

V. Control Of Biohazards Associated With Laboratory Animals

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A. Responsibility

Procedures designed to prevent exposure to or transmission of biohazards from laboratory animals to human beings must take into account both naturally occurring diseases of laboratory animals transmissible to humans and experimentally induced disease which may be harmful to humans. The ultimate responsibility for reducing or eliminating such risks lies with the principal investigator.

Programs for the safe handling and ultimate disposition of potentially contaminated animals and animal wastes must protect the health and well-being of the employee, maintain the integrity of the experimental program, and minimize the hazard to non-program personnel or animals in adjacent areas. Such programs are based on an understanding of the hazard potential involved in working with animals; procedures, equipment, and facilities must be selected to minimize or eliminate such risks. A carefully conceived animal care program, and properly designed animal facility are necessary to reduce biohazard exposure in animal facilities. Definitive procedures which encompass all potential exposure possibilities are beyond the scope of this document.

Principal investigators and/or laboratory supervisors are responsible for providing specific information to their personnel concerning the biohazardous agent, carcinogen, radioactive isotope, etc. involved, its host range, the ability of experimentally infected animals to infect non-exposed animals or to excrete the agent in urine or feces, special caging or animal isolation requirements, the need to autoclave isolation cages and their content prior to processing, and selection and use of appropriate personal protective equipment.

B. Personnel Health Programs

All employees assigned to animal facilities, or having significant contact with animals or potentially contaminated animal wastes, should have pre-employment and periodic medical examinations. This service is provided by Campus Health Services.

C. Animal Facilities

Existing standards and regulations govern animal facilities, operational practices and the quality of animal care. These standards and regulations are beyond the scope of this manual. Additional information on those aspects of animal facilities is available from the [Institutional Animal Care Committee](#) (IACUC).

Animals which have received a biohazardous material should be housed in separate animal rooms, preferably in limited access rooms on a separate ventilation system. Animal room doors as well as individual cages should be conspicuously labeled with information regarding the agent used, date of exposure, the biohazard symbol, and the names and telephone numbers of the investigator and responsible technician.

D. Work Practices And Engineering Controls

1. Personnel who handle animals must wear gloves appropriate for task. Hands must be washed after gloves are removed.
2. Personnel handling animals which have received biohazardous agents must wear a face mask, gloves and gown or other appropriate personal protective equipment.
3. Animals that are infected with a pathogen are isolated by use of laminar flow systems or within specific barriers such as filter-top cages, laminar flow racks, or germ-free type housing isolators. In all of these systems, the effectiveness of the barrier is determined by its design and the personnel using it. Thus, employee training is of paramount importance.
4. Extreme care must be taken in transferring animals from biohazard animal rooms to laboratories or other facilities. Personnel should wear proper masks, gloves, gowns, caps and footwear. The animal must be in a sealed container (or filter-top cage) and transport equipment must be sanitized or sterilized immediately after transport.
5. Postmortem dissection or necropsy is often performed on laboratory animals. Personnel conducting necropsies must wear appropriate personal protective equipment.

Post-mortem examinations of small animals exposed to biohazards should be conducted in Class II biological safety cabinets, when possible. If such equipment is not available, extreme care must be taken to guard against the creation of aerosols and the contamination of conventional necropsy facilities.

The necropsy table should be of stainless steel and have suitable flushing devices.

Appropriate disinfectant should be used to disinfect completely and thoroughly all instruments and working surfaces that come into contact with animal tissues.

E. Microbiological Monitoring

Animal rooms, necropsy rooms, and cage and bottle wash rooms should have regular microbiologic monitoring to determine the effectiveness of the sanitation and disinfectant procedures.

F. Pest Control Program

The University provides a pest control program to control or eliminate crawling and flying insects, wild rodents, or similar pests. All breeding sites should be sealed or eliminated, and pesticides or traps are to be used as appropriate in conjunction with a strict program of sanitary maintenance. To prevent toxic effects and possible interference with experimental procedures, pesticides (including insecticide-impregnated plastics) must be performed by a licensed professional. Contact Environmental Health and Safety (206-543-7209) concerning pest control issues.

G. Waste Handling Procedures

Animal waste collection and disposal should be scheduled on a regular and timely basis. When storage of animal waste is required the area selected should be physically separate from other storage facilities and free of insects and rodents. Refrigerated storage facilities are recommended when waste must be held in excess of 4-6 hours.

Additional information on waste handling is found in Section IV. H of this manual.

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