

The following are excerpts of a power point presentation by ACOEM/AOEC member Dr. Alan Ducatman.

It is of a survey taken of AOEC members. The presentation shows that 2 out of 3 AOEC members “do not believe” mold toxin exposure within an indoor environment cause illness. The document may be viewed in its entirety at:

http://www.hsc.wvu.edu/som/cmed/education/continuing_education/online_lectures/molds/ducatman_molds.pdf

MOLDS

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GOALS

1. Recognize real disease outcomes caused by mold.
2. Discuss controversial claims that lack a strong scientific basis.
3. Point out that mold occurs in a specific setting; it is both simple AND complex to detect.
4. Discuss why (and how) to abate.



GOALS

5. Review what clinicians think.
6. Show over 70 slides within one hour—and still have fun.
7. Get good links (not just on Wednesday).



Fungus Among Us

Fungi are eukaryotic, unicellular, or multicellular organisms that lack chlorophyll and therefore depend on external food sources. They are a ubiquitous and essential part of earth's ecology as primary decomposers of organic matter.



Allergy to Molds - Delayed

- IgG-Mediated.
- Can cause hypersensitivity pneumonitis, a specific antibody response.
- Can occur with pet birds, humidifiers, air conditioning overgrowth, or structural growth.



Allergy to Molds - Delayed

- One cause is *Thermophilus actinomyces*, a filamentous bacterium.
- Immunoassays used to detect sensitivity. May be positive before onset of disease, and in asymptomatic individuals.



Mold Allergy and Pseudoscience

- Large body of web literature on “chronic candida” and “candida hypersensitivity.”
- Virtually any laboratory immunology finding has been cited to support the existence of the syndrome.



Mold Allergy and Pseudoscience

- Patients who endorse the syndrome may also endorse chronic fatigue, chronic fibromyalgia, and multiple chemical sensitivity.
- It has long been known that the chronic candida syndrome is an epidemic of nonsense.

American Academy of Allergy and Immunology. Clinical ecology. J Allergy Clin Immunol 1986; 78:269-71.



CDC Review of Data

- Worker and veterinary data of direct mold toxin health effects are related to high-dose environment.
- We do not have convincing evidence regarding exposures at indoor air levels.



Mold Allergy or Toxicity and Pseudoscience: “Haunted by Mold”

- A public issue
- “It grows in the walls. It chokes your child and renders your husband senseless. It is your—and your insurer’s—worst nightmare.”

NY Times Magazine, August 12, 2001



Nonindustrial Mold and Epidemiologic Review Data

- “The studies we reviewed provide no evidence that increasing levels of viable mold exposure in nonindustrial work environments or dwellings are related to an increasing occurrence of asthma or to nose, eye, and skin symptoms; fatigue; or headache in the adult population, which may be due to inappropriate or insufficient measure of mold exposure.”
- Kilstad HA et al. Do indoor molds in nonindustrial environments threaten workers’ health? A review of the epidemiologic evidence. *Epidemiologic Reviews*. 2002; 24:203-17.



Nonindustrial Mold and Epidemiologic Review Data

- “No consistent indications . . . related fungal biomass to health effects; however, the studies were few. . . .”
- “These health problems more often are reported by adults working or living in buildings that have signs of indoor mold and dampness.”

Kilstad HA et al. Do indoor molds in nonindustrial environments threaten workers’ health? A review of the epidemiologic evidence. *Epidemiologic Reviews*. 2002; 24:203-17.



Preventive Strategies: Ductwork

- Not all biocides were equally effective
- Treatments did not work in the presence of moisture and food supply

Source: Samini BS and Ross K. Appl Occup Environ Hyg 2003; 18:193-99.



AOEC Clinical Opinion Survey: What Do Doctors Think?

- Sufficient evidence to attribute mold effects to mycotoxins?

<u>Yes</u>	<u>No</u>	<u>DNA</u>
20	42	5

Note: This addresses cause, not presence of health effects.



AOEC Clinical Opinion Survey: What Do Doctors Think?

- What is the cause of mold-related illness?

1. Allergic (43/67 ranked this first)
2. Irritant
3. Toxic



AOEC Clinical Opinion Survey: What Do Doctors Think?

- What is the message to transmit to employees if there is moisture or signs of moisture damage?
 - A. Employees are likely to be ill and should be evaluated.
 - B. The building has a water problem that needs to be remediated to prevent mold growth.

(53/67 chose this answer)

