



# House Dust Mite Allergy

Allergy to house dust mite is a problem that affects millions of people all over the world.

Unlike pollen allergens, which cause symptoms seasonally, house dust mite is a year-round allergen. Symptoms produced by house dust mites include nasal and eye allergy (allergic rhinitis and allergic conjunctivitis), asthma and eczema. Studies indicate that nearly 1 in 3 people may be sensitive to house dust mites.<sup>1</sup>

## WHAT ARE HOUSE DUST MITES?

House dust mites are microscopic, eight-legged insects that are the major cause of allergic reactions to dust.

Dead skin called human dander serves as the primary food source for these common insects. House dust mites do not live on our skin, but rather live in areas where human dander is abundant, like bedding, mattresses and upholstered furniture. Once the mites digest their food, they produce potent allergens which are released in their feces. Inhaling or physically contacting the excrement, which is the same size of a pollen grain, provokes allergic symptoms. There are many species of mites, but only a few can be found in homes.



The most commonly discussed mites, as it relates to human allergy, are *D. farinae* and *D. pteronyssinus*.

## WHERE DO HOUSE DUST MITES LIVE?


Because house dust mites feed on human dander, mattresses and pillows are the ideal places for mite infestations and have the highest levels of mite allergens. House dust mites thrive in warm, humid environments. They prefer temperatures at or above 70 degrees and approximately 50% humidity.<sup>2</sup> Even though house dust mites can be found year-round in your home, they are at their peak in September and October after the warmer weather months.

Carpeting, bedding, upholstered furniture and even stuffed toys provide ideal conditions for dust mites. Although mattresses and bed covers at home are the major source of mite allergens, mite-allergic individuals are also exposed to significant mite allergens in public places such as schools, movie theaters and public transportation.

House dust mites are typically found “in things” versus in the air unless dust has been disturbed, like after vacuuming. So, little or no airborne allergen is present in undisturbed air.



Approximately  
**80 percent**  
of allergy sufferers are  
allergic to dust mites.<sup>3</sup>



## DIAGNOSING MITE ALLERGY

If an allergy to dust mite is suspected, the doctor will often perform a skin test to determine if the allergy exists. In a skin test, small droplets of dust mite allergen will be applied to or under the skin. If positive, a red, raised area will develop around the site where the dust mite extract was applied. If there is no reaction, allergy is not suspected. Your medical history and a physical exam, in combination with an allergy diagnostic test (skin or serum) will help your physician identify a mite allergy.

## AVOIDANCE

The key to reducing symptoms is the careful cleaning of all rooms where you spend most of your time. Since most people spend a third of their lives in the bedroom, that is a good place to start. Here are some simple steps you can take;

- Since mites can grow abundantly in your bed, the single most important thing you can do is enclose your mattresses, box springs and pillows in vinyl or synthetic coverings.
- Change your bed linens and pillow cases weekly
- Use washable blankets and bed spreads
- Eliminate upholstered furniture, carpeting and drapes
- Wet mop hard surfaces and vacuum weekly
- Remove stuffed animals
- Keep the humidity between 35-50%
- Use chemical agents to kill mites and remove allergens

## TREATING MITE ALLERGY WITH IMMUNOTHERAPY

Allergy immunotherapy is a treatment that reduces or completely alleviates your allergy symptoms<sup>5</sup>. With this treatment, your body builds up a resistance to the allergens that currently impact your day-to-day living. After six months on treatment, symptoms should start to decrease, as will your need for symptomatic medications that control the allergy-associated sneeze, runny nose, cough, wheeze or hives. As an additional benefit, immunotherapy may prevent the onset of other allergies or the development of asthma in children<sup>5</sup>. Scientific studies have shown that the results of immunotherapy are maintained for a minimum of 5-10 years after the course of treatment has been completed.<sup>4</sup> Among the wide variety of treatment possibilities available today, allergy immunotherapy is the only treatment that targets the underlying cause of allergy and alters the natural course of the disease<sup>5</sup>. Immunotherapy is not without risks. Possible

side effects may include: itching, redness and swelling at the injection site and sometimes soreness hours after an injection. These local reactions are not considered serious. Although rare, a full body allergic reaction, called anaphylaxis, can occur following an injection. To reduce the risk associated with allergy immunotherapy, it is recommended to wait in your physician's office for 30 minutes following an immunotherapy injection.

## LEARN MORE ABOUT IMMUNOTHERAPY

Consult an Allergy Specialist. If you experience allergic symptoms, it is important to talk to a doctor who specializes in the diagnosis and treatment of allergic diseases. Based on your past history and specific testing, your Allergy Specialist will be able to determine if you are a candidate for immunotherapy treatment.

### References

1. Gergen PJ, et al. Total IgE levels and asthma prevalence in the US population: results from the National Health and Nutrition Examination Survey 2005-2006. *The Journal of allergy and clinical immunology*. Sep 2009;124(3):447-453.
2. AAFA, Asthma and Allergy Foundation of America, 2005
3. Andiappan AK, et al. Allergic airway diseases in a tropical urban environment are driven by dominant mono-specific sensitization against house dust mites. *Allergy*. Apr 2014;69(4):501-509.
4. Cox, L., et al., Allergen immunotherapy: a practice parameter third update. *J Allergy Clin Immunol*, 2011. 127(1 Suppl): p. S1-55.
5. J Bousquet, et al, Allergen immunotherapy: therapeutic vaccines for allergic diseases. *Annals of Allergy, Asthma, & Immunology*; Nov 1998, Volume 81, p. 401-405.

