FAMILY FUNCTIONAL MEDICINE

Fungus Among Us

Is Mold Making You Ill?

That musty smell, that black stain in the corner, are they indications of a problem that might make you ill? For some people, the answer is yes. Whether at work, at home or in other buildings you frequent, it can make you sick, and you may not even know it. It is MOLD. Take for example Jane and her family. Jane is a business executive with three school age children. She took care to provide the family a healthy diet of home prepared, organic foods. Everyone in the family was healthy, active and did well in school and work.

Suddenly things changed. The youngest child age 8, developed asthma and was hospitalized with bronchitis. The middle child, who was normally active and athletic, complained of fatigue and weakness. He became unusually irritable, depressed and his grades dropped. The oldest, in middle school, developed frequent headaches and abdominal pain. Jane herself, had trouble concentrating at work and was forgetful. She noticed she was having trouble seeing her computer screen, but thought it was because she was getting older. One day, a plumber was called to repair the dishwasher, and noticed a dark stain behind the appliance and under the sink. There had been an undetected leak in the water line for some time. Very wisely, the plumber recommended testing the area for mold. The sample revealed three different kinds of mold, one of which was *Stachybotrys*, also know as, “Toxic Black Mold”. The leak was repaired, then the area was safely and professionally cleaned. Jane and the children underwent treatment for the toxic exposure and most of their symptoms were eventually resolved. Jane’s story is not an actual case but used to demonstrate the varied effects of mold.

Common Symptoms of mold-related illness are…

- Fatigue and weakness
- Headache, light sensitivity
- Poor memory, difficulty finding the right word to communicate
- Red and/or teary eyes, blurred vision
- Difficulty in maintaining concentration
- Morning stiffness, joint pain
- Shortness of breath, sinus congestion or chronic cough
- Appetite swings, body temperature fluctuations

- Abdominal pain, bloating, diarrhea, constipation
- Increased urinary frequency or increased thirst
- Mood swings, sharp pains
- Disorientation, metallic taste in mouth
- Vertigo, feeling lightheaded

How could a little leak cause some much illness?

Mold-related reactions and health risks are very common, so why do we not hear more about these mold-related illnesses? As in Jane's story, toxic mold exposure causes varied and sometimes vague effects. Each person in the family had different symptoms and Jane's spouse was unaffected. Some people are genetically more susceptible to the effects of mold. It is estimated that 25% of the American population carries the HLA-DR gene, making them susceptible to mold and its toxins. People with this gene cannot clear toxins from their bodies and tend to have more allergies. Some molds are very allergenic. However, allergy to mold is only one of the ways that mold affects the body. Molds also cause irritation to tissues, cause infections, disrupt the immune system, cause diffuse inflammation, and alter hormone production.

Mold is a type of fungus, like a mushroom, that spreads by spores through the air. Mold and mold spores can be found indoors, outside, and in food. Microscopic spores are easily spread and can survive harsh environmental conditions for long periods of time. When mold spores are in warm moist conditions they begin to grow, feed and produce more

spores. Commonly called “Black Mold”, *Stachybotrys* grows on buildings or other surfaces that have high cellulose content, such as wood, fiberboard, sheetrock, paper, dust, and lint. This mold requires constant moisture such as the conditions in Jane’s kitchen with a plumbing leak.

Like most living organisms, mold has mechanisms to protect itself and compete for food. Mold produces toxins called, mycotoxins, to compete with other microscopic organisms. Different molds produce different mycotoxins which can be measured in the body of people exposed to the mycotoxin. For example, Aflatoxin is a mycotoxin produced by *Aspergillus* mold. It can be found in or on foods that are stored such as animal feed, rice, seeds, and peanuts. According to the CDC, *Aflatoxin* is a cause of liver disease and liver cancer.

Stachybotrys produces a mycotoxin called Trichothecene which is used as a biological weapon because it is extremely toxic and difficult to destroy. Trichothecene can be absorbed through the skin, ingested, and inhaled, causing damage to various organ systems and altering the immune system. A weak immune system allows bacteria and other infections to grow, especially in sinuses and lungs.

You may have mold exposure or mold sensitivity if you answer yes to some of these questions.

- Do musty odors, chemical smells or perfume bother you?
- Have you worked or lived in a building where the air vents or ceiling tiles were discolored?
- Have you noticed water damage or discoloration elsewhere?
- Has your home or workplace been flooded?

- Any leaks in the roof or air conditioners not draining properly?
- Have you experienced a sudden decline in health?
- Do you experience unusual shortness of breath?
- Do you experience recurring sinus infections?
- Do you experience recurring respiratory infections and coughing?
- Do you have frequent flu-like symptoms?
- Do your symptoms worsen on rainy days?
- Do you have frequent headaches?

If you think you have mold in your home.

Do not panic! Household mold is common, especially in bathrooms, and not all mold cause illness. Most molds can be cleaned up without hiring a professional or using harsh chemicals. However, if you think you are ill from the mold you may want someone else to clean up. When cleaning mold it is important to protect yourself.
Wear gloves, eye protection, and a Half Mask Respirator from a hardware store which costs around $25. Clorox is not recommended because it gives off a strong gas and odor which is irritating especially if someone is chemically sensitive after mold exposure. Surface mold such as in bathrooms should be sprayed with a cleaner which is left on the area for about one hour before wiping. Mix one cup of Borax with one gallon of water or make it into a paste which works as well as does hydrogen peroxide. Grapefruit Seed Extract, 20 drops in two cups of water in a spray bottle is another natural treatment. Undiluted white distilled vinegar or Vodka diluted with equal parts water, also work well and is safe around food, children, and pets, as long as they do not drink it.

Moisture control is critical! Mold cannot grow without the right conditions. Leaks need to be completely repaired, and good ventilation is maintained. Bathrooms and damp areas need a vent and/or dehumidifier. Basements and crawl spaces may need improved drainage, sump pumps, and a dehumidifier.

If you smell a musty, moldy odor or have extensive mold growth, an air quality specialist may be needed for professional testing. Do-it-yourself mold testing kits are not reliable. In Greensboro, Environmental Solutions Group is a good resource and can also be a guide in the remediation of water-damaged areas. If you hire a contractor for repairs or a remediation company, make sure they take care to remove mold-contaminated objects in a way to prevent the spreading of mycotoxins and mold spores. Contaminated objects should be bagged for removal, and not carried through the building exposed. HEPA filters should be used and a vacuum with a HEPA filter used for clean-up, not a standard vacuum.

Recovery from Mold Related Illness.

Unfortunately, many conventional healthcare providers are not trained in how to detect and treat mold-related illness and exposure to mycotoxins. Therefore, people affected by mold toxins are often treated for depression, anxiety, or other illness and they do not get better. Mold exposure can be confirmed by checking blood for antibodies to certain molds, checking for metabolic markers, and checking for the presence of mycotoxins. Mycotoxins and other toxins often affect the neurological system causing a decrease in the ability to see details at low contrast levels, Visual Contrast Sensitivity (VCS). Testing is available to measure

VCS with a small device or can be done on a computer. The website, VCSTest.com offers at-home testing and results can be shared with a physician to aid in diagnosis and monitor recovery.

If you think you are ill from mold exposure, you do not have to wait for testing. Remove yourself from the building; go on vacation, for 3 to 5 days. If your symptoms improve, then investigate the building for mold or water damage. Avoiding the infected location is the first step to treatment. Other treatments involve removing toxins from the body, treating infections such as sinusitis, and healing affected tissues. Often mold exposed people develop autoimmune disorders such as thyroiditis, chemical sensitivities, and new allergies. This is due to an altered immune system which must also be treated. Unfortunately, treatment for mold-related illness is not a quick fix with one pill. Recovery time depends on the severity of a person's illness, the length of exposure, and other medical conditions they may have.

Dietary changes also help in recovery from mold-related illness. Many foods have mold and fungus proteins which can make mold-related illness worse so are best avoided or limited in affected people. The meat substitute, Quorn is made from a mold and mushrooms are a fungus so these should be avoided. Fermentation involves mold and therefore mold proteins will be in fermented products such as beer, wine, and soy sauce. Canned tomato products such as tomato paste, ketchup, and spaghetti sauce are frequently made of older, moldy tomatoes and contain mold proteins. Fresh, unblemished fruits and vegetables are preferred. Leftovers should be refrigerated and eaten within 24 hours.

Exposure to water-damaged buildings and molds can greatly affect a person’s health, but there is hope. Finding and removing the source or sources of mold exposure is the first step. Maintaining an environment that does not allow mold growth and monitoring for leaks is important to prevent further exposure to mold. People that are affected by mold and mold toxins can be diagnosed and recovery is possible with appropriate treatment.

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