

Allergy expert has advice for flood victims

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As if the emotional and financial impact of flood damage isn't bad enough, floodwaters can also bring health problems. H. James Wedner, M.D., professor of medicine and chief of the Division of Allergy and Immunology at Washington University School of Medicine in St. Louis, says after the water recedes, damp homes and businesses are fertile grounds for mold growth, which can cause allergic reactions and asthmatic symptoms in sensitive people.

"Mold loves water," Wedner says. "When your building is flooded, it's very difficult to dry it out quickly and completely, and that allows mold to grow. Walls made of Sheetrock soak up water far above the floodline, and mold can be hidden under wallpaper, carpet and floorboards and in ceiling tiles, furniture and clothing."

Wedner is a Washington University allergy and asthma specialist at Barnes-Jewish Hospital. He has conducted research investigating the molds and other allergens present in homes following the 1993 flood in the Midwestern United States.

Molds (and mildew, a type of mold) are fungi, which reproduce by releasing spores. Inhaling the spores causes allergic reactions in some people. Symptoms of mold allergy include itchy, watery eyes; itchy, runny nose; headaches above and below the eyes; itchy ears and changes in hearing; itchy throat and palate; difficulty breathing; coughing; and shortness of breath. Mold spores may also trigger asthmatic reactions in asthma sufferers.

If a doctor confirms that health symptoms stem from a reaction to mold, medical treatments are effective: those can be pharmacotherapy — which may include antihistamines or steroids, given intranasally or orally — or if necessary, immunotherapy, often called allergy shots, which allow your immune system to build up a tolerance to the allergen. But Wedner emphasizes that the source of the reaction, the mold itself, also has to be removed.

For those who have to deal with a flooded building, Wedner has the following recommendations: 1) dry it out quickly — mold will grow almost immediately in wet conditions; 2) cool it down — mold likes warmth as well as humidity; 3) remove wet materials — wet Sheetrock can't be repaired and must be taken out; 4) clean anything that has been wet — that includes clothing, which should be dry cleaned; 5) throw away anything that can't be thoroughly cleaned — that favorite couch might have to go; 6) hire a professional to clean affected areas of the building with appropriate materials — often a solution of 10 percent bleach is used.

In addition to allergic reactions, mold has other negative effects. The organisms release substances, volatile organic compounds or VOCs, that people can smell even at low levels. The musty odor is disagreeable and can make a person react at an emotional level. "If you feel sick when you smell mold, make sure what's making you sick is the mold and not the emotions associated with the smell," Wedner says.

Mold can also damage a building structurally. It releases enzymes to breakdown cellulose, a major component of wood.

Wedner indicates that although molds release natural toxins, called mycotoxins, these don't cause problems to people who live in moldy houses because the toxins don't diffuse into the air. The only way to be exposed to them is to swallow them.

Recently, a mold called *Stachybotrys*, a greenish-black, slimy mold found on wood or paper that has been wet for several days, has gotten a lot of attention. Some claim *Stachybotrys* is the cause of sick building syndrome, in which people occupying a building have a variety of symptoms such as headaches; eye, nose and throat irritation; dizziness; fatigue and breathing problems. But Wedner says *Stachybotrys* itself has little to no affect on health. "*Stachybotrys* is a mold that needs a lot of water," he says. "So it's a sign that there has been a lot of water in the building. But it's not toxic, and people generally aren't allergic to it."

In addition to *Stachybotrys*, flooded homes will also foster molds that require less water, such as *Aspergillus* and *Penicillium* — bread and cheese molds and common components of mildew. These molds and others like them are the source of allergic reactions in sensitive individuals.

Wedner is currently studying the role of fungi and fungal allergens in asthma, with particular emphasis on the role of fungi in the inner-city setting. The data demonstrates the marked prevalence of fungi in many homes in the St. Louis area and points out the importance of fungal allergens in asthma and allergic rhinitis. With Anupma Dixit, Ph.D., assistant professor of community health in the Division of Environmental and Occupational Health at Saint Louis University School of Public Health, Wedner is also continuing to study the health effects of home flooding.

Source: Washington University in St. Louis

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