

Animal Dander Allergy

Why does house dust cause allergies and asthma?

House dust is a mixture of many things that has been shown to include **animal dander** and hair, fungi or molds, insect proteins (primarily from cockroach), human skin cells, food particles, various fibrous materials of both plant and animal origin and dust mites.

In most communities almost all houses contain detectable levels of cat and dog allergens; though the levels are up to 200 times lower in homes without pets than in those with pets. In some individuals even this lower level of allergen is sufficient to cause symptoms. Cats carry large amounts of allergen that is frequently transferred to public places, schools and day care centers on the clothes of their owners. In one study, the amount of cat allergen on a department store display bed reached levels comparable to bedding in homes with cats simply from customers (some presumably being cat owners) lying on the bed.

Because pet allergens are so easily transferred it is difficult to achieve sufficient reduction in allergen levels as long as contact with the pet occurs. When cats are removed from a room allergen levels may drop by as much as 70% though this number is less with fitted carpeting. Even a 70% reduction in allergen may not produce clinically significant changes in allergy and asthma symptoms. When cats are permanently removed from the home it can take months or even years for allergen levels to return to normal.

People allergic to animal dander react to proteins from the bodies and saliva of the animals. These protein particles are so light that they float easily into the air and are increased when anyone vacuums, runs a fan, walks on a carpet or disturbs bedding. In allergic individuals, inhalation of these particles causes nasal symptoms or asthma. However, it is not unusual to be unaware of a relationship between exposure to animal dander or house dust and worsening of symptoms.

Why is animal dander avoidance important?

Scientific studies have shown that symptoms of asthma, allergic rhinitis and atopic dermatitis may be substantially improved in sensitized individuals by reducing the quantity of animal dander allergen in the indoor environment. It is important to realize that it may take weeks to months to see clinical improvement once allergen levels are reduced.

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Recommended Measures to Decrease Animal Dander Levels

~in order of importance~

Control of Source

- Removal of the animal is the only method shown to reduce allergen levels. For dogs, eviction outside the house may be sufficient. For cats, complete removal from the property may be necessary due to easy transfer of allergen on clothes.
- A poor compromise is to limit the animal's territory to easily cleanable hard floored areas (such as kitchen or laundry room) and confine outdoors the majority of the time. Animals should never be allowed in the bedroom or on soft furnishings.

Control of Allergen Reservoirs

Beds

- Encase mattress/pillows with allergen impermeable covers and wash bedding weekly.
- Remove all items from bed unless able to wash at least monthly.

Floor Coverings

- There are no good methods to render wall to wall carpets free of allergens.
- If possible, replace carpets with smooth flooring and vacuum/damp mop weekly.
- Using loose rugs over smooth flooring is a possible compromise as long as rugs are washed monthly.

Soft Furnishings and Clothing

- Where possible, replace with cleanable items that do not retain allergens (leather, vinyl, wood, plastic).
- Compromise is allergen impermeable encased cushions with loose coverings that are washed monthly.
- Clothing should be washed weekly. Wash immediately after contact with the animal.

Washing and Cleaning

- Standard washing practices at any temperature will wash out most animal dander.
- Allergens accumulate in the dust on hard surfaces therefore these should be wiped with damp or oiled cloth at least once weekly.
- Frequent dry vacuuming picks up excess dust and reduces reservoirs of allergens in carpets. A HEPA filter fitted vacuum is preferable.

Mechanical Devices

- HEPA air filtering units offer some benefits by removing airborne allergen; however other measures listed above are much more important.
- Washing the animal can reduce allergen production, but is short lived – lasting 3-4 days. All animal bedding should be washed at least weekly even if animal is not, as bedding is a potent source of allergen.
- The use of chemicals to reduce animal dander is not useful and is not recommended.