

EcoWellness: Mold a mushrooming problem?

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As people displaced by Hurricane Katrina begin to trickle back to their old homes, many are developing vague upper respiratory symptoms -- tightness of the chest and coughing -- that some have coined "Katrina cough."

The exact cause is still unknown, but doctors and environmental health specialists believe the vast amounts of dust and mold infiltrating the hurricane-affected areas are to blame. Buildings still damp from high floodwaters have quickly become hotbeds for bacteria and mold.

Although a cataclysmic event such as Katrina is rare, indoor mold in the average American home is becoming more common and arguably more harmful, worsening asthma and leading to serious health problems, experts tell EcoWellness.

"(Katrina) is definitely an extreme example of what we're finding everywhere else," said Ron Gallo, a certified indoor air quality manager and a director at RTK Environmental Group, an environmental testing service in Connecticut and New York. "Mold is turning up in anyone's potential home." Molds are vibrantly col-

ored fungi that grow on virtually any organic surface -- including wood, paper and foods. They thrive in moisture-ridden areas such as basement walls, sinks and bathroom tiles, slowly digesting and destroying whatever they grow on. Outdoors, molds break down leaves and plant debris; without them, the world would be awash in decomposing matter.

Although many people conjure up images of old, drafty homes as perfect habitats for mold, it's actually the newer homes -- ones constructed quickly with mold-friendly materials such as sheetrock -- that are the most prolific breeding grounds. Poor caulking under the windows, inadequate runoff areas around the house, leaky pipes and other such slip-ups can all create mold.

Older homes breathed better than today's tightly sealed houses, making mold contamination a more recent phenomenon, Gallo said.

The fungi are also equally prevalent in low-income neighborhoods, where home maintenance can be costly.

"It's going across socioeconomic lines," said Dr. Jonathan Bernstein, a

professor of clinical medicine at the University of Cincinnati and a researcher on indoor pollutants.

So far, management of mold has been polarized by those who overreact to its health effects and those who discount it as a non-issue.

"There's a lot of misperceptions about mold," said Dr. Gina Soloman, a senior scientist at the National Resources Defense Council, an environmental advocacy group.

"Many people don't take mold seriously enough ... and some people freak out about it more than they need to. The appropriate reaction is to get rid of it," said Soloman, a mold expert and physician who traveled to New Orleans in 2005 to assess the environmental conditions of Katrina-ravaged homes.

Most scientists agree mold in its various forms can cause headaches, breathing difficulties and skin irritation in people. The respiratory ailments associated with molds, specifically the allergic reactions and asthma attacks, are the most well-documented.

Molds work by either irritating the body or evoking an immune-system response. Mold spores, which are invisible to the human eye, are allergens that can interact with the immune system. A serious illness, hypersensitivity pneumonitis, can be triggered by long-term exposure to organic dusts, molds and bacte-

ria. A person with the condition will have chronic relapses and recovery of lung inflammation and pneumonia-type symptoms.

Molds also produce irritating airborne chemicals called microbial volatile organic compounds (mVOCs) that are similar in impact to petroleum by-products in household cleaning products. They can lead to headaches, dizziness, fatigue and nausea.

Another example of mold irritation is organic dust toxin syndrome, a mild, short-lived condition with symptoms similar to the flu -- cough, fever, chills and muscle pains.

When molds try to out compete other molds, they may also create mycotoxins, which include the greenish-black stachybotrys mold of "killer mold" fame.

After a spate of infant deaths from pulmonary hemorrhage -- or bleeding lungs -- in Cleveland in the mid-1990s, speculation swirled around the possibility of a connection between bleeding lungs and stachybotrys, or "killer mold."

However, the link is still unproven, and "the media has blown things out of proportion, at least relative to what we have in hard medical evidence," said Joe Ponessa, an extension specialist and professor in housing indoor environments and health at Rutgers Cooperative Extension in New Brunswick, N.J.

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Ponessa said that although stachybotrys is a potent toxin, mold doesn't make it that often.

"You would need millions of spores to cause significant toxic effects," added Bernstein, who is also doubtful of the "killer mold" assertions.

Since mold is everywhere on Earth -- it has even been found on an aircraft at 30,000 feet -- "none of us spend time in a mold-free environment," Ponessa said. People have evolved with the organism, and so the human body's response to mold varies dramatically. Asthmatics, for example, might experience a terrible attack from spending time in a mold-infested house, whereas another person might have no reaction.

The potency of mold exposure might also depend on a person's immune system -- for instance, people with HIV, advanced stage cancer, or the very old and young will be more susceptible to health problems. In general, the more exposure to mold a person has, the more susceptible he becomes. People who work in a moldy building for years will often develop allergic reactions, Ponessa said.

There's no good data on how many people in the United States have mold-related health conditions, Bernstein said. Many of the symptoms people report are poorly defined

and non-specific, and could also be explained by colds and allergies.

But if health problems begin when someone enters a building and go away when that person leaves, it's fairly obvious an indoor pollutant is the reason, Ponessa added.

Luckily, most of the health effects of mold can be reversed by removing the fungi from the home. Bernstein recommends getting homes tested by an environmental expert, especially if a resident sees or smells mold.

Gallo's business has received more calls for indoor pollutant testing, including mold, in recent years. Gallo recommends a course of action for the owner after examining the house, which could mean cutting out certain parts of insulation or dry-wall.

When homeowners want to preserve walls by washing them of mold instead, Gallo warns them it's like "trying to wash a box of tissue" -- in a word, impossible.

In New Orleans, residents may need to strip their mold-covered homes down to the studs, said Soloman, who found the highest mold levels she had ever seen reported in the flood-damaged areas.

Soloman recalled walking down the middle of the street in New Orleans, a month after Katrina

struck, and being overpowered by the smell of mold. Inside the homes, she saw fungi that grew in thick, multi-colored, hairy mats on the walls.

Even with a respirator, Soloman had a perpetually runny nose. She talked to residents who complained of congestion, aching sinuses, coughing and a persistent, annoying tickle at the back of their throats.

Even so, some scientists insist the health effects of indoor pollution and mold are being blown out of proportion, Bernstein said.

"I challenge people who don't believe this problem exists to live in a home with a significant mold and mildew," he said, "and see how long they survive."

