

MOLD PREVENTION

An Overview



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BIOAEROSOLS

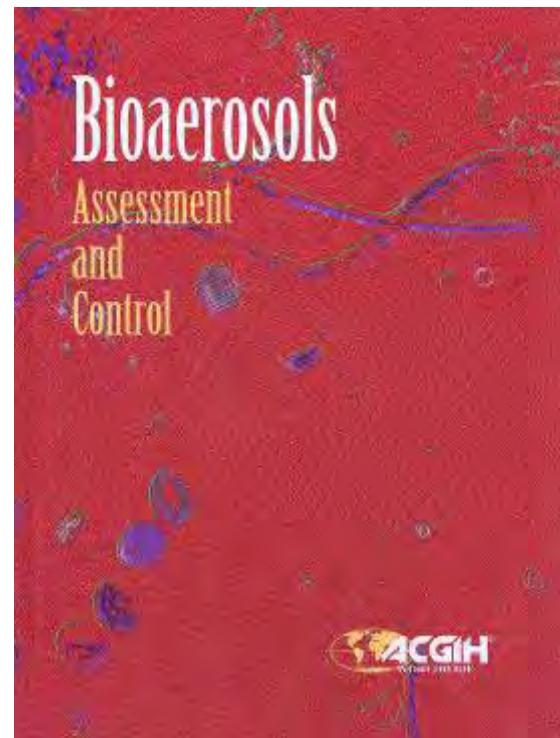
- * Definition:

- Any airborne material which originates from living organisms
 - * Viable & non viable molds & bacteria
 - * Viable and non viable viruses
 - * Fragments of any of the above
 - * Toxins (Mycotoxins & Endotoxins)
 - * Waste products (MVOCs)
 - * Pollens, animal dander, insect parts, etc.



RECENT PUBLICATION

- ★ Published in May, 2000
 - No exposure limit:
 - ★ No single entity...
 - ★ Responses too varied...
 - ★ No sampling methods...
 - ★ No dose-response data...



10 SECRETS OF MOLD

1

- * Health effects include allergies, asthma, and other respiratory issues
 - Known health effects
 - Not enough evidence to support other claims of adverse health effects
 - Risk Groups:
 - * cystic fibrosis
 - * steroid therapy
 - * chemotherapy
 - * ...hospital patients
 - * HIV and AIDS
 - * infants & elderly
 - * asthmatics



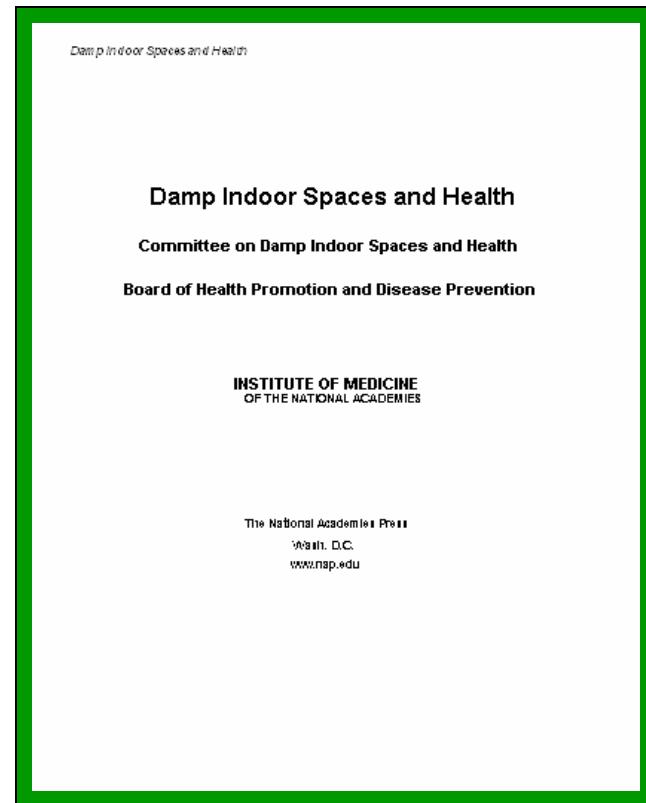
HEALTH EFFECTS

- * National Institute of Medicine
 - National Academy of Science
- * Issued (5/25/04) a report on mold “Damp Indoor Spaces and Health”
 - <http://www.iom.edu/>
 - * “recent reports” - “2004” - “Damp...”
 - stated:
 - * “sufficient evidence for upper respiratory tract symptoms, cough, wheeze, & asthma symptoms in sensitized person”



HEALTH EFFECTS

- “Damp Indoor Spaces and Health”:
 - * limited or suggestive evidence for “dyspnea, respiratory illness in healthy children, & development of asthma”
 - * inadequate or insufficient information to suggest more severe symptoms such as skin symptoms, fatigue, neurological, cancers, reproductive effects, immune diseases, AIPHI, and obstructive airways.



10 SECRETS OF MOLD

2

- * There is no way to eliminate all mold and mold spores from the environment
 - We actually need the mold in the outdoors
 - We don't need mold indoors - but it's very difficult to eliminate it
 - * \$\$\$\$\$\$\$\$\$\$



TYPICAL LEVELS

- * Phoenix metropolitan area
 - Typical calm outdoors (summer or winter)
 - * 1,000 to 3,000 spores per cubic meter of air
 - Typical outdoors (Seattle/Birmingham)
 - * 10,000 to 20,000 S/m³
 - Typical clean office building with well maintained HVAC & housekeeping
 - * 300 to 500 S/m³
- * Outside metropolitan areas
 - Typical outdoors: 300 to 500 S/m³



10 SECRETS OF MOLD

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- * Fix the source of the water problem
 - Immediately or during cleanup
 - Don't replace water damaged materials till fixed



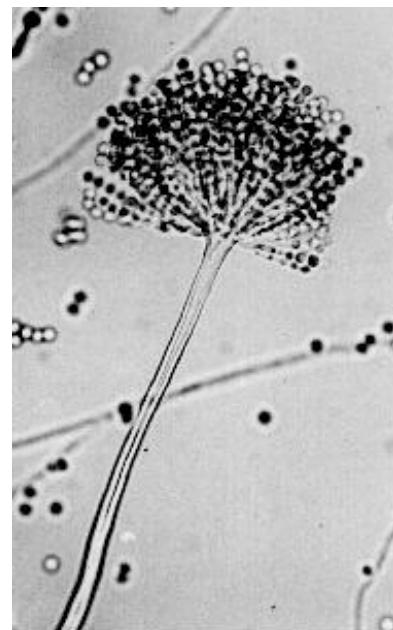
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- * You must clean up the mold and eliminate the moisture
 - Moldy materials must be removed from the building



FIX THE PROBLEM!

- * Removal of mold growth is only cure!!
 - Bioaerosols will continue to be released
 - Mycotoxins reside on the spores
 - Spores are tiny (3 - 20 μm) and can pass out of wall cavities
 - People with sensitivities will still react
 - Risk Groups could still be at risk



10 SECRETS OF MOLD

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- ★ Maintain indoor humidity to between 30% to 60% relative humidity.
 - Not much of a problem in Arizona!
 - In HVAC systems using chilled water...
 - ★ ducts lined on “inside” trap organics & water
 - Outside the arid Southwest humidity is a problem:
 - ★ dust mites/house mites



10 SECRETS OF MOLD

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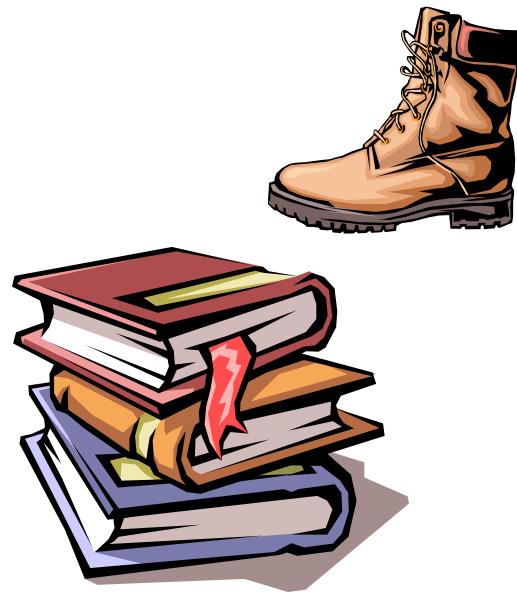
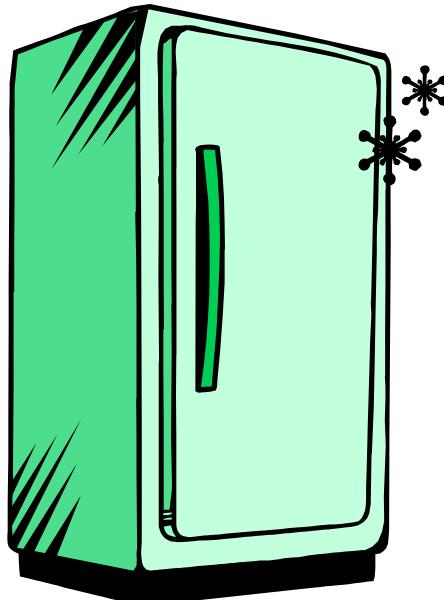
- ★ Clean and dry within 24 - 48 hours
 - Mold does not grow fast enough to become a problem within 48 hours
 - Pre-select a qualified contractor and consultant
 - ★ have their phone number close by



10 SECRETS OF MOLD

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- * Clean hard surfaces with water and detergent; absorbent/porous materials may need to be replaced



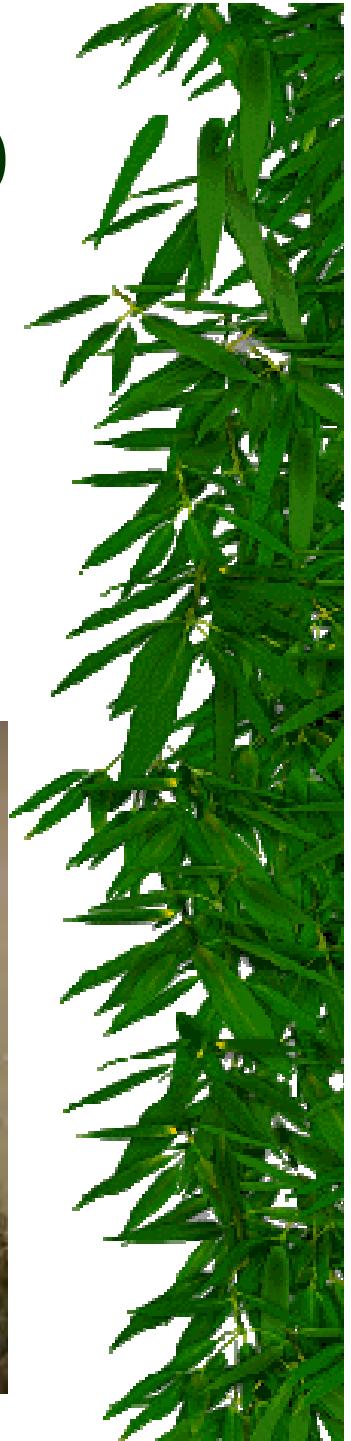
10 SECRETS OF MOLD

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* Prevent Condensation

- Water pipes are insulated to prevent condensation

- * Uninsulated piping leads to moisture dripping on walls and flooring



10 SECRETS OF MOLD

8

- * Prevent Condensation
 - Cold exteriors - Warm moist interiors
 - * Leads to condensation on windows and wet window sills and walls



10 SECRETS OF MOLD

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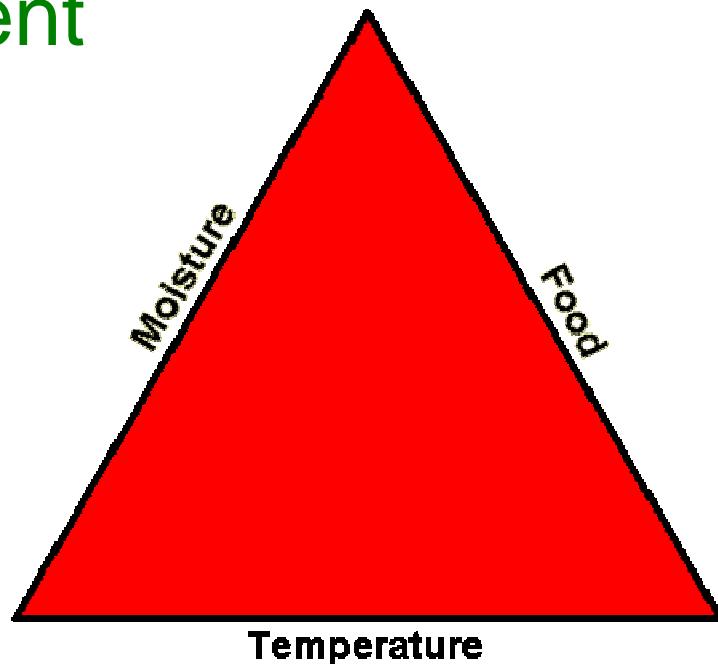
- * Do not install carpeting by drinking fountains, sinks, or on concrete with leaks or condensation
 - Many molds consider carpet backing an excellent food source
 - Carpeting acts as a “sink” for all kinds of organic debris (food source)
 - It is difficult, if not impossible, to “clean” carpeting once it gets “dirty”



10 SECRETS OF MOLD

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- * Molds can be found anywhere; they grow on virtually any substance if moisture is present



10 SECRETS OF MOLD

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- ★ Molds can be found anywhere; they grow on virtually any substance if moisture is present
 - Keep the substance dry and mold will not grow
 - ★ If it gets wet, dry it out quickly to prevent mold growth
 - Be Pro-Active
 - ★ Names/numbers of qualified contractor



Thanks!



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