UNIVERSITY OF SOUTH ALABAMA

Animal Allergies and Occupational Health Awareness

Animal Care and Use Program
Occupational Health Program for Personnel with Animal Contact

Animal Allergies-Relative Risks

Various studies have shown that the incidence of animal allergies among people who work with animals ranges from 10% to 44%. This means that most people who work with animals are not allergic to them. Allergy to animals is particularly common in workers exposed to animals such as cats, rabbits, mice, rats, gerbils and guinea pigs. The most important risk factor for the development of laboratory animal allergy is the level of exposure to animal allergens. Animal allergy is an immune reaction to proteins found in animal saliva, dander, or urine. When these tiny proteins become airborne, they may landon the lining of the eye or nose, on the skin, ormay be inhaled directly into the lungs. Any ofthese exposures can cause allergic symptoms, which can range from mild itchingto severe asthma. Changing animal cages and handling animals can cause individuals to be exposed to high levels of allergens, which may hasten the onset of allergic symptoms. Other risk factors that may put you at risk for developing a laboratory animal allergy is; a personal history of other allergies such as hay fever, individuals with a family history of developing allergies and smoking.

WHAT TO DO TO MINIMIZE RISK FACTORS

Risk factors for developing animal allergy depend upon individual susceptibility and environmental exposure. The following are actions* that you can take to decrease your exposure:

- Do not wear your street clothing when working with animals. Wear a lab coat or scrubs, or a disposable gown while in the laboratory.
- Do not eat or drink in areas where animals or their bedding are handled.
- Wash your hands frequently. Avoid touching your face with your hands.
- Wear personal protective equipment (PPE) such as masks, hair and shoe covers, gloves and long sleeved gowns when cleaning cages or handling animal byproducts.
- Change clothes and wash or shower before leaving work to avoid bringing laboratory animal allergens home with you.

(Discuss with your supervisor before making changes to the type(s) of PPE you wear)

WHAT TO DO IF YOU THINK YOU ARE DEVELOPING LABORATORY ANIMAL ALLERGIES

If you feel that you may be developing allergies to lab animals it is important that you report this to your supervisor. If you develop symptoms of allergy to lab animals, contact USA Industrial Health providers' office for an appointment for a medical evaluation.

ALLERGY SYMPTOMS

Conjunctivitis

- Red, itchy and watery items

Rhinitis

- Sneezing, itchy skins, welts and hives

Asthma

- Cough (can be late-phase with symptoms starting several hours after leaving the animal facility), wheezing, chest tightness and shortness of breath.

Anaphylaxis

- Itching, hives, tightness in throat, fainting, nausea, vomiting and diarrhea

OCCUPATIONAL HEALTH AWARENESS AND THINGS TO KNOW

The Occupational Health Program has an important role in protecting employees and animals. The requirements of this program arebased on the guidelines in the National Institute of Health's *Guide for the Care and Use of Laboratory Animals*. Occupational health programs are designed to prevent exposure to diseases that are either commonor that have severe consequences from infections. It's important to be aware that there are organisms harbored by animals thatcan potentially infect humans. This is especially true for people who are immunosuppressed. For example, organisms such as *Salmonella* can be a hazard when handling reptiles, nonhuman primates, and occasionally livestock or poultry. It is recommended, therefore, to wear protective clothes and gloves when handling animals and to take special precautions on the advice of a physician if you have a medical condition that renders you immunodeficient. Because the scope of possible zoonotic infections is broad, only a few examples are described in this brochure.

If you are PREGNANT

Pregnant women, without immunity to toxoplasmosis, should not be exposed to possible toxoplasmosis infection. The risk of congenital toxoplasmosis infection exists, andprecautions should be taken. Since asymptomatic toxoplasmosis infection is common before child-bearing years, serological samples should be taken from women handling high-risk species prior to beginning work to avoid confusion about thesignificance of positive antibody tests in caseof subsequent pregnancy. In addition, pregnant women can have altered immunityto potentially zoonotic agents and should wear gloves at all times.

If you work with RODENTS (gerbils, guinea pigs, hamsters, mice and rats)

While laboratory rodents are usually specific pathogen free, the risk for zoonotic disease exists. PPE should be worn as directed by yoursupervisor. Contact with feral rodents requires precautions against such diseases as toxoplasmosis, tapeworm infection, lymphocytic choriomeningitis (LCMV) and salmonellosis shigellosis, as well as ringworm and other dermatomycoses. Additional concerns for investigators using wild rodents are leptospirosis and hanta virus. Care shouldbe exercised when handling rodents as well as potentially infected materials, such as bedding, feces in the laboratory.

If you work with RABBITS, REPTILES or AMPHIBIANS

Individuals working with rabbits should beaware of possible allergic reactions.
Salmonella is frequently harbored in reptiles,turtles and amphibians. The use of gloves and good hand washing is a must after contact with these species.

If you work with HAZARDOUS AGENTS

Personnel protective equipment should be used as appropriate and other safety practices consistent with institutional guidelines. Potentially hazardous chemicals in the animal laboratory and care room maybe found in disinfectants, cleaning agents, pesticides, and as feed and beddingcontaminants.

Hands should be washed after handling chemicals, infectious materials and animals,and before leaving the laboratory. A biological safety cabinet should be used when handling infectious materials and a fume hood when handling toxic chemicals.All contaminated materials should be decontaminated before washing, reuse or disposal.

Contact Safety and Environmental Compliance at **460-7070** if you will be working with hazardous agents or if there is apossibility of inhalation of toxic chemicals.

CONTACT INFORMATION

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