

Bloodborne Pathogens Exposure Control Plan

NDSU

Objectives

- The objectives of this plan are to:
 - Provide training, guidelines, and procedures designed to prevent or minimize occupational exposure to bloodborne pathogens and other potentially infectious agents.
 - Ensure compliance with the Bloodborne Pathogen Standard

Roles and Responsibilities

➤ Deans, Directors, and Department Heads

- Have overall responsibility for their organization regarding implementation of and compliance with this plan.
- Work with principal investigators, supervisors and employees to develop and administer any additional policies and procedures needed to support the implementation of this plan.
- Revise and update procedures for all areas of responsibility at least annually.
- Identify personnel that are exposed to potentially infectious material
 - Provide annual bloodborne pathogen and infectious material training
 - Maintain training records.

Roles and Responsibilities

➤ Principal Investigators

- Responsible for insuring compliance with NDSU Exposure Control Plan within their research areas.
- 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.
- Revise and update Standard Operating Procedures all areas of responsibilities at least annually.
- All Researchers and Faculty using University facilities, including non-university staff researchers, are required to obtain prior approval from the IBC for work involving
 - Recombinant DNA and artificial gene transfers
 - Infectious agents and biologically derived toxins
 - Exposure to blood or other potentially infectious materials

Roles and Responsibilities

➤ Supervisors or Principal Investigator

- Ensure compliance with NDSU Exposure Control Plan in their work areas by working directly with the employees to promote proper exposure control procedures are followed
- Inform all employees of potential hazards in the work place.
- Investigate and report exposure incidents immediately to the University Police and Safety Office and take the necessary action to prevent similar incidents from occurring.
- Provide lab-specific safety training at time of initial work assignment and annually thereafter.
- Regularly review the availability of products engineered to reduce sharps exposure in order to determine if there is an acceptable sharp replacement for lab procedures.

Roles and Responsibilities

➤ Employees

- Employees are responsible for the day-to-day implementation of the Exposure Control Plan as part of their work practices.
- All workers having potential exposure to bloodborne and other potential pathogens are required to:
 - Understand which work tasks may have potential occupational exposure and the route of exposure
 - Conduct all tasks in accordance with the practices described in the Safe Operating Procedures
 - Attend annual bloodborne pathogen training
 - Practice good personal hygiene habits.

What are Bloodborne Pathogens

- Bloodborne pathogens are microorganisms such as viruses or bacteria that are carried in blood and body fluids and can cause disease in people.

Types of Bloodborne Pathogens

- Bloodborne Pathogens Include (but not limited to)
 - Hepatitis A,B & C
 - Human Immunodeficiency Virus (HIV)
 - Malaria
 - Syphilis
 - Brucellosis

What is Hepatitis

- **Hepatitis** is a disorder involving inflammation of the LIVER. Symptoms include loss of appetite, dark urine, fatigue, and sometimes fever. The liver may become enlarged and JAUNDICE may occur, giving the skin a yellow tinge.
- **Hepatitis** may be acute or chronic. The acute form can subside after about two months or, rarely, can result in liver failure. Chronic carriers are at risk of lasting liver disease. Hepatitis A, once called infectious hepatitis, is the most common cause of acute hepatitis. Usually transmitted by food and water contaminated by human waste, such infections can reach epidemic proportions in unsanitary regions.

Hepatitis B often causes an initial episode of liver disease, but both forms occasionally lead to chronic hepatitis. Another form of hepatitis, called delta hepatitis, is caused by a very small virus that cannot replicate on its own. Instead it requires the presence of the hepatitis B virus.

Most chronic HCV carriers are asymptomatic. When symptoms are present, the most common are fatigue (70%), abdominal pain/discomfort (20%), anorexia (15%) and weight loss(5%).

Hepatitis B Vaccinations

➤ Employees who have routine exposure to bloodborne pathogens (such as Plumbers, Residence Life Custodians, etc.) may be offered if requested, the Hepatitis B vaccine series at no cost to themselves unless:

- They have previously received the vaccine series
- Antibody testing has revealed they are immune
- The vaccine is contraindicated for medical reasons

In these cases they need not be offered the series

Vaccination Process

- Series of three shots
 - Second shot is given one month after the first
 - Third shot follows five months after the second

This series gradually builds up the body's immunity to the Hepatitis B virus

HIV

- HIV attacks the body's immune system, weakening it so that it cannot fight other deadly diseases. AIDS is a fatal disease, and while treatment for it is improving, there is no known cure.
- The HIV virus is very fragile and will not survive very long outside of the human body. It is primarily of concern to employees providing first aid or medical care in situations involving fresh blood or other potentially infectious materials.

Bloodborne Pathogen Transmission

➤ Bloodborne pathogens are transmitted through contact with infected human blood and other body fluids that contain blood such as:

- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Synovial fluid
- Pleural fluid
- Peritoneal fluid
- Amniotic fluid
- Saliva

Skin Provides a Barrier

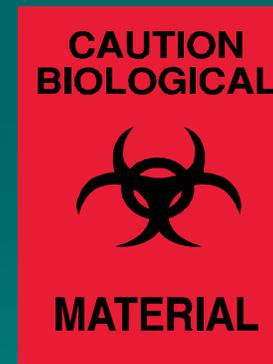
- Unbroken skin forms an impervious barrier against Bloodborne pathogens. However, infected blood can enter your system through:
 - Open sores
 - Cuts
 - Abrasions
 - Acne
 - Any sort of damaged or broken skin such as sunburn or blisters

Mucous Membranes

- Bloodborne pathogens may also be transmitted through the mucous membranes of the
 - Eyes
 - Nose
 - Mouth

Signs & Labels

- Warning labels must be placed on containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport, or ship blood or other potentially infectious materials.



Body Fluid Clean-Up Kit

- It is mandatory to use the Body Fluid Clean-Up Kit for all infectious material spills. These should be located in your work area. Remember that only those who have been trained in spill cleanup are allowed to use the kits. Contact the UP&SO for information on the kits.
- The kit contains the following materials:
 - Absorbent packs
 - Disposable gloves
 - Containment Bag
 - Scoop/Scraper

What Is Regulated Waste?

- Any 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.

Emergencies

- In an emergency situation, always use Universal/Standard Precautions
 - Treat all blood or potentially infectious body fluids as if they are contaminated.
- Minimize your exposure by wearing
 - Gloves
 - Splash goggles
 - Pocket mouth-to-mouth resuscitation masks
 - Other barrier devices

If You Are Exposed:

- Wash the exposed area thoroughly with soap and running water.
- Use non-abrasive soap or liquid hand sanitizer for 20 seconds or sing the ABC's
- Flush mouth, nose, eyes for 15 minutes if blood is splashed in mucous membranes
- Report the exposure to your supervisor and the University Police & Safety Office Claims Specialist
- Fill out an incident report form immediately – remember NDSU's 24 hour reporting requirement
- If unknown source - request blood testing and Hepatitis B vaccination if you do not already have it

Personal Protective Equipment

- The best protection against exposure is to ensure you are wearing the appropriate personal protective equipment (PPE).
 - Gloves
 - Gowns
 - Plastic aprons
 - Masks
 - Protective eyewear or face shields
- When a procedure calls for the use of PPE at NDSU, it is *mandatory* that you use it.

Rules to Follow

- Replace PPE that is torn or punctured.
- Remove PPE before leaving the work area.
- Properly disinfect or dispose of used PPE.
- Wash hands immediately after removing PPE

Rules to Follow

- Universal/Standard Precautions - Treat all blood or potentially infectious body fluids as if they are contaminated.
- Always wear personal protective equipment (PPE) in exposure situations.
- Individual departments will specify the type of protective barrier(s) to be used during any specific procedure, according to the type of exposure anticipated
- Departments will be responsible for providing PPE to their employees at no expense to the employee, except in certain situations.

Gloves

- Gloves should be made of nitril, rubber, or other water impervious materials. (Avoid latex use - if you have a latex allergy, you must wear a different glove)
- Inspect gloves before use and change between personal contact
- Use sterile gloves for procedures involving contact with mucous membranes and for other personal care
- Double gloving can provide an additional layer of protection.
- If you have cuts or sores on your hands, you should cover these with a bandage or similar protection as an additional precaution before donning your gloves.
- Do not touch the outside of used gloves

Goggles, Face Shields & Aprons

- Use goggles if there is a risk of splashing or vaporization of contaminated fluids
- Face shields provide additional face protection for the nose and mouth.
- Lab coats protect your clothing, and should never be worn home

Contaminated Clothing

- Remove clothing that is contaminated with blood, body fluid or body tissue as soon as possible
- Use Universal Precautions when handling contaminated clothing (Treat as if it is contaminated)
- Place clothing in approved & labeled bags or containers – do not launder at home

Hand Washing

- Hand washing is one of the most important (and easiest) practices used to prevent transmission of bloodborne pathogens.
- Use soap and water. Do not use harsh, abrasive soaps and wash for at least 20 seconds (Sing the ABC's)
- Use paper towels to turn off the water and to also open the bathroom door
- If soap and water are not available, use a waterless hand washing solution.

Hygiene Rules

- If you are working in an area where there is reasonable likelihood of exposure, you are never to:
 - Eat
 - Drink
 - Smoke
 - Apply cosmetics
 - Handle contact lenses

Food Rules

- Do not keep food or drink in refrigerators, freezers, shelves, cabinets, or on counter tops where blood or potentially infectious materials are present.
- Do not eat or drink where you are likely to be exposed to blood and bodily fluids.

Decontamination & Sterilization

Decontamination & Sterilization

- All surfaces, tools, equipment and other objects that come in contact with blood or potentially infectious materials must be decontaminated and sterilized as soon as possible.

BE SAFE, ASSUME ALL BODY FLUIDS ARE
CONTAMINATED

Body Fluid Spill Clean Up

➤ ***SPILL CONTAINMENT***

- Sprinkle necessary absorbent material on spill.

➤ ***SPILL CLEAN UP***

- Use disposable gloves
- Use provided scoop to pick up absorbent material, and place in containment bag.

➤ ***DECONTAMINATION OF AREA***

- Use germicidal cleaning cloth to wipe over entire spill area.

Body Fluid Spill Clean Up

➤ DISPOSAL OF CONTAMINATED WASTE

- Dispose of used germicidal cloth and any other contaminated materials (including gloves) into red containment bag. Call UP&SO for waste pick up.

➤ Double bag it

Call UP&SO at 1-7759 for pick up



Sharps Disposal

- Individuals handling any sharps contaminated with body fluids, other than their own, should wear disposable gloves.
- All sharps are to be discarded in sharps disposal containers and the gloves disposed of in an infectious waste bag.
- The sharps disposal container is to be discarded when the container is three fourths full. Sharps disposal containers must be disposed of by calling the University Police & Safety Office for pick-up at 231-7759.

Training

- NDSU will ensure that all faculty, staff and students with occupational exposure participate in training conducted by their department:
 - At no cost and during work hours
 - At the time of initial assignment to tasks where exposures may take place and at least annually thereafter
 - If modification of individual's exposure potential tasks occur
 - In addition of a new task presenting potential exposure

The End

University Police & Safety Office
North Dakota State University