

## MOLD: A Health Alert

It started with a series of leaks. Within a year, Melinda Ballard's 11,500-square-foot Texas dream home was quarantined; her 3-year-old son, Reese, was on daily medication to treat scarred, asthmatic lungs; her husband, Ron Allison, had lost his memory along with his job; and the family was living out of suitcases and locked in a seemingly endless battle with their insurance company. The problem? Household mold.

"I call it the house of pain," Ballard says, sitting at the gazebo by the fishing pond, a quarter-mile from the abandoned house on the hill. Nobody enters that house anymore, except when Ballard puts on a HEPA respirator once a week to make sure the air conditioning is still running. That's the only thing keeping the mold at bay.

"It was our Shangri-La," the New York heiress says of her 72-acre estate in Dripping Springs, just west of Austin. "It was nirvana. Then we come to have *Stachybotrys*."

*Stachybotrys atra* (pronounced Stack-ee-bot-ris) is an especially lethal mold. It's part of a family of molds (others are *Memnoniella* and *Aspergillus versicolor*) that produce airborne toxins, called mycotoxins, that can cause serious breathing difficulties, memory and hearing loss, dizziness, flulike symptoms, and bleeding in the lungs. In 1996 and 1999 studies by Eckardt Johanning, M.D., of the Eastern New York Occupational and Environmental Health Center, people with prolonged exposure to mycotoxins from *Stachybotrys* and other fungi experienced chronic fatigue, loss of balance, irritability, memory loss and difficulty speaking. "These were college graduates who had been functioning at a high level, and now they can't," Johanning says.

Fortunately, *Stachybotrys* isn't found in homes as often as milder molds such as *Cladosporium*, *Penicillium* and *Alternaria*. Those are common, especially in damp states such as Texas, Louisiana, Florida and Oregon. Yet even they can cause health problems, including chronic sinus and respiratory infections and asthma. A 1999 Mayo Clinic study pegged nearly all the chronic sinus infections afflicting 37 million Americans to molds. Recent studies also have linked molds to the tripling of the asthma rate over the past 20 years.

How common are these molds? A 1994 Harvard University School of Public Health study of 10,000 homes in the United States and Canada found half had "conditions of water damage and mold associated with a 50 to 100% increase in respiratory symptoms," says Harvard's Jack Spengler.

When molds grow, it's usually in damp places, behind walls and under floors, above ceiling tiles or behind shower walls -- wherever there are wet cellulose materials they can feed on, such as wood, ceiling tiles, plasterboard, or accumulations of organic material inside air-conditioning and heating systems. Water is the key. Without it, molds can't get started, much less spread. But when water is left to sit for even 24 hours, common molds can take hold. If water continues to sit and areas become completely saturated, that's when a more lethal mold, such as *Stachybotrys*, can move in.

In Michigan, Wisconsin and Minnesota in the mid-1980s, thousands of middle-income families fell ill when their homes developed mold problems. This year in New York City, 125 families at Henry Phipps Plaza South filed an \$8 billion mold lawsuit against their landlord. And four years ago in Cleveland, *Stachybotrys* growth from unrepaired storm damage was suspected of causing pulmonary hemorrhage in 14 children, killing two.

## **Why new homes are moldier**

What's behind the sudden mold epidemic? Experts point to modern home design, including materials used, such as fake stucco (great mold food when wet); the way insulation can trap moisture behind walls; and the fact that today's homes, like office buildings, are more airtight, with air-conditioning and heating systems recirculating contaminated air. Families can go for months, even years, without knowing where their symptoms are coming from.

New houses are more prone to mold problems than older houses, but a bad leak in any house anywhere in the country can cause a mold problem if not properly taken care of (see tips at bottom).

And what starts as a small mold problem can grow to consume a home. Melinda Ballard and Ron Allison's house can't even be bulldozed until men in moon suits cut out the *Stachybotrys*-infested timber, flooring and wallboard, wrap it up and cart it off for burial. "That's the only safe way to get rid of the stuff," says David Straus, a mold expert with the Texas Tech University Health Sciences Center, who found himself throwing up hours after spending just 30 minutes inside Ballard's house. "I'm still not entirely over it," says Straus, who has severe hearing loss in one ear from his exposure to the mold.

Melinda Ballard believes her child or husband would have died if providence had not intervened. Their house's copper plumbing sprang a series of leaks starting in 1998. That December, the hardwood floors in the living and dining rooms began to warp. By March 1999, the family (as well as the groundskeeper and nanny) were suffering from headaches, dizziness and fatigue, then respiratory and sinus problems. Not your ordinary runny noses, but profusely bloody runny noses. "It was grotesque," Ballard recalls. "We would cough up the hardest stuff you've ever seen. It was blood, but it was hard as a rock."

Everyone tested negative for allergies, so no one associated the symptoms with the house. Then, on an April 1 plane trip from Austin, Ballard ran into indoor-air-quality consultant Bill Holder. "He saw me coughing up blood," she recalls, "and he said, 'What's wrong with you?' I said, 'I don't know. We can't figure it out.' His next question was, 'Had any water damage to your house recently?'"

Holder was on his way to Dallas. He stopped by Dripping Springs on his way back and took samples. "There was visible mold growing everywhere," Holder says. He sent the samples to Straus at Texas Tech, who came back on April 23 with a level-4 *Stachybotrys* diagnosis, advising Ballard and Allison to evacuate immediately. They checked into a Four Seasons hotel -- and that's when Allison realized he couldn't remember his room number.

The former investment banker now carries a note pad to keep track of such things. "It got continually worse," he says, his voice slow and deliberate. "I started slipping at work. The president of the company was asking, 'What's wrong with Ron?' The last few weeks, I just sat there and stared at my screen." He stops for a moment. "It's hard to accept," he says. "You work long and hard to get to a point where you're proud of yourself, and then you go from that to ..."

"Mowing the lawn," Melinda interjects. "At 33, he basically has to retire."

It will be several years before 3-year-old Reese is old enough for cognitive testing. Then there's the ongoing battle with Farmers Insurance, which, Ballard insists, knew about the danger to her family and did nothing to alert or protect them. Ballard has filed a \$100 million suit against Farmers. In it she claims, among other things, that Farmers ignored repeated warnings from Richard Roberts of Double R Hardwood Floors that buckling floors had to be removed immediately or else "dangerous molds" could grow.

In addition, Hays County District Attorney Michael Wenk has initiated a grand-jury investigation to consider criminal charges against the insurance company in its handling of Ballard's claim.

Farmers Insurance spokesman Bob Huxel told USA WEEKEND magazine that "Mr. Roberts did not make repeated warnings to Farmers that dangerous molds could grow." He says Farmers is aware that toxic molds can be a health threat and that *Stachybotrys* can be neurotoxic. "We believe all of that," Huxel says, "because we know it's true."

Today, signs posted around Melinda Ballard's house read: "DO NOT ENTER -- BIOHAZARD." It will be years before Ballard and her family see any kind of normal life again. "I just want everyone to know *Stachybotrys* is something that can happen to them," Ballard says.

Arnold Mann, a contributing writer for *Time magazine*, last wrote for USA WEEKEND about laser eye surgery.