



The University of Texas at El Paso
Respiratory Protection Program

Laboratory Animal Hazards

UTEP researchers who handle laboratory animals and/or enter animal holding rooms are potentially exposed to animal dander, urine, saliva, tissues, and sera. Animal-related allergies are one of the most significant health hazards faced by laboratory animal workers (1). The literature indicates that about 10 to 46 percent of exposed personnel develop laboratory animal allergies, with symptoms progressing from those of minor rhinitis to more severe signs of asthma (2) (3) (4).

Inhalation is one of the most common ways for allergens to enter the body. After a period of time (frequently for several months, but sometimes many years), you may inhale enough quantities of allergens to become sensitized that is, you could develop symptoms when exposed again, even to small amounts of the allergen (5). More serious reactions to inhaled allergens may result in asthma symptoms such as cough, chest tightness, wheezing, or shortness of breath. A laboratory worker who has developed asthma symptoms from animal allergies can improve or recover completely if he or she immediately stops being exposed to dusts containing the animal allergens. However, the longer the exposures continue, the more likely the illness will persist, even after all contact with animals has stopped (6).

Symptoms from animal-related asthma and allergies can be severe and may require affected laboratory workers to change jobs or careers (5). Avoiding skin contact with animal products such as animal dander, serum, and urine may decrease your risk of sensitization. Gloves, lab coats, and approved particulate respirators with face shields can all decrease exposure (7) (1) (5).

References

1. **Newman-Taylor AJ, Gordon S.** Laboratory animal and insect allergy. [book auth.] Chan-eung M, Malo J-L, Bernstein DI, eds. Bernstein IL. *Asthma in the workplace*. New York, NY : Marcel Dekker, Inc, pp. 399-414.
2. *Allergy to laboratory animals: an epidemiological study.* **Aoyama K, Ueda A, Manda F, Matsushita T, Ueda T, Yamauchi C.** 1, s.l. : Br J Ind Med, 1992, Vol. 49, pp. 41-47.
3. *Laboratory animal allergy: an update.* **Bush RK, Stave GM.** 1, s.l. : ILAR J, 2003, Vol. 44, pp. 28-51.
4. *Prospective study of laboratory-animal allergy: factors predisposing to sensitization and development of allergic symptoms.* **Renstrom A, Malmberg P, Larsson K, Sundblad BM, Larsson PH.** 7, s.l. : Allergy, 1994, Vol. 49, pp. 548-552.
5. **Jr., Bardana EJ.** Occupational asthma and related conditions in animal workers. [book auth.] Montanaro A, O'Hollaren MT, eds. Bardana EJ Jr. *Occupational asthma*. Philadelphia, PA : Hanley & Belfus., 1992.
6. **NIOSH.** *Preventing Asthma in animal handlers.* s.l. : DHHS (NIOSH), n.d.
7. *Occupational allergy to animal dander and sera.* **Lincoln TA, Bolton NE, Garrett AS Jr.** 7, s.l. : J Occup Med Med, 1974, Vol. 16, pp. 456-469.
8. *etiological agents in occupational asthma.* **Chan-Yeung M, Malo JL.** s.l. : Eur Respir J, 1994, Vol. 7, pp. 346-371.
9. *Occupational asthma caused by allergy to pigs' urine.* **Harries MG, Cromwell O.** 6319, s.l. : Br Med J Clin Res, 1982, Vol. 284. 867.