

Guidelines for Experiments with Wild Rodents

Wild rodents potentially carry many diseases, including Hantavirus, leptospirosis, rat-bite fever, salmonella, and plague. Workers who must handle wild rodents or work in areas infested with wild rodents should take appropriate precautions to protect themselves. Workers who develop illness within 45 days of exposure to wild rodents should seek medical attention and inform the physician of the risk of rodent-borne diseases. The physician should contact local health authorities promptly if Hantavirus pulmonary syndrome-associated illness is suspected.

Precautionary guidelines are outlined as follows:

Field Work

Use appropriate personal protective equipment (PPE) to enter enclosed spaces or buildings visibly contaminated with rodents or rodent droppings. At minimum, hand, eye, and respiratory protection should be considered. Additional PPE may be needed when working in areas where Hantavirus infection has been confirmed.

- **Prevent skin contact** with infectious materials by wearing rubber, plastic, or latex gloves. (i.e., when handling captured rodents, contaminated traps, or disturbing burrows, and nests). Additional protection may be necessary to provide protection against bites.
 - Reusable gloves should be decontaminated before removing the gloves. A 10% solution of household bleach (1 ½ cups of bleach per gallon of water) is an appropriate disinfectant, as are most household detergents.
 - Thoroughly wash hands with soap and water after removing gloves.
 - If hand washing facilities are not available, rinse gloves with water or use a disinfectant wipe
 - Wash your hands thoroughly as soon as handwashing facilities are available
 - Never wash or reuse disposable gloves
- **Wear eye protection** to minimize exposure to particles of rodent excreta (i.e., when handling captured rodents, contaminated traps, or disturbing burrows, and nests). Safety goggles or glasses provide appropriate protection.
- **Wear respiratory protection** to minimize exposure to airborne particles of rodent excreta (i.e., when handling captured rodents, contaminated traps, or disturbing burrows, and nests).
 - When working in areas where there have been confirmed cases of Hantavirus infection or in areas with heavy rodent infestation, wear a NIOSH approved half-face or full-face air-purifying respirator with P100 rated particulate filters or a powered air-purifying respirator (PAPR) equipped with P100 rated particulate filters.
 - Contact EH&S at (515) 294-5359 for information on respirator fit-testing and training requirements.
 - Anesthetize animals before handling when possible. Remove a captured animal from the trap by shaking it into an anesthesia bag; or pinch the animal's skin through the mesh of the trap with forceps and inject an anesthetic. If it is not possible or appropriate to use anesthesia, wear protective clothing as described and use appropriate restraining devices. Avoid creating aerosols.

- **Safely transport traps containing live animals.** If live animals must be transported, leave animals in the traps and place in plastic bags at least 4 mils thick and large enough to ensure a sufficient supply of air for the animals.
 - If transporting animals in an enclosed vehicle, isolate the trapped animals from the passenger compartment if possible.

Blood Sampling and Dissection

Field dissection is strongly discouraged. Instead, transport animals to a laboratory with appropriate containment equipment in order to process them under safer working conditions. Process animals in an isolated area, using appropriate personal protective equipment and laboratory containment devices.

- **Use leak-proof containers** for all tissues or specimens of body fluids during collection, handling, processing, or storage.
 - If transporting contaminated materials, place the primary container into a secondary leak-proof and closable container (such as an ice chest) labeled with the biohazard symbol.
 - Contaminated materials shipped by commercial carrier must comply with packaging and paperwork requirements specified by U.S. Department of Transportation regulations.
- **Minimize creation of aerosols** to prevent airborne exposure.
- **Use extreme caution with contaminated sharp items**, including needles, syringes, slides, pipettes, capillary tubes and scalpels. Substitute plastic for glass whenever possible. Dispose of all contaminated sharps items in a puncture-resistant sharps container.

Clean Up

- **Wash hands thoroughly with soap and water** as soon as feasible.
- **Remove protective clothing in a well-ventilated area** (such as outside) and place in plastic bags for disposal or laundering, as appropriate.
- **Disinfect all traps and contaminated equipment** by submerging in an appropriate disinfectant, such as 10% bleach, for at least 10 minutes.
 - Traps can then be rinsed twice with water and set in the sun to dry. If disinfection of traps is not done until the end of the trapping run, wear gloves and a respirator whenever handling contaminated traps, and transport empty traps in closed plastic bags.
- **Decontaminate all wastes** appropriately before disposal.
 - Dispose of dead rodents by placing the carcasses in a sealed plastic biohazard bag, followed by incineration.
 - For all other waste, refer to the [ISU Sharps and Biohazard Waste Policy](#).

(Excerpted from information supplied by the National Center for Infectious Diseases, U.S. Public Health Service Centers for Disease Control and Prevention). MMWR 2002:51(RR09): 1-12