

University of Rochester

Preventing Animal Allergies in Laboratory and Vivarium Personnel Guidelines

Purpose:

The purpose of these guidelines is to provide guidance for reducing the risk of exposure to animal allergens from handling laboratory animals.

Scope:

These guidelines apply to all university staff and students handling laboratory research animals.

Background:

Animal-related allergy is one of the most important health hazards encountered by personnel handling research animals. People who work with animals are at risk of becoming sensitized to allergens in animal dander, scales, fur, hair, body wastes, and saliva. Animal allergies can manifest as allergic rhinitis (runny nose and sneezing), allergic conjunctivitis (irritation and tearing of the eyes), asthma (shortness of breath, chest tightness, wheezing), or as dermatitis (a skin reaction). These symptoms can be persistent and severe, and can lead to permanent disability or require a career change.

Inhalation is one of the most common ways for allergens to enter the body. Personnel, over a period of time, may inhale sufficient quantities of allergens to become sensitized. Following sensitization, those personnel manifest symptoms when exposed again, even to tiny amounts of the allergen, either soon after exposure or after a delay of 2 to 8 hours or more.

Personnel who develop asthma symptoms from animal allergies may improve or recover completely if they immediately stop being exposed. However, the longer the exposure continues, the more likely the illness will persist, even after all contact with animals has stopped.

Exposure to animal allergens can occur during regular husbandry duties as well as during the course of research and may include activities such as feeding, cage cleaning, administering agents, sacrificing, surgery, and collecting body fluids.

Sources of exposure to allergens can vary according to animal species, but rats, mice, and rabbits have frequently been associated with the development of occupational asthma.

Guidelines:

The following steps should be taken to limit the chances of inhaling or having skin contact with allergens in animal urine, saliva, and dander. Reducing your exposure to animal allergens will help reduce your risk of developing allergen sensitivity.

Engineering controls:

- Perform animal manipulations within ventilated hoods or biological safety cabinets or on downdraft tables whenever possible.

Administrative/Work practice controls:

- Keep cages and animal areas clean. If your activities generate dander or other animal contaminants, use wet methods to clean or consider the purchase of a HEPA vacuum cleaner.
- Reduce the number of soiled cages present in the laboratory. Store in a fume hood, if possible, until they are returned to the Vivarium.

University of Rochester

Preventing Animal Allergies in Laboratory and Vivarium Personnel Guidelines

- Wash your hands frequently and avoid touching your face while working with animals or while working in Vivarium spaces.
- When removing disposable personal protective equipment, carefully turn it inside out, and place in the appropriate waste bin.

Personal Protective Equipment:

- Avoid wearing street clothes while working with animals. Wear dedicated, protective clothing such as gloves, lab coats or gowns to reduce skin contact with animal allergens.
- Leave work clothes at the workplace to avoid potential exposure problems for family members. Never bring soiled protective equipment home for laundering.
- Return soiled gowns to the Vivarium frequently for cleaning to prevent exposure through re-use of gowns. Send re-usable lab coats out for laundering frequently.
- If you suffer from allergies related to the species you must work with, consider wearing an approved NIOSH certified respirator while working with animals or while working in Vivarium spaces. **Note that prior to respirator use, OSHA requires medical clearance and respirator fit testing. University Health Services (MC 1-5000, 275-2662) must be consulted before respirators can be worn.**

Should allergy symptoms develop that are triggered through interactions with laboratory animals or activities associated with animal husbandry, the supervisor and University Health Services (UHS, MC 1-5000, 275-2662) must be contacted. UHS will evaluate the individual and make specific recommendations to manage the symptoms and to reduce the exposure to animal allergens.

The information provided is a brief synopsis of a NIOSH (National Institute for Occupational Safety and Health) Alert 97-116 titled "Preventing Asthma in Animal Handlers". The entire alert is available at <http://www.cdc.gov/niosh/docs/97-116/>

Additional information is available from these sources:

Allergens chapter in "Occupational Health and Safety in the Care and Use of Research Animals", 1997: http://www.nap.edu/openbook.php?record_id=4988

Occupational Health and Safety Administration: <http://www.osha.gov/SLTC/occupationalasthma/>

American Academy of Allergy Asthma & Immunology: <http://www.aaaai.org/patients/publicedmat/tips/occupationalasthma.stm>

Administration:

It is the responsibility of laboratory supervision (Principal Investigator or supervisor) to ensure their staff is aware of the risks posed by animal allergens.

It is the responsibility of the individual handling the animals to adhere to these guidelines.