

Laboratory animal allergy is an allergic response which may develop as a result of exposure to animal allergens. This leaflet contains advice on reducing the risk of developing allergies as a result of your animal work.

Why is animal allergy such a problem?

Up to a quarter of people who regularly work with small mammals and insects (and as a result come into contact with proteins secreted in their urine, dander, or excreta) develop allergic response. Usually this only causes annoying symptoms such as an itchy nose or watering eyes - but also asthma can occur. All persons working with laboratory animals are at risk, even if allergy has never been a problem before.

How does an allergy develop?

You can become exposed to allergenic material both by direct contact with the animals and/or the soiled bedding and cage materials or by airborne exposure - tiny particles of soiled bedding; skin and droplets of urine – aeroallergens – get thrown up and can remain suspended in the air for some time. These may then be breathed in or can settle on exposed skin and clothing. Skin contamination with allergenic material is inevitable unless the correct protective clothing is worn.

In some people, allergens absorbed across the lining of the lung, or through the skin (particularly damaged skin) can stimulate the immune system to produce antibodies that trigger an allergic reaction when you are next exposed to that allergen - even at very low levels. The development of allergic antibodies – called ‘sensitisation’ – appears to be linked more to ‘peaks of exposure’ than ‘cumulative’ or ‘long-term’ exposure – this means that even what may seem to be ‘low risk’ work of only an hour per month can be dangerous, if during that time, your exposure to allergens is not controlled.

How can we control the problem?

The ventilation systems, both the main room ventilation and Local Exhaust Ventilation (LEV) in animal facilities assist in reducing aeroallergens but they can only reduce and not eliminate contact with them. Ventilation provides no protection against direct skin contact with allergenic material. Effective control relies on the use of effective, tested LEV, protective clothing and work practices designed to reduce exposure.

Following prescribed work practices and complying with Safe/Standard/Specified Operating Procedures (SOPs), rules on the use of LEV and personal protective equipment (PPE), will substantially reduce your risk of allergy. If you think you are developing an allergy don't ignore it, report it to your supervisor and Occupational Health immediately.

How can I reduce my exposure?

Animal handling

- always conduct animal experiments and observations in accordance with the SOPs for the work. You must familiarise yourself with these before starting work.
- collect animals from the holding rooms only at the time that they are required for experimental work and return them as soon as you have finished. Do not spend any more time in animal holding rooms or procedure rooms than is absolutely necessary.
- avoid carrying animals in open stock cages. Transfer them to a clean, covered cage or box or use enclosed transport trolleys.
- learn and follow safe handling and experimental techniques. Gentle handling and manoeuvring will reduce the risk of startling the animal and lessen the plume of aeroallergen in your breathing zone.
- always use the appropriate LEV provided for your work with animals (e.g., cage changing stations, Microbiological Safety Cabinets, negative pressure isolators, downflow tables etc.).

Protective clothing and Personal Protective Equipment (PPE)

- special protective clothing is supplied in all the University's animal units and must be worn whenever its use is prescribed and required in the rules of the unit by both your supervisor and the unit manager. Requirements may vary between facilities.
- dispose of used protective clothing as directed. NEVER wear this clothing outside the facility.
- you must always wear gloves when handling animals.
- in many areas in animal units, face masks (usually disposable masks rated to at least FFP Level 2) MUST be worn and MUST be face fit tested – the unit manager will arrange this for you. If you use other types of respirator (e.g., powered downflow mask) then ensure these are tested and maintained in good working order – including keeping them charged.
- keep animal unit clothing separate from your own clothing.

Housekeeping and hygiene measures

- keep your work areas clean. Waste materials must be promptly bagged and correctly disposed of.
- bench tops and trays must be cleaned as soon as your experiment is over.
- always wash your hands after handling animals even though you have worn gloves. If you've been involved in high-risk activities e.g., cage cleaning or working in stock rooms then have a shower as soon as you can after you have finished your work.
- your attention to hygiene will not only prevent the risk of allergy but also reduce the risk of spreading infections to your animals.

Allergy symptoms:

Eyes: itching, watering, redness, swollen eyelids
Nose: itching, runny nose, sneezing bouts
Skin: itching, cracked skin, small blisters, nettle rash (urticaria),
a wheal & flare reaction if scratched (swelling and inflammation)
Lungs: coughing/wheezing, chest tightness, shortness of breath

Eye, nasal and most skin symptoms tend to occur during work exposure. Asthma symptoms may not occur until some hours after exposure e.g., coughing at night. If you experience **any** of these symptoms, report it!

Health Surveillance

Whilst you are working with animals Occupational Health (OH) will regularly monitor your health. This will be at the start of your work with animals and at 6 and 12 weeks later. Thereafter this will be by an annual questionnaire unless otherwise indicated.

If you think you may have symptoms of animal allergy you must report this to OH as soon as you become aware of them don't wait for your next health surveillance questionnaire to arrive before reporting it. We will then arrange a confidential assessment to establish whether or not you have become sensitised and advise on any additional precautions necessary to enable you to safely continue with your work. The earlier you report symptoms, the easier it is to prevent allergies progressing.

NOTE: Compliance with Health Surveillance is **compulsory**. If you fail to complete and return a surveillance questionnaire, your access to animal house facilities will be reviewed. To avoid problems please complete and return your questionnaire to OH promptly.

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Occupational Health & Safety Service

Information for Staff and Students

Allergy to Laboratory Animals