

## House Dust Mites



House dust mite, courtesy Wikipedia.

House dust mites, *Dermatophagoides farinae* Hughes, may be one of the most maligned and over-promoted groups of invertebrates. An entire industry has developed to sell products to eliminate dust mites and treat perceived medical conditions caused by them.

Dust mites are detritivores. They feed on human skin flakes, animal dander, pollen, bacteria and fungi. They do not drink water, instead they absorb the water they need from the air and their environment. Dust mites live in bird and animal nests and human habitations, feeding on the debris that accumulates in those sites. You might think of them as being household recyclers. The largest amount of skin flakes and similar debris accumulates where people and animals sleep.

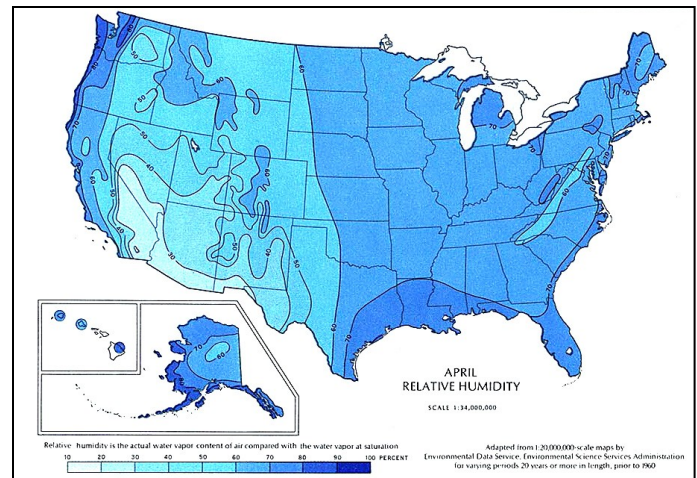
House dust mites can build up in large numbers given the right conditions, which can lead to allergies and even asthma. Humans are often allergic to dust mite's shed skins, feces and even dead mites.

There is a great deal of misinformation in the media about these mites even from supposedly reputable university extension websites. Published statements include statistics that dust mites make up 10% of the weight of your pillow or that the hum you hear at night is the sound of millions of dust mites feeding on dead skin and debris in your bed.

House dust mites require relatively high humidity to survive. However, they do not do well in regions that have seasonal periods of very dry conditions. They also need warm temperatures (between 75° and 80°F) to breed. This means that dust mites are unlikely to thrive in regions of the country where the summer humidity indoors are likely to be below 50%. In fact they may not even occur in these regions.

They are also unlikely to do well in buildings that are air-conditioned. In the Midwest air-conditioned homes have 10 times fewer dust mites than ones without air-conditioning.

So what does this mean relative to all the advertising we see for products to protect us from dust mites? The map below shows the average relative humidity for April in the United States; the darker the blue color the higher the average relative humidity. The map can be used to predict where dust mites will occur. The areas with high relative humidity are found either in the eastern U.S., especially along the Gulf Coast, or right along the western coastline. People living in the upper Midwest, Rocky Mountain States or the drier areas of the far western states should probably save their money.



Map of relative humidity in the US compiled by the US Army.

In fact house dust mites are rare in most of North America. In hundreds of samples of household materials examined over the past 20 years we rarely see house dust mites. In fact the only samples that consistently had these mites are from coastal California within 40 miles of the ocean or from the southeastern U.S. So, unless you live in that narrow coastal band of California or in the eastern US, or your house is unusually humid you are not likely to have house dust mites!

Dust mites can be controlled. The simplest way is to reduce the relative humidity inside your home. Thorough, frequent vacuuming is another important way to control dust mites, particularly if you have pets. Reduce or eliminate the dust and debris they feed on and fewer can survive.

For more information and additional information pages go to:

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