# Dust & indoor allergen control

## Tips for minimizing dust

With a good vacuum cleaner, suction walls, ceilings, and windows and wipe with a damp cloth. Bedroom furnishings should be kept to a minimum. Remove heavy drapes, upholstery, stuffed animals, animal skins and furs from the bedroom, as well as feather beds and pillows, down comforters, and wool blankets.

Carpets and the padding beneath are notorious nesting grounds for dust mites. A mite killer powder can be applied to the carpet, but mites can repopulate in six months to one year if not used routinely. If possible, strip floors of old carpets, substituting with hardwood, vinyl or tile.

Vacuum bedrooms weekly, including the bed itself with a brush attachment that's used for the bed only. Vacuum the pillow, box spring, mattress, sheets, and bedspread. Because bedspreads, quilts and comforters gather settling dust, roll the bedspread, put it on the floor, and use another blanket to cover yourself while sleeping.

Choose bedding made of Dacron or other washable synthetic material. Wash bed linens in hot water once every week or two. The mattress, box spring, and pillows should be encased in texturized vinyl encasings which act as barriers and prevent mite material from being inhaled.

All pillows and mattresses could be frozen at subzero temperatures, or exposed to hot afternoon sun, for hours to kill the mites. Then, beat with a stick to release the dust mite matter.

An average used mattress may have 100,000 to 10 million mites. Water beds are preferable, but can develop mold if not cared for properly. If bunk beds are used, the allergic child should sleep on the top bunk.

Don't use fans in the bedroom as they stir up dust. If there's a heat vent by the bed, cover it with a filter to prevent direct air flow on the sleeper's face.

Humidity is a requirement for mite survival. Set a humidity gauge to control humidity to no more than 50% and no less than 30% for comfort. Use dehumidifiers if needed and remove jacuzzis and hot tubs from indoors.

Vacuum the entire house regularly. Consider buying a vacuum cleaner with HEPA bags. HEPA is a fine filter that filters 99.9% of particles more than 0.3 u in size. For new homes, central vacuum systems are highly recommended as the dust is carried outside the house.

Especially in old homes, the duct system can be the source of dust. Open heat registers and vacuum as far inside as you can. Professionally suction-clean the duct system once every 3 to 4 years (preferably in the fall before heating season). Ordinary filters on the furnace allow too much dust to pass through, so a washable electrostatic lifetime filter ($75-100) is recommended. 3M's 'Filtrete' is also a good furnace filter.

Central air conditioners control the amount of air allowed in the house and also the amount of outdoor particles coming in. Air conditioners are great for controlling pollen and mold spore exposures in the summer because air is filtered before it's cooled.

Air purifiers aren't as beneficial as air conditioners and quality vacuum cleaners, except when there is continual dust pollution within the house, often caused from a smoker or a pet. Very old, dusty homes or those near unpaved roads may also benefit from an air purifier.

More on reverse ...

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## Common Allergens

### Dust mites

House dust mite (D. Farinae) is a microscopic creature not visible to the naked eye that lives in old, dusty carpets, mattresses, stuffed animals, and upholstery. Mites are about 1/3 mm in length with hairy legs, no eyes, fearsome jaw, and a tough shell. The mites don't directly harm humans, but their fecal pellets dry and float in the air which people inhale, and this causes allergic reactions. It's a common cause of asthma during childhood. Direct contact can also trigger severe eczema.

- They thrive on dead skin shed by humans and animals and multiply on animal skins like furs, buckskin, down, feather, and silk
- Mites multiply rapidly in warm, humid air, with a life cycle of about 30 days
- Each egg-laying female can increase population by 25-30 every three weeks
- Mite numbers peak July-August, and persist in high numbers through December. It's possible that mites die in the fall in large numbers, giving a saturated exposure to those who are allergic

### Pollens

Pollens are produced by male plants for reproduction and are transferred from male to female flowers. Trees, grasses, and weeds transfer their pollen through the air over many miles when in season, so humans are exposed by inhalation.

- Trees — mid March through the end of May
- Grasses and crops (corn) — June, July and August
- Weeds (ragweed) — August and half of September

An air conditioner is an ideal way to keep pollens out of the house. Small plants and bushes are insect-pollinated, and their pollens aren't a cause of allergy. Don't dry clothes outside if you're pollen allergic because pollens settle on them and can easily be transferred indoors.

### Pets

House pets shed a lot of dander (dead skin) and hair that carry dried saliva. Cats are more allergenic than dogs because they frequently lick their bodies. Pets shouldn't be allowed in the bedroom. If you're going to be exposed to an allergenic pet, take an extra red antigen drop and/or an antihistamine to prevent a reaction.

Rodents (mice, guinea pigs, hamsters, gerbils, rabbits) don't have allergenic dander, but they do have allergenic proteins in their urine. The down and feathers of birds are allergenic, as well as their fecal droppings. Allergenicity of reptile pets (snakes, turtles, chameleons) isn't known. If it's hard to part with a pet, an air purifier should be installed in the bedroom to minimize the dander.

### Molds

There are different kinds of molds found in nature. Molds are a type of fungus that multiply on moist organic surfaces and produce spores that float in the air and germinate when conditions are favorable. Mold spores can cause allergy when inhaled. Molds are everywhere:

- **Outdoors:** fields, barns, even camping and swimming in lakes exposes you to molds
- **Indoors:** bathtub mildew, plant fuzz, and musty material in the attic are examples of indoor molds

Some molds are highly allergenic, especially those in silos, barns, and grain bins. Repeat exposure to these molds can damage the lung over years (Farmer's Lung). Borax powder or bleach are commonly used mold retardants. Impregnon is another anti-mold solution.