



Laboratory Animal Allergies

Laboratory animal allergies (LAA) are significant occupational hazards for researchers and staff that work with laboratory animals. Most workers that develop LAA will do so within one to three years of first exposure, and symptoms usually begin with sneezing and a runny nose, itchy/watery eyes, and/or rashes.¹ Rats and mice are the most common causes of LAA because these lab animals are used more frequently than others, and not necessarily because other lab animals are less allergenic.²



Risk of LAA Development

There are four risk groups that you can fall in:

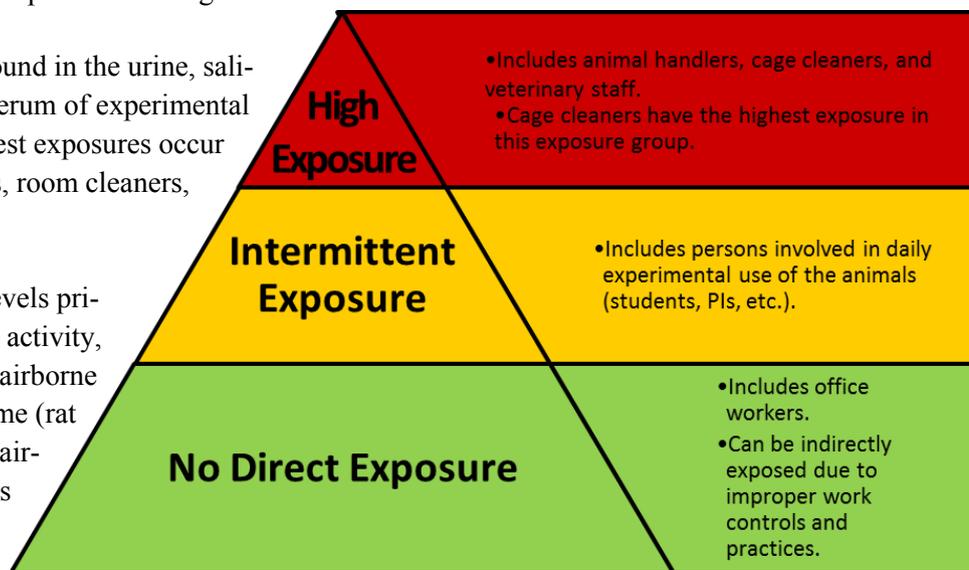
- **Normal:** Those with no evidence of allergies. ~10% will develop allergic reactions to lab animals.
- **Atopic:** Those with pre-existing allergies. Up to 73% will develop allergic reactions to lab animals. Will eventually develop symptoms from repeat exposure.
- **Asymptomatic:** Those with IgE antibodies to allergenic animal proteins. Up to 100% will develop allergic reactions to lab animals. Continued high exposure will eventually cause allergic symptoms.
- **Symptomatic:** Those with clinical LAA symptoms when exposed to allergenic animal proteins. 100% will develop allergic reactions to lab animals which can lead to permanent impairment.³

Exposure and Occupational Tasks That Favor LAA Development

Although it is unclear what specific exposure levels will cause symptoms and sensitization, epidemiological studies have shown that the greater the animal allergen exposure, the more likely you will develop work-related symptoms.² See Figure.

Since allergens are found in the urine, saliva, dander, fur, and serum of experimental lab animals, the highest exposures occur among cage changers, room cleaners, and animal feeders.²

Although exposure levels primarily depend on job activity, allergens can remain airborne for long periods of time (rat allergens can remain airborne for 60+ minutes after disturbance).²



Once airborne, allergens can be carried for substantial distances throughout the animal facilities, indirectly exposing other workers.² Therefore, it is important to use the appropriate controls and follow the appropriate work practices to protect not only yourself, but others.

Training

Most of EHSO's Trainings are available online:

ehso.emory.edu.

Rad Safety Training

2nd Tuesdays at 10:00am (monthly).

Lab Safety Training

3rd Thursdays at 10:00am (monthly).

Chemical/ Radioactive Waste

Full Schedule here...

All **chemical** waste pick up should be requested by emailing

chemwaste@emory.edu.

All **radioactive** waste pick up should be requested via EHS Assist pick-up.

Chemical waste disposal inventory form and/or **radioactive** waste inventory form should accompany all waste containers at the time of pick-up.

PPE

Choice to be based on potential exposures involved:

Eye: Glasses, goggles & face shields.

Gloves: Appropriate for the type of procedure.

Clothing: Gowns, lab coats, aprons, coveralls.

Respirators: Appropriate for the type of procedure.

The table below explains the controls in place at Emory University designed to reduce personnel animal allergen exposure.

Engineering Controls	Administration Controls	Work Practices
<ul style="list-style-type: none"> Ventilated caging. Filter top cages. Ventilated work stations in some animal rooms (Biological Safety Cabinets (BSCs) and/or Cage Changing Stations (CCSs). Automated cage washers. Absorbent pads for bedding or corncob bedding instead of sawdust bedding. 	<ul style="list-style-type: none"> Pre-screening questionnaire for risk factors (symptoms or history of allergies or asthma). Health surveillance (annual employee evaluations). Training and proper handling of waste and contaminated clothing. Good housekeeping practices. 	<ul style="list-style-type: none"> Always wear the appropriate PPE and reduce skin contact with animals. Leave work clothes at work to prevent exposure to family members. Keep filter top lids on cages until it is time to empty them. Manipulate animals under the BSC or CCS when possible. Move soiled cages to the cleaning area using a closed transport trolley or drape the cages with a cover cloth or plastic sheet. Limit your time spent in rooms where animals are housed.

Participation in the Respirator Protection Program will help reduce allergen exposure. Learn about our Respirator Program [here](#) or on our website. If you are experiencing symptoms, you should submit an Incident Report through People Soft and visit Employee Health Services. Contact your Research Safety Building Liaison if you have any questions.



EHSO Document Updates!

The following documents have recently been revised. Please read and review as there has been some changes.

- The Bloodborne Pathogen Exposure Control Plan ([BBP ECP](#)) has been updated.
- The following Biological Agent Reference Sheets ([BARS](#)) have been updated:
 - ◇ Japanese Encephalitis Virus ([JEV](#))
 - ◇ Human Immunodeficiency Virus ([HIV](#))

References

- McLeod, Vince, CIH. "Nothing to Sneeze About: Laboratory Animal Allergens." *ALN*. 30 Sept. 2010. <http://www.alnmag.com/articles/2010/09/nothing-sneeze-about-laboratory-animal-allergens>
- Wood RA. Laboratory animal allergens. *ILAR J* 2001; 42:12-16. <http://www.bu.edu/buohc/files/2009/07/all-laa.pdf>
- National Research Council. *Occupational Health and Safety in the Care and Use of Research Animals*. Washington, DC: The National Academies Press, 1997. http://www.nap.edu/openbook.php?record_id=4988

Please Read—

Signature indicates: I have read and I understand the information in this issue of Lab Rat Newsletter. Use an additional sheet of paper for more signatures, if needed and attach to this document.

- This newsletter is a tool to help fulfill a legal requirement for ongoing safety training.
- Supervisors are responsible for ensuring that individuals in their area have read and understood the information that applies to their area.
- The signed newsletter should be placed into the PI's EHSO Lab Safety Binder.

Signature Here

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Eye Wash Testing

Eyewash Stations should be tested and documented once a month by lab personnel

Certifications

Certifications required annually:
Biosafety Cabinets, Geiger Meters and Chemical Fume Hoods.

Fire Extinguishers

Visual fire extinguisher inspections conducted monthly:

- Is it present and mounted in its proper location?
- Is it readily accessible?
- Initial and date attached tag.

If it appears to need servicing contact the Maintenance HELP line at 7-7463

Tell us how we are doing!

The newsletter has a new home. Every individual article is now hosted [online!](#)

Got something to share? [Tell us!](#) Post comments, related articles/links, and safety concerns.

Feel free to also send your comments to biosafe@emory.edu.

We look forward to reading your ideas and comments!

Building Liaisons

[Click here](#) to find your building's Radiation and Research liaisons.