ASU FACT SHEET
Animal-Related Asthma and Allergies

The Department of Animal Care and Technologies, ASU Employee Health and Environmental Health and Safety Biosafety and 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 the 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:

Albumin: Dogs, rodents.
Dander: Cats, dogs, guinea pigs, horses, rabbits, rodents.
Fecal droppings: Birds.
Fur: Cats, guinea pigs, rabbits.
Hair: Birds, dogs.
Saliva: Cats, guinea pigs, rabbits.
Serum: Birds, horses.
Urine: Guinea pigs, rodents.
Unknown sources: Crickets, fish, grasshoppers.

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 1-2 years and may lead to acute anaphylaxis in a small number of patients. Allergen exposure can occur with any direct or indirect animal contact (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). Wear a facemask to reduce inhalation and the hand-to-face spread of allergens is particularly important. 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 of or laundered according to EHS policy once work has been 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

Employee Health maintains a medical health surveillance program for individuals who work with animals at ASU. Please contact Employee Health – employeehealth@asu.edu for questions regarding asthma and animal allergies.