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## **INDOOR ALLERGY SURVIVAL TIPS**

For millions of Americans, "allergy season" never ends. Colder temperatures that eliminate the problems of grass and tree pollens also drive people indoors where they meet troublesome dust mites, animal dander, and mold spores. Most indoor environments trap airborne allergens where they can pose a risk to respiratory health.

Many people with allergic rhinitis also can be at risk of developing allergic asthma. Symptoms to watch for are a persistent cough or wheezing.

An allergist can evaluate asthma and allergy symptoms, perform tests to determine the precise cause of the symptoms and, together with you, develop a treatment plan that brings allergic reactions under control. Sometimes allergy shots, also known as immunotherapy, can improve natural resistance and decrease sensitivity to specific allergens. Allergy shots also can prevent the development of allergic asthma. Check out this [online fact sheet](#) for more information on the effectiveness and safety of immunotherapy.

If you suspect an indoor allergen is causing upper or lower respiratory symptoms, see your doctor. If tests show a specific allergen is causing your symptoms, there are steps you can take to limit your exposure to such allergens. You should not try these tedious and complex measures without first being tested to see if you are allergic.

### **House Dust Allergy**

House dust is present even in clean homes. Allergenic components of house dust are a major cause of year-round runny or stuffy nose; itchy, watery eyes; and sneezing for allergy sufferers. Dust allergy can also make people with asthma experience wheezing, coughing and shortness of breath.

Why does house dust cause allergic reactions?

House dust is a mixture of many substances. Its content varies from home to home, depending on the type of furniture, building materials, presence of furry pets, moisture and other factors. A speck of dust may contain fabric fibers, human skin particles, animal dander, microscopic creatures called house dust mites, parts of cockroaches, mold spores, bacteria, food particles and other debris. Of these, animal dander, house dust mites and cockroaches are the most common culprits. A person may be allergic to one or more of these substances, and, if exposed to the dust, will have an allergic reaction.

Is dust allergy a sign of a dirty house?

No. A dirty house can make a house dust allergy problem worse, however. Normal housekeeping procedures may not be enough to get rid of house dust allergy symptoms. This is because many of the substances in dust cannot be removed by normal cleaning procedures. For example, no matter how vigorously you dust or vacuum, you will not reduce the number of dust mites present deep within carpeting, pillows and mattresses. Vigorous cleaning methods can put more dust into the air making symptoms worse.

What are house dust mites?

Tiny microscopic creatures called house dust mites are an important cause of allergic reactions to house dust. They belong to the family of eight-legged creatures called arachnids. This family also includes spiders, chiggers and ticks. Dust mites are hardy creatures that live well and multiply easily in warm, humid places. They prefer temperatures at or above 70 degrees Fahrenheit with a relative humidity of 75 percent to 80 percent and die when the humidity falls below 40 percent to 50 percent. They are rarely found in dry climates.

As many as 10 percent of the general population and (in some regions) 90 percent of people with allergic asthma are sensitive to dust mites. Recent studies in the United States suggest that at least 45 percent of young people with asthma are allergic to dust mites.

Dust mite particles are just the right size to be inhaled. They are found in the highest concentrations in pillows, mattresses, carpeting and upholstered furniture. They float into the air when anyone vacuums, walks on a carpet or disturbs bedding, but settle out of the air once the disturbance is over. Dust-mite-allergic patients who sleep for eight hours every night, spend one third of their lives with their noses in direct contact with pillows loaded with dust mite particles!

There may be many as 19,000 dust mites in one gram of dust, but usually between 100 to 500 mites live in each gram. (A gram is about the weight of a paper clip.) Egg-laying females can add 25 to 30 new mites to the population during their lifetimes. Mites eat particles of skin and dander, so they thrive in places where there are people. Dust mites don't bite, and cannot spread diseases. They are harmful only to people who become allergic to them. While usual household insecticides have no effect on dust mites, there are ways allergic people can reduce exposure to dust mites in the home.

Why is mold present in house dust?

Molds are commonly found in outdoor air, and they come in any time you open a door or window. Any house can develop a mold problem given the right conditions. You might not see it growing on the walls, but it may still be present in your home. Molds require two factors to grow indoors: (1) free moisture that can occur in the form of relative humidity above 50 percent, leakage from pipes or foundations, or any ongoing source of water; and (2) something to grow on. Molds particularly like to grow on wallboard, wood or fabrics, but will grow virtually any place if they are given a chance.

Molds spread by producing spores that can become airborne. These spores end up in house dust where they grow. Dust from mold-contaminated houses can cause allergy symptoms if a mold-sensitive person inhales it.

Does house dust contain cockroaches?

As unappealing as it seems, cockroach particles can be a component of house dust. This is most common in older, multifamily housing and in the southern United States where complete extermination of cockroaches is very difficult. Allergic individuals, particularly those with asthma, will tend to have increased symptoms when they go into such houses. Cockroaches require food and moisture to survive, so eliminating sources of each can help reduce exposure. In cockroach-endemic areas, the services of a skilled professional exterminator will be required to keep cockroaches under control.

Is house dust allergy seasonal?

Yes. In the United States, dust mite populations tend to peak in July and August, and their allergen levels stay high through December. Mite allergen levels are

lowest in late spring. Some dust mite-sensitive people report that their symptoms get worse during the winter. That's because mite fecal particles and pieces of dead mites, both of which trigger dust mite allergy, are still present. Mold levels tend to peak during the summer months depending on where you live since some tropical areas have molds year-round. There is also evidence that cockroaches have a seasonal pattern, peaking in the late summer.

Forced-air heating systems tend to blow dust particles into the air. As they dry out over time, even more of the particles become airborne. This does not account for the seasonal pattern, however, since air blows through the same ducts during the summer when air conditioning is used. People may have fewer symptoms from house-dust exposure during the summer because they spend more time outdoors. For these reasons, the terms "seasonal allergy" and "perennial allergy" are being used less frequently. It is better to classify symptoms as "intermittent" or "persistent".

How do I know if I have house dust allergy?

If you think you may have an allergy to house dust, consult an allergist-immunologist. To pinpoint the cause of your symptoms, the allergist may ask questions about your work and home environments, eating habits, family medical history, frequency and severity of symptoms, exposure to pets and a variety of other questions. Your allergist may test you for allergy by doing skin tests, which involves pricking the skin or injecting it with different allergens and observing for a reaction. A positive reaction (a raised welt with redness around it) may indicate you are allergic to that allergen. Occasionally, your allergist may order a blood test instead of the skin test to confirm the diagnosis of allergy.

What can I do to relieve house dust allergy symptoms?

If you are tested and found to be allergic to a component of house dust, specific avoidance measures can be undertaken. Your allergist can give you expert advice on which avoidance measures are right for you. The three basic treatments for dust allergy are:

- avoidance, or limit exposure
- medications
- allergy shots (immunotherapy)

How do I avoid house dust?

Avoidance measures work best to relieve symptoms, but it is not possible to avoid all exposure to all types of house dust. Some of these procedures are difficult, and you may not need to do them all. Ask your allergist which ones will be most helpful for your situation. If you are found to be allergic to furry pets, well, there needs to be a family meeting to decide what is going to be done. In general, finding another home for an allergenic pet followed by a thorough housecleaning is the best solution for symptom control.

If you live in a dust mite area, you cannot eradicate them completely. First line steps to limit dust mite exposure focus on the bedroom because, on average, people spend one-third of their lives in the bedroom. Of all the rooms in the home, the bedroom often contains the most dust mites. Special zip-up covers can seal dust mite particles inside your pillows and mattresses. This will substantially limit your exposure to dust mite particles, and should reduce your allergy symptoms. More extreme measures, such as pulling up carpets and buying expensive dehumidifiers, should only be undertaken in consultation with your allergist.