

CLEMSON UNIVERSITY

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Dust Mites

The inventor of the microscope, Anton van Leeuwenhoek, reported in 1694 that mites live in dust. Now, more than 300 years later, it is an established fact that dust mites can be found in house dust all over the world. Dust mites are not insects but are more closely related to spiders and ticks. There are two common dust mites, the American house dust mite (*Dermatophagoides farinae*) and the European house dust mite (*D. pteronyssinus*). Due to their very small size, these dust mites are not visible to the naked eye. **They live in bedding, couches, carpet, stuffed toys and old clothing.** Dust mites feed on the dead skin that falls off the bodies of humans and animals and on other organic material found where they live.

Dust mites are second only to pollen in causing allergic reactions. When dust mites grow, they shed their skin. The shed skin and feces are what cause allergic reactions in people. Allergic reactions range from itchy noses and eyes to severe asthma attacks.

Habits and Habitats

Dust mites do not live in air ducts in homes. Many people spend much time and money cleaning the air ducts to reduce dust mites. This is not necessary because dust mites need 30 percent relative humidity or higher to live, and they need food. Areas where people spend much time, like a bed or a favorite plush chair, are prime sites for dust mites.

The top part of mattresses containing fibrous material is a favorite place for dust mites during warm and humid times. The deeper parts of mattresses may provide protected areas for the dust mites during unfavorable conditions. Clothing is used by dust mites as a means of transportation from room to room or even from house to house.

Control

Control of dust mites can be difficult, time consuming and expensive. For people who are extremely sensitive, the following measures should be taken:

- Have mattresses, upholstered items and other porous items professionally cleaned and sanitized on a regular basis (once or twice a year depending upon climate, humidity and occupancy of the home). Wash bedding materials, including pillow cases, sheets, blankets and mattress pads at least once a week in hot water (130 °F or higher).
- Eliminate or reduce fabric wall hangings such as tapestries or pennants.
- Purchase stuffed toys that are machine washable.
- Avoid using curtains, drapes or blinds on windows. Use plastic shades instead.
- Remove carpeting from the bedroom of the allergic person and replace it with tile or wooden floors.
- Replace upholstered furniture with wooden or plastic furniture.
- Vacuum carpeted areas often with a high-powered vacuum cleaner equipped with a high efficiency purifying air (HEPA) filtration system. Throw away vacuum bags after use because dust mites can leave the bag.

Installing HEPA filters on air conditioner or heater vents is not practical or necessary, and may actually increase mite problems. Remember, dust mites cannot survive on the dust in the ducts, and the small holes of the filters will force air out of vents at a higher velocity, stirring up more dust than without filters.

Complete (100%) elimination of dust mites is unlikely and in order to greatly reduce dust mite populations throughout a home you can engage the services of professional dust mite and allergen elimination services on a regular basis. Reducing humidity in the home by using a dehumidifier may help reduce populations, but reducing humidity levels in microclimates, such as in bed fibers or carpet fibers is impossible

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