

Advisory 12.4

ASTHMA PREVENTION FOR ANIMAL HANDLERS

The National Institute for Occupational Safety and Health (NIOSH) has issued an alert warning those who work with animals that exposure to animals and animal products can cause asthma and allergies. NIOSH reports that 33% of animal handlers have allergic symptoms and approximately 10% have symptoms of animal-induced asthma.

Animals or animal products (dander, hair, fur, feathers, scales, saliva, and body wastes) contain powerful allergens that can cause both respiratory (lung) and skin disorders. Workers at risk include laboratory animal caretakers, veterinary technicians, research staff, veterinarians, and others who have prolonged, close association with animals, or their secretions or excretions. Also at risk are workers who handle animal products or associated materials such as bedding or feed.

Inhalation is one of the most common ways for allergens to enter the body. After a period of time, which may range from months to years depending on the individual, workers may inhale sufficient quantities of allergens to become sensitized. Becoming sensitized means that workers develop symptoms when exposed again, even to tiny amounts of the allergen.

Symptoms vary among workers who have become sensitized to animals from mild reactions such as sneezing to asthma symptoms such as cough, wheezing, or shortness of breath. Sensitized workers may react soon after exposure to animals or animal products, or the reaction may be delayed for several hours.

All animal handlers appear to be at risk for developing work-related allergy symptoms. Workers who had symptoms or signs of allergies before they were employed as animal handlers are more likely to develop animal-induced asthma.

Workers who develop asthma symptoms from animal allergies may improve or recover completely if they immediately stop being exposed to dusts containing the animal allergens. However, if exposures continue, it is more likely that the illness will persist, even after all contact with animals has stopped. Symptoms from animal-related asthma and allergies can be severe and may require affected workers to change jobs or careers.

Animal handlers should take the following steps to protect themselves from exposure to animals and animal products:

- Perform animal manipulations within ventilated hoods or safety cabinets when possible.
- Reduce skin contact with animal products such as dander, serum, and urine by using gloves, lab coats, and approved particulate respirators with face shields. (See Advisory 11.1 regarding respirators.)
- Keep cages and animal areas clean.
- Avoid wearing street clothes while working with animals.
- Leave work clothes at the workplace to avoid potential exposure problems for family members.

University departments employing persons who work as animal handlers should take the following steps to protect workers from exposure to animals and animal products:

- Modify ventilation and filtration systems:
 - Increase the ventilation rate and humidity in the animal-housing areas.
 - Ventilate animal housing and handling areas separately from the rest of the facility.
 - Direct airflow away from workers and toward the backs of the animal cages.
 - Install ventilated animal cage racks or filter-top animal cages.
- Decrease animal density (number of animals per cubic meter of room volume).
- Keep cages and animal areas clean.
- Use absorbent pads for bedding. If these are not available, use corncob bedding instead of sawdust bedding.
- Use an animal species or sex that is known to be less allergenic than others.
- Provide protective equipment for animal handlers, including, but not limited to gloves, lab coats, and approved particulate respirators with face shields.
- Workplace laundry equipment or the use of disposable work clothes are recommended for all persons working with animals to avoid potential exposure problems for persons outside the animal care facility and to prevent accidental exposures to those who launder workers' clothing contaminated with animal allergens.
- Provide training to educate workers about allergies to animals and steps for risk reduction.
- Provide health monitoring and appropriate counseling and medical follow-up at UC Health, 513-585-6600, for workers who have become sensitized or have developed allergy symptoms.

Additional information is available at <https://www.cdc.gov/niosh/docs/97-116/>

NOTE: University of Cincinnati faculty, staff, and students are welcome to comment on this draft Advisory. Fax your comments to 556-4981.