

What are Laboratory Animal Allergies (LAA)?

Animal-related asthma and allergies are exaggerated reactions of the body's immune system to animal proteins known as allergens (NIOSH, 1998). Allergies are caused by exposure to allergens released from the animals. Allergens are found in the following:

- Urine
- Saliva
- Blood
- Dander (microscopic scales from hair, feathers, or skin)
- Fur
- Feathers
- Feces

Rat urine, cat saliva, rabbit fur, and dander from dogs, cats, ferrets, guinea pigs, hamsters, and other furry animals are particularly potent allergens and sensitizers.

Are You Exposed?

You can be exposed to allergens if you inhale them, if they contact your skin or eyes, and if they enter your body through breaks in the skin from bites or needlesticks.



Inhalation is one of the most potent routes of exposure. Allergens can be released into the air when dander or fur is shed from the animals and when materials containing allergens are disturbed.

Tasks that may generate airborne exposures to allergens include cage changing, cage dumping and washing, and performing procedures on animals or animal tissue.

For example, when cages containing urine, saliva, or feces are dumped to dispose of bedding, allergens may become airborne.

You do not have to work directly with animals to be exposed to their allergens. If allergens are released into the air, anyone in the room can be exposed.

How Can You Reduce Exposure?

Awareness: Understand the sources of allergens, your individual risk, ways you can be exposed through your work, and ways to control your exposure.

Complete an Animal Use Medical Screening (AUMS): All persons working in rooms where animals and animal fluids are present and/or who are working directly with animal tissue, must complete the AUMS form prior to work.

Engineering Controls: These are tools or equipment designed to capture the allergens. Engineering controls are the most effective type of workplace controls. They include the following:

- Biological safety cabinets and chemical fume hoods. *Do not work with animals or animal tissues in laminar flow cabinets that blow unfiltered air at the worker.*
- Cages with filter tops.
- Cage racks that filter the air before releasing it into the room or maintain the cages under negative pressure relative to the room.

Work Practice Controls: Perform all tasks in a manner that minimizes aerosolization and cross contamination.

- Wash hands and exposed skin after handling animals, at breaks, and at the end of work.



- When cage dumping and washing, saturate bedding completely with water and gently dispense contents.
- Keep work surfaces and animal areas clean by wet wiping or mopping.
- Shower and shampoo hair daily to decrease allergen exposure.
- Leave work clothes at work so the allergens do not travel home with you.
- Talk with your supervisor. Ask questions and offer ideas for reducing exposure.

Personal Protective Equipment (PPE)

- Gloves, goggles, lab coats, hair bonnets, and sleeve covers are available, to cover skin and clothing.



Respirators (such as N95s) are recommended to help prevent the onset of animal allergies. See the EH&S guidance on N95s for animal allergies:

<http://www.ehs.washington.edu/ohsresp/voluntaryrespanimaluse.shtm>

Are You at Risk?

All people who work with animals, around animals, or in rooms where animals are present are at increased risk for developing LAA. Those with an even greater risk are people with:

- A history of allergies or hay fever
- Allergies to domestic animals such as cats and dogs
- A history of working with animals or animal products (e.g., lab animal workers, animal husbandry staff, and livestock workers.)
- Exposure to tobacco smoke

What are the Symptoms?

A variety of symptoms may occur alone or in combination with each other.

- Respiratory: Nose, eye, and throat irritation, runny nose, sneezing, coughing, wheezing, chest tightness, shortness of breath
- Skin: Itchy, red rash and hives



A rare but severe reaction from sensitization is anaphylactic shock. This can include a sudden difficulty in breathing or swallowing.

Do You Have Symptoms?

Even if you do not experience symptoms when you first start working around animals, they can develop over time.

Repeated exposure to allergens may result in sensitization. Sensitization may occur after a few months or as long as 10 years. Sensitization will cause symptoms to begin, increase, or become severe.

If you develop symptoms of LAA, contact an Occupational Health Nurse (OHN) right away! We need to develop preventative solutions.

Who Can You Contact?

Animal husbandry staff from Comparative Medicine and WANPRC contact EHC-UW:
Hall Health, Box 354410
Phone: 206-685-1026
emphlth@uw.edu

All other staff should contact an EH&S OHN:
Health Sciences Building, T287
Phone: 206-221-7770
ohnurse@uw.edu

Whatever your concerns, the occupational health care team will help. Contact us!

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Reduce the Risk

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