

CLEANING UP SPILLS OF BLOODBORNE PATHOGENS

Potentially infectious material (PIM) includes: (1) the following human body fluids: blood, 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); and (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. Other potential bloodborne pathogens include, but are not limited to: Hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeld-Jakob disease, and viral hemorrhagic fever. All bloodborne pathogens differ in their routes of exposure, infectivity, and risk of laboratory-acquired infection. Consult current literature regarding the specifics of agents that you are likely to encounter.

Have these materials on hand for cleaning up spills:

- A durable container to store the clean up supplies
- Several biohazard bags
- Disinfectant – freshly-prepared 10% solution of household bleach (1 part bleach and 9 parts water; or add ½ cup bleach to 1 quart of water) or other commercial chlorine or iodine based disinfectant
- Inert absorbing material (e.g., diatomaceous earth, hy-dri, kitty litter, absorbent pads, paper towels)
- A small dust pan and hand brush or tongs
- Personal protective equipment, including several pairs of latex gloves, goggles, face shield, face masks, coveralls, and paper boots
- A heavy cardboard box or plastic bucket with lid
- Antiseptic wipes

Follow these procedures if you are cleaning up a spill of blood or PIM:

- If blood or PIM has spilled directly onto you, it should be thoroughly washed off as soon as possible. If the material has spilled on your clothing and soaked through so that there is skin contact, the clothes must be removed. Following removal, wash those areas where exposure is evident, even to the point of taking a shower. If blood or PIM has come into contact with any of the mucous membranes (eyes, nose, lips) they need to be thoroughly rinsed (at least 10

minutes of running water). If there is contact with open wounds or cracks in the skin, there is a risk of exposure. Immediately and thoroughly wash with soap and water. These occurrences are considered to be a potential exposure incident and it is important to follow the procedures outlined in the UNL Bloodborne Pathogen/Exposure Control Plan.

- When clean up involves blood or PIM on equipment or floor surfaces, you should first delineate and mark the spill area so that others do not inadvertently enter the area until clean up is complete.
- If assistance is needed because the spill is unusually large, it involves additional hazards, or clean-up materials are not available, contact EHS at 402-472-4925 or the campus operator at '0' for assistance.
- Don personal protective equipment before beginning clean up. Minimal PPE consists of gloves, goggles, mask or chin length face shield, and impervious coveralls or other outer garment.

For small spills, (less than 8 ounces or 250 mL)

- Gently place absorbent material (i.e., paper towels) over the spill.
 - If using a powdered absorbent, allow it to fully absorb and use a paper towel to compress the absorbent to ensure no liquid remains.
- Cover with appropriate disinfectant (i.e., freshly prepared 10% bleach). Pour disinfectant slowly to minimize aerosols. See EHS SOP, ***Chemical Disinfectants for Biohazardous Materials***.
- Allow disinfectant to soak area for 20 minutes.
- Using tongs to remove contaminated sharps (i.e., broken glass) from the spilled material and place in a rigid, puncture and leak proof container, if necessary.
- Carefully place the absorbent material into a biohazard bag. Secondly contain biohazard bag to ensure any leaks are contained.
- Clean spill area again with disinfectant and add materials to biohazard bag.
- Autoclave spill response materials. See EHS SOP, ***Disposing of Biohazardous Materials, Including Recombinant Nucleic Acids***.

Large spills (greater than 8 ounces or 250 mL)

- Quickly contain spill by creating a circular berm around the perimeter of the spill with an absorbent material (hy-dri, kitty litter, diatomaceous earth).
- Add absorbent material to entire spill area working from the edges to the center.
- Cover absorbent with appropriate disinfectant (i.e., freshly prepared 10% bleach) Pour disinfectant slowly to minimize aerosols. See EHS SOP, ***Chemical Disinfectants for Biohazardous Materials***.
- Allow disinfectant to soak area for 20 minutes.
- Carefully place the absorbent material into a secondarily contained biohazard bag.
- Clean spill area again with disinfectant.

- Carefully remove gloves, coveralls, boot covers (if used), and other disposable PPE and package in a biohazard bag. Goggles can be disinfected, rinsed and reused.

Final area cleanup

- Either autoclave spill residues and absorbents including bagged, disposable PPE or contact EHS for pickup. Disinfect reusable tools, equipment, and supplies.
- Thoroughly wash hands, arms, face and any other exposed body part with soap and water.
- After cleaning and disinfecting equipment, return it to the proper storage area. Replace consumed materials, such as PPE, bags, and other items so that they will be available for future use.
- Record the incident and report it to your supervisor.
- Review work procedures and update accordingly to reduce risk of a repeated spill event.

Yale University has produced a video demonstrating the proper procedure for cleaning a blood spill titled "Blood Spill Clean Up." View this video at <http://ehs.yale.edu/cleaning-blood-spill>.