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Sick Building Syndrome. III. *Stachybotrys chartarum*

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Abstract

Increasingly, physicians are being asked to evaluate patients with putative environmentally associated illnesses. These can include a variety of problems, including infectious illnesses (Legionnaire's disease), chemical exposure in the workplace, and sick building syndromes. The latter has been an issue particularly in asthma because of the association of mold and increased bronchial responsiveness. Recently, attention has been focused on the mold *Stachybotrys* in human disease. *Stachybotrys* was first identified more than 60 years ago following an epidemic of stomatitis, rhinitis, conjunctivitis, pancytopenia, neurologic disorders, and death in

horses. Since then, *Stachybotrys* has been identified in several outbreaks of disease in animals. It has also attracted attention as a possible agent in idiopathic pulmonary

hemorrhage in infants. *Stachybotrys* is a relatively uncommon fungus but has been isolated from a variety of sources, including contaminated grains, tobacco, indoor air, insulator foams, and water-damaged buildings with high humidity. This fungus is particularly important because it is one of a series of fungi that produces trichothecenes mycotoxins; these mycotoxins are biologically active and can produce a variety of physiological and pathologic changes in humans and animals, including modulation of inflammation and altered alveolar surfactant phospholipid concentrations. The presence of *Stachybotrys* in a building does not necessarily imply a cause-and-effect relationship with illness, but should alert physicians and healthcare professionals to do more vigorous environmental testing. Guidelines are presented herein for intervention measures in the maintenance of heating, ventilation, and air-conditioning systems.

Key Words: Sick building syndrome, *Stachybotrus*, Trichothecenes