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Questions and Answers on *Stachybotrys chartarum* and other molds

Q 1. I heard about toxic molds that grow in homes and other buildings. Should I be concerned about a serious health risk to me and my family?

A. The hazards presented by molds that may contain mycotoxins should be considered the same as other common molds which can grow in your house. There is always a little mold everywhere - in the air and on many surfaces. There are very few case reports that toxic molds (those containing certain mycotoxins) inside homes can cause unique or rare, health conditions such as pulmonary hemorrhage or memory loss. These case reports are rare, and a causal link between the presence of the toxic mold and these conditions has not been proven. A common-sense approach should be used for any mold contamination existing inside buildings and homes. The common health concerns from molds include hay-fever like allergic symptoms. Certain individuals with chronic respiratory disease (chronic obstructive pulmonary disorder, asthma) may experience difficulty breathing. Individuals with immune suppression may be at increased risk for infection from molds. If you or your family members have these conditions, a qualified medical clinician should be consulted for diagnosis and treatment. For the most part, one should take routine measures to prevent mold growth in the home.

Q 2. How common is mold, including Stachybotrys chartarum (also known by its synonyn Stachybotrys atra) in buildings?

A. Molds are very common in buildings and homes and will grow anywhere indoors where there is moisture. The most common indoor molds are Cladosporium, Penicillium, Aspergillus, and Alternaria. We do not have accurate information about how often Stachybotrys chartarum is found in buildings and homes. While it is less common than other mold species it is not rare.

Q 3. How do molds get in the indoor environment and how do they grow?

A. Molds naturally grow in the indoor environment. Mold spores may also enter your house through open doorways, windows, heating, ventilation, and air conditioning systems. Spores in the air outside also attach themselves to people and animals, making clothing, shoes, bags, and pets convenient vehicles for carrying mold indoors.

When mold spores drop on places where there is excessive moisture, such as where leakage may have occurred in roofs, pipes, walls, plant pots, or where there has been flooding, they will grow. Many building materials provide suitable nutrients that encourage mold to grow. Wet cellulose materials, including paper and paper

products, cardboard, ceiling tiles, wood, and wood products, are particularly conducive for the growth of some molds. Other materials such as dust, paints, wallpaper, insulation materials, drywall, carpet, fabric, and upholstery, commonly support mold growth.

- Q 4. What is Stachybotrys chartarum (stachybotrys atra)?

  A. Stachybotrys chartarum (also known by its synonym Stachybotrys atra) is a greenish-black mold. It can grow on material with a high cellulose and low nitrogen content, such as fiberboard, gypsum board, paper, dust, and lint. Growth occurs when there is moisture from water damage, excessive humidity, water leaks, condensation, water infiltration, or flooding. Constant moisture is required for its growth. It is not necessary, however, to determine what type of mold you may have. All molds should be treated the same with respect to potential health risks and removal.

- Q 5. Are there any circumstances where people should vacate a home or other building because of mold?

  A. These decisions have to be made individually. If you believe you are ill because of exposure to mold in a building, you should consult your physician to determine the appropriate action to take.

- Q 6. Who are the people who are most at risk for health problems associated with exposure to mold?

  A. People with allergies may be more sensitive to molds. People with immune suppression or underlying lung disease are more susceptible to fungal infections.

- Q 7. How do you know if you have a mold problem?

  A. Large mold infestations can usually be seen or smelled.

- Q 8. Does Stachybotrys chartarum (Stachybotrys atra) cause acute idiopathic pulmonary hemorrhage among infants?

  A. To date, a possible association between acute idiopathic pulmonary hemorrhage among infants and Stachybotrys chartarum (Stachybotrys atra) has not been proved. Further studies are needed to determine what causes acute idiopathic hemorrhage.

- Q 9. What if my child has acute idiopathic pulmonary hemorrhage?

  A. Parents should ensure that their children get proper medical treatment.

- Q 10. What are the potential health effects of mold in buildings and homes?

  A. Mold exposure does not always present a health problem indoors. However some people are sensitive to molds. These people may experience symptoms such as nasal stuffiness, eye irritation, or wheezing when exposed to molds. Some people may have more severe reactions to molds. Severe reactions may occur among workers exposed to large amounts of molds in occupational settings, such as farmers working around moldy hay. Severe reactions may include fever and shortness of breath. People with chronic illnesses, such as obstructive lung disease, may develop mold infections in their lungs.

Q 11. How do you get the molds out of buildings, including homes, schools, and places of employment?

A. In most cases mold can be removed by a thorough cleaning with bleach and water. If you have an extensive amount of mold and you do not think you can manage the cleanup on your own, you may want to contact a professional who has experience in cleaning mold in buildings and homes.

Q 12. What should people to do if they determine they have Stachybotrys chartarum (Stachybotrys atra) in their buildings or homes?

A. Mold growing in homes and buildings, whether it is Stachybotrys chartarum (Stachybotrys atra) or other molds, indicates that there is a problem with water or moisture. This is the first problem that needs to be addressed. Mold can be cleaned off surfaces with a weak bleach solution. Mold under carpets typically requires that the carpets be removed. Once mold starts to grow in insulation or wallboard the only way to deal with the problem is by removal and replacement. We do not believe that one needs to take any different precautions with Stachybotrys chartarum (Stachybotrys atra), than with other molds. In areas where flooding has occurred, prompt cleaning of walls and other flood-damaged items with water mixed with chlorine bleach, diluted 10 parts water to 1 part bleach, is necessary to prevent mold growth. Never mix bleach with ammonia. Moldy items should be discarded.

Q 13. How do you keep mold out of buildings and homes?

A. As part of routine building maintenance, buildings should be inspected for evidence of water damage and visible mold. The conditions causing mold (such as water leaks, condensation, infiltration, or flooding) should be corrected to prevent mold from growing.

Specific Recommendations:

- Keep humidity level in house below 50%.
- Use air conditioner or a dehumidifier during humid months.
- Be sure home has adequate ventilation, including exhaust fans in kitchen and bathrooms.
- Use mold inhibitors which can be added to paints.
- Clean bathroom with mold killing products.
- Do not carpet bathrooms.
- Remove and replace flooded carpets.

Q 14. I found mold growing in my home, how do I test the mold?

A 14. Generally, it is not necessary to identify the species of mold growing in a residence, and CDC does not recommend routine sampling for molds. Current evidence indicates that allergies are the type of diseases most often associated with molds. Since the susceptibility of individuals can vary greatly either because of the amount or type of mold, sampling and culturing are not reliable in determining your health risk. If you are susceptible to mold and mold is seen or smelled, there is a potential health risk; therefore, no matter what type of mold is present, you should arrange for its

removal. Furthermore, reliable sampling for mold can be expensive, and standards for judging what is and what is not an acceptable or tolerable quantity of mold have not been established.

Q 15. A qualified environmental lab took samples of the mold in my home and gave me the results. Can CDC interpret these results?

A 15. Standards for judging what is an acceptable, tolerable, or normal quantity of mold have not been established. If you do decide to pay for environmental sampling for molds, before the work starts, you should ask the consultants who will do the work to establish criteria for interpreting the test results. They should tell you in advance what they will do or what recommendations they will make based on the sampling results. The results of samples taken in your unique situation cannot be interpreted without physical inspection of the contaminated area or without considering the building's characteristics and the factors that led to the present condition.

Summary: In summary, *Stachybotrys chartarum* (*Stachybotrys atra*) and other molds may cause health symptoms that are nonspecific. At present there is no test that proves an association between *Stachybotrys chartarum (Stachybotrys atra*) and particular health symptoms. Individuals with persistent symptoms should see their physician. However, if *Stachybotrys chartarum (stachybotrys atra)* or other molds are found in a building, prudent practice recommends that they be removed. Use the simplest and most expedient method that properly and safely removes mold.

March 10, 2000 : MMWR Update: Pulmonary Hemorrhage/Hemosiderosis Among Infants --- Cleveland, Ohio, 1993-1996

Report to the CDC Working Group on Pulmonary Hemorrhage/Hemosiderosis - June 17, 1999

Some additional information on fungi and fungal diseases at the CDC Web site:

CDC/NCID Division of Bacterial and Mycotic Diseases: Fungal Diseases

NIOSH publication: HISTOPLASMOSIS: Protecting Workers at Risk

Emerging Infectious Diseases article: "Emerging Disease Issues and Fungal Pathogens Associated with HIV Infection" by Neil M. Ampel, M.D. University of Arizona College of Medicine, Tucson Veterans Affairs Medical Center, Tucson, Arizona, USA

Emerging Infectious Diseases article: "Coccidioidomycosis: A Reemerging Infectious Disease" by Theo N. Kirkland, M.D., and Joshua Fierer, M.D., Departments of Pathology and Medicine, University of California, San Diego School of Medicine and Department of Veterans Affairs Medical Center, San Diego, California, USA

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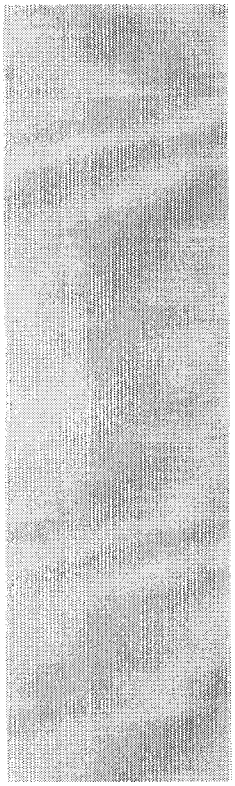
Indoor Air Quality Info Sheet



Mold in My Home: What Do I Do? March 1998

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