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Exorcizing A Mold Monster

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A few days before settlement on their new townhouse in Gaithersburg's Quince Orchard Park, Elizabeth and Gary Gensler discovered black fuzz on the basement walls. The Genslers scrambled to find a company to test the substance but closed on the house before receiving the results.

To their horror, they eventually learned that many of the basement rooms and wooden trusses supporting the ceiling and first floor were covered with mold. Elizabeth Gensler, a television writer and producer, said she suffered a severe allergic reaction to the mold and spent months trying to persuade the builder, Stanley Martin Cos., to clean it up.

"We bought the house in 1999," she said. "Back then, no one knew much about mold. There were few specialists and Internet sites to give you information."

Today, Gensler cites mold species and statistics like an expert. She and her husband are one of 14 households in Quince Orchard Park that have filed a lawsuit against Stanley Martin Cos. and the manufacturer of the wood trusses, Universal Forest Products Shoffner.

Even though the builder cleaned up the mold, the Genslers have moved out of their three-bedroom townhouse to a smaller rental apartment in Rockville. "There's no guarantee that the mold is gone," Elizabeth Gensler said. Now expecting their first child, the Genslers say they are not taking any health risks and sold their Gaithersburg townhouse this month.

"Our reports say the houses are clean," said Steve Alloy, president of Stanley Martin. "We hired the environmentalist recommended by the homeowners and a remediation company that cleaned the mold. We paid for rental housing for the owners while the homes were being cleaned. We did everything the homeowners asked us to do."

This dispute between the Gaithersburg homeowners and the builder is typical of the controversy over mold. In the past two years, the furry fungus has become a major fear factor for homeowners concerned about the safety of their health and property. Worst-case scenarios about the spread of mold and its toxic effects have been widely publicized by high-profile lawsuits, including those filed by entertainer Ed McMahon and citizen activist Erin Brockovich.

"Mold will exceed asbestos, radon and lead paint in terms of lawsuits and insurance claims," predicted Doreen Eiserman, general manager of Homesteaders Home Inspection in Baltimore. Eiserman said 2 out of 10 of her company's home inspections reveal some type of mold.

Fueling the hysteria is the lack of agreement over mold's effects on health and the best ways to clean and prevent its spreading spores. "There are no standards for mold," Alloy said. "Any time you open a door or a window, mold comes into your house. The question is, at what level should you be concerned?"

The debate over mold has home inspectors and real estate agents scrambling to learn more about the fungus so they can alert home sellers, buyers and owners about potential dangers. A recent Long & Foster Real Estate Inc. newsletter, for example, warns about the "fungus among us" and reviews ways to clean up toxic mold.

Yet experts concur that mold offers little reason to panic. "Most houses with mold do not necessitate massive containment with guys in hazmat gear," said Matthew Cooper, president of the Patuxent Environmental Group in Dunkirk, Md., a company that specializes in diagnosing mold. "For the vast majority of cases, it's not that difficult to clean."

Many people mistakenly think they should have no mold in their homes, Cooper said. "That's impossible. Mold is everywhere," he said. "Indoor mold should be equal to or lower than the mold outdoors, but not zero."

Mold begins growing inside a house when airborne spores land on a wet surface containing some organic source of food. Common food sources for mold include wood, gypsum fiberboard, paper and other fibrous building products.

Moisture is also essential for mold growth. The amount of water required for growth varies according to the species. For example, the notorious black mold called *Stachybotrys chartarum*, which produces toxins and has been linked to allergic reactions and respiratory illnesses, requires so much moisture to grow, Cooper said, that it is often found in only small amounts. "Unless conditions are perfect," he says, "it loses out to other molds." (This is the variety that some people call "killer mold.") A more common black mold is *cladosporium,* which grows on plants and wood but produces no major toxins.

Mold is identified by its speckled, fuzzy growth, which ranges in color from black and white to green and pink. Since it is often hidden from view in walls and ceilings, mold is often discovered because of its musty smell. Blistered paint, water condensation, stains and swollen floorboards may also indicate the presence of mold.

Once mold has been discovered, experts recommend fixing leaks or water seepage to prevent the spread of spores. Common sources of moisture include cracks around the foundation that allow water to enter basements; poor drainage around the house; and leaky pipes and air conditioners.

Indoor humidity should also be kept in check to prevent excessive dampness. The Environmental Protection Agency suggests no more than 60 percent, while the Centers for Disease Control recommends keeping it at less than 40 percent.

In newer houses, the source of mold may not be a leak but instead mold-infested building materials, such as wood and drywall delivered to the construction site. Rainwater soaking into homes while they are being erected can also cause mold.

During a construction inspection of their new four-bedroom townhouse in Belmont Bay, a development on the Occoquan riverfront in Woodbridge, John and Tara Quinnette discovered green, white and black mold on the party walls and foundation. "They didn't put the roof on quickly enough," Tara Quinnette said. "So the house was exposed to moisture for at least for two months." The Quinnettes say they spent $680 to have the house tested for mold and doled out another $550 to an environmental consulting firm to review the builder's assessment of the mold problem before it was cleaned up.

A basic assessment for mold -- visual inspection, moisture meter readings and three test samples -- can cost about $500, Cooper said. Some experts, however, say testing is unnecessary because there are no standards for determining acceptable levels of mold. And no matter what species the mold, it must be removed in the same way.

The jump in mold-related claims has led insurance companies to in some cases increase rates, reduce coverage and stop writing homeowner policies. Typically, mold cleanup is covered by insurance only if it is caused by sudden damage, such as water from a burst pipe. "Mold as such is excluded from homeowner policies," said Carolyn Gorman, vice president of the Insurance Information Institute. "It's considered to be a maintenance problem like rust or a leaky roof."

"Testing can be expensive and inconclusive," said Jamie Lyons, director of energy and environmental programs for the National Association of Homebuilders Research Center in Upper Marlboro. "Even if tests indicate mold, then you'll still have to eliminate the moisture source and clean it up."

Moldy surfaces that are 10 square feet or less in size can be safely cleaned up by homeowners with detergent, according to guidelines set by the EPA and state health agencies. Fungicides developed for outdoor use are not recommended, as they can pose health hazards.

Wood affected by mold can be scrubbed with a wire brush and sanded. Metal, concrete and glass can be cleaned and reused, but moldy porous materials, such as drywall, ceiling tiles, batt insulation and carpet, should be removed and replaced.

While cleaning mold, people with allergies should wear protective gear such as rubber gloves, goggles and respirators. Clothing should be washed after the cleanup is complete.

The EPA, the New York City Department of Health and the California Department of Health Services offer guidelines on the Internet for mold abatement based on the size of the moldy area.

"Remember that those are only guidelines," said Rich Hargrove, director of ServPro, a company that has cleaned up mold at the Pentagon. "You can make mold worse by disturbing it and releasing spores that may contaminate the rest of the house."

Added Eiserman, "People don't realize mold is very light [in weight]. If they disturb it and don't do it under proper guidelines, it can land somewhere else and come back."

To prevent spores from spreading, mold-affected surfaces and ventilation ducts should be covered with plastic sheets to contain dust and debris.

Mold-contaminated areas larger than 10 square feet should be cleaned up by professional contractors trained in what's called mold remediation, according to experts. Contractors from ServPro and ServiceMaster, for example, are required to attend a three-day course in mold identification and removal based on EPA, OSHA and state guidelines and to pass an exam administered by the Indoor Air Quality Association.

Remediation specialists follow a set of guidelines called a protocol that is typically determined by an environmentalist or industrial hygienist after the mold has been tested. In choosing a remediation expert, says Lyons, beware of firms linked to a testing company. "Testing is often used to measure the need for and effectiveness of remediation, so these two roles are best left separate."

Professional mold removers wear protective gear, seal off contaminated areas and use high-efficiency particulate-air vacuums to clean surfaces affected by mold after the polluted materials have been removed. This process isn't cheap. Hiring a remediation specialist to clean up mold within a 10-square-foot area and conduct a follow-up inspection can cost up to $2,500, according to Cooper. He estimates that the cost of containing and cleaning up mold within 10 to 100 square feet, plus taking test samples, ranges from about $5,000 to $15,000, depending on the size and complexity of the mold problem.

After the cleanup is complete, the areas affected by the mold should be routinely inspected to confirm the effectiveness of the remedy. Dead mold may still cause allergic reactions, so removing the source of the mold is as critical as killing the spores.

Many believe mold problems can be traced to today's tightly sealed, energy-efficient homes. "They are built like Tupperware," said Greg Gandee, vice president of ServiceMaster of Alexandria, Washington and Fort Washington.

His home-maintenance company does mold remediation work. "Water goes in and doesn't come out. It's ideal environment for mold." Newer homes are also built with an abundance of porous building materials -- paper-covered gypsum wallboard, plywood and oriented strandboard. When wet, these materials provide a food source for mold growth.

Others disagree that "tight" construction is responsible for growing mold. "Based on our investigations around the country, there is no clear evidence that newer homes have more mold than older homes," Lyons said. "There are advantages to newer homes in better-insulated windows and walls that keep water out."

With all the focus on fungus, builders are experimenting with a newer generation of mold-resistant products. They include fiberglass-coated drywall and mold-retardant coatings that can be applied to wood, concrete, brick, stucco and gypsum. Some local building codes, however, don't permit such alternative materials to be substituted for approved construction methods.

Congress, meanwhile, has entered the mold battle in an effort to fund more research and establish standards. In June, Rep. John Conyers Jr. (D-Mich.) introduced the U.S. Toxic Mold Safety and Protection Act, which calls for studies of mold growth and tax credits for mold remediation. The bill would create a national insurance program administered by the Federal Emergency Management Agency to protect homeowners from catastrophic losses related to mold. It would establish guidelines for certifying mold inspectors and remediation companies, and require modification of local building codes to help prevent mold. The bill is not expected to be taken up until next year's session of Congress, according to a Conyers staffer.

In Maryland, Gov. Parris N. Glendening established a state task force to examine health and environmental risks posed by molds, spores and other toxic organisms located in the heating and air-conditioning systems of office buildings. The group's report, issued in June, concluded that the current scientific research on mold is inadequate to justify adopting statewide health standards. Most indoor air-quality problems, the report concluded, can be prevented by regular preventive maintenance and early correction of the problems.

To help pinpoint the ill effects of mold, the Centers for Disease Control has tapped the National Institute of Medicine to study and review all the existing research on mold. The institute's report will be handed to the CDC in mid-2003.

"We hope this compilation of findings will identify the gaps in our understanding of mold," CDC spokeswoman Bernadette Burden said. "From that we will determine the next steps in policy, research and evaluation of mold."