

# CHESTER COUNTY OTOLARYNGOLOGY AND ALLERGY ASSOCIATES

## A DIVISION OF PINNACLE EAR, NOSE AND THROAT ASSOCIATES

### *Adult and Pediatric Ear, Nose and Throat and Allergy Evaluation and Treatment*

Andrew V. Chuma, MD  
Michael A. Hoffmann, MD  
Michael J. Ward, MD  
Timothy J. Downey, MD

Head and Neck Cancer Surgery  
Thyroid & Parathyroid Surgery  
Sinus Surgery  
Allergy Evaluation and Treatment  
Audiology and Hearing Aids

## **ENVIRONMENTAL CONTROL MEASURES**

### **DUST MITE AVOIDANCE MEASURES**

Dust mites are tiny (microscopic) eight-legged creatures that are closely related to ticks and spiders. They grow best in warm, humid areas and live predominantly on a diet of human scales of skin. The design of “tight” energy-efficient homes with limited ventilation, higher indoor temperature and humidity has led to increased mite levels over the past 20-30 years.

Dust mites thrive in fabrics such as mattresses, pillows, bedding, carpet, upholstered furniture and stuffed animals. The bedroom should be the first line of focus.

1. **Bed:** mattress, box spring and pillows should be covered with allergy proof dust mite protective covers. Vinyl and plastic are adequate but not as durable and comfortable as airtight cloth covers.
2. **Bedding:** wash all bedding in a hot water cycle (130 degrees) at least once every 2 weeks.
3. **Dust collectors:** all unnecessary fabric items especially stuffed animals (they can be placed in a freezer for 12 hours every 10-14 days to kill dust mites), extra pillows, canopies, comforters with down or feather and heavy drapes should be removed from the bedroom. Remove stuffed furniture. Avoid wall pennants and cloth hangings.
4. **Dust:** Careful dusting with a damp rag once or twice a week should be adequate.
5. **Humidification:** Total avoidance of humidifiers or vaporizers in bedrooms. Use dehumidifiers in a basement and in the rest of the house during the summer month. Try to keep the humidity below 45%, low humidity will kill most of the dust mites.
6. **Floors:** Bare floors that can be damp dusted are preferable. If carpet is unavoidable, options are:
  - a. Vacuum with effective HEPA filter twice a week.
  - b. Vacuum cleaner with electrostatic filter if HEPA cleaner is not available.
  - c. Use a dust mite pesticide such as Acarasan.
  - d. Tannic acid solution to break down dust mite allergen.
7. **Closets:** Should be used for clothing only. Avoid storage.
8. **Air Cleaners:** Dust mite allergens are carried on large particles that settle rapidly out of the air, so air cleaner probably offer limited benefit. If you do get a filter, get one with a HEPA filter.

**Pets:** Keep pets outside the bedrooms because pets shed a lot of skin dander which is a good nutrient for dust mite so eventually they will grow more.

### **PET ALLERGY: AVOIDANCE MEASURES**

#### HAIR AND FUR-BEARING ANIMALS SHOULD BE AVOIDED BY SENSITIZED INDIVIDUALS

1. Keep animal out of the home. Cat and dog allergens remain in the air “in settled dust” for prolonged periods of time, so unfortunately benefits of removing the pet from the home may not be obvious for several weeks.
2. If pet removal is not possible the following measures may be helpful but not curative.
  - Keep pets out of the bedroom and isolate to rooms with hard surfaces from which regular washing can occur.
  - Wash a cat every seven days and a dog twice a week to decrease the buildup of allergen in the dust reservoirs within the home.
  - Wash rugs in which pets lie every 1-2 weeks.
3. Carpets serve as a major reservoir for pet allergens. Carpet accumulates pet allergens much faster than smooth floors.
  - Damp mopping on hard surfaces, removes about 90% of surface mite and pet allergens.
  - Vacuum cleaner should have a good HEPPA air filter.
4. Clothing should be washed regularly if contaminated with pet allergens. Large quantities of pet allergens can be found in the dust of beds, carpets, and clothing.
5. Air cleaners reduce cat and dog allergen level in the air and they should be used in any area which the pets spends time. So it is recommended using air cleaners in the bedroom and living room.
6. Dander, hair and saliva are the most important sources of pet allergens. There are no allergen-free breeds of cats, dogs or other animals with hair or fur.

## **MOLD AVOIDANCE MEASURES**

Molds are microscopic organisms that thrive in moist damp places. They are found in both indoor and outdoor environments. They are capable of growing wherever there is sufficient moisture and warmth. The most common indoor sites for mold growth are the basement walls and floors, window molding, shower curtains, and bathroom walls, ceiling and fixtures. Aspergillus and Penicillium molds are most prevalent in indoor environments.

### REMOVE SITES OF MOLD GROWTH INDOORS

1. Dehumidify damp areas.
2. Bathrooms: wash bathroom tiles and grout frequently. If mildew present, clean with a mold-specific disinfectant (Lysol, Clorox, ETC).
3. Bedroom; cover all mattresses and pillows in air tight covers so that they do not become damp.
4. Carpets: remove all carpets in basements that have gotten wet repeatedly. Remove carpet from bathrooms.
5. Air conditioner: examine for mold. Clean filters frequently. Check central humidifier for mold accumulation.
6. House plants; although house plants are not a major source of indoor molds, clean them appropriately. Do not stir up the soil. Keep plants out of the bedroom.
7. Closets: molds grow well in closets that are damp and dark. Dry clothes and shoes before storing in closets. Store wool clothing, leather goods, and other textiles in dry closets.
8. Kitchens: check foods for mold growth. Clean garbage containers frequently.
9. Firewood: should be stored outside since mold can be present on the bark of the wood. Burning mold woods can aggravate allergies and asthma. Christmas trees may also present mold spores in the home.
10. Windows: seal windows tightly, wipe away condensation daily.
11. Utility room: vent clothes dryer to outside.

### ELIMINATION OUTDOOR MOLD

Outdoor molds commonly grow in fallen leaves, soil, moist debris, wooded areas, and barns. They peak in summer and fall and taper off after the first frost. They may thrive year around in tropical climates. Alternaria and Cladosporium are the most prevalent outdoor molds.

1. Proper drainage around home.
2. Remove leaves and debris.
3. Take care when hiking and camping in the woods.
4. Do not allow your children to play in leaves.

## **POLLEN AND OUTDOOR ALLERGENS**

It is more difficult to control exposure to outdoor allergens, like pollens and outdoor mold spores. Pollens can travel great distances from their original source, so removing the original source is impossible. Control measures are directed to minimize your exposure to them as much as possible and to keep them out of your home.

\*. *Pollinating seasons are:*

<b>Trees</b>	March through May.
<b>Grasses</b>	May through July.
<b>Ragweed&amp; other Weeds</b>	August through October.

\*. *Pollen counts vary over the course of a day:*

<b>Trees</b>	pollen counts peak in early morning.
<b>Ragweed and other weeds</b>	pollen counts peak in late morning.
<b>Grasses</b>	pollen counts peak in early to mid-afternoon.

\*. *Pollen counts are highest on dry, windy days.*

**So patients may want to avoid outdoor activities at these times.**

1. During the spring, early summer, and early fall months, keeps the windows and doors closed in both home and car.
2. Use an air conditioner during the pollen season; this will relieve the pollen-sensitive individuals.
3. If symptoms are severe, avoidance of certain outdoor activities during peak pollen seasons may be necessary.
4. Do not hang clothing out to dry, it can trap airborne pollens.
5. Pets can be a source of pollen and they can collect it in their fur when they are outdoor.