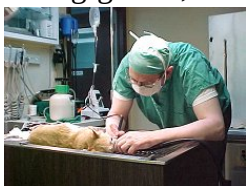
Ventilation

Working with animals in well ventilated areas can decrease the build up of various particles in the air.

- All animal rooms should have 10-15 fresh air exchanges per hour. An increase in relative humidity has been shown to reduce airborne rat-allergen concentrations substantially.
- Use ventilated hoods or cage dumping stations for emptying loose bedding.
- Reduce airborne concentrations with ventilated cage and rack systems that exhaust air through a HEPA filter.
- When possible, perform animal manipulations in a ventilated hood or a biosafety cabinet.

Hygiene and PPE

- Follow good hygiene practices and wash hands frequently. In some cases, showering after cleaning, feeding, or handling animals may be beneficial.
- Use prescribed personal protective equipment (PPE), including gloves, lab coats, and shoe covers, to cover street clothes and exposed skin.



- PPE should be removed when leaving animal rooms or areas to help prevent spreading allergens to other areas.
- PPE should be laundered or replaced before reuse; it should never be taken home with you.

Respiratory protection, in general, is not as effective as other control methods and therefore should not be used as a substitute for engineering controls or good personal hygiene. If respiratory protection is necessary, use of NIOSH-approved respirators equipped with high efficiency particulate filters is recommended. Users should be current in their medical approvals, training, and fit testing.

Getting Assistance

For additional information or questions, please contact EH&S. Assistance is available for conducting PPE assessments, evaluation and subsequent support for engineering controls such as local exhaust systems, and qualifying individuals for using respirators.

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Animal Allergens

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Allergies to Laboratory Animals

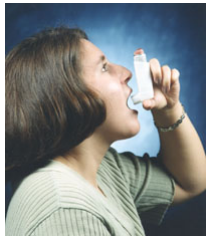
An allergy is an extreme sensitivity to a substance usually considered to be harmless such as food, dust, or pollen. However, allergic reactions to animals are among the most common conditions that adversely affect the health of workers in the care and use of animals in research. Surveys indicate that up to 56% of persons working with laboratory animals are affected by animal-related allergies. In addition, up to 73% of those with pre-existing allergic disease (i.e., "hay fever") eventually develop allergy to laboratory animals

Animal allergens are generally a protein or glycoprotein associated with animal fur, hair, dander, saliva, and urine. Although an individual could potentially be allergic to almost any animal, those most commonly associated with workplace allergies include rats, mice, guinea pigs, rabbits, cats, dogs, horses, and pigs.

Symptoms of Animal Allergies

Animal allergy is most often manifested by nasal symptoms, itchy eyes, rashes, and asthma. Symptoms evolve over a period of exposure of 1-2 years.

- **Allergic rhinitis** is characterized by runny nose and sneezing similar to hay fever.
- **Allergic conjunctivitis** is characterized by eye irritation and tearing.
- **Contact urticaria** ("hives") may occur when an allergen comes in contact with skin and may include the development of wheals (small acute swelling on skin) and flare reactions that produce welts.
- **Occupational-related asthma** can develop in about 10% of persons with allergic disease who work with laboratory animals. Asthma symptoms include coughing, wheezing, and shortness of breath which may occur while the worker is exposed to the animals and lead to chronic symptoms, even after the exposure ceases.



- In rare instances, some people experience **anaphylaxis,** an allergic reaction to animal saliva (i.e., exposure from a bite) which includes generalized itching, hives, and swelling of the face, lips, and tongue. Some people experience difficulty breathing, and reactions vary from mild to life-threatening.

Reporting Exposure

Exposure to animal allergens occurs from handling animals, performing techniques such as injections, blood sampling, testing, euthanasia, feeding, and cleaning cages.

Allergy to laboratory animals is considered an occupational illness; individuals experiencing symptoms should report them to their supervisor for further evaluation and investigation (refer to SPPM 25.20.1 "Reporting Bodily Injury, Accidents, or Occupational Illness").

Individuals experiencing symptoms should also be advised to notify either the Animal Contact Program physician if they are participating in this program or their personal physician for diagnosis and treatment.

Preventing Exposure

Certain procedures should be routinely followed in order to minimize the risk of developing an allergy to animals.

- Be aware of procedures or activities that increase exposure risks.
- All WSU employees with significant animal contact should be registered in the WSU Animal Contact Program, be made aware of the risks associated with animal allergens, and be instructed in proper measures to control and avoid exposure.
- People with known risks should be assigned tasks that minimize exposure (e.g., feeding, weighing, or necropsy) and avoid procedures that can lead to high exposures, such as cage cleaning.