

## ***Laboratory animal allergy***

**One-third of workers who work with laboratory animals develop a hypersensitivity to the animals' dander or hair. Exposure to the allergens must be halted in order not to aggravate the symptoms.**

An allergy is a hypersensitive reaction that the immune system has to allergens, which are harmless foreign proteins that some people are sensitive to. In people with allergies the immune system reacts violently to the allergens. An allergy to laboratory animals is a hypersensitivity to the animals' protein products. This type of allergy manifests itself primarily in problems in the respiratory tract.

Multiple allergens and factors are often involved simultaneously. For example, the immune system can already have been activated by another substance (latex, cats, tree pollen). In that case, your chances of developing an allergy for another substance (a similar one) are high. Studies have shown that an allergy to laboratory animals can develop over a period of 15 months to 8 years.

Symptoms usually disappear as soon as the exposure ceases. With a chronic allergy the symptoms can persist, even when the exposure is halted. In fact, it is estimated that half of all people with occupational allergic asthma still have symptoms years after the exposure has ended. If exposure continues, a persistent hypersensitivity can develop that cannot be cured. For this reason, good protection is of vital importance.

A high level of exposure to allergens is to be expected when caring for and cleaning laboratory animals, conducting research with the animals, transporting cages, cleaning cages and living areas and dealing with waste matter. The degree of exposure is partially determined by

- the number of laboratory animals per living area
- the degree of intensive contact with the laboratory animals
- stress experienced by the animals

The length of time of the exposure also influences development of an allergy. A short intense exposure poses more risk than an exposure that is evenly spread out. Preventive measures are necessary to prevent workers as much as possible from coming in contact with the allergens, so that no allergy can develop. For workers who are already hypersensitive, measures can be taken to reduce the physical symptoms.

These measures entail following the occupational hygiene strategy:

- Measures taken at the source (do not conduct research on animals, alternative experiments),
- Technical measures (enclosed living areas, choice of bedding material, effective ventilation of the area, pressurised plumbing system, working in the fume cupboard).
- Organisational measures (limit length and intensity of exposure, limit number of animals per space, minimise animals' restlessness and stress).
- Personal protective measures (use of lab coats, face mask and gloves).