



# **Bloodborne Pathogens Exposure Control Plan**

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# 1 Policy

Purdue University will make every effort to comply with the U.S. Department of Labor Occupational Safety and Health Administration Bloodborne Pathogen Standard (29 CFR 1910.1030). Universal precautions will be utilized to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

## 2 Scope and Application

This exposure control plan applies to all occupational exposure to blood or other potentially infectious materials at the West Lafayette campus, regional campuses, university research farms and agricultural centers, and related facilities and operations. This exposure control plan will be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

### 2.1 Exposure Determination by Job Title and Task

- **Building Service staff:**
  - Responds to emergency spills and accidents to clean up possible infectious material
  - Supervises the cleaning of restrooms and public areas with possible contact with infectious materials
  - Collect potentially infectious used needles from residents for disposal
  - Handles uniforms and laundry items that may contain infectious materials.
- **Emergency Response staff:** Responds to illnesses, accidents, and injuries that involve exposure to human blood or other body fluids
- **Head Coach, Coach Assistants/Weight Trainer/Athletic Trainer/Physical Therapist:** Responds to accidents and injuries that may involve contact with human blood or other body fluids
- **Health Care Workers:** Responds to illnesses, accidents, and injuries that involve exposure to human blood or other body fluids.
- **Laboratory Technician:** Conducts research that involves the use of human blood, unfixed tissue, or cell lines and handles laboratory instruments, utensils, etc. that may be contaminated with infectious materials.
- **Life Guard:** Responds to emergencies that may involve contact with human blood or other body fluids.
- **Maintenance Staff:** Repairs and maintains facilities, equipment, and fixtures that may contain infectious materials.
- **Police:** Responds to situations that may involve exposure to human blood or other body fluids.

- **Professor/Associate Professor/Assistant Professor/Graduate Student:** Instructs and supervises research that involves the use of human blood, unfixed tissue, or cell lines.
- **Speech-Language Pathologists/Audiologists:** Conducts oral-facial examinations and other procedures which could result in contact with body fluids.
- **Teacher:** Responds to emergencies and accidents with children which may involve infectious materials.
- **Team Physician:** Responds to illnesses, accidents, and injuries that involve exposure to human blood or other body fluids.

### 3 Definitions

- **Bloodborne Pathogens:** Pathogenic microorganisms that are present in human blood and can cause disease in humans. These disease causing organisms can be found in all body fluids, unfixed tissue, cell lines, and in situations where it is difficult or impossible to differentiate between body fluids and other materials.
- **Contamination:** The presence of blood or other potentially infectious materials on an item or surface.
- **Contaminated Sharps:** Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.
- **Decontamination:** 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:** Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.
- **Exposure Incident:** A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.
- **HBC:** Hepatitis C Virus.
- **HBV:** Hepatitis B Virus.
- **HIV:** Human Immunodeficiency Virus.
- **Occupational Exposure:** Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.
- **Parenteral:** Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.
- **Personal Protective Equipment (PPE):** is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothing (e.g., uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard is not considered to be personal protective equipment.

- **Regulated Waste:** Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.
- **Source Individual:** Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.
- **Universal Precautions:** Is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.
- **Work Practice Controls:** Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

## 4 Methods of Compliance

### 4.1 Communication of Hazards to Employees (Biohazard Warning Label)

Biohazard warning labels like the one pictured in Figure 1 will be affixed to containers of blood or regulated waste, refrigerators and freezers containing blood or other potentially infectious material and other containers used to store, transport or ship these materials. Biohazard labels will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color. These labels will be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal. Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment, or disposal are exempted from the labeling requirement. Regulated waste that has been decontaminated need not be labeled.



Figure 1 – Biohazard Warning Label

## 4.2 Engineering and Work Practice Controls

Engineering and work practice controls will be used to eliminate or minimize employee exposure. Engineering controls will be examined and maintained or replaced to ensure their effectiveness. Personal protective equipment will also be used if there is exposure potential.

Purdue University will provide readily accessible hand washing facilities for employees use. When hand washing facilities are not possible, appropriate antiseptic hand cleanser or antiseptic towelettes will be provided. Employees will be trained to wash their hands with soap and running water as soon as possible after any exposures and after removing personal protective equipment.

Contaminated needles and other contaminated sharps will not be bent, recapped, or removed unless no alternative is feasible or that such action is required by a specific medical or dental procedure. Such bending, recapping, or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

Food and drink will not be kept in refrigerators, freezers, shelves, cabinets or on countertops or bench tops where blood or other potentially infectious materials are present.

All procedures involving blood or other potentially infectious materials will be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

Specimens of blood or other potentially infectious materials will be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping. Containers used for storage, transport, or shipping will be biohazard labeled and closed prior to being stored, transported, or shipped.

The primary container will be placed within a biohazard labeled second container to prevent puncture and leakage during handling, processing, storage, transport, or shipping.

Equipment which may become contaminated with blood or other potentially infectious materials will be decontaminated prior to servicing or shipping. A readily observable biohazard label will be attached to the equipment stating which portions remain contaminated. Purdue University will ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, and prior to handling, servicing, or shipping so that appropriate precautions will be taken.

### **4.3 Personal Protective Equipment**

When there is occupational exposure, Purdue University will provide, at no cost to the employee, appropriate personal protective equipment such as gloves, gowns, laboratory coats, face shields, eye protection, masks, mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's clothes, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Purdue University will ensure that the employee uses personal protective equipment and that appropriate sizes are readily accessible at the worksite or is issued to employees. Personal protective equipment will be repaired or replaced as needed to maintain its effectiveness, at no cost to the employee. All personal protective equipment will be removed prior to leaving the work area and/or if the protective clothing is contaminated with blood or infectious material. Purdue University will clean, launder, and dispose of personal protective equipment. When personal protective equipment is removed it will be placed in designated areas or containers for storage, washing, decontamination, or disposal.

Gloves will be worn when there is potential for hand contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives will be readily accessible to those employees who are allergic to the gloves normally provided. Disposable (single use) gloves will be replaced as soon as practical when contaminated or damaged. Disposable (single use) gloves will not be washed or decontaminated for re-use. Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibiting other signs of deterioration or when their ability to function as a barrier is compromised.

Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, will be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated.

Appropriate protective clothing such as gowns, aprons, lab coats, clinic jackets, or similar outer garments will be worn in occupational exposure situations. Surgical caps or hoods and/or shoe covers or boots will be worn in instances when gross contamination can reasonably be anticipated (e.g., necropsies, sawing, or otherwise aerosolizing human tissue or fluids).

### **4.4 Housekeeping**

Purdue University will ensure that the worksite is maintained in a clean and sanitary condition. Purdue University will determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

- All contaminated equipment and work surfaces will be decontaminated immediately or as soon as feasible with an appropriate disinfectant after completion of procedures and at the end of the work shift if the surface may have become contaminated since the last cleaning.
- Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces will be removed and replaced when they become contaminated.
- All bins, pails, cans, and similar receptacles intended for reuse will be decontaminated immediately if they are contaminated with blood or other potentially infectious materials.
- Broken glassware which may be contaminated will not be picked up directly with the hands. Mechanical means, such as a brush and dust pan, tongs, or forceps will be utilized for cleaning.
- Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

#### **4.5 Regulated Waste**

Disposal of all regulated waste will be in accordance with Purdue University policy as well as applicable federal, state, and local regulations. Contaminated sharps and other regulated waste will be discarded immediately or as soon as feasible in biohazard labeled containers that are closable, puncture resistant, and leakproof. Containers for contaminated sharps will be maintained upright throughout use, easily accessible to personnel, replaced routinely, and not be allowed to overfill.

When moving contaminated sharps or other regulated wastes the containers will be biohazard labeled and closed to prevent spillage or protrusion during handling, storage, transport, or shipping. Secondary containers will be used if leakage is possible. The second container will also be biohazard labeled, closable, and constructed to contain all contents and prevent leakage.

#### **4.6 Laundry**

Contaminated laundry will be handled as little as possible while being placed in biohazard labeled transport bags or containers. Contaminated laundry will not be sorted or rinsed in the location of use. Wet contaminated laundry will be placed in appropriate leak proof bags or containers. Purdue University will ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

### **5 Training**

If an employee has occupational exposure or potential exposure to human blood or human fluids they must take part in the Bloodborne Pathogen Exposure Control Plan training to control



exposure. Training will be provided at the time of initial assignment to tasks where occupational exposure may take place and annually thereafter. The person conducting the training will be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to Purdue University.

Purdue University will provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

## **5.1 Training Requirements**

1. Training must take place within 10 days of employment and before there is any blood exposure.
2. Training must be conducted by an approved designated trainer or during a monthly scheduled Environmental Health and Safety (EHS) training session.
3. Training must be conducted annually.
4. Training must contain elements as prescribed below in section B.
5. Training documentation, Hepatitis B vaccination rosters, and health release authorization forms must be sent to EHS.

## **5.2 Training Program Elements**

1. An accessible copy of the regulatory text of the OSHA Bloodborne Pathogen Standard (29 CFR 1910.1030) and an explanation of its contents;
2. A general explanation of how widespread bloodborne diseases are among the general population and what the symptoms of bloodborne diseases are;
3. An explanation of the ways bloodborne diseases are transmitted;
4. An explanation of the Purdue University Exposure Control Plan and the means by which you can obtain a copy;
5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
6. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;
7. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;
8. An explanation of how personal protective equipment is selected for particular jobs;
9. Information on the hepatitis B vaccine, including information on how well it works, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;
10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

12. Information on the post-exposure evaluation and follow-up that Purdue University is required to provide for the employee following an exposure incident;
13. An explanation of the signs and labels and/or color coding required by the Exposure Control Plan; and
14. An opportunity for interactive questions and answers with the person conducting the training session

All current Bloodborne Pathogen forms can be found on the EHS website Forms page.

## **6 Hepatitis B Vaccination**

### **6.1 Availability**

Purdue University will make available hepatitis B vaccine and vaccination series at no cost to all employees who have occupational exposure. Post-exposure evaluation and follow-up to all employees who have had an exposure incident will also be at no cost. The vaccinations and/or testing will be made available to the employee at a reasonable time and place and be performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional.

Hepatitis B vaccination will be made available after the employee has received Bloodborne Pathogen training and within 10 working days of initial assignment. Employees who decline to accept hepatitis B vaccination must sign a declination statement but can at any time change their mind. Purdue University will make available hepatitis B vaccination at that time. If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) will be made available.

### **6.2 Post-Exposure Evaluation and Follow-Up**

After an exposure incident, Purdue University will provide the exposed employee with a confidential medical evaluation and follow-up. The exposed employee will be asked to document the route of exposure, the circumstances under which the exposure incident occurred, and asked for the identification of the source individual. The source individual's blood will be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity.

If consent is not obtained, Purdue University will establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, will be tested and the results documented. When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

Results of the source individual's testing will be made available to the exposed employee, and the employee will be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service will be provided. Medical counseling and evaluations of reported illnesses will be available.

Purdue University will ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided with:

- A copy of the Bloodborne Pathogen regulation
- A description of the exposed employee's duties as they relate to the exposure incident
- Documentation of the route(s) of exposure
- The circumstances under which exposure occurred.

If available, the results of the source individual's blood testing will be provided and all medical records relevant to the appropriate treatment of the employee including vaccination status.

Purdue University will obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The healthcare professional's written opinion for Hepatitis B vaccination will be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination. All other findings or diagnoses will remain confidential and will not be included in the written report.

The healthcare professional's written opinion for post-exposure evaluation and follow-up will be limited to the following information:

- Results of the evaluation
- Any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

## **7 Records and Recordkeeping**

### **7.1 Records Availability**

Purdue University will ensure that all records required to be maintained will be made available upon request to the Assistant Secretary and the Director for examination and copying. If Purdue University ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer will notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

## 7.2 Medical Records

Purdue University will establish and maintain an accurate medical record for each employee with occupational exposure. This record will include the following information:

1. The name, date of birth, and a specific Purdue Identification number for the employee
2. A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
3. A copy of all results of examinations, medical testing, and follow-up procedures
4. The employer's copy of the healthcare professional's written opinion
5. A copy of the information provided to the healthcare professional

Purdue University will ensure that employee medical records kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as may be required by law. Purdue University will maintain the records for at least the duration of employment plus 30 years.

## 8 Training Records

Training records will be maintained for 3 years from the date on which the training occurred. Training records will include the following information:

1. The dates of the training sessions
2. The contents or a summary of the training sessions
3. The names and qualifications of persons conducting the training
4. The names and job titles of all persons attending the training sessions

### 8.1 Sharps Injury Log

Purdue University will establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee. Purdue University will maintain the records at least the duration of employment plus 30 years. The sharps injury log will contain, at a minimum the following information:

1. The type and brand of device involved in the incident,
2. The department or work area where the exposure incident occurred
3. An explanation of how the incident occurred.

## 9 Forms

The most recent versions of the following forms can be found on EHS's Forms webpage.

- **Training and Information Certification**
- **Department Hepatitis B Vaccination Eligibility List**
- **Hepatitis B Vaccination Declination**

## **Appendix A: Summary of Changes**

### **July 8, 2024**

- Added this appendix
- Changed “Radiological and Environmental Management” and “EHS” to “Environmental Health and Safety” and “EHS” respectively