

## Controlling House Dust Mite Exposure

House dust mites (*Dermatophagoides* sp) exist throughout our environment. These microscopic creatures feed on human and animal dander, skin scales and hair. They are commonly found in beds, mattresses, carpets, sofas and pet bedding. Mites multiply rapidly when a house is sealed because the temperature and humidity are mite-optimum (50-70% relative humidity). Mite bodies and mite feces are the principal source of house dust mite allergens.

Hypersensitivity to house dust mites is a widespread problem in allergy. Approximately 50-60% of all dogs with elevated allergy test results to other allergens also exhibit elevated results to mites. Hyposensitization therapy can be effective in the reduction of symptoms in atopic patients with mite allergy. Some patients are sensitive only to mites, and in these cases immunotherapy is highly effective. In addition, an effective environmental control regimen can prove useful in minimizing the patient's discomfort and lessening immediate signs.

Although it is virtually impossible to totally eliminate house dust mites from our environment, we can take steps to inhibit their multiplication and thereby minimize the effect on the animal who is allergic to house dust mites.

The following suggestions should prove useful in controlling mite populations. Although some of these suggestions may be difficult to apply to the entire household, it is recommended that at least the main sleeping areas of the allergic pet be maintained according to these specifications.

- Avoid the use of carpeting. Base floors, such as hardwood, vinyl or tile are best; if carpet must be used, low pile is preferable.
- Remove upholstered furniture, books, records, piles of newspapers and magazines, knick-knacks, stuffed animals, wall hangings and other "dust collectors" from the room.
- Wash all bedding frequently (at least weekly) in HOT (130°F) water.
- The bedroom has been found to have the greatest concentration of mites. A recent study demonstrated over 45% of US homes have bedding with dust mite allergen concentrations that exceed a level associated with allergic sensitization. It's best to keep your pet out of the bedroom. Encase mattresses and box springs in airtight plastic; seal zippers on the casing with tape. Use washable blankets and mattress pads. Encase pillows in < 10µm pore fine woven or vapor - permeable covers. **Note:** the most dust-free type of bed is a waterbed.
- Plants can also be dust collectors and should be removed.
- Change furnace and air conditioning filters frequently. Electrostatic filters may be more effective in filtering out dust, mites and inhalant particles.
- Use air conditioning to control the temperature during warm months. Central air conditioning is preferred, but window units are also helpful. Try to maintain the humidity levels between 30 and 50%. Dehumidifiers may prove useful.
- Dry steam clean and vacuum carpets and upholstered furniture at least weekly using good quality 2 layer bags or high efficiency particulate air filters. Steam cleaning is believed to kill the mites while vacuuming removes them. Wet mop and dust with a damp cloth daily. Room should be properly aired after vacuuming.
- Groom animals frequently.

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### References

Eggleston PA, Bush RK. Environmental allergen avoidance: An overview. *J Allergy Clin Immunol* 2001;107:S403-5.

Arlian LG, Platts-Mills, TAE. The Biol of Dust Mites and the Remediation of mite allergens in allergic disease. *J Allergy Clin Immunol* 2001;107 No 3:S406-13

Study Shows Simple Steps Can Reduce Dust Mite Allergens in Bedrooms: [www.intelihealth.com](http://www.intelihealth.com). August 6, 2001.

### Websites for additional information:

[www.intelihealth.com](http://www.intelihealth.com)

[www.pollen.com](http://www.pollen.com)

[www.niaid.nih.gov/publications/allergies.htm](http://www.niaid.nih.gov/publications/allergies.htm)

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