

UNIVERSITY OF MINNESOTA



**Bloodborne and Other Pathogens  
Exposure Control Plan**

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## I. PURPOSE AND SCOPE

The Occupational Safety and Health Administration (OSHA) regulates workplaces where employees may be exposed to bloodborne pathogens and promotes safe work practices to minimize the incidence of disease due to bloodborne pathogens. OSHA enacted the Bloodborne Pathogen Standard, 29 CFR 1910.1030 (and 2001 revision to comply with the Needlestick Safety and Prevention Act), to reduce/eliminate occupational exposure to Hepatitis B Virus, Hepatitis C Virus, Human Immunodeficiency Virus (HIV), and other bloodborne pathogens that employees may encounter in their workplaces.

The University of Minnesota's Exposure Control Plan is **not** limited to exposures as defined by the Bloodborne Pathogen Standard. This plan covers all employees who may come in contact with bloodborne and all other potential pathogens via any route of transmission.

Additional exposure control information regarding pathogen exposure due to research animal contact can be accessed through Research Animal Resources, <http://www.ahc.umn.edu/rar/safety.html>.

As part of the University's commitment to minimizing employee exposure to all potentially hazardous biological materials, it has developed a policy for [\*Activities Involving Potentially Hazardous Biological Agents\*](#).

The University of Minnesota's Exposure Control Plan is based on the following principles:

- Risk of exposure to pathogenic agents should never be underestimated.
- It is prudent to minimize exposure to all pathogenic organisms.
- All laboratory areas should institute as many engineering and work practice controls as possible to eliminate or minimize exposure to pathogenic organisms.

## II. OBJECTIVES

The objectives of this plan are to:

- A. Provide training information and describe procedures designed to prevent or minimize occupational exposure to bloodborne pathogens and other potentially infectious agents.
- B. Ensure compliance with the Bloodborne Pathogen Standard.

## III. AUTHORITY FOR PLAN

Guidelines and procedures found in this plan follow those outlined by:

- A. Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Rule 29CFR 1910.1030, [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=10051](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10051)
- B. Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Rule

29CFR 1910.1030 January 2001 amendment to comply with the Needlestick Safety and Prevention Act [http://www.osha.gov/FedReg\\_osha\\_pdf/FED20010118A.pdf](http://www.osha.gov/FedReg_osha_pdf/FED20010118A.pdf).

C. The Centers for Disease Control

#### **IV. ROLES AND RESPONSIBILITIES**

The following roles and responsibilities for implementation of the Exposure Control Plan will be updated as needed to reflect any change(s) in the assignment of these responsibilities.

##### **A. Deans, Directors, and Department Heads**

1. Have overall responsibility for their entire organization regarding implementation of and compliance with the Exposure Control Plan.
2. Work with principal investigators, supervisors and staff to develop and administer any additional policies and procedures needed to support the implementation of this plan.
3. Revise and update procedures for all areas of responsibility at least annually.
4. Identify job classifications in which all employees have a potential for occupational exposure to Bloodborne pathogens and other potentially infectious material.
5. Identify job classifications in which some employees may have a potential for occupational exposure to Bloodborne pathogens and other potentially infectious material. Identify the tasks and procedures or groups of closely related tasks and procedures in which potential occupational exposure occurs.
6. Ensure that a program is in place to:
  - a. provide annual bloodborne pathogen and other infectious material training
  - b. maintain training records
  - c. report sharps injuries
  - d. offer Hepatitis B vaccination/declination forms
  - e. ensure that covered employees comply with requirements outlined in this plan for training, safe practices, injury reporting, and follow-up.

##### **B. Principal Investigators**

1. Responsible for ensuring compliance with the University of Minnesota Exposure Control Plan within their research area.
2. Identify personnel with a potential for occupational exposure to Bloodborne pathogens and other potentially infectious material.
3. Work with lab supervisor(s) and employees to develop and administer any additional policies and procedures needed to support the effective implementation of this plan.
4. Develop, and at least annually revise and update Standard Operating Procedures for all areas of responsibility. Work with lab supervisor(s) and employees to develop standard operating procedures (SOPs) that reflect:
  - a. the biosafety level approved by the Institutional Biosafety Committee (IBC)

- b. appropriate biosafety level practices outlined in CDC-NIH's [Biosafety in Microbiological and Biomedical Laboratories](#)
    - c. [NIH Guidelines for Research Involving Recombinant DNA Molecules](#)
  - 5. All researchers using university facilities, including non-university staff researchers, are required to obtain prior approval from the IBC for work involving:
    - a. recombinant DNA and artificial gene transfers
    - b. infectious agents (organisms in Risk Group 2 or above)
    - c. biologically derived toxins
- C. Work unit supervisors (In lab/research settings, this would be the Principal Investigator if there is no other lab supervisor)
  - 1. Ensure compliance with the University of Minnesota Exposure Control Plan in their work areas by working directly with the employees to promote and ensure that proper exposure control procedures are followed.
  - 2. Inform all employees of potential hazards in the work place.
  - 3. Investigate and report exposure incidents and take the necessary action to prevent similar incidents from occurring.
  - 4. Provide lab-specific safety training at time of initial work assignment and annually thereafter. Training content shall comply with 29 CFR 1910.1030(g)(2)(vii)
  - 5. Regularly review the availability of products engineered to reduce sharps exposure in order to determine if there is an acceptable replacement for lab procedures.
- D. Employees
  - 1. Employees are responsible for the day-to-day compliance with the Exposure Control Plan as part of their work procedures.
  - 2. All workers having potential exposure to bloodborne and other potential pathogens are required to:
    - a. understand potential exposure from work tasks and route of exposure
    - b. conduct all tasks in accordance with established rules and SOPs
    - c. successfully complete all required bloodborne pathogen training
    - d. practice good personal hygiene habits
- E. The Department of Environment Health and Safety and the Office of Occupational Health and Safety
  - 1. Will update the Exposure Control Plan at least
  - 2. Conduct periodic inspections of all work areas where the program applies including Biosafety Level 2 and above research labs to ensure that engineering controls are in place and that safety procedures are being followed.
  - 3. Develop suitable education/training programs and materials.
  - 4. Provide in-person and web-based training (see Section XIII).
  - 5. Maintain a university-wide inventory of pathogens and toxins.
  - 6. Maintain web-based biosafety manual and list of biosafety references.
  - 7. Maintain a sharps log.

8. Conduct annual reviews of the program in compliance with Section XIV.
- F. Institutional Biosafety Committee (IBC)
1. Reviews all recombinant DNA and artificial gene transfer, infectious agents, and biologically derived toxin protocols for:
    - a. appropriate biosafety level
    - b. exposure control methods
    - c. waste disposal and spill clean-up methods
    - d. expertise of laboratory personnel

## V. ACCESSIBILITY

A copy of this Bloodborne and other Pathogens Exposure Control Plan is accessible to all employees on the Department of Environmental Health and Safety web site, <http://www.dehs.umn.edu/>.

Employees, their health care providers, and other concerned parties may also access the OSHA Bloodborne Pathogen regulation here:

[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10051](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051)

## VI. DEFINITIONS

As defined in 29 CFR 1910.1030

([https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10051](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051))

- A. "**Bloodborne Pathogens** mean 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 (HCV), and human immunodeficiency virus (HIV).
- B. "**Blood** means human blood, human blood components, and products made from human blood.
- C. "**Occupational exposure** means 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."
- D. "**Other potentially infectious materials means:**
  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 blood, organs, or other tissues from

experimental animals infected with HIV or HBV.”

- E. “**Parenteral** means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.”
- F. “**Regulated Waste** means 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.

## VII. EXPOSURE DETERMINATION

Directors, Department Heads, Work Unit Supervisors and Principal Investigators identify those employees and job classifications that have occupational exposure to human blood, other potentially infectious materials, or other pathogens, as defined in Section VI above. For each new work assignment, the Principal Investigator or work unit supervisor will make an individual employee exposure determination. Exposure determination must be made without regard to the use of personal protective clothing and equipment.

Two examples of job classification lists are included in Appendix A. Separate lists must be made for job classifications in which all employees in those classifications have occupational exposure and job classifications in which some of the employees may have occupational exposure. For employees falling under the second list, specific tasks and procedures for each classification must be included.

## VIII. METHODS OF COMPLIANCE

The following five methods of compliance will be implemented.

- A. Universal Precautions
  - 1. Principle Investigators and supervisors are responsible for overseeing the Universal Precaution Program in their work area.
  - 2. All human blood and OPIM, and other pathogens covered by this program must be treated as if they are infectious for bloodborne or other pathogens.
- B. Engineering Controls and Other Safety Equipment
  - 1. **Engineering Controls** means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices such as sharps with engineered injury protections, and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace. Engineering Controls:
    - a. shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
    - b. are used whenever possible to eliminate or minimize employee exposure to bloodborne and other pathogens.

- c. are reviewed annually for the availability of safer medical devices, review is documented, and input is provided by non-administrative staff.
  2. Containers for contaminated sharps have the following characteristics:
    - a. puncture-resistant
    - b. color-coded or labeled with a biohazard warning label
    - c. leak-proof on the sides and bottom
    - d. closable
  3. Hand washing facilities are readily accessible.
  4. The following additional containment equipment is used as needed for specific procedures:
    - a. biological safety cabinets
    - b. other vented enclosures as needed
- C. Work Practice Controls

It is the responsibility of work unit supervisors, in conjunction with directors, department heads, and principal investigators, to oversee the implementation of work practice controls.

1. Hand washing procedures include:
  - a. Wash hands immediately, or as soon as feasible, after removal of gloves or other personal protective equipment.
  - b. Wash hands, and any other skin, with soap and water immediately, or as soon as feasible, following contact with blood or other potentially infectious materials.
  - c. Flush mucous membranes with water immediately, or as soon as feasible, following contact with blood or other potentially infectious materials.
  - d. When it is not feasible to provide a sink, such as for field work, OSHA has stated "If there has been no occupational exposure to blood or other potentially infectious materials, antiseptic hand cleansers may be used as an appropriate hand washing practice." (Per OSHA clarification March 2003, [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_tabl e=INTERPRETATIONS&p\\_id=24389&p\\_text\\_version=FALSE](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_tabl e=INTERPRETATIONS&p_id=24389&p_text_version=FALSE).) If antiseptic hand cleansers are used, hands shall be washed with soap and running water as soon as feasible.
2. Sharps procedures:
  - a. Contaminated needles and other contaminated sharps are not bent, recapped or removed unless it can be demonstrated that there is no feasible alternative. Necessary recapping is done through mechanical means or with a one-handed technique as demonstrated on the DEHS web site, [http://www.dehs.umn.edu/bio\\_pracprin\\_su\\_ss.htm](http://www.dehs.umn.edu/bio_pracprin_su_ss.htm).
  - b. Contaminated reusable sharps are placed in appropriate containers immediately, or as soon as possible, after use.
  - c. During use containers must be easily accessible and kept upright.



- d. Containers must be replaced when  $\frac{3}{4}$  full and closed prior to removal.
- e. A Sharps Injury Log must be maintained. The log must protect the confidentiality of the injured employee and include:
  - the type and brand of device involved in the incident
  - the department or work area where the exposure incident occurred
  - an explanation of how the incident occurred
3. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to bloodborne pathogens. Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where blood or other potentially infectious materials are present.
4. Mouth pipetting and suctioning of blood or other infectious materials is prohibited.
5. All procedures involving blood or other potentially infectious material is performed in such a manner as to minimize splashing, spraying, spattering, or other actions generating droplets.
6. Blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, or transport.
7. The above containers are appropriately labeled and closed for handling and storing specimens of blood or other potentially infectious material. If outside contamination of a primary specimen container occurs, that container is placed within a second leak-proof container appropriately labeled for handling and storage. If the specimen can puncture the primary container, the secondary container must also be puncture-resistant.
8. Transport of biological material within the university will be in primary and secondary containers. Containers must be:
  - Leak-proof and closable
  - Labeled with appropriate biohazard label
  - Puncture-resistant, when necessary
9. Shipping of blood or other potentially infectious materials outside the university shall only be done by individuals trained by the Department of Environmental Health and Safety ([http://www.dehs.umn.edu/training\\_shiphazmat.htm](http://www.dehs.umn.edu/training_shiphazmat.htm)). Training is required every two years.
10. Equipment which becomes contaminated will be decontaminated prior to servicing or shipping. If decontamination is not feasible, an appropriate biohazard warning label will be attached to identify the type of contamination and the contaminated areas. Before equipment is handled, serviced, or shipped, contamination information will be conveyed to all affected employees, the intended equipment receiver, and any equipment service representative.

#### D. Personal Protective Equipment

1. The lab manager or work unit supervisor is responsible for ensuring that appropriate protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided. Personal Protective Equipment is provided at no cost to protect employees. This equipment may include, but is not limited to:
  - a. gloves of latex or nitrile
  - b. disposable gowns and lab coats
  - c. face shields/masks
  - d. safety glasses/goggles
  - e. mouthpieces/resuscitation bags/pocket masks or other ventilation devices
  - f. hoods and shoe covers
2. Employees are trained regarding the use of the appropriate personal protective equipment for the tasks/procedures they perform. If necessary, additional training is provided when an employee takes a new position or is assigned new tasks/procedures. To determine whether additional training is needed, the employee's previous job classification and functions are compared to his/her new job classification or functions. Any needed training is provided by his/her department and/or supervisor.
3. To ensure that personal protective equipment is not contaminated and is in good condition to protect employees from potential exposure, the following practices are utilized:
  - a. All personal protective equipment is inspected periodically and repaired or replaced as needed to maintain effectiveness.
  - b. Reusable personal protective equipment is cleaned, laundered and decontaminated as needed.
  - c. Each department is responsible for providing lab coats and a lab coat laundering service.
  - d. Single-use personal protective equipment (or equipment that cannot be decontaminated) is disposed of as outlined in the University's Infectious Waste Management Plan, <http://www.dehs.umn.edu/PDFs/infectwaste-plan.pdf>.
4. To ensure that personal protective equipment is used as effectively as possible, employees will adhere to the following practices:
  - a. Any garments penetrated by blood or other infectious materials will be removed immediately, or as soon as feasible.
  - b. All personal protective equipment will be removed prior to leaving the work area. It shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.
  - c. Gloves will be worn:

- whenever employees anticipate hand contact with potentially infectious materials
  - when performing vascular access procedures
  - when handling or touching potentially contaminated items or surfaces
- d. Disposable gloves are replaced as soon as practical after contamination or if torn, punctured, or otherwise lose their ability to function as an "exposure barrier." Disposable (single use) gloves are not washed or decontaminated for re-use.
  - e. Utility gloves may be decontaminated for reuse unless they are cracked, peeling, torn or exhibit other signs of deterioration, at which time they are disposed.
  - f. Masks in combination with eye protection such as goggles or glasses with solid side shields, or chin-length face shields, are used whenever splashes, sprays, or droplet generation of infectious material, can be reasonably anticipated.
  - g. Protective clothing is worn whenever potential exposure to the body is anticipated. Type and characteristics of protective clothing will depend on the task and the degree of exposure that is anticipated.
  - h. Surgical caps/hoods and/or shoe covers/boots are used in any instances where "gross contamination" is anticipated.
  - i. While carrying out tasks or procedure in which direct or incidental hand contact with potentially infectious materials is likely.

#### E. Housekeeping and Waste Disposal

Departments and lab staff, with the assistance of Custodial Services or other assigned employees as needed, will ensure that the worksite is maintained in a clean and sanitary condition.

1. All equipment and surfaces are cleaned and decontaminated immediately, or as soon as feasible, after spills or other contact with blood or other potentially infectious materials.
2. All work surfaces that may have been contaminated are decontaminated at the completion of procedures and at the end of each work shift if surfaces may have become contaminated since the last cleaning.
3. Equipment protective coverings are removed and replaced as soon as possible after spills or other contact with blood or other potentially infectious materials and after the work shift if the covering may have become contaminated.
4. All containers for reuse are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
5. Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush) and disposed of per Environmental Health and Safety's

Infectious Waste Disposal Chart, [http://www.dehs.umn.edu/bio\\_wastedisptble.htm](http://www.dehs.umn.edu/bio_wastedisptble.htm).

6. All infectious waste, including regulated waste (see Section VI Definitions), is disposed of according to the University's Infectious and Pathological Waste Management Plan, <http://www.dehs.umn.edu/PDFs/infectwaste-plan.pdf>, which is in compliance with 1910.1030 (d)(4)(iii)(B).

## **IX. HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES**

- A. There are no HIV or HBV production facilities at the University.
- B. The following procedure requirements are in addition to the other requirements of the Bloodborne Pathogen Standard and apply to research laboratories engaged in culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories solely engaged in the analysis of blood, tissues, or organs.
  1. Assigned laboratory space and work practices for HIV and HBV research must be approved by the Institutional Biosafety Committee (IBC).
  2. All waste will be decontaminated by autoclaving for one hour or placed in a red bag for disposal by a licensed contractor.
  3. Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled, or color-coded container that is closed before being removed from the work area.
  4. Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.
  5. Access to 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 specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.
  6. A Biohazard sign will be posted on all access doors.
  7. All work shall be conducted in biological safety cabinets or other appropriate containment devices. No work shall be conducted on the open bench. Biological safety cabinets will be certified when installed, when moved, and at least annually.
  8. Appropriate protective clothing shall be worn, removed before leaving the work area, and decontaminated before laundering.
  9. Vacuum lines will be protected with liquid disinfectant traps and filters.
  10. Use of needles and syringes will be limited to situations where there is no feasible alternative. Only needle-locking syringes or syringe-needle units where needle is integral to syringe shall be used.
  11. All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

12. A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.
  13. All activities that pose a threat of exposure to droplets, splashes, spills, or aerosols shall use appropriate combinations of biological safety cabinets, personal protective equipment, and secondary containment such as centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals.
- C. The following facility requirements must be met for HIV and HBV labs.
1. Each laboratory must contain a facility for hand washing and an eye wash which is readily available within the work area.
  2. An autoclave shall be available for decontaminating regulated waste.
- D. For training requirements see Section XIII, Training and Record Keeping.

## **X. HEPATITIS B VACCINATION**

Hepatitis B vaccination is offered after initial bloodborne pathogen training and within 10 days of work assignment to all employees who have occupational exposure to bloodborne pathogens unless the employee has previously received the complete hepatitis B series, antibody testing has revealed that the employee is immune, the vaccine is contraindicated for medical reasons, or the employee declines the vaccination.

The vaccination consists of a series of three inoculations over a six-month period and is provided at no cost to the employee. A HealthPartners Occupational and Environmental Medicine clinic will provide vaccination at no cost to the employee after a departmental EFS number is presented to the Office of Occupational Health and Safety. Visit the Office of Occupational Health and Safety website for appointments and clinic locations at <http://www.ohs.umn.edu/ohp/home.html>. If the employee declines the vaccine a Declination Form (Appendix B) must be signed and kept in the employee's file. There is also an opportunity to decline the vaccine as part of the University's online Bloodborne Pathogen training. If the employee declines to be vaccinated, he/she may accept vaccination at a later date.

Information regarding the vaccination program, including safety and effectiveness, is part of [Bloodborne Pathogen training](#).

## **XI. FIRST AID, INCIDENT REPORTING, AND POST-EXPOSURE EVALUATION**

- A. Administer First Aid. Flood the area with water, and clean it with an antiseptic. If exposure has resulted from a splash to the eyes, flush for 15 minutes at the nearest safety eyewash. Seek medical attention immediately.
- B. Incidents are reported to the worker's supervisor as soon as possible and a First Report of Injury must be submitted, either online at <https://webapps-prd.oit.umn.edu/froi/> (preferred),

or using the printable fillable pdf form at <http://policy.umn.edu/prod/groups/president/@pub/@forms/@hr/documents/form/froi.pdf>.

If the exposure has occurred during work on an IBC protocol, an Incident Report Form must be filled out and submitted to the IBC office within 24 hours. The Incident Report Form is available at <http://www.research.umn.edu/ibc/report.html#.UJ0X3IfAeZs>.

- C. Following a report of an exposure incident, the employee is provided confidential medical treatment, evaluation, and follow-up under the supervision of a licensed physician or another licensed health care professional. Tests are conducted by an accredited laboratory at no charge to the employee. Emergency care is provided by [HealthPartners Occupational and Environmental Medicine](#) during regular business hours and University of Minnesota Medical Center, Fairview after hours. Post-exposure evaluation and follow-up to bloodborne pathogen exposure must include:
1. Documentation of the routes(s) of exposure and the circumstances under which the exposure incident occurred.
  2. Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law.
  3. The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the University shall 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, shall be tested and the results documented.
  4. If the source individual is already known to be infected with HBV or HIV, testing need not be repeated.
  5. Results of source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
  6. If the employee agrees to blood collection and testing following an exposure incident, it will be done as soon as possible after consent is given.
  7. If the employee consents to baseline blood collection at the time of the exposure, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.
  8. An exposed employee will be offered:
    - a. post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service
    - b. counseling
    - c. evaluation of subsequent reported illnesses.
- D. The employee's supervisor will investigate the circumstances surrounding the incident to determine what action (training, change in work practice, engineering controls, etc.) must

be taken in order to prevent similar incidents in the future.

- E. The University's Occupational Health Provider is responsible for maintaining employee medical records according to OSHA regulations. All medical records are confidential; information will not be disclosed without the employee's written consent. Medical records, with regards to an occupational exposure, will be maintained for at least the duration of employment plus 30 years.

Record-keeping and/or reporting for occupational bloodborne pathogen exposures will be in compliance with OSHA Bloodborne Pathogen Standard 29 CFR 1910.1030(d) (2)(i) and as directed by OHS as follows:

1. OHS will receive a bloodborne pathogen post-exposure evaluation report and a work ability report for each injured University community member.
2. HealthPartners Occupational and Environmental Medicine will work with the University's Risk Management Office as needed regarding missing or incomplete information about Workers Compensation claims.
3. Test results are documented in the HPOEM electronic medical record.
4. Affected persons can be asked and should complete any post-exposure patient questionnaires or other appropriate forms as determined by HPOEM and OHS.
5. HPOEM will work with University staff to assist them in the maintenance of other records on an as-needed basis.

## **XII. LABELS AND SIGNS FOR HAZARD COMMUNICATION**

Biohazard warning labels and signs are used to communicate hazards to employees. Labels and signs display the Biohazard symbol and are colored fluorescent orange or orange-red.

A. Labels are affixed to:

1. biohazard waste containers, sharps disposal containers, laundry bags
2. other containers used to store, transport, or ship blood and other potentially infectious materials
3. refrigerators/freezers containing blood or other potentially infectious materials
4. contaminated equipment with indication of which portion of equipment is contaminated

B. Biohazard signs are posted at entrances to all Biosafety Level 2 research laboratories including HIV and HBV. The sign must indicate whether any special requirements are needed for entry and the name and phone number(s) of the lab director or other responsible person.

## **XIII. TRAINING AND RECORDKEEPING**

It is the responsibility of individual departments to identify employees needing training and ensure that training is completed. Bloodborne Pathogen training is required for all employees that are at risk for exposure to bloodborne pathogens (See the Appendices).

Covered employees must take Bloodborne Pathogen/Infectious Material training at the time of initial assignment and at least annually thereafter. All new employees, as well as employees changing jobs or job functions, will be given additional job-specific training prior to beginning new work assignments.

A. Training material will include but not be limited to:

1. An accessible copy of the Bloodborne Pathogens Standard  
[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=10051](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10051)
2. The epidemiology and symptoms of bloodborne and other diseases
3. The modes of transmission of bloodborne and other pathogens
4. The University's Exposure Control Plan,  
<http://www.dehs.umn.edu/PDFs/exposecontrol-plan.pdf>
5. Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials
6. A review of the use and limitations of methods that will prevent or reduce exposure, including:
  - engineering controls
  - work practice controls
  - personal protective equipment
7. Selection and use of personal protective equipment including:
  - types available and location
  - proper use
  - removal and handling
  - decontamination and disposal
8. An explanation of biohazard labels, signs and "color-coded" containers
9. Information on the Hepatitis B Vaccine, including:
  - efficacy and safety
  - method of administration
  - benefits of vaccination
  - no cost to employee
10. Post exposure evaluation procedures as outlined in Section XI above.

B. In addition to the training outline above, employees in HBV and HIV research labs must:

1. Demonstrate proficiency in standard microbiological techniques and techniques specific to the job tasks.
2. Have prior experience handling human pathogens or tissue cultures or be provided with a training program beginning with non-infectious agents and progressing as proficiency is developed.



### C. Training Methods

The following types of training, *by themselves*, do not constitute training, and do not comply with this program or the regulation:

1. Giving an employee a data sheet, package insert, reference manual or any other printed material to read.
2. Watching video or computer-delivered presentations, especially when the material in the video is not specific to the operation and hazards at hand.
3. Any type of training which does not include an opportunity for employees to ask questions to ensure they understand the information presented to them.

Audiovisuals, interactive videos, printed materials, etc., may be used as a component of the Bloodborne Pathogens training program if they are supplemented by specific information related to the employees' job duties and related exposures, and if employees are permitted to ask questions and have them answered.

### D. Training Records

Each department is responsible for maintaining training documentation for all employees who have potential exposure to bloodborne or other pathogens. A *Bloodborne Pathogen and Other Infectious Agents* training form is available at

<http://www.dehs.umn.edu/PDFs/Bptrain.pdf>. Records will include:

1. dates of all training sessions
2. contents/summary of the training sessions
3. names and qualifications of the instructors
4. names and job titles of employees attending the training sessions

Training records will be maintained for at least three years.

## XIV. ANNUAL REVIEW OF THE PROGRAM

At least annually, a formal, documented review shall be conducted by DEHS and OHS to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

## Appendix A

### EXPOSURE DETERMINATION BY JOB CLASSIFICATION

All of the following job classifications require employees to perform procedures or occupation-related tasks that involve exposure, or the potential for exposure to blood or other potentially infectious material. These classifications may also include tasks that involve the potential for spills or splashes of blood or other potentially infectious material.

#### EXAMPLES OF JOB CLASSIFICATIONS IN WHICH ALL EMPLOYEES HAVE OCCUPATIONAL EXPOSURE

Anatomical Preparation Technician	Nurse CLN I
Anesthesiologist	Nurse CLN II
Assistant Athletic Equipment Manager	Nurse CLN Manager
Assistant IM Director	Nurse Practitioner
Athletic Equipment Manager	OB\GYN Surgeon
Chemical and Biosafety Officer	Occupation Physician
Clinic Aide	Optometrist
Clinical Laboratory Staff	Orthopedic Surgeon
Clinical Nurse	Physician
Cytogenetic Laboratory Director	Physician Assistant
Cytogenetic Laboratory Manager	Public Safety Personnel
Cytogenetic Laboratory Technician I	Public Safety
Cytogenetic Laboratory Technician II	Radiation Safety Officer
Dental Hygienist	Resident/Instructor
Physicist	Safety Technician
Hospital Nurse	Staff Athletic Trainer
Immunization Clinic Coordinator	Staff Dentist
Industrial Hygienist	Staff Physician Health
Laundry Worker I	Student Athletic Aid
Laundry Worker II	Student Athletic Trainer
Licensed Practical Nurse	Surgeon, M.D.
Maxillofacial Surgeon	Surgical Resident, M.D.
Nurse	Urological Surgeon

## EXAMPLES OF JOB CLASSIFICATIONS IN WHICH SOME OF THE EMPLOYEES MAY HAVE OCCUPATIONAL EXPOSURE

<b>Job Classification</b>	<b>Task</b>
Accounting Clerk	Handle shipping/receiving of human samples
Associate Intramural Director	First aid
Assistant Professor	Handles human blood and tissue
Associate Professor	Handles human blood and tissue
Assistant Scientist	Handles human blood and tissue
Athletic Staff Trainer	First aid and treatment of athletic injuries
Athletic Student Trainer	First aid and treatment of athletic injuries
Community Health Association	Draws blood
Custodian/employees assigned to custodial work	Cleans and disinfects work areas where hazards might exist
Electron Microscopist I	Process human tissue
Graduate Assistant	Handles blood and tissue samples
Health Care Aid	Handles blood samples
Health Care Assistant	Patient contact, draw blood, housekeeping
Histological Tech	Process human blood and tissue
Junior Scientist	Handles human blood and tissue
Laboratory Attendant I	Process human blood and tissue
Laboratory Supervisor	Handles human blood and vascular access
Laboratory Tech	Handles human blood and tissue
Maintenance Worker	Maintains item that may be contaminated
Pipefitter/Plumber	Deals with contaminated lines
Research Assistant	Handles human blood and tissue
Research Associate	Handles human blood and tissue
Research Fellow	Handles human blood and tissue
Scientist	Handles human blood and tissue
Senior Scientist	Handles human blood and tissue

## APPENDIX B

### HEPATITIS B VACCINE DECLINATION

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline the hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with the hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_