

Health Effects of Indoor Mold: Brief Summary

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Common Health Effects of Indoor Mold: Brief Summary

Molds are a ubiquitous type of fungus that thrive in damp environments. Prevalent outdoors as part of the natural ecosystem, molds enter indoor environments through doors, windows, and ventilation systems. In order to grow, molds need a food source of organic matter (e.g. building materials, paper, carpet, ceiling tiles) and water. High humidity, roof leaks, and window leaks are all sources of moisture that can lead to potential mold infestation (CDC, 2009). Indoor mold has recently become a hot topic in the fields of environmental health science and public health. Children, because of their smaller size and developing immune systems, are particularly sensitive to environmental contaminants, including mold. Ongoing studies supported by the U.S. Environmental Protection Agency (EPA), Centers for Disease Control (CDC), National Institutes of Health (NIH), as well as state and local agencies are beginning to shed light on the health effects of mold and dampness on children.

Molds reproduce through spores which readily travel through the air. Therefore, the most common health effects associated with mold are respiratory. It is estimated that approximately 10% of the population is allergic to mold, and approximately half of allergic individuals will display symptoms. Symptoms often include coughing, allergic asthma, runny nose, nasal congestion, and atopic dermatitis. Because people with mold allergies often react to other allergens in their environments (e.g. pet dander, dust mites, pollen, etc.), it is difficult to illustrate a direct causative relationship between the presence of indoor mold and an allergic reaction. The most significant indoor mold species related to allergic reactions are *Penicillium* and *Aspergillus*; however, allergy-causing outdoor mold species such as *Cladosporium* and *Alternaria* can also be found at high levels indoors under proper growing conditions (American College of Occupational and Environmental Medicine [ACOEM], 2011).

In 2004, The Institute of Medicine (IOM) issued a report stating that there is sufficient evidence to link indoor exposure to mold to asthma symptoms in people with asthma (IOM, 2004). Asthma is a chronic respiratory disease characterized by breathing difficulty due to airway constriction. Symptoms include coughing, wheezing, and shortness of breath and can often be relieved by inhaled medications. Analyses of epidemiologic studies have shown a clear association of indoor dampness or mold with asthma development and exacerbation (Mendell, et al, 2011). As of 2010, asthma prevalence in Georgia's school-age children (age \geq 5) was 10.8% (Georgia Department of Public Health, 2013).

To reduce the incidence of respiratory symptoms potentially caused by molds, it is recommended that mold be removed from the indoor environment and controlled as

much as possible (EPA, 2008). Water from leaks or spills should be dried within 24-48 hours (EPA, 2010). Additionally, moisture sources should be eliminated and relative humidity maintained at or below 50% (CDC, 2009) in order to inhibit indoor mold growth.

In summary, the literature suggests there may be an association between indoor mold and respiratory symptoms; however, conclusive data are lacking. Individuals diagnosed with asthma may find their asthma symptoms exacerbated. Removing existing mold and maintaining an indoor environment with reduced humidity that inhibits future mold growth, may help alleviate some respiratory symptoms in sensitive individuals.

References

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