, torn or contaminated. They shall not be washed or decontaminated for re-use.
2. Utility gloves may be decontaminated and re-used if not punctured.
3. Latex-free gloves will be provided as necessary.

### **Masks, eye protection, face shields**

Masks, in combination with eye protection devices (with side shields), or a chin-length face shield with a mask shall be worn when there is a reasonably anticipated chance of exposure to blood or OPIM through splashes, sprays, spatters or droplets.

### **Gowns, coats, aprons and other protective coverings**

Protective coverings shall be worn depending upon the task and the degree of exposure anticipated. This apparel shall not be taken home for laundering.

### **Surgical caps, hoods or boots**

Head and foot covers shall be worn when gross contamination is reasonably anticipated.

There shall be a designated area in each work setting for the dispensing, storage, cleaning and disposal of PPE. Contaminated PPE that is not immediately decontaminated shall be clearly designated and treated as biohazardous material. All PPE must be removed before leaving the work area.

*Closed-toe, full coverage shoes must be worn at all times in laboratory/clinical areas and all animal housing/procedure areas at the University of Florida.*

### **Housekeeping**

#### **Cleaning, Disinfection, and Sterilization Practices**

1. All environmental and work surfaces shall be properly cleaned and disinfected after completion of procedures and immediately after overt contamination with blood or OPIM (see procedures, pg. 11).
2. Appropriate personal protective equipment (e.g. gloves) shall be worn to clean and disinfect blood and OPIM spills.
3. Cleaning, disinfection, and sterilization of equipment shall be performed, as appropriate, after contamination with blood and OPIM (see procedures, pg. 11).

4. Disinfectants must be included on EPA's registered tuberculocide products effective against Mycobacterium tuberculosis list ([https://www.epa.gov/sites/production/files/2016-12/documents/list\\_b\\_tuberculocide.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/list_b_tuberculocide.pdf)).

**All linens used in UF Health Care Facilities shall be considered to be contaminated and shall be handled using Universal Precautions.**

### **Regulated Waste**

1. All biomedical waste shall be managed in accordance with State of Florida Statutes.
2. All biohazardous and/or biomedical waste designated for removal and treatment off-site shall be labeled according to the US DOT rule and Florida statutes.
3. Each work area shall be covered by a written waste plan.  
Refer to Environmental Health & Safety's biomedical waste training program.

### **Labels**

1. Warning labels as specified by the bloodborne pathogen standard shall be used.
2. The labels shall include the biohazard symbol and be fluorescent orange or orange-red. Red bags or red containers with a biohazard symbol printed on them may be substituted for labels.
3. Warning labels shall be placed on containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials. Other containers used to store, transport or ship blood and OPIM shall also be labeled.
4. Warning labels should be affixed to contaminated equipment and state which portions of the equipment are contaminated.

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## **Exposure Management**

Exposure management including post exposure prophylaxis shall be done according to the UF Student Health Care Center (SHCC) Employee Health Policies, in compliance with OSHA standard 1910.1030 and Florida Statute 381.004.

UF employees who have been determined to be at risk shall receive education regarding the management of exposures to bloodborne pathogens that shall include the following:

1. Wound and skin exposures shall be immediately and thoroughly washed with soap and water for 5 minutes. If bleeding, squeeze or milk the wound lightly.
2. Eye and mucous membrane exposures shall be rinsed in running water for 15 minutes.
3. Exposed individuals shall *immediately* call the Needlestick Hotline (1-866 477- 6824) for treatment information. Jacksonville employees should go to the Employee Health Office in Suite 505, Tower 1, from 7AM to 4PM or to the ER other hours.
4. Immediately after you have been evaluated/treated, notify your supervisor and contact AmeriSys by calling 1-800-455-2079. AmeriSys will assist the employee/supervisor in completing the First Report of Injury or Illness form.
5. The health care provider shall provide a confidential medical evaluation and follow-up of all exposure events to employees. The follow-up shall include these components:
  - a) The route and circumstances of the exposure shall be documented.
  - b) The identification of the source individual shall be documented unless it is unfeasible or



- prohibited by state law.
- c) The source individual shall be tested for HIV, HBV, or HCV according to Florida Statutes. Re-testing the source individual is not necessary when that individual is known to be positive for HIV, HBV, or HCV. Those results shall be disclosed to the exposed employee according to Florida statutes.
  - d) Serologic testing of the exposed employee shall be offered within the provisions of Florida statutes for HIV. If the employee consents to baseline blood collection, but chooses not to be tested for HIV at that time, the sample shall be held for 90 days after the incident, enabling the employee to have HIV testing within the 90 days.
  - e) Individuals with exposures need to keep their follow up appointments with the SHCC. Typically, follow up appointments for exposure to HCV are at 4 weeks, 8 weeks and 26 weeks. For HIV exposure, the scheduled follow ups are individualized based on whether the employee accepts post-exposure prophylaxis (PEP) medication or not; if employee accepts PEP the typical follow-up protocol is 2 weeks, 4 weeks, 8 weeks and 16 weeks (assuming the source patient is not co-infected with hepatitis C; if so, additional testing dates would be added at 26 weeks and 1 year). If HIV treatment is prescribed, medications should be taken for 28 days, with a follow up at the SHCC done at 2 weeks and 4 weeks for medication monitoring. Exposure to HBV will involve a vaccine titer determination; results of this titer will indicate if the employee is immune (no booster dose needed) or re-immunization with the HBV vaccine and/or if HBIG and a booster dose is necessary.

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## **HIV and HBV Research and/or Production Laboratories**

There are special requirements for research laboratories and production facilities engaged in the culture, production, concentration, experimentation and manipulation of HIV and HBV (see procedures, pg. 12). These requirements apply in addition to the other requirements of the BBP rule. These requirements DO NOT apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissue or organs.

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## **Assessment: Monitoring, Review and Update**

### **Monitoring**

1. Each department chairperson or director shall be responsible for monitoring his or her department's or division's compliance with the bloodborne pathogen standard.
2. EH&S shall assist departments in monitoring compliance with the bloodborne pathogen standard.

### **Review and Update**

EH&S shall review and assess the Exposure Control Plan annually. Input from the departments and from campus-wide monitoring will be used to update this plan as needed.

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## Universal Precautions Policy

According to the concept of Universal Precautions, all human blood, human blood components, products made from human blood and other potentially infectious materials are treated and handled as if known to be infectious for HIV, HBV and other bloodborne pathogens.

The other potentially infectious materials (OPIM) which require Universal Precautions include: 1) the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; 2) any unfixed tissue or organ (other than intact skin) from a human (living or dead); 3) HIV-containing cell or tissue cultures, organ cultures and HIV or HBV-containing culture medium or other solutions; and 4) blood, organs or other tissues from experimental animals infected with HIV or HBV.

The following shall be observed:

### Personal Protective Equipment (PPE)

Personal protective equipment shall be used to prevent skin and mucous membrane contact with blood and OPIM. These may include the use of gloves, masks, protective eyewear or face shields and gowns or aprons, as appropriate for the task.

### Hand washing

Hands and other skin surfaces shall be washed immediately after contact with blood or OPIM. Hands shall be washed each time gloves are removed.

### Sharps

Self-sheathing safety needles or needle-less systems will be used when possible. All sharps (needles, scalpels and lancets) shall be disposed of in labeled, leak-proof, puncture-proof sharps containers. Needles shall not be bent, sheared or recapped. Sharps containers shall be available in the area where sharps are being used.

### Dermatitis

Employees who have exudative lesions or weeping dermatitis shall refrain from handling blood or OPIM until the condition resolves.

### Housekeeping

All work areas, equipment or materials that may be contaminated with blood or OPIM must be appropriately decontaminated or disposed of as biomedical waste.

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## **Disinfection & Sterilization Procedures**

### **Blood spills**

All blood and OPIM spills must be decontaminated with a freshly prepared 1:14 dilution of concentrated household chlorine bleach (final concentration 0.5% sodium hypochlorite). The contaminated area should be covered with paper towels or other absorbent material, then flooded with the disinfectant solution. At least thirty minutes of contact time is required for disinfection.

Appropriate PPE should be worn during the clean-up procedures. Chlorine bleach can corrode some items and surfaces; items treated with chlorine should be rinsed thoroughly with water (or 70% ethanol) to remove chlorine residue. Other high-level disinfectants may be used after consultation with the Biological Safety Office.

### **Disinfection and cleaning**

Work surfaces, biosafety cabinets, and other laboratory equipment may be cleaned and disinfected with a freshly prepared 1:140 dilution of concentrated household bleach in the absence of overt contamination (i.e. splash or spill). Other EPA approved disinfectants may be used for routine cleaning and disinfection if they are labeled "tuberculocidal." For a list of approved tuberculocidal agents see: [https://www.epa.gov/sites/production/files/2016-12/documents/list\\_b\\_tuberculocide.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/list_b_tuberculocide.pdf).

### **Equipment Decontamination**

Potentially contaminated equipment or instrumentation must be disinfected before repair or removal from the laboratory. Please complete and send this form: [http://webfiles.ehs.ufl.edu/biohaz\\_decon.pdf](http://webfiles.ehs.ufl.edu/biohaz_decon.pdf) to the biosafety office to document appropriate disinfection on items with biohazard stickers prior to moving them.

If you have questions about a specific item or about the efficacy of a specific disinfectant, please call the Biological Safety Office for assistance.

### **Sterilization**

Objects to be sterilized should first be thoroughly cleaned to remove blood, tissue, food, and other organic residue.

Steam sterilization is the best way to achieve total inactivation of biohazards. If the item may be damaged by heat, pressure, or moisture, or if it is otherwise not amenable to steam sterilization, please call the Biological Safety Office for advice.

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## Requirements for HIV & HBV Research Laboratories and Production Facilities

This section applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation and manipulation of HIV and HBV. It does NOT apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues or organs. The requirements listed here apply in addition to other requirements of the Bloodborne Pathogen Program Exposure Control Plan.

### **Research laboratories shall meet the following criteria:**

**Standard microbiological practices are used. All infectious waste will be inactivated prior to disposal.**

#### **Special practices include:**

1. Laboratory doors will be kept closed when work involving HIV or HBV is in progress.
2. Contaminated materials that are to be transported are carried in a durable leak-proof, labeled or color coded container that is closed prior to being removed from the work area.
3. Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any special entry requirements and who comply with all entry and exit procedures will be allowed in the work area.
4. Biohazard signs (see Exposure Control Plan for description) shall be posted on all access doors when work involving HIV or HBV is in progress.
5. All activities involving HIV or HBV shall be conducted in biological safety cabinets (BSC) or other physical containment devices within the containment module. No work with HIV or HBV shall be conducted on the open bench. BSCs must be recertified annually.
6. Laboratory coats, gowns, smocks, uniforms or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.
7. Special care shall be taken to avoid skin contact with HIV or HBV cultures or contaminated material. Gloves shall be worn when handling infected animals and OPIM.
8. All waste from work areas will be inactivated prior to disposal.
9. Vacuum lines shall be protected with liquid disinfectant traps and HEPA filters that are routinely maintained and replaced as necessary.
10. Hypodermic needles and syringes shall be used only for parenteral injection and aspirations of fluids from laboratory animals and diaphragm bottles. Extreme caution shall be used when handling needles and syringes. Needles should not be bent, sheared or recapped. Needles shall be placed in an appropriate sharps container and inactivated (by steam sterilization or chemically) prior to disposal. Needle-locking syringes should be used. The use of safety sharps is recommended.
11. All spills shall be immediately contained and cleaned up by the appropriate professional staff or personnel trained to work with HIV, HBV or OPIM.
12. A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or supervisor and the Biological Safety Office.
13. A Biosafety Manual shall be prepared and updated at least annually. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures and shall be required to follow them.

## **Containment Equipment**

1. Certified Biological Safety Cabinets (BSC) or other appropriate combinations of PPE and physical containment devices shall be used with all activities involving HIV or HBV that pose a threat of exposure to droplets, aerosols or spills.
2. BSCs shall be certified when installed and annually thereafter.
3. BSCs must be professionally decontaminated prior to being moved, repaired or disposed of. If the BSC will be put back into service after being moved or repaired, it must be recertified.

## **Facilities:**

1. The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be a basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high containment work area from access corridors or to other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock or other access facility that requires passing through two sets of doors before entering the work area.
2. The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these areas shall be sealed or be capable of being sealed to facilitate decontamination.
3. Each work area shall contain a sink for washing hands and an eye wash facility. The sink shall be foot, elbow, or automatically operated and located near the exit door.
4. Access doors to the work area or containment module shall be self-closing.
5. An autoclave for decontamination of regulated waste or other materials shall be located within or very near the work area.
6. A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area, The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

## **Training Requirements for HIV and HBV research laboratories and production facilities**

The following additional training requirements are required for employees in HIV and HBV research laboratories and production facilities:

1. The employer shall ensure that the employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility prior to being allowed to work with HIV or HBV.
2. The employer shall ensure that employees have prior experience in the handling of human pathogens or tissue cultures prior to working with HIV or HBV.
3. The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall ensure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

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# University of Florida Biological Waste Disposal Policy

This policy is intended to provide guidance and ensure compliance with NIH/CDC guidelines, the State of Florida Administrative Code 64E-16, and restrictions of the local County landfill.

## Biological Waste Segregation and Handling

The generator must segregate biological waste from other types of waste at the point of origin into the following categories:

1. **Infectious, Potentially Infectious, or Recombinant or Synthetic Nucleic Acid Biological Waste**
  - a) any material containing or contaminated with **human pathogens**
  - b) any material containing or contaminated with **animal pathogens**
  - c) any material containing or contaminated with **plant pathogens**
  - d) any material containing or contaminated with **recombinant DNA or synthetic nucleic acid and recombinant organisms**
  - e) cultures
  - f) laboratory and clinical wastes containing **human or primate blood, blood products, tissue**, and other potentially infectious material (**OPIM**) including:
    - i) Used, absorbent materials saturated with blood, blood products, or OPIM
    - ii) Non-absorbent, disposable devices that have been contaminated with blood, body fluids or OPIM and have not been treated by an approved method.
- **Laboratory waste containing infectious, potentially infectious, or recombinant or synthetic nucleic acid must be inactivated prior to leaving the facility.** The preferred method is steam sterilization (autoclaving), although incineration or chemical inactivation (e.g. treatment with household bleach) may be appropriate in some cases.
- Storage of all non-inactivated waste in this category is restricted to within the generating laboratory and is limited to 30 days. The 30 day period starts when the first non-sharps waste item is placed into a red bag or sharps container, or when a sharps container containing only sharps is sealed.
- Infectious/potentially infectious waste must be stored in a leak-proof, covered container lined with a red autoclave bag. Best practice is to autoclave this waste at the end of each work day but at a minimum, it should be autoclaved at the end of each week.
- Biological waste containers for material that is infectious/potentially infectious to humans must be labeled with the biohazard symbol.
- Filled or partially filled non-sharps biological waste containers and boxes should not be held for more than 30 days.

## 2. Sharps

- All medical sharps (e.g. metal lancets, scalpel blades, needles or syringe/needle combinations) must be disposed of in red, plastic sharps containers even if they are unused or not biologically contaminated.
- Sharps containers that contain only sharp items should be closed when they are  $\frac{3}{4}$  full and discarded in the red bag lined biomedical waste box within 30 days after closure. Containers should be labeled with the date, PI name, location (room/building) and telephone number prior to disposal. If the sharps are biologically contaminated, autoclave the container. Closed and labeled sharps containers are disposed of in the red bag lined biomedical waste box.
- Other sharp items that can cut or puncture the skin or the red bag (e.g. fragile glass, glass slides and cover slips, razor blades, pipettes and pipet tips) should be disposed of in a manner that prevents harm. These items may be placed in a sharps container but other alternatives, such as placing the items in small rigid boxes or hard sided plastic containers, are detailed in the [Options for Collecting Non-Medical Sharps](#) handout.
- Non-sharp items (i.e. wrappers, paper towels, Kimwipes, plastic tubes) should not be placed in sharps containers as they quickly overfill the container and may cause sharps to protrude out of the top of the container. If a sharps container contains any of these types of non-sharp items, it must be dated when the first non-sharps item is placed inside and disposed of within 30 days under State of Florida Department of Health regulations.

## 3. Non-contaminated laboratory waste

- Any waste items that are not contaminated with any of the biological material listed above and are not contaminated with any chemicals or radioactive material may be disposed of in a “clean lab ware” container. This is merely a more economical alternative to the biomedical waste box for non-contaminated lab material. This includes used, clean lab ware (tissue culture dishes and flasks, petri dishes, centrifuge tubes, test tubes, pipet tips, vials, etc.) unused medical devices, and personal protective equipment (gloves, lab coats, shoe covers).
- Note that chemically contaminated material (i.e. DNA extraction tubes contaminated with phenol/chloroform, specimen cups containing formalin, chemically contaminated gloves, etc.) must be handled as chemical waste. See the Hazardous Materials Management Facility website [http://www.ehs.ufl.edu/programs/chemrad\\_waste/](http://www.ehs.ufl.edu/programs/chemrad_waste/) or call 352 392-8400 for more information.

## 4. Mixed radioactive/biological waste

Radioactive waste must be segregated, stored, labeled, and handled per the requirements of the Radiation Control Guide. The biological component of mixed radioactive/biological waste shall be inactivated prior to turning it over to Hazardous Materials Management. Please contact Radiation Control (392-7359) for additional information.

## 5. Mixed chemical/biological waste

The biological component of mixed chemical/biological waste shall be inactivated prior to turning it over to Hazardous Materials Management. Precautions should be taken to prevent

the generation and release of toxic chemicals during the inactivation process. In general, autoclaving is not recommended for this type of waste. Note that the chemical component of the waste may have inactivated the biological component (as in the case of fixative solutions). Please contact Hazardous Materials Management (392-8400) for additional guidance. Chemical waste must be segregated, stored, labeled and handled per the requirements outlined in the [Laboratory Chemical Waste Management](#) guide.

## 6. **Animal Carcasses and Other Animal Material**

- The disposal of **research** animal carcasses and animal tissue shall be through Animal Care Services (273-9230). Note that if the animal had not generated per diem or if it was hoof stock a fee may be generated for the service. Random sourced animal carcasses or tissue may be disposed of through Veterinary Medicine Anatomical Pathology division (294-4528) for a fee.
- Material obtained from the Animal Science slaughter facility may be returned there for disposal if not contaminated with infectious, potentially infectious, or recombinant or synthetic nucleic acid material.
- Animal carcasses and other animal material that may contain infectious animal or human pathogens require containment (bags, sealed containers labeled with the biohazard symbol) before moving to Animal Care Services or the Veterinary Medicine disposal facilities.
- Items contaminated with blood, blood products or tissues from **healthy animals** (no exposure to infectious/potentially infectious materials or recombinant/synthetic nucleic acids) should be disposed of in the red bag lined biomedical waste box since it is impossible to distinguish animal blood from human blood. However, these items do not require inactivation prior to leaving the laboratory.

## 7. **Human Remains/Tissues**

Human remains/tissues should be returned to the source from which you received them. If that is not possible, contact the Biosafety Office (392-1591) for further guidance.

## **Packaging and Labeling Biological Waste**

Use the following materials to package biological waste. Off campus facilities should contact the Biological Safety Office at (352) 392-1591 for guidance.

### 1. **Corrugated biological/biomedical waste cardboard boxes**

- Sturdy, pre-printed cardboard biowaste boxes displaying the biohazard sign are used as the terminal receptacle in most locations on campus. Biohazard waste boxes and red liner bags are available from Building Services custodians in the Health Science Center (HSC) and are left by Stericycle in buildings that have their own pick-up and box delivery.
- Call Building Services (294-5500) for all requests for biowaste box delivery, pickup, or problems, whether you are inside the Health Science Center or outside. Personnel from outside of the health center may pick up the boxes from room AG129 at the Health Science Center after requesting them from Building Services at the number above (294-5500).



- Tape all seams in an “H” pattern using clear tape. Do not overfill the boxes – the maximum weight is 55 lbs. Label all boxes with the date, PI name, location (room/building), and phone number. In HSC buildings, place the closed and labeled biomedical waste boxes in the hall for pick-up by HSC custodians. In other locations, take the box to the established holding room for pick-up by Stericycle. Only properly packaged and labeled boxes will be accepted for transport.

## 2. **Biohazard bags – used for the initial collection of certain biological wastes**

- The biomedical waste box must be lined with a red biohazard bag printed with a certification stamp indicating that the bag meets the ASTM D 1922 and ASTM D 1709 standards for tear and impact resistance. Stericycle provides liner bags for each box but note that these bags are not autoclavable.
- All biohazard bags must meet impact resistance (165 grams), tearing resistance (480 grams), and heavy metal concentration (<100 PPM total of lead, mercury, chromium and cadmium) requirements. Documentation from the manufacturer regarding these requirements must be available.
- The generator must order and supply their own autoclavable red biohazard bags (e.g. Fisher Scientific #14-828-248 or VWR #14220 098) for the 30 gallon waste boxes. Autoclavable bags can only be used to line the biomedical waste box if they have the certification stamp noted above.
- Label the biohazard bag with the date put in use, generator’s (PI/area supervisor) name, lab location (room number) and phone number.
- Autoclaved red biohazard bags are placed in the Stericycle red bag–lined biowaste box for disposal.
- Each bag, including the liner bag, must be securely closed before sealing the biomedical waste box. Per Federal Department of Transportation (DOT) regulations, “The bag must be capable of being held in an inverted position with the closed end at the bottom for a period of 5 minutes without leakage.” Please see the [Packaging Biological Waste](#) handout for the proper way to close the bag.
- Do not put liquids into the bags.

## 3. **Sharps Boxes**

- Closed sharps boxes are labeled with the date closed, generator’s (PI/area supervisor) name, lab location (room number) and phone number, and then put into a biomedical/biological waste box for disposal.
- Sharps boxes are free and delivered to health science center personnel. Personnel from outside of the health center must call Building Services at 294-5500 to arrange to pick them up from room AG129 at the Health Science Center. Alternatively, they can be ordered from Fisher Scientific or other lab supplies vendors.

## Transport

- Biological waste being transported outside of the laboratory (e.g. to an autoclave) must be in a closed, leak-proof bag or container; bags must be contained in a leak-proof tray and transported on a cart to and from the autoclave.
- Do not leave non-inactivated waste unattended.
- Laboratory staff needing to transport [properly packaged and labeled biowaste boxes](#) to a secure storage/pick up area must protect the boxes from the weather and not leave the boxes unattended.
- A state vehicle, not a personal vehicle, must be used to transport biomedical waste. You must transport less than 25 lbs. at one time.
- The locked silver semi-trailer at the loading dock of the Health Science Center is the disposal site. Call Building Services at 294-5500 to arrange to meet someone with the keys. The usual meeting site is AG-129 on the ground floor of the HSC. Leave a voice mail message if needed and someone will return your call. Be prepared to show your photo ID.

## Training

- All employees who handle biomedical waste shall be trained regarding the proper segregation, handling, packaging, labeling, storage, and treatment of biomedical waste. Biomedical Waste training is included in the annual BBP training, but should be supplemented with site-specific information from the BBP SOPs and any site-specific biomedical waste operating plan.
- According to Florida Statute (Ch. 64E-16 F.A.C.), records of the training session shall be maintained for each employee, along with an outline of the training program. Training records shall be retained for a period of three (3) years. Records of BBP/BMW training taken on-line through myTraining are maintained indefinitely by HR. If the PI or department provides the training, those entities are required to maintain the training record(s) for 3 years and should notify EH&S of those trained.

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## Packaging and Shipping of Biological Materials

This policy is intended to provide guidance and insure compliance with DOT/IATA/ICAO\* regulations.

### **Relevant Categories:**

1. Category A Infectious substances
2. Category B infectious substances
3. Exempt human specimens
4. Regulated medical waste or biomedical waste

### **Requirements:**

In addition to the OSHA BBP training and compliance, anyone involved in the packaging and/or shipping of biological materials, particularly infectious substances, must be trained.

Certification and training is required every 2 years or sooner when there is a change in the regulations.

Shipping and Transport of Biological Materials Training is available on-line and compliance is tracked through myTraining. You must be assigned to the training:

**Email your name and UFID number to  
[bsa@ehs.ufl.edu](mailto:bsa@ehs.ufl.edu)  
Ask to be enrolled in the  
Shipping and Transport of Biological Materials training.**

- \* DOT – Department of Transportation  
IATA – International Air Transport Association  
ICAO – International Civil Aviation Organization

# Exposure Incident Guidelines

## **Report Exposures Immediately**

If you have sustained a potential exposure – needle stick, sharps injury or mucous membrane splash, take action as soon as possible. This is especially important in out-patient clinical areas so the source patient is still available for testing. Also, some treatment regimens are most effective if started within a few hours of exposure.

## **Gainesville Community**

A Bloodborne Pathogen Exposure Number has been initiated for all UF personnel and students in the Gainesville area to call following a BBP sharps or BBP splash exposure.

**BLOODBORNE PATHOGEN EXPOSURE NUMBER: 1 866 477-6824 (OUCH)**

**Call 24 Hours a Day, 7 days a week in Gainesville area**

Operators from the Student Health Care Center or Shands Nurse Coordinators will answer the line and immediately forward the call to a skilled and knowledgeable medical provider. The medical provider will collect the exposure and source history, arrange for lab work to be drawn, decide on post-exposure treatment if necessary, and recommend follow-up as appropriate. After-hours and on weekends, persons with post exposure will be triaged to the closest Emergency Room for treatment.

### **Faculty, Staff or Non-Student OPS Employees, Residents, GAs/TAs or Student**

**Assistants:** You must report all sharps and splash exposures to your supervisor and immediately call the Bloodborne Pathogen Exposure Number. Time is critical! You or your supervisor must then contact AmeriSys at 1-800-455-2079 immediately after your evaluation/treatment has been completed to report your exposure.

**UF Students - Not employed by the University:** Call the Bloodborne Pathogen Exposure Number. Your care must be paid for through your student/personal insurance or by some other means.

## **Jacksonville Community**

UF personnel and residents in Jacksonville who have a BBP exposure between the hours of 7am – 4pm should go immediately to the Employee Health Office in Suite 505 of Tower 1 at 8th and Jefferson. Go to the Emergency Room after hours. All follow-up, baseline labs, counseling, and medication reorders are provided by the Employee Health Office (904 244-9576).

**After treatment, you must report the incident to AmeriSys at 1-800-455-2079.**

## **Off-Site Locations**

If you have an exposure incident at an off-site rotation further than one-hour travel time from UF notify your supervisor and call AmeriSys at 1-800-455-2079 to authorize treatment and for information where to go. For any life-threatening emergency, go to the nearest ER and then call AmeriSys to report the claim.

## **Questions?**

Re: Bloodborne Pathogen Exposure Number: SHCC 352-294-5700

<http://shcc.ufl.edu/all-patients/emergencies/needlestick/>

Re: BBP Program--- UF Environmental Health & Safety 392-1591; E-mail: [bsc@ehs.ufl.edu](mailto:bsc@ehs.ufl.edu)

<http://www.ehs.ufl.edu/programs/bio/bbp/>

Re: UFWC Program- 352 392-4940 ; E-mail: [workcomp@ufl.edu](mailto:workcomp@ufl.edu).