The VSU IACUC occupational health and safety program is designed to inform individuals who work with animals about potential zoonoses (diseases transmitted to humans from animals), personal hygiene to prevent zoonotic transmission, and other potential hazards associated with animal exposure. This information sheet is directed toward those involved in the care and use of laboratory animals who are at risk for allergic reaction and asthma.

Animal-related asthma and allergies are exaggerated reactions of the body's immune system to animal proteins, also known as allergens. Allergens are excreted in the animals' saliva and urine, and from various glands associated with the skin. The proteins tend to be sticky and become associated with the animal's hair, scales, and/or particles of dander. The allergens are unique to each species of animal, so it is possible to be allergic to mice and not to rats and vice versa. It is also possible to be allergic to multiple species; in fact a person who is already allergic to one allergen (animal or otherwise) has a greater chance of becoming allergic to a new allergen than a person that has no allergies at all.

The National Institute for Occupation

Inhalation is one of the most common ways for allergens to enter the body. After a period of time (often several months, but occasionally many years), workers may inhale sufficient quantities of allergens to become sensitized; that is, they develop symptoms when exposed again, even to tiny amounts of the allergen. Airborne exposures to dusts derived from animals are not currently regulated to protect workers from developing allergic problems.

Exposures to rats, mice, and rabbits have frequently been associated with the development of occupational asthma. Species other than mammals have also been reported to cause respiratory symptoms, (e.g., frogs, which are commonly used in science classes). Exposures to birds have been associated with other respiratory diseases, including hypersensitivity pneumonitis. A person who becomes allergic to one animal species may react to other species as well. Even a low exposure to these common sources of animal allergens can result in allergies, but the risk increases as the worker's exposure increases.

The most effective way to prevent and control allergies is to minimize exposure to the allergens. Supervisors should be aware of the possibility of allergy in workers and should be aware of factors in the work place that can increase or decrease the exposure of the workers to animal allergens.

The following practices for animal facilities and laboratories may help workers reduce their exposure to animal allergens:

- If possible, use an animal species or sex that is known to be less allergenic than others.
- Perform animal manipulations within ventilated hoods or safety cabinets when possible.
- When not working in a hood or cabinet, ensure adequate ventilation in the work area.
- If working with a species to which you are allergic, consider wearing a NIOSH certified N-95 respirator when in the animal facility. The VSU Office of Environmental & Occupational Safety (OEOS) can provide information about the N-95 respirator and the required medical clearance and fit test.
- Reduce skin contact with animal products such as dander, serum, and urine by using gloves, lab coats, and approved particulate respirators with facesndETB1 0 0 1 9.4856ct8ct81 0nd the r0.9(, aC /P 4MCID2Lang (e

Symptoms vary among workers who have become sensitized to animals. Mild reactions include allergic rhinitis (a condition characterized by runny nose and sneezing similar to hay fever) and allergic conjunctivitis (irritation and tearing of the eyes). More serious reactions to an inhaled allergen may result in asthma symptoms such as cough, chest tightness, wheezing, or shortness of breath. Animal workers who have become sensitized may also experience contact dermatitis (a red, bumpy rash that may appear where his/her skin touches the animal).

A worker who has developed asthma symptoms from animal allergies often improves or recovers 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.

Those who work with animals should be aware of the signs and symptoms of animal allergies. If you have a stuffy nose or other respiratory signs and if these symptoms seem to last longer than a common cold (weeks instead of days), then you may be suffering from an allergy. If you develop suspicious symptoms when you are exposed to a certain species, you have an animal allergy. In sensitized workers, reactions often occur soon after exposure to the animal or animal product, but they may be delayed for two to eight hours or more.

If your job requires you to be exposed to something to which you know you are allergic, you should discuss with your health care provider what effect the allergy may have on your future health. Some workers are so severely affected that only a change in career will control their allergies.

If you suspect you have developed an animal allergy, you should see your health care provider. He/she can diagnose animal allergy or sensitizat