

WAR on House Dust Mite

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Most of us would have experienced it before. While spring cleaning our house, changing the bed sheets, or sweeping the floor, we get caught in a frenzied episode of sneezing, tearing in the eyes and blocked nose. Why? Doctors will tell you that you are allergic to house dust and its components.

Your nose can be irritated by a variety of things that we are exposed to. Some of these factors may be found outdoors, for example, exposure to the haze, car pollution, and construction work in the neighborhood. Most of the nose problems I see in my clinic, however, are due to factors found indoors within the milieu of your own home. House dust accounts for the majority of sensitive noses that I see in my clinic.

House dust comes from within the house!

House dust is not a homogenous entity. Some people mistake it as something that is blown into the home from the outside. The reality is that house dust is composed of a wide spectrum of substances that are produced in the indoor environment.

Depending on the specific indoor environment of your home, house dust contains varying proportions of dog hair, cat saliva, bird feather, urine from pet rodents, dead and disintegrated cockroaches, molds and fungi.

However, the major ingredient of house dust is none other than the shed scales from your own skin. In other words, you are the main cause of dust formation in your house!

Unwittingly, your shed skin scales provide the principal food supply for a ubiquitous army of microscopic 8-legged spider-like creatures that play a very important role in causing allergic rhinitis, asthma and eczema – the house dust mite.

The house dust mite is everywhere!

The humble house dust mite is an amazing organism. You cannot see them with your naked eye, yet they are there on your skin, pillow, mattresses, window curtains, carpets, and soft toys – everywhere, and all the time.

Like an alien out of a sci-fi movie, a new generation of mites sprouts out every 3 weeks. A mite colony can survive when there are enough skin scales for them to feed on.

But an environment with high humidity and warm temperatures will multiply mite growth exponentially, and allow them to flourish in much greater numbers.

This is the reason why dust mites thrive in our warm tropical climate, making it the most important cause of allergies in the nose, sinuses, skin and lungs.

Whether they are dead or alive, dust mites can aggravate your allergic symptoms. This is because it is not the dust mites themselves, but their waste products, that induces allergy. Dust mites produce 20 waste particles a day. These remain on your bedding or carpets even after the mites have been killed.

You will not get much benefit in symptom reduction just by killing the dust mites themselves. You will also have to remove those allergy causing waste particles by washing or vacuuming before you will begin to experience any improvement.

Environmental control is important!

One of the most important ways to relieve your allergy problem is by minimizing exposure to house dust. This is achieved by a process called "avoidance" or "environmental control".

The strict avoidance measures needed to control exposure to dust mite is essential in minimizing your reliance on medications and other treatment strategies, like surgery, desensitization and immunotherapy.

Your bedroom is the dust mites' favorite dwelling place. This is the first place to begin environmental control.

The bedroom is the first place to start environmental control for the following 3 reasons:

1. You spend more time in your bedroom than in any other rooms in your home. This means that more skin scales are being shed in the bedroom.
2. With more skin scales and dust mite food in the bedroom, it is only logical that they will gravitate there. Dust mite numbers tend to be higher in the bedroom than in any other room.
3. Because you spend more time in the bedroom, you are exposed for longer periods of time to higher numbers of dust mites.

Six steps to a dust free environment!

Eliminating house dust mites require discipline and planning. I recommend a 6-prong approach that will reduce the mite population in your bedroom and your exposure to them.

ONE: Interrupt their supply chain

Starve the mites of their important food supply – your own human skin scales. Clean and wipe the room regularly with a moist towel. If you normally use a feather duster, moisten it first before swinging it around.

Never use a dry feather duster.

Dust particles floating around in the air after dry dusting will cause more problems for you as they are more easily inhaled into your nose, throat and lungs. Using a wet feather duster traps dust particles instead of scattering them around.

Redesign your bedroom so that it is easy to clean. Remove clutter by storing away books and other small items in closed shelves or drawers. Personal belongings that are stored in open shelves make it difficult and cumbersome to clean, and should not be used.

House plants and dried flowers do not belong in the bedroom where they can trap dust. Do not leave clothes hanging in the open, but store them in a closed cupboard.

TWO: Deprive them of their hiding places

Mites love to hide in upholstered furniture and couches. They also flourish in carpets, rugs, and thick curtains.

However, their choice accommodation coincides with where you would spend most of your resting hours – on the warm comfort of your mattress and pillows.

Here, they are guaranteed an unlimited supply of food. Mites also love the soft toys that children, and even some adults, can't bear to spend the night without.

You have to be ruthless about this! Remove all pieces of furniture and bedroom paraphernalia that can potentially harbor the enemy. Spare no prisoners when it comes to removing the upholstered furniture, carpet and rugs. If your child loves to hug soft fluffy toys or even sniff them, some bold parenting action is needed.

Expel them from the bedroom, or trade them away. A kinder alternative would be to wash them weekly in hot water of at least 60°C (to kill the dust mites), or to wrap them in a plastic bag and leave them in the freezer overnight.

THREE: Slow down the arrival of reinforcements

House dust mites thrive and reproduce very rapidly in a warm, high humidity (75% to 80%) environment that has a plentiful food supply. You can slow them down by cooling and dehumidifying (40% to 50%) your room with an air-conditioner.

Air filters do not work effectively in managing the mite population. This is because mites and their waste products are heavy particles that settle on the ground. The air filter is unable to siphon off the dust particles unless they are airborne.

Air filters are only useful for airborne particles like pollen.

FOUR: Surround and trap them

Dust proof pillows and mattress covers are available in the market. They are made of tightly woven fabric that prevents mites and their fecal particles from passing through. Research has shown that these mattress encasements are a useful long-term strategy for mite allergen avoidance.

FIVE: Launch a direct assault

House dust mites may be killed by chemicals called acaricides (mite-killing chemicals), or by exposing them to hot water and subzero temperatures.

If foam washable pillows are used, they should be washed weekly in hot water (more than 60°C).

Soft toys and rugs should preferably be removed from the bedroom. But if they have to stay, two options are available. One, wash them in hot water. Two, wrap them in an airtight plastic water-proof casing, and leave them overnight in the freezer compartment of a refrigerator.

SIX: Clearing up the spoils of war

Killing the mites does not completely solve your problem. Fecal particles that the mites produce will remain to haunt and produce allergic symptoms. These have to be physically removed by vacuum cleaners that use a high-efficiency particulate (HEPA) filter.

Vacuumping is only effective for removing dead mites and fecal particles. The live mites possess claws that allow them to latch on tightly and resist eviction.

Use of acaricides will not help in this situation as they act only by killing the life mites.

In conclusion, dust mite avoidance and control strategies are an important component in the overall plan of treating allergic diseases like rhinitis, asthma, and eczema. The 6-prong approach that I have described should significantly reduce exposure to house dust and alleviate the troublesome symptoms of sneezing, blocked nose and runny nose that has plagued so many nasal allergy sufferers.