

ANIMAL ALLERGENS

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu>.)

Introduction

This SOP was written in support of the UNL Institutional Animal Care and Use Committee (IACUC) program. Its purpose is to provide Principal Investigators with a tool for informing Animal Users at UNL of the risk of developing animal allergies. This SOP should be used in conjunction with the EHS SOP, **Zoonotic Diseases**.

Persons at greater risk of developing animal allergies as a result of their activities with animals at UNL may include:

- Persons with other allergies (i.e., food, pollen, latex, etc.).
- Persons with allergies to domestic pets.
- Persons with a genetic pre-disposition to allergies (i.e., family history).
- Persons with asthma or other lung disorder.
- Persons who have been previously exposed to animal fluids (i.e., serum, saliva) through bites or puncture wounds or have a previous history of working or living with animals.

Prevalence of Animal Allergies

The Asthma and Allergy Foundation of America estimates that 15-30% of people with allergies have an allergy to animals. Individuals in occupations that involve prolonged close contact with animals are at increased the risk for developing animal allergies. Allergic reactions result from an immune system response to proteins present in saliva, scales, serum, urine, feces, and dander through contact with the person's skin or mucous membranes, ingestion, inoculation, or inhalation. The prevalence of allergic symptoms in the general population of regularly exposed animal-care workers ranges from 10% to 44%. An estimated 10% of laboratory workers eventually develop occupationally-related asthma. Employees who are allergic to an animal species they work with may be exposed to a significant health risk if they are also asthmatic.

Employees who work with or around animals should be aware of the signs and symptoms of animal allergies. Allergic individuals may display an assortment of symptoms such as:

- Allergic rhinitis (a condition characterized by a runny nose and sneezing similar to hay fever).
- Allergic conjunctivitis (irritation and tearing of the eyes).
- Asthma (characterized by wheezing and shortness of breath).
- Coughing.

- Nasal congestion.
- Contact dermatitis (a red, bumpy rash that may appear where skin touches the animal).

Symptoms may occur within 30 minutes following exposure or may not develop until several hours later, with an increase in severity possible for up to 12 hours.

Avoiding Animal Allergies

Allergies can often be managed by a combination of medical and workplace strategies. It's important to consult with a physician to determine the cause of an allergy in order to manage it effectively. The following practices may help reduce exposure to animal allergens.

- When possible, perform animal manipulations, cage emptying, and bedding changes in a ventilated hood or biosafety cabinet.
- Use ventilated and filtered cages/cage racks when possible.
- Animal rooms should be adequately ventilated and humidity controlled. Ventilation, temperature, and humidity rates should follow the recommendations provided in the *Guide for the Care and Use of Laboratory Animals*, (National Research Council, 1996) and the *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching* (Federation of Animal Science Societies, 1999).
- Keep the number of animals in any given area as low as feasible.
- Reduce skin contact with animals by wearing gloves, eye protection, long-sleeved lab coats and a respirator, if necessary. However, use of a respirator requires medical qualification, fit-testing, and training. See EHS SOP, ***Information and Checklist for Supervisors of Employees Required to Use Respiratory Protection Equipment***.
- Avoid wearing street clothes when working with animals. If you must wear street clothes, use outer protective garments. Discard disposable outer garments or launder reusable protective clothing at work or have it cleaned by a professional service. Do not take protective clothing home to launder.
- Wash hands frequently and avoid touching hands to face while working with or around animals. Wash hands and exposed areas of the skin immediately after removing personal protective equipment and outer garments. Shower as soon as feasible after working with or around animals.
- Keep cages and work areas clean and disinfect routinely. Use wet methods for cleaning to avoid creation of dusts.
- Use beddings that are not dusty, preferably non-contact pads. Most commercial beddings are not dusty. Wood shavings may be dusty depending on their source and quality.
- Adhere to medical surveillance recommendations/requirements.
- Employees that develop allergies or symptoms as a result of their job should file a **First Report of Alleged Occupational Injury or Illness Form** and arrange for evaluation by the UNL Occupational Physician. See EHS SOP, ***On-The-Job Injuries*** for more information.