

SOUTHERN METHODIST
UNIVERSITY

PROCEDURE FOR BLOOD BORNE
PATHOGENS

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OFFICE OF RISK MANAGEMENT
ENVIRONMENTAL HEALTH & SAFETY

BLOOD BORNE PATHOGENS

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this procedure is to protect students, employees and visitors against exposure to Blood Borne Pathogens (BBP) such as HIV and HBV. This operating procedure establishes a permit authorization system to ensure that all hazards are evaluated, all employees at risk are aware and that appropriate safety measures and controls are taken. EXPOSURE CONTROL PLAN is developed in accordance with the OSHA Blood Borne Pathogens Standard, 29 CFR 1910.1030.

1.2 SCOPE

This operating procedure shall apply to all SMU personnel who could be reasonably anticipated to face contact with blood or other potentially infectious materials. Contractors should comply with all the federal, state and local regulatory requirements.

1.3 UNIVERSAL PRECAUTIONS

Universal precaution is an approach to infection control in which all human blood and certain human body fluids are treated as known to be infectious for HIV, HBV and other BBP. The university is required to implement “Universal Precautions” to prevent contact with blood or other potentially infectious materials to reduce the risk of occupational exposure. The only exception is, if those precautions would interfere with the proper delivery of health care or public safety services in a particular circumstance or would create a significant risk to the personal safety of the worker.

1.4 RESPONSIBILITY

Department Managers/Supervisors – are responsible for implementing this operating procedure within their departments, when applicable, and ensuring that all personnel fully comply. Supervisors shall identify employees with potential risk of occupational exposure to Blood Borne Pathogens. They must ensure that their employees receive the required training.

Employees – are responsible for complying with the requirements of this operating procedure.

Office of Risk Management – is responsible

- for the development and maintenance of this procedure
- providing resources for training
- For auditing all operating units and/or departments for compliance to this procedure.

1.5 DEFINITIONS

1. ***Blood-borne pathogens*** mean disease-causing microorganisms that are present in human blood. These pathogens include but are not limited to, Hepatitis B virus (HBV) and Human Immunodeficiency Virus (HIV).
2. ***Contaminated*** means the presence or reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
3. ***Exposure Determination*** means a list of job classification and specific tasks that have occupational exposure. This list is made without regard to the use of personal protective equipment
4. ***Exposure incident*** means a specific eye, mouth, or other mucous membrane, non-intact skin, or potential contact with blood or other potentially infectious materials that result from the performance of an employee's duties.
5. ***Infectious Materials*** include semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid visibly contaminated with blood and all body fluids where it is difficult or impossible to differentiate between body fluids.
6. ***Occupational Exposure*** means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious material that may result from the performance of an employee's duties.
7. ***Parenteral*** means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.
8. ***Universal precautions*** – a system of infectious disease control, which assumes that every direct contact with body fluids is infectious and requires every employee, exposed to direct contact with body fluids to be protected as though such body fluids were HBV- or HIV-infected.

2. EXPOSURE CONTROL PLAN

EXPOSURE CONTROL PLAN is developed in accordance with the OSHA Blood borne Pathogens Standard, 29 CFR 1910.1030.

Under the 1991 OSHA standard, every employer with employees at occupational risk exposure to bloodborne pathogens “shall establish a written control plan of designed to minimize or eliminate employee exposure”.

This plan must:

1. Identify all employees with occupational exposure;
2. Develop a schedule and method for compliance with the OSHA standards;
3. Have a procedure for evaluating exposure incidents.

3. METHODS OF COMPLIANCE

3.1 ENGINEERING AND WORK PRACTICE CONTROLS

The standard requires the use of engineering and work practice controls to eliminate or minimize employee exposure. Engineering controls isolate or physically remove the hazard. Work practice controls change the manner in which high-risk activities are performed. The primary method of eliminating or reducing the risk of occupational exposure should be through the use of engineering controls.

Some examples of engineering and work practice controls being evaluated or already in use at SMU are:

- ***Hand washing stations:***
Employees must wash their hands or other skin with soap and water, or flush mucous membranes with water, as soon as possible following an exposure incident.
- ***Puncture-resistant sharps containers:*** Lined box containers.
- ***Recapping devices:*** Needles should never be recapped. Needles may be moved only by using a mechanical device or tool (forceps, pliers, broom and dust pan).
- ***Sharps disposal policies*** SMU employees should dispose sharps in labeled sharps containers provided at the location. If sharps containers are not available at that location, EHS will pick up and dispose of the needles in an appropriate, labeled sharps container.
- ***Proper labeling and handling of specimens***
- ***Food & Drinks Policy:*** No eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses is allowed in a work area where there is a reasonable likelihood of occupational exposure. No food or drinks shall be kept in refrigerators, freezers, shelves, cabinets, or on counter tops or bench tops where blood or other potentially infectious materials are present.

3.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The department shall provide appropriate protective gear to the employee (Personal Protective Equipment - PPE). These include gloves, gowns, face shields, masks, protective eyewear, and ventilation devices.

Departments are responsible for:

1. Providing PPE in a location at the work site or issued directly to employees;
2. Cleaning, laundering or disposal of PPE;
3. Repairing and replacement of PPE to maintain its effectiveness.
4. Refer to Risk Management PPE procedure.

3.3 HOUSEKEEPING

Supervisors are responsible for assuring that the work site is maintained in a clean and sanitary condition. Decontamination will be accomplished by utilizing the following materials:

- 10% (minimum) solution of chlorine bleach
 - Lysol or other EPA-registered disinfectants
1. All contaminated work surfaces, tools, objects, etc. will be decontaminated immediately or as soon as feasible after any spill of blood or other potentially infectious materials. The bleach solution or disinfectant must be left in contact with contaminated work surfaces, tools, objects, or potentially infectious materials for at least 10 minutes before cleaning.
 2. Equipment that may become contaminated with blood or other potentially infectious materials will be examined and decontaminated before servicing or use.
 3. Broken glassware will not be picked up directly with the hands. Sweep or brush material into a dustpan.
 4. Known or suspected contaminated sharps shall be discarded immediately or as soon as feasible in containers which are closeable, puncture-resistant, leak-proof on sides and bottom, and marked with an appropriate biohazard label. If sharps container is not pre-labeled, biohazard labels are available through the Office of Risk Management.
 5. When containers of contaminated sharps are being moved from the area of use or discovery, the containers shall be closed immediately before removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
 6. Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of percutaneous injury.

3.4 INFECTIOUS WASTE DISPOSAL

Closable containers or bags that are designed to prevent leakage of fluids during handling, storage, transport, or shipping must be used for disposal of potentially infectious waste or specimens. Special closable, puncture-resistant containers must be available for sharps. Containers with bio-hazardous waste must be color coded or identified with a label. Once decontaminated, the labeling must be defaced or marked to indicate that the contents have been rendered non-infectious.

3.5 LAUNDRY

Appropriate bags shall be provided for contaminated laundry. Potentially contaminated laundry should not be washed in work areas and should be placed and transported in appropriate bags.

3.6 COMPLIANCE MONITORING

Supervisors are required to ensure that employees follow the protective practices outlined in this standard.

4. HIV AND HBV RESEARCH LABS

4.1 PRACTICES

In addition to standard microbiological practices, HIV and HBV research labs are required to adhere to practices outlined by CDC, NIH, OSHA lab standard and other applicable regulations. Specific information regarding these practices is discussed in the Exposure Control Plan.

4.2 SAFETY EQUIPMENT

HIV and HBV research labs are required to contain a facility for hand-washing and an eye wash facility, which is readily available within the work area. An autoclave system for decontamination of regulated waste is required.

4.3 ADDITIONAL TRAINING

In addition to the training requirements outlined below, HIV and HBV research laboratories are required to provide the following training:

1. Employers must assure that all employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to begin work with HIV or HBV.
2. Employers must assure that employees have prior experience in the handling of human pathogens or tissue culture before working with HIV or HBV.
3. Employers must provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents.

5. HEPATITIS B VACCINE

The Hepatitis B vaccination shall be made available after the employee has received the training in occupational exposure and within 10 working days of initial assignment. It shall be made available to all employees who have potential occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

If the employee initially declines Hepatitis B vaccination but at a later date decides to accept the vaccination, the vaccination shall then be made available. All employees who decline the Hepatitis B vaccination offered shall sign the OSHA required waiver indicating their refusal. If a routine booster dose of Hepatitis B vaccine is recommended by U.S. Public Health Service at a future date, such booster doses shall be made available at no cost to the employee. The vaccine shall also be offered to EHS emergency responders. Depending on their job situation and likelihood of exposure, the vaccine may also be offered to plumbers, housekeeping staff, custodial staff, preventive maintenance personnel, electricians, and other personnel as necessary and applicable.

5.1 POST-EXPOSURE EVALUATION AND FOLLOW-UP

All exposure incidents shall be reported, investigated and documented by their supervisors. When the employee incurs an exposure incident, it shall be reported immediately to their supervisor. Following a report of an exposure incident, the exposed employee shall go to the Student Health Center for a confidential medical evaluation and follow-up, including at least the following elements:

- (a) Documentation of the route(s) of exposure.
- (b) A description of the circumstances under which the exposure occurred.
 - 1. The identification and documentation of the source individual. (The identification is not required if the employer can establish that identification is impossible or prohibited by state or local law.)
 - 2. The collection and testing of the source individual's blood for HBV and HIV serological status.
 - 3. Post-exposure treatment for the employee, when medically indicated in accordance with the U.S. Public Health Service.
- (c) Counseling.
- (d) Evaluation of any reported illness.

The Healthcare professional evaluating an employee will be provided with the following information:

1. A copy of this plan.
2. A copy of the OSHA Blood-borne Pathogen regulations (29 CFR 1910.1030)
3. Documentation of the route(s) of exposure.
4. A description of the circumstances under which the exposure occurred.
5. Results of the source individual's blood testing, if available.
6. All medical records applicable to treatment of the employee, including vaccination status.
7. The employee will receive 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 is limited to the following: (1) whether the employee needs Hepatitis B vaccination; (2) whether the employee has received such a vaccination. The healthcare professional's written opinion for post-exposure evaluation and follow-up is limited to the following information:

1. That the employee was informed of the results of the evaluation.
2. That the employee was informed about any medical conditions resulting from exposure to blood or other infectious materials that require further evaluation or treatment.
3. All other findings or diagnoses will remain confidential and will not be in a written report.
4. All medical evaluations shall be made by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional. All laboratory tests must be conducted by an accredited laboratory at no cost to the employee. All medical records will be kept in accordance with 29 CFR 1910.20.

6. HAZARD COMMUNICATION

Refer to SMU's Hazard Communication Procedure.

6.1 TRAINING

All high-risk employees shall participate in a training program. Training will occur before assignment to a task where occupational exposure may take place and at least annually thereafter. Additional training will be provided when changes such as modification of tasks or procedures affect the employee's occupational exposure.

Any employee who is exposed to infectious materials shall receive training, even if the employee was allowed to receive the HBV vaccine after exposure. The training program will include at least the following elements:

1. An accessible copy of the regulatory text of 29 CFR 1910.1030 and an explanation of its contents.
2. A general explanation of the epidemiology and symptoms of blood-borne diseases.
3. An explanation of the modes of transmission of blood-borne pathogens.
4. An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan.
5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood or 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 the basis for selection of personal protective equipment.

6.2 TRAINING RECORDS

The supervisor shall maintain records of employee training and provide a copy to ORM, including a summary of the session's contents, the names and qualifications of the trainers, and the names and job titles of all persons attending the sessions. These records must be maintained for three years from the date training occurred.

7. HEPATITIS 'B' VACCINE DECLINATION

I understand that due to my occupational exposure to blood or other infectious materials that I may be at risk of acquiring Hepatitis B virus infection. I have been given the opportunity to be vaccinated with the 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 the Hepatitis B vaccine, I can receive the vaccination series at no charge to me.

(Print name)_____

(Title)_____

(Date)_____

(Signature)_____