



GUIDANCE FOR WORKING WITH INSECTS

Persons working with insects are at risk of developing allergic reactions to insect frass, scales or hair particles. Insects with a scaly or hairy cuticle are a greater risk than insects with a soft cuticle. Microscopic fragments become airborne through insect movement or through handling cages or substrates and remain suspended in the air. If these particles are inhaled they can stimulate an allergic response by the body's immune system. This most often causes nuisance conditions such as allergic conjunctivitis, rhinitis or eczema but can also cause more serious and occasionally life threatening conditions such as asthma. Once developed the symptoms may remain a problem even if the person ceases to work with insects.

It is not possible to predict who may develop an allergy. It is known that the risk of becoming sensitised to insect proteins - the first stage in the development of allergy - is related to exposure: the greater the degree of exposure, the higher the likelihood of sensitivity developing. Once an allergic response is established this relationship no longer holds - serious allergic reactions can be provoked by even slight exposure to the relevant insect.

Individuals who already have a respiratory condition, such as asthma and those who smoke are at a slightly greater risk of becoming sensitised.

Reducing Your Exposure

Working procedures

You should only work in the holding rooms when absolutely necessary and for the shortest time. Mouth pooting is not allowed unless the pooter has a membrane barrier or equivalent to avoid inhalation of particles. Mechanical pooters can be used successfully. Foliage, soil and other substrates should be changed regularly – at least once per breeding cycle, unless this would significantly damage breeding programmes or research projects.

Personal Protective Equipment

Laboratory coats must be worn inside holding rooms. Coats must be stored outside the rooms and not worn elsewhere to prevent the spread of allergenic materials and keep exposure to a minimum.

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Gloves and respiratory protective equipment must be worn for room and cage cleaning as well as when carrying out work with the insects. If latex gloves are used, these must be the low protein, non-powdered variety. Disposable facemasks reduce the amounts of allergenic particles you inhale and so reduce the risk of developing allergic nasal or lung problems. Wearing masks is mandatory for those working with scaly/hairy insects such as crickets. If you work with soft cuticle insects or insects that do not produce airborne particles you do not need to wear a mask, but should wear a laboratory coat and gloves. If you share a room with scaly/hairy insects, masks must be worn.

If you are unsure about the risk from your insects, please refer to your Risk Assessment and consult your Health & Safety Manager. Masks must conform to EN149 FFP2 standard or higher. They should ideally be single use, or changed daily. If re-used, masks must be stored outside rooms in closed containers with the inner surface protected against inadvertent contamination. If you suspect the inner surface of the mask has been contaminated it must be discarded immediately and not reused. Powered respirators may be recommended for individuals who are already asthmatic or who develop allergies to the insects.

Hygiene

Wash your hands after handling insects, even if you have been wearing gloves. Lab coats must be laundered regularly. Containers storing masks should be washed at least every 3-4 uses. Cleaning programmes must be adhered to as defined by project leaders.

Health Surveillance

Staff and postgraduate students involved with colony maintenance or other work in rooms where work will extend over a period of two months or more must attend the Occupational Health Service for health surveillance. Your line manager, HR Manager or Health and Safety Manager should initiate this process.

Frequency of surveillance:

- 1st year every 3 months
- 2nd year every 6 months
- 3rd year and thereafter – yearly.

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Symptoms of Allergy

Allergic reactions can affect the eyes, nose, lungs and skin. Symptoms usually occur at the time of exposure but especially with asthmatic symptoms there may be a delay of some hours before symptoms appear. The list given below is not exhaustive. If you develop any symptoms that you think are caused by your work please discuss this with your line manager, HR manager or Health and Safety Manager who may be able to help or refer you to seek advice from the Occupational Health Service.

- Eyes: Itching, watering, redness, swollen eyelids.
- Nose: Itching, watering, sneezing.
- Lungs: Coughing, chest tightness, wheeze, difficulty in breathing.
- Skin: Itching, cracked skin, chapping, small blisters, weals or nettle rash.

If you think that you are becoming allergic to the insects you work with then report this to your line manager, HR manager or Health and Safety Manager as soon as possible.

Early assessment of the problem with specific advice on how you can further reduce or avoid exposure can prevent allergic problems from progressing.

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