

Stachybotrys chartarum

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Fact Sheet

Environmental Health Programs
Office of Environmental Health & Safety



Fungi are a class of organism that includes yeasts, molds, mildews, and mushrooms. Fungi, other than mushrooms, live as single cells or as threadlike structures known as hyphae. Fungi reproduce through the production of spores. Spores can enter the air (be aerosolized); therefore, humans can come in contact with spores through skin and respiratory exposure. Fungi can produce secondary metabolites which include antibiotics (penicillin) and mycotoxins. These toxins may adversely impact human health. Some other metabolites are volatile organic compounds that cause musty, moldy smells. Fungi require water to grow and can tolerate a wide range of temperatures.

Stachybotrys chartarum

Stachybotrys chartarum is a black slimy mold that is common outdoors, but can also grow indoors if requirements are met. (Note: not all black molds are *Stachybotrys chartarum*.) It can grow on paper, sheet rock, and other high cellulose materials. Spores of wet mold do not easily enter the air. However, dry mold-contaminated material that is disturbed allows spores to be aerosolized resulting in the possibility of human exposure.

Health Effects

Stachybotrys chartarum may cause health problems from volatile gases or toxicity from inhalation or skin contact with toxin-containing spores. Toxic effects at relatively low doses include rashes, mild neurotoxic effects such as headache, nausea, muscle aches and pains, and fatigue. The immune system may also be affected resulting in a decreased resistance to infections. Health problems related to long-term (chronic) exposure to toxins have not been studied.

Sources

Stachybotrys chartarum requires large amounts of water to grow indoors. Mold may be found in areas that have been flooded, where roofs or walls leak, or where plumbing leaks create a wet environment. Often such wet areas are hidden and mold contamination may not be readily visible, yet can be extensive. Most homes have areas where warm moist air comes in contact with a cooler outside wall or window allowing condensation to form. This is also an area where mold may form. Growth is often visible and less extensive.

Remediation

It is important to determine the extent of the contamination. If the area is small and well

defined, clean-up can be done by the homeowner. If the problem is extensive, (e.g., between the walls, under the floor) a professional will be required. If in doubt, consult a specialist.

Control of *Stachybotrys chartarum* requires control of moisture. Roof, wall, and plumbing leaks must be repaired and the area thoroughly dried. Contaminated material must be cleaned or removed. Mold can be killed by treating with ¼ cup bleach in one quart of water. After rinsing, the area can be cleaned with soap and water to remove residues which could still be allergenic or toxic. It is important to wear personal protective equipment, especially gloves, eye protection, and a good dust mask when handling contaminated material and clean-up.

Testing

Testing for *Stachybotrys chartarum* is expensive; the results are difficult to

interpret and often inconclusive. If testing is necessary, consult the local health jurisdiction or the Washington State Department of Health ☐

Bibliography

- **Biological Contaminants in Indoor Environments**, P. Morey, J. Feeley, and J. Otten, ASTM, 1990.

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