

St. Lawrence University
Exposure Control Plan for
Occupational Exposure to Bloodborne Pathogens

Exposure Control Plan

St. Lawrence University is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 *CFR* 1910.1030, "Occupational Exposure to Bloodborne Pathogens." This ECP includes

- I. Background and Definitions
- II. Identification of employees at risk
- III. Methods of Implementation and Control
 - a. Universal Precautions
 - b. Engineering and Work Practice Controls
 - c. Personal Protective Equipment
 - d. Housekeeping
 - e. Training and Communication of hazards to employees
 - f. Hepatitis B vaccination
 - g. Recordkeeping
 - h. Implementation of ECP
- III. Post Exposure Evaluation Procedures

Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees can review this plan at any time during their work shifts by contacting their supervisor. If requested, the Environmental Health and Safety Office will provide an employee with a copy of the ECP free of charge and within 15 days of the request. The Environmental Health and Safety Office is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

I. Background

OSHA has defined occupational exposure as meaning any 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. Other potentially infectious materials include:

- A. The following body fluids: Semen, vaginal secretions, cerebrospinal fluids, 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 bodily fluids when it is difficult or impossible to differentiate between body fluids.
- B. Any unfixated tissues or organ other than intact skin from a human (living or dead) and
- C. 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 that are infected with HIV or HBV.

Hepatitis B Virus (HBV): The major mode of HBV transmission for the general population is sexual, both heterosexual and homosexual. Also important is parenteral entry by shared needles covering intravenous drug users and to a lesser extent in needle stick injuries or other exposure of individuals, usually health care workers to blood. HBV has not been found to be transmitted by casual contact, fecal, oral or airborne routes or by contaminated food or drinking water. Contact with fluids such as tears or saliva has not been shown to transmit infection. However, all body fluids should be regarded as potentially contaminated. Despite the similarities in the modes of transmission, the risk of HBV infections in health care settings far exceeds that for HIV infections.

Human Immune Deficiency Disease (HIV): The major modes of HIV transmission for the general population are essentially identical to those for HBV; HIV is caused by a virus that is transmitted in well-defined mechanisms involving the direct introduction of contaminated blood through the skin such as intravenous drug abuse, sexual contact, and cross placental transmission. HIV transmission has not shown to occur unless the above activities occur. Ordinary social contact and ingestion of food and water have not been shown to result in virus transmission. Contact with fluids such as tears and saliva have not been shown to result in virus transmission. However, all bodily fluids should be regarded as potentially contaminated.

II. Exposure Determination

The following is a list of all job classifications at our establishment in which all employees have occupational exposure:

<u>Job Title</u>	<u>Department/Location</u>
First Responder	Security and Safety/Noble Center
Security Officer	Security and Safety/Noble Center
EMT	Security and Safety/Noble Center
Athletic Trainer	IA&R/Augsbury
Cleaner	Winning Health Center
Equipment Attendant	IA&R/Augsbury Cage

The following is a list of job classifications in which some employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or

groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

<u>Job Title</u>	<u>Department/Location</u>
Cleaner	Facilities Operations/various
Custodian	Facilities Operations/various
Coaches, Assistant Coaches and Athletic Staff	IA&R/Augsbury
Skilled Trades (except Electricians)	Facilities Operations/various

Task and Procedure Risks

The following is a list of tasks and procedures in which occupational exposure may occur.

1. Cleaning up blood or bodily fluid spills
2. Rendering first aid to bleeding victims
3. Cardio-pulmonary resuscitation to victims
4. Handling contaminants, soiled/exposed materials
5. Disposal of/ cleaning up of sharps.
6. Repair and maintenance of plumbing which may be contaminated with blood or bodily fluids.

III. Methods of Implementation and Control

A. Universal Precautions

Universal precautions shall be used to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between bodily fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials. These precautions are:

1. Wearing of rubber gloves as a precaution to prevent skin contact with blood and/or bodily fluids.
2. Hand and skin surfaces washed immediately and thoroughly if contaminated with blood or bodily fluids.
3. Hands washed immediately after glove removal.
4. Use of mouthpieces, ventilation or resuscitation devices during resuscitation efforts.
5. Precautions taken to prevent injuries caused by needles, broken glass or other sharp, potentially contaminated materials.

B. Engineering Controls and Work Practice Controls

1. **Facilities Operations.** The following work practices will be utilized by all facilities operations personnel when encountering any blood or body fluid spills.
 - a. Rubber gloves must be worn at all times.
 - b. Large spills should be diluted with a germicidal cleaner (EPA labeled stating it will kill HIV/Hepatitis B) before being removed.

- c. Remove all visible material and place in plastic bags for proper disposal.
- d. After spill and all materials are picked up, clean area with the facility approved EPA labeled germicidal cleaner.
- e. Liquid waste may be flushed down toilets or rinsed down floor drains.
- f. Remove gloves when cleaning is completed and place gloves in an appropriate plastic bag for disposal.
- g. Wash hands thoroughly.

If sharp objects, such as needles or potentially contaminated broken glass are found, DO NOT touch. Call your supervisor who will assist you in acquiring a puncture resistant container for disposal. Use mechanical means (broom and dust pan) to clean up broken glass. Gloves must be worn.

2. **Laundry.** The following work practices will be used by Equipment Attendants anytime there is a potential to encounter bloodborne pathogen exposure while laundering athletic towels and uniforms:
 - a. Rubber gloves will be worn.
 - b. Towels and uniforms will be handled carefully and not shaken or aired out.
 - c. Place wet contaminated laundry in leak-proof, labeled or color-coded containers (plastic bio hazard bag) before transport.
 - d. Use a germicidal washing detergent to wash towels and uniforms.
 - e. If sharps are encountered, STOP and call your supervisor, who will assist you in acquiring a puncture resistant container.
 - f. Wash hands thoroughly after handling laundry.

3. **Security Officers/EMTs.** When responding to any emergency where blood or other body fluids are suspected and you may become EXPOSED to person or materials, the following procedures shall be followed:
 - a. Wear rubber gloves.
 - b. Wash immediately and thoroughly after contact.
 - c. CPR – use protective mouthpiece to ventilator resuscitate during rescue effort.
 - d. Use proper containers (plastic bags) when disposing of contaminated material such as bandages or other soiled materials.
 - e. Ensure the area is left clean. All hazardous material must be removed to proper containers. (Contact Facilities Operations to clean and wash area.)
 - f. Do not try to recap needles, use proper disposal container, available at Security and Safety Office.
 - g. All equipment will be cleaned and sterilized if needed after each use.
 - h. A statement indicting proper procedure handling the above situations shall be included in your report.

- i. Proper cleaning equipment, including germicidal cleaner will be available at the Security and Safety Office.

4. Athletic Department. The following work practices will be used by the Athletic department every time there is a potential for contact with bloodborne pathogens:

- g. Wear gloves as precaution to prevent skin contact with blood and /or bodily fluids.
- h. Hand and skin surfaces washed immediately and thoroughly if contaminated with blood or bodily fluids.
- i. Hands washed immediately after glove removal.
- j. The use of protective mouthpiece if rescue breathing is applied during CPR.
- k. Precautions taken to prevent injuries by needles, scalpels and other sharp instruments:
 - i. Needles may not be recapped, bent or broken by hand or removed from disposable syringes following use.
 - ii. Used syringes, needles and scalpel blades shall be placed in puncture resistant containers for disposal, available in the Head Trainers Office.
- l. Use proper containers (plastic bio hazard bag) when disposing of contaminated material such as bandages or other soiled material if there is enough material to be squeezed out or is dripping.
- m. Ensure that area is left clean, hazardous material is removed to proper containers, and disinfect all equipment with a germicidal cleaner.

C. Personal Protective Equipment (PPE)

PPE is provided to our employees at no cost to them. Training in the use of the appropriate PPE for specific tasks or procedures is provided by the Environmental Health and Safety Office.

The following types of PPE are available through your department:

1. Gloves
2. Gowns
3. Goggles
4. Face masks.

All employees using PPE must observe the following precautions:

- Wash hands immediately or as soon as feasible after removing gloves or other PPE.
- Remove PPE after it becomes contaminated and before leaving the work area.

- Used PPE may be disposed of in the regular trash unless it is saturated and/or leaking or heavily caked and/or flaking (with blood or OPIM) in which case it should be disposed of in a plastic bio hazard bag.
- Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Never wash or decontaminate disposable gloves for reuse.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

D. Housekeeping

Regulated waste (e.g. saturated and dripping or heavily caked and flaking) is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded and closed prior to removal to prevent spillage or protrusion of contents during handling.

Contaminated sharps are discarded immediately after use in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled or color-coded. Sharps disposal containers are available through your supervisor.

Bins and pails are cleaned and decontaminated as soon as feasible after visible contamination. Broken glassware that may be contaminated is only picked up using mechanical means, such as a brush and dustpan.

E. Training Programs

The Environmental Health and Safety Department ensures that all employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

- a copy and explanation of the OSHA bloodborne pathogen standard
- an explanation of our ECP and how to obtain a copy
- an explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident

- an explanation of the use and limitations of engineering controls, work practices, and PPE
- an explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- an explanation of the basis for PPE selection
- information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
- information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- 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
- information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
- an explanation of the signs and labels and/or color coding required by the standard and used at this facility
- an opportunity for interactive questions and answers with the person conducting the training session.

Training materials for this facility are available at the Human Resources Office located in Vilas Hall, G-6 (229-5596).

F. Hepatitis B Vaccination

The Environmental Health and Safety Office will ensure that training is provided to employees on hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost to all new employees who have the potential for occupational exposure during the course of performing their duties. The vaccination is administered within 10 days of employment. The vaccine will not be administered if the employee has previously received the series, or antibody testing reveals the employee is immune or the vaccine is contraindicated.

If an employee declines the vaccination the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept in the Human Resources Office.

Vaccination and a medical evaluation will be provided by the Winning Health Center. Following the medical evaluation, a copy of the health care professional's written opinion will be kept in the employee's medical file in the Human Resources Office and provided to the employee within 15 days of the completion of the evaluation. The evaluation will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered (or declined by the employee).

G. RECORDKEEPING

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at the Human Resources office in Vilas Hall, G-6.

The training records include:

- the dates of the training sessions
- the contents or a summary of the training sessions
- the names and qualifications of persons conducting the training
- the names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to Human Resources, Vilas Hall, G-6.

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 *CFR* 1910.1020, "Access to Employee Exposure and Medical Records."

The Human Resources Office is responsible for maintenance of the required medical records. These confidential records are kept in Human Resources, Vilas Hall, G-6 for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to Human Resources, Vilas Hall, G-6.

OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 *CFR* 1904). This determination and the recording activities are done by The Environmental Health and Safety Office.

H. IMPLEMENTATION

- The Environmental Health and Safety Office is responsible for implementation of the ECP and will:

- Maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number: Central Warehouse/229-5907.
- Provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and biohazard bags as required by the standard.
- Ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes.
- Ensure that all medical actions required by the standard are performed and that appropriate employee health and OSHA records are maintained.
- Provide training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives.

Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

III. Post Exposure Evaluation and Follow –Up

A. IMMEDIATELY FOLLOWING AN EXPOSURE, THE EXPOSED INDIVIDUAL SHOULD:

- Wash blood or potentially infectious fluid from the contaminated body area(s) with soap and running water continuously for 15 minutes.
- Be evaluated immediately by **one of the following** to determine if the exposure is **significant** and needs medical follow-up:
 1. The nursing personnel at the Winning Health Center during the hours that they are open. (Monday through Friday 8:30 am – 4:30 pm during the academic year)
 2. A SLU EMT (during the hours that the Health Center is closed during the academic year) contact Security and Safety by calling 5555.
- If the exposure is determined to be significant, **proceed immediately** to a local hospital emergency room for further medical evaluation. The emergency room staff will follow specific procedures to determine if prophylactic medication for Hepatitis B and HIV should be initiated.
- If the exposure is not significant, no further medical follow up is necessary. Documentation of this assessment will be kept in the exposed individual's medical file in the Human Resources Office.

- The supervisor of the exposed individual should be notified as soon as possible

B. DEFINITION OF SIGNIFICANT EXPOSURE

Criteria in both (1) and (2) must be met for the exposure to be considered a significant exposure which would require immediate clinical follow-up at the Emergency Department*:

1. The body substance was:

- Blood, semen, vaginal secretions, an internal body fluid (e.g., cerebrospinal, peritoneal, pericardial, pleural, amniotic, synovial or joint fluid), **OR**
- Any other body fluid visibly contaminated with blood; **OR**
- Exposure was to a body fluid during a circumstance where it was **difficult or impossible** to differentiate the fluid type involved and is therefore considered potentially hazardous;

AND

2. The type of injury or contact provided a portal of entry;

- Percutaneous exposure (e.g., a penetrating injury with a contaminated implement that went through the skin such as needle stick or cut),
- Mucous membrane contact (e.g., the body fluid splashed in the eyes or mouth),
- Non-intact skin contact** (e.g., the body fluid came in contact with open skin such as dermatitis or abrasion).

* If the exposed individual questions or is not satisfied with the determination regarding significant exposure, they should be referred to the Emergency Department.

** If there has been prolonged contact with intact skin or a massive blood exposure, the exposure should be considered significant.

Following initial first aid or emergency room care the following activities will be performed:

- Document the routes of exposure and how the exposure occurred.
- If possible identify and document the source individual
- Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that

the source individual's test results were conveyed to the employee's health care provider.

- If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
- Assure that the exposed employee is provided with the source Individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
- After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status.
- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

C. Administration of Post-Exposure Evaluation and Follow-up

The Environmental Health and Safety Office ensures that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of SLU's bloodborne pathogens standard and ensures that the health care professional evaluating an employee after an exposure incident receives the following:

- a description of the employee's job duties relevant to the exposure incident
- route(s) of exposure
- circumstances of exposure
- if possible, results of the source individual's blood test
- relevant employee medical records, including vaccination status

The Environmental Health and Safety Office provides the employee with a copy of the evaluating health care professional's written opinion re: hepatitis B within 15 days after completion of the evaluation.

D. Procedures for Evaluating an Exposure Incident

The Environmental Health and Safety Office will review the circumstances of all exposure incidents to determine:

- engineering controls in use at the time
- work practices followed
- a description of the device being used (including type and brand)
- protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)

- location of the incident (O.R., E.R., patient room, etc.)
- procedure being performed when the incident occurred
- employee's training

The supervisor will report, to the Environmental Health and Safety Office, all percutaneous injuries from contaminated sharps for recording in a Sharps Injury Log.

If revisions to this ECP are necessary The Environmental Health and Safety Office will ensure that appropriate changes are made. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.)

HEPATITIS B VACCINE DECLINATION (MANDATORY)

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 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 hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Signed: (Employee Name)_____ Date:_____