

UNIVERSAL PRECAUTIONS Handling Body Fluids

Last Reviewed January 2004

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The body fluids of all persons should be considered to contain potentially infectious agents. The table below provides examples of infectious agents that may occur in body fluids and the respective transmission concerns. It must be emphasized that many of the body fluids with which one may come in contact contain microorganisms, some of which may cause disease. Individuals may be at various stages of infection: incubating disease, mildly infected without symptoms, or chronic carriers of certain infectious agents. In fact, transmission of communicable diseases is more likely to occur from contact with infected body fluids of unrecognized carriers than from contact with fluids from recognized individuals because simple precautions are not always used.

TRANSMISSION CONCERNS IN THE SCHOOL SETTING: POTENTIAL BODY FLUID SOURCES OF INFECTIOUS AGENTS

BODY FLUID SOURCE	EXAMPLES OF AGENTS OF CONCERN	POTENTIAL TRANSMISSION ROUTES
Blood - cuts/abrasions - nosebleeds - menses - contaminated needle	Hepatitis B & C viruses HIV virus Cytomegalovirus	Inoculation through cuts and abrasions. Direct blood stream inoculation. Mucous Membrane Inoculation
*Feces	Salmonella bacteria Shigella bacteria Rotavirus Hepatitis A virus Noroviruses	Oral inoculation from contaminated hands.
*Urine	Cytomegalovirus	Oral or Nasal inoculation

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		from contaminated hands.
Respiratory Secretions - saliva - nasal discharge	Mononucleosis virus Common cold virus Influenza virus Meningococcal bacteria	Oral inoculation from contaminated hands. Direct Droplet Inoculation to Mouth and Nose
*Vomitus	Gastrointestinal viruses, (e.g., Norwalk Agent Rotavirus)	Oral inoculation from contaminated hands.

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*Possible transmission of HIV and Hepatitis B and Hepatitis C is of little concern from these sources.

Tips for Prevention

1. Treat all bodily fluids as if they were contaminated.
2. Use disposable non-latex gloves when exposure to bodily fluids is possible. Hands should be washed after gloves are removed and gloves discarded in a plastic bag or lined trashcan, secured, and disposed of daily.
3. Use protective clothing when anticipating spattering of fluids.
4. All personnel (e.g. custodians, bus drivers, maintenance personnel) should use bloodborne precautions when cleaning and disinfecting.

Decontamination After Direct Contact

According to OSHA, regulated waste includes 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 and are capable of releasing these materials during handling; and sharps (e.g. materials that will cause punctures or cuts to those handling them such as needles and scalpel blades) and other microbiological wastes containing blood or other potentially infectious materials.

Schools should develop a relationship with local hospitals, rural health centers or other medical providers for the disposal of needles, sharps and other hazardous waste.

Recommended Decontamination Procedure:

1. **Wash** hands thoroughly with soap and water.
2. **Clothing** - Rinse and place clothing and other non-disposable items that have been soaked with body fluid, in plastic bags.
 - a. Use gloves while handling items.
 - b. If presoaking is required to remove stains (e.g., blood, feces) use gloves to rinse or soak item in cold water prior to bagging to be sent home.
 - c. Laundry – Launder contaminated clothing in soap and water adding

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bleach. Wash separately from other items if clothing is soaked with body fluids.

3. **Hard Surfaces** - Use disinfectant (that is in compliance with the school's Integrated Pest Management Policy) on hard surfaces (e.g. 1 part bleach to 10 parts water) or other product that kills HIV, Hep B virus, vegetative bacteria, fungi and tuberculosis bacillus, and other viruses. Use bleach solution the same day as it is prepared.
 - a. Mops should be soaked in the disinfectant after use and rinsed thoroughly or washed in a hot water cycle before rinse.
 - b. Non-disposable cleaning equipment (dustpans, buckets) should be thoroughly rinsed in the disinfectant. Disinfectant solution should be promptly disposed down a drainpipe.
4. **Rugs** - Local school districts should stock absorbent agents specifically intended for cleaning body fluid spills. Cover spills with absorbent material, gently sweep up and discard in plastic bag.
 - a. Leave for a few minutes to absorb the fluid and then vacuumed or sweep up.
 - b. The vacuum bag or sweepings should be disposed of in a plastic bag.
 - c. Broom and dustpan should be rinsed in a disinfectant.
 - d. No special handling is required for vacuuming equipment.
5. **Disposable Items** – Materials that meet the definition of regulated waste (see first paragraph, this section), must according to OSHA, be placed in color-coded containers (orange or red-orange) or labeled "BIOHAZARD".

Exceptions:

 - a. Bloody tissues, not soaked, may be disposed of in the toilet.
 - b. Tissues with dried blood, minimal amount, may be disposed of in sealable trash receptacle.

Disposal of Needles and Sharps

1. Contaminated needles and other sharps shall not be bent, recapped, or removed.
2. Place reusable contaminated needles and sharps in appropriate container until properly returned to parents. Container must be puncture resistant, leak proof, and labeled or color-coded.
3. Disposable needles and sharps are to be placed in a closable, puncture resistant, leak proof, labeled or color-coded container.

School Staff Education

OSHA requires that all employees with occupational exposure to body fluids, participate in a training program at the time of their initial assignment and at least annually thereafter, at no cost to the employee.

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Training programs must include:

1. A copy of the OSHA regulations. OSHA requires that all employers having employees with an occupational exposure to body fluids, must have a written Exposure Control Plan designed to eliminate or minimize employee exposure.
2. A general explanation of the epidemiology and symptoms of bloodborne diseases',
3. Modes of transmission,
4. An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the plan,
5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious material,
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
9. 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,
10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials,
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available,
12. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident,
13. Explanation of the signs and labels and/or color-coding required by OSHA,
14. Documentation of training must occur.

CARRYING FOR BITING INCIDENTS, STUDENT-TO-STUDENT

(This section is adopted from: Janis Hootman, RN, PhD," Quality Nursing Interventions in the School Setting: Procedures, Models, and Guidelines, National Association of School Nurses, Inc., 1996)

- A. For student bitten:
1. Care for the wound.
 2. Notify administrator of incident and plan for prompt parental notification.
 3. Advise parent of pertinent health recommendations.
 - a. Whenever skin is broken, consultation with health care provider for direction regarding any necessary treatment measures, including tetanus

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immunization. (Although the risk of disease transmission from a human bite is minimal, a health care provider should evaluate the degree of risk to the person.)

B. For biter:

1. When blood is drawn during biting incident, student should rinse mouth with water to remove possible residual blood.
2. Advise parent of pertinent health recommendations.
3. Refer, as appropriate, to school counselor or special education teacher for management of behavioral concerns.

OTHER INCIDENTS/ACTUAL BODY FLUID EXPOSURE (e.g., scratches, needle or sharp injuries)

A. Student-to-student Exposure

1. For scratches or other wound, care for wounds.
2. For body fluid contact with eye/nose/mouth, rinse involved area with tap water or saline until body fluid is removed (3-5 minutes). If student is wearing contact lenses, remove them before flushing eyes.
3. Advise administrator of incident and contact parent.
 - a. Advise parent as appropriate, to visit student's health care provider regarding possible risk of communicable disease transmission from body fluid contact. Recommend that student's nails be kept short and clean as protective device when student has pattern of scratching.

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SAMPLE PLAN

This sample plan is provided only as a guide for compliance with OSHA's Bloodborne Pathogens standard. It is not intended to supersede the requirements detailed in the standard. Employers should review the standard for particular requirements that are applicable to their specific situation.

BLOOD BORNE PATHOGENS EXPOSURE CONTROL PLAN (SAMPLE)

School Name:

Date of Preparation:

In accordance with the OSHA Blood borne Pathogens standard, 29 CFR 1910.1030, the following exposure control plan has been developed:

Exposure Determination: OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are considered to be exposed even if they wear personal protective equipment.) This exposure determination is required to list all job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency. At this facility the following job classifications are in this category:

In addition, OSHA requires a list of job classifications in which some employees may have occupational exposure. Since not all the employees in these categories would be expected to incur exposure to blood or other potentially infectious materials, tasks for procedures that would cause these employees to have occupational exposure are also required to be listed in order to clearly understand which employees in these categories are considered to have occupational exposure. The job classifications are around associated tasks for these categories are as follows:

Job Classification	Tasks/Procedures
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Implementation Schedule and Methodology: OSHA also requires that this plan include a schedule and method of implementation for the various requirements of the standard. The following complies with this requirement:

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Compliance Methods: Universal precautions will be observed at this school in order to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

Engineering and work practice controls will be used to eliminate or minimize exposure to employees at this facility. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used. At this facility the following engineering controls will be followed: (list controls, such as sharps containers, etc.)

The above controls will be examined and maintained on a regular schedule. The schedule for reviewing the effectiveness of the controls is as follows: (list schedule such as daily once/week, etc. as well as list who has the responsibility to review the effectiveness of the individual controls, such as the school nurse.)

Hand washing facilities are also available to the employees who incur exposure to blood or other potentially infectious materials. OSHA requires that these facilities be readily accessible after incurring exposure. At this facility hand washing facilities are located:

After removal of personal protective gloves, employees shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water.

If employees incur exposure to their skin or mucous membranes then those areas shall be washed or flushed with water as appropriate as soon as feasible following contact.

Needles: Contaminated needles and other contaminated sharps will not be bent, recapped, removed, sheared or purposely broken.

Containers for Sharps: Contaminated sharps are to be placed immediately, or as soon as possible, after use into appropriate sharps containers. At this school the sharps containers are puncture resistant, labeled with a biohazard label, and are leak proof. Arrangements will be made with parents to transport reusable sharps safely. (Employees should list here where sharps containers are located as well as who has responsibility for removing sharps from containers, if needed, and how they will be disposed.)

Personal Protective Equipment: All personal protective equipment used at this facility will be provided without cost to employees. Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees' clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used.

Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous

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membranes. Gloves will be available from (state location and/or person who will be responsible for distribution of gloves). Gloves will be used for the following procedures: Disposable gloves used at this facility are not to be washed or decontaminated for re-use and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for re-use provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

Masks in combination with eye protection devices, such as goggles or glasses with solid side shield, or chin length face shields, are required to be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can reasonably be anticipated. Situations at the school that would require such protection are as follows:

This school will be cleaned and decontaminated according to the following schedule: (list area and schedule).

Decontamination will be accomplished by using the following materials: (list the materials which will be used, such as bleach solutions or EPA registered germicides).

All contaminated work surfaces will be decontaminated after completion of procedures and immediately or as soon as feasible after any spill of blood or other potentially infectious materials, as well as the end of the work shift if the surface may have become contaminated since the last cleaning. (Employers should add in any information concerning the usage of protective coverings, such as plastic wrap that they may be using to assist in keeping surfaces free of contamination.)

All bins, pails, cans, and similar receptacles shall be inspected and decontaminated on a regularly scheduled basis (list frequency and by whom).

Any broken glassware that may be contaminated will not be picked up directly with the hands. The following procedures will be used:

Regulated Waste Disposal: All contaminated disposable sharps shall be discarded as soon as feasible in sharps containers that are located in the school. Sharps containers are located in (specify locations of sharps containers).

Regulated waste containers are located in (specify locations of containers).

Hepatitis B Vaccine: All employees who have been identified as having exposure to blood or other potentially infectious materials will be offered the Hepatitis B vaccine, at no cost to the employee. The vaccine will be offered within 10 working days of their initial assignment to work involving the potential for occupational exposure to blood or other potentially infectious materials unless the employee has previously had the vaccine

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or who wishes to submit to antibody testing which shows the employee to have sufficient immunity.

Employees who decline the Hepatitis B vaccine will sign a waiver that uses the wording in Appendix A of the OSHA standard.

Employees who initially declined the vaccine but who later wish to have it may then have the vaccine provided at no cost. (Employers should list here who has responsibility for assuring that the vaccine is offered, the waivers are signed, etc. Also the employer should list who will administer the vaccine.)

Post-Exposure Evaluation and Follow-Up: Exposure incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

When the employee incurs an exposure incident, it should be reported to: (list who has responsibility to maintain records of exposure incidents)

All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the OSHA standard.

This follow-up will include the following:

Documentation of the route of exposure and the circumstances related to the incident.

If possible, the identification of the source individual and, if possible, the status of the source individual. The blood of the source individual will be tested (after consent is obtained) for HIV/HBV/HCV infectivity.

The employee will be offered the option of having their blood collected for testing of the employee's HIV/HBV/HCV serological status. The blood sample will be preserved for up to 90 days to allow the employee to decide if the blood should be tested for HIV serological status. However, if the employee decides prior to that time that testing will or will not be conducted then the appropriate action can be taken and the blood sample discarded.

The employee will be offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service.

The employee will be given appropriate counseling concerning precautions to take during the period after the exposure incident. The employee will also be given information on what potential illnesses to be alert for and to report any related experiences to appropriate personnel.

The following person(s) has been designated to assure that the policy outlined here is effectively carried out as well as to maintain records related to this policy.

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Interaction with Health Care Professionals: A written opinion shall be obtained from the health care professional that evaluates employees of this school. Written opinions will be obtained in the following instances:

When the employee is sent to obtain the Hepatitis B vaccine.

Whenever the employee is sent to a health care professional following an exposure incident.

Health care professionals shall be instructed to limit their opinions to:

Whether the Hepatitis B vaccine is indicated and if the employee has received the vaccine, or for evaluation following an incident.

That the employee has been informed of the results of the evaluation, and

That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials. (Note that the written opinion to the employer is not to reference any personal medical information.)

Training: Training for all employees will be conducted prior to initial assignment to tasks where occupational exposure may occur. Training will be conducted in the following manner:

Training for employees will include the following with an explanation of:

- The OSHA standard for Blood borne Pathogens
- Epidemiology and symptomatology of blood borne diseases
- Modes of transmission of blood borne pathogens
- This Exposure Control Plan, i.e. points of the plan, lines of responsibility, how the plan will be implemented, etc.
- Procedures that might cause exposure to blood of other potentially infectious materials at this school.
- Control methods which will be used at the school to control exposure to \ blood or other potentially infectious materials.
- Personal protective equipment available at this school and who should be contacted concerning
- Post Exposure evaluation and follow-up
- Signs and labels used at the school
- Hepatitis B vaccine program at the school

Record Keeping: All records required by the OSHA standard will be maintained by (insert name or department responsible for maintaining records):

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Dates: All provisions required by the standard will be implemented by: (insert date for implementation of the provisions of the standard).

(Employers should list here if training will be conducted using videotapes, written materials, etc. Also the employer should indicate who is responsible for conducting the training.)

All employees will receive annual refresher training. (Note that this training is to be conducted within one year of the employee's previous training.)

The outline for the training materials is located: (list where the training materials are located).

RESOURCES

OSHA Guidelines for Blood web site -

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051

National Institute of Occupational Safety and Health Blood borne Pathogens Web Site:

<http://www.cdc.gov/niosh/topics/bbp/>

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