Laboratory Animal Allergy

Information for:
students & research staff

What is the problem?

As many as half of people who work in laboratories or facilities that use animals such as rats, mice, and guinea pigs will become allergic to them. There are also similar potential health issues when working with pigeons. The usual symptoms are the same as for allergies to pollen, dust mites, or pets – sneezing, runny nose, itchy eyes, and skin rash. But some people will also develop asthma and suffer from coughing, wheezing, and shortness of breath, even when not at work.

The allergy is caused by microscopic particles from dead skin cells, feathers, and dried urine. These tiny particles float in the air and are easily inhaled. Because they can stay airborne for a long time, they can spread all over a laboratory, even in places well away from where the animals are kept. They can also be carried on your hands, clothes, and hair, on items such as paperwork, and on the animals and their cages if they are moved around the laboratory. They can even find their way into your home on your clothing and hair.

One big problem is that compared to other laboratory hazards that you can see (e.g. dangerous chemicals or broken glassware) you won't know that you are breathing in the allergy-causing particles. Another problem is that becoming allergic to laboratory animals usually takes months or years. So people often don't realise until it is too late to do anything about it.

Staying free of allergy to laboratory animals is important. You can avoid having symptoms that can make working with animals unpleasant or impossible, and even reduce your quality of life outside work.

Are you at risk?

To stop yourself becoming allergic to laboratory animals you need to know the main risks. These include:

- Spending a lot of your day close to laboratory animals or their waste (e.g. soiled cage bedding).
- Experiments or other tasks that disturb soiled cage bedding (e.g. handling animals, changing cages).
- Experiments with animals in rooms that are insufficiently ventilated.
- Using adult rats or mice as they produce the most allergy causing particles.
- Already having other allergies (e.g. hayfever, allergies to dust mites or pets).
- Being within the first 2 to 3 years of exposure to lab animal allergens.

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND
SAPERE AUDE

Laboratory Animal Allergy

Information for: students & research staff

What you can do to reduce the risk

The good news is that there are things that you can do to protect both yourself and people who you work with. Even if you think that you have a low risk of becoming allergic to laboratory animals, you can still benefit from the following advice. It will lower the risk to you even further and will also help your colleagues who may be at higher risk than you. **Remember – you can protect people around you by doing the right thing.**

- Follow existing safety rules and any new ones that are introduced. They are there to protect you. If you would like to know more about why you should do something in a particular way, please ask your supervisor for more information.
- If your animal facility uses individually ventilated cages, make sure that you know how to operate them properly before you open them.
- If you need to move an animal outside of the animal facility, always put it inside a filter-top cage. These cages will stop most of the allergy-causing particles from entering the laboratory air.
- Wear appropriate Personal Protective Clothing and Equipment (PPCE) when you are in the animal facility or when you are handling animals (even in their own laboratories appropriate PPCE must be worn). This should include a lab coat/gown, gloves, P2 mask, hair cover, gloves, footwear and shoe covers. This is designed to protect you and also the people close to you. Wear the PPCE and you avoid transporting the allergens to your office area, affecting your colleagues, or taking them home.

If your laboratory has separate animal and non-animal areas, leave your lab coats/gowns and hair coverings [this should be ALL PPCE (shoe covers, gloves, P2 mask), including lab coats/gowns and hair coverings] in the animal area. This will help to protect not only you, but also your colleagues who may only work in the non-animal area.

- Wash your hands thoroughly after handling animals or animal-associated equipment, and before leaving the laboratory. This will help to protect you, your colleagues, and people outside your laboratory.
- Dispose of animal bodies and waste material as instructed.
- Cooperate with the University health surveillance program – it is designed to monitor health and identify issues early. There are a number of levels of potential exposures. Annual blood tests and surveillance will be offered to those with high level exposure. (Daily exposure >2 hours per day or >10 hours per week more than once a month, and/ or anyone with respiratory health issues such as asthma). The blood test is for rodent (rabbit, rat, mice, guinea pig) specific antigen levels, which are an indication of allergy response.
- Staff who are going to be subjected to high level exposure should be offered a blood test at the start of their employment. Postgraduate students and other staff wishing to know their status should talk with their supervisor or Principal Investigator (PI), as there is a cost involved in this procedure. Tests are arranged through the Health and Safety Office.
- At any time if you notice allergic symptoms that you did not have before starting work in your laboratory (sneezing, runny nose, itchy eyes, skin rash, cough, or irritated feeling in chest) you must tell your supervisor or departmental health and safety office. This should also be reported on the University incident reporting system Vault, otago.ac.nz/health-safety, and will be assessed and monitored on an individual basis.

If you notice any new allergy type symptoms (increased sneezing, runny nose, itchy eyes, skin rash) contact your Supervisor, PI, Departmental H&S Officer, or the Health and Safety Office for further assessment and advice.

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND
SAPERE AUDE