

- Avoid contact with animals when possible.
- Keep animals outside as much as possible.
- Vacuum house, including upholstery furniture, frequently.
- Bathe animal frequently, especially after being outside.
- Keep animals out of the bedroom.
- DO NOT SLEEP WITH ANIMALS.
- If you live with a pet, close the air ducts to your bedroom if you have forced-air heating/cooling.
- Remove animal from the home if possible.
- Avoid contact with carpets or fabrics containing animal hair.
- Allergic symptoms may be provoked when attending the zoo or circus.
- Consult your veterinarian regarding the use of pet products to reduce pet dander and allergic symptoms.
- Wash your hands immediately after petting any animal and visiting friends with animals.



If you or other members of your family are prone to develop allergies, a pet in the house can be quite harmful. A cat or dog kept in the house soon becomes part of the family and is very difficult to exclude after that point, but their adverse affect on an allergic person's health can be significant.

Cats appear to be the most allergenic of the pets. A potent allergyproducing substance is found in cat saliva and in the glands at the base of the hair. Since cats groom themselves by licking, this allergy-producing substance becomes distributed over the cat's coat, the hair is shed and decomposes, and eventually this substance is inhaled by those people living in the same house with the cat.

Dogs appear to be less allergenic than cats but can still cause significant allergy symptoms. Some experts believe male dogs to be more allergic than females and there are indications that some breeds may be less allergenic than others but you can become allergic to any breed of dog kept in the house.

Birds, gerbils, hamsters, and guinea pigs all have a definite ability to cause allergies. Guinea pig allergy is not uncommon among science personnel who work with them on a daily basis.

If you or members of your family are allergic, you should not keep a pet in your house. Even though the pet may not be the current cause of the allergy, people who have the tendency to develop allergies will probably become allergic to the pet sooner or later. It has been documented that it takes six months of normal, routine housecleaning to rid a house of cat allergy-producing substance after the cat has left the house

People who are allergic to their pets cannot expect to achieve complete relief from their symptoms through medications, or immunotherapy (allergy shots) unless the pet is removed from the house. Remember, the best treatment for your allergy is to avoid the substance that produces your symptoms. In the case of allergies to pets, this is something that you can control.



## ABOUT CAT ALLERGY

Direct contact with cats may produce various allergic symptoms. For example, hives may occur when a cat licks an individual's skin. Cat allergen may also be rubbed on one's eyes or nose after petting or holding a cat. This is a common, but often ignored, source of exposure.

The most important route of exposure results from breathing in airborne cat allergen. This allows deposition of large quantities of allergen in both the upper and lower airways. The most important determinants of an allergic reaction to a cat are the amount of airborne allergen in the immediate environment, and an individual's sensitivity to the allergen.

#### What is Cat Allergen?

An allergen is a material (such as a pollen grain, dust particle or animal dander) which is capable of provoking an allergic reaction (sneezing, rash, and shortness of breath).

Cat allergen, the allergy causing material from cats, is not cat hair, but rather a protein present in the dander and saliva of cats. These allergens become airborne as microscopic particles, which when inhaled into the nose or lungs can produce allergic symptoms.

#### Symptoms

- 1. The symptoms of cat allergy may include the following:
  - a. Runny nose and congestion
  - b. Itchy eyes
  - c. Sneezing
  - d. Rash or skin itching
  - e. Hives
  - f. Shortness of breath
  - g. Wheezing
- 2. The symptoms of cat allergy usually do not appear immediately:
  - a. Rhinitis (runny nose and congestion) seldom becomes severe before 15-30 minutes, and asthma symptoms begin after 30 minutes.
  - b. Symptoms may not occur until there have been several days of cumulative exposure

c. Some patients may experience a reduction or an increase in symptoms after longterm exposure.

#### Some Facts

- 1. Exposure to cat allergens is an important cause of allergic disease, especially asthma
- 2. At least 2% of the population are allergic to cats, and 1/3 of these have a cat
- 3. Cat allergy is common among asthmatics, and a significant risk factor for ER visits
- 4. Patients who are allergic to cats often experience a rapid onset of symptoms
- 5. Less than 10% of airborne cat allergen comes from the cat breathing.
- 6. Cat allergen is found in the dander, saliva, exocrine glands, urinary and fecal products
- 7. Male cats shed more allergen than female cats

#### **Environmental Control**

- 1. For several reasons, controlling the environment of a person allergic to cats is especially difficult. Among them are the following:
  - a. Cat allergen is extremely difficult to remove from a patient's environment
  - b. The allergen remains airborne in undisturbed conditions for extended periods
  - c. A significant portion is associated with particles less than 2.5 microns in diameter
  - d. Cat allergen adheres to walls and has been found in homes which have never had cats
  - e. Many patients report more severe allergic symptoms when exposed to certain cats
  - f. As far as the amount of allergen shed, considerable variation exists between cats and from time to time in the same cat.
- 2. For all of these reasons, for most patients, avoidance can only be considered an adjunct to other forms of therapy. Even though avoidance represents the ideal form of therapy for the allergic patient, it is often impossible to accomplish. Patients are often reluctant to give up their pets and even when they do so, cat allergen is extremely difficult to remove from a patient's environment. The following steps can be taken, however, to reduce the level of cat allergen in the air and house dust:
  - a. Limit an indoor cat to a single area of the house. It is especially important to keep the cat out of the bedroom of an allergic patient.
  - b. Keep the house well ventilated. An energy efficient house usually traps animal danders inside.
  - c. Shampoo the cat in plain water every week to remove much of the surface allergen. Cats bathed from a young age do not mind being washed. Even if you just wipe them down with a damp cloth each day it will help.
  - d. Remove rugs, carpeting, stuffed animals and fabric upholstered furniture as cat allergen adheres to soft furnishings. When touched, the cat allergen is released into the air.

- e. In an uncarpeted room, the combination of vacuum cleaning, air filtration and washing the cat can reduce airborne cat allergen by as much as 90%.
- f. Cover mattresses and pillows with impermeable covers.
- g. Use a face mask when brushing the cat or changing kitty litter.
- h. Wash your hands after touching a cat.
- i. Change clothing after coming in contact with a cat. Wash the clothing in hot water.





#### **Environmental Controls for Dog Allergy**

Don't touch, hug, or kiss dogs.

It should be obvious, but some people think a little dog contact is OK. It isn't.

#### Beware of visitors who own dogs.

Even if your house guests leave their dogs at home, they can bring the hair and dander with them on their clothing and luggage. This indirect exposure can cause serious dog allergy symptoms in some people.

#### Plan.

If you have to stay in a house with dogs, ask that the dog be kept out of the room in which you will sleep for a few weeks before you arrive.

But what if you already own a dog? Please consider this sensible advice: if you or a family member has dog allergies, you shouldn't have a dog in the home. Of course, such harsh advice may not be easy to follow. If the dog has to stay, there are other things you can try.

#### Keep your distance.

Limit exposure to the dog. Certainly, another family member should take responsibility for the dog's care and do things like grooming and bathing the dog.

Restrict the Dog to certain sections of the house.

Don't allow your dog to roam free. Keep the dog out of your bedroom at all times.

#### Keep the dog outdoors as much as possible.

Clean rigorously and often.

Dog hair and dander gets everywhere. So you need to sweep and mop the floors, vacuum the rugs, and clean furniture regularly. Make sure to get a vacuum with a HEPA filter, because regular filters may not be fine enough to catch allergens. Get rid of carpets and drapes that can trap dander.

Clear the air.

A central air cleaner -- as well as filters on the vents themselves -- can help prevent dog hair and dander from circulating through the house.

Try bathing your dog on a regular basis.



Latin name: Dermatophagoides farinae /pteronyssinus Family: Pyroglyphidae Common names: House dust mite, dust mite

The house dust mite (sometimes referred to by allergists as HDM) is a cosmopolitan guest in human habitation. Dust mites feed on organic detritus such as flakes of shed human skin and flourish in the stable environment of dwellings. House dust mites are a common cause of asthma and allergic symptoms worldwide. The mite's gut contains potent digestive enzymes (notably proteases) that persist in their feces and are major inducers of allergic reactions such as wheezing. The mite's exoskeleton can also contribute to allergic reactions. The European house dust mite (*Dermatophagoides pteronyssinus*) and the American house dust mite (*Dermatophagoides farinae*) are two different species, but are not necessarily confined to Europe or North America; a third species *Euroglyphus maynei* also occurs widely.

### Description

House dust mites, due to their very small size (250 to 300 microns in length) and translucent bodies, are not visible to the unaided eye. For accurate identification, one needs at least 10X magnification. The body of the house dust mite has a striated cuticle. Like all acari, house dust mites have eight legs (except the first instar, which has six).

### Life cycle

The average life cycle for a male house dust mite is 10 to 19 days. A mated female house dust mite can last up to 70 days, laying 60 to 100 eggs in the last 5 weeks of her life. In a 10-week life span, a house dust mite will produce approximately 2,000 fecal particles and an even larger number of partially digested enzyme-covered dust particles.<sup>[1]</sup>

### Habitat and food

The house dust mite survives in all climates, even at high altitude. House dust mites thrive in the indoor environment provided by homes, specifically in bedrooms and kitchens. Dust mites survive well in mattresses, carpets, furniture and bedding, with figures around 188 animals/g dust. Even in dry climates, house dust mites survive and reproduce easily in bedding (especially in pillows), which takes up moisture from body contact.<sup>[2]</sup>

House dust mites consume minute particles of organic matter. Like all acari, house dust mites have a simple gut; they have no stomach but rather diverticulae, which are sacs or pouches that divert out of hollow organs. Like many decomposer animals, they select food that has been already partially decomposed by fungi.

References: (From Wikipedia, the free encyclopedia)

- 1. <u>^ http://www.pneumologiamo.it/allergia\_acari.htm</u>
- <u>A</u> G. Daniel Brooks & Robert K. Bush (2009). <u>"Allergens and other factors important in atopic disease"</u>. In Leslie Carroll Grammer & Paul A. Greenberger. *Patterson's Allergic Diseases* (7th ed.). <u>Lippincott Williams & Wilkins</u>. pp. 73–103. ISBN <u>978-0-7817-9425-1</u>. <u>http://books.google.co.uk/books?id=H7GVhb27mo4C&pg=PA96</u>.

Recommended Environmental Controls for Dust Mites

- 1. Encase your pillows and mattress in dust mite covers.
- 2. Wash your bedding in hot water at least once every week.
- 3. Keep the humidity level in your home below 50%. Using a dehumidifier and/or air conditioner, as well as a humidity gauge will help you control the level of humidity in your home.
- 4. Remove stuffed animals that are not hot water machine washable.
- 5. Wear a dust mask when cleaning or doing household chores.
- 6. Avoid heavy drapes; use shades or washable curtains.
- 7. Remove carpeting.
- 8. Vacuum often.
- 9. Use a HEPA filter.



# DUST AVOIDANCE

Wear a mask when performing house cleaning.

Vacuum house, including upholstered furniture frequently.

Use a vacuum with a dust containing filtration system.

Replace carpeting with vinyl or wood flooring, if possible.

Clean house with a damp cloth twice weekly.

Remove objects that collect dust, such as toys, books, etc. from bedroom.

Clean drapes often or remove from room.

Encase mattress in dust mite covers.

Use polyester or Dacron pillows. Replace pillows every 6 months. Use dust mite covers.

Change sheets and pillow cases at least once a week. Wash all bedding in hot water.



Shower prior to bed.

