

ASU FACT SHEET

Animal Related Asthma and Allergies

The Department of Animal Care & Technologies, Health Services, and Biosafety & Biosecurity have developed this fact sheet to highlight common allergic reactions to animals.

Introduction

Animal-related asthma and allergies are a response of the body's immune system to [allergens](#) (e.g., animal proteins). The estimated prevalence of allergic symptoms among workers exposed to animals ranges from 10% to 40%. Workers who are continually exposed to animal allergens tend to have progressively more frequent and severe symptoms, and an estimated 10% develop asthma. Once animal allergy develops, the affected worker should minimize any additional allergen exposure to prevent progression of allergy symptoms. Symptoms from animal-related asthma and allergies can be severe and may require affected workers to change jobs or careers.

Sources of Exposure

Sources of animal allergens vary with animal species. Examples include:

- **Birds:** Hair, serum, fecal droppings
- **Cats:** Fur, dander, skin, saliva
- **Crickets:** Unknown sources
- **Dogs:** Hair, skin, dander, albumin
- **Fish:** Unknown sources
- **Grasshoppers:** Unknown sources
- **Guinea pigs:** Urine, dander, fur, saliva
- **Horses:** Serum, dander
- **Rabbits:** Fur, dander, saliva, urine
- **Rodents:** Urine, dander, saliva, albumin

Symptoms of Exposure

Allergy is often manifested by nasal symptoms (e.g., allergic rhinitis), itchy eyes (e.g., allergic conjunctivitis), and rashes (e.g., contact urticaria, atopy). Symptoms usually evolve over a period of 1-2 years and may lead to acute anaphylaxis in a small number of patients. Allergen exposure can occur with any animal contact, direct or indirect (e.g., simple presence in a facility that houses allergenic species).

Preventing Exposure

Prudent efforts to prevent allergen exposure and reduce the frequency of sensitization in animal workers require strict work practices and consistent use of personal protective equipment (PPE). Of particular importance is wearing a facemask to reduce inhalation and hand-to-face spread of allergens. Additionally, covering all exposed skin with the use of appropriate PPE (e.g., gloves, lab coat, sleeve protectors, hair cover) will help to prevent allergen contact. PPE should be removed and disposed or laundered according to EH&S policy once work has completed. Under no circumstances should these items be worn outside of the animal areas to prevent exposure to others. The work area must be maintained clean to prevent inhalant and contact exposure. Housing animals in filter-top cages, working in well-ventilated areas, and using hoods or down draft stations for soiled bedding disposal will minimize exposure to animal allergens.

Medical Surveillance

[Health Services](#) maintains a medical health surveillance program for individuals who work with animals at ASU. Please contact Health Services for questions regarding asthma and animal allergies.