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No Link between Mold Growth and Development of Asthma and Allergy, Scandinavian Study Finds

A recent Scandinavian study shows that there is no link between mold-spore concentrations in the indoor air and development of asthma and allergy among children.

Many studies around the world have concluded that moisture-related problems in buildings increase the risk of health effects such as respiratory symptoms, asthma and allergy in both adults and children. However, there is only limited knowledge on which agents in indoor air or dust that causes the reported negative health effects. Biological pollutants such as molds have been suggested.

In the recent PhD study, carried out at NTNU (Norwegian University of Science and Technology), researcher Jonas Holme at SINTEF Building and Infrastructure has suggested different approaches on how to increase the knowledge of mold growth in buildings, and possible links between mold growth and health effects in humans.

"The perhaps most surprising discovery was that there was no link between mold-spore concentrations (CFU) in the investigated children's bedrooms and asthma or allergy among the children. These results demonstrate that there is no reason to carry out one-time air sampling of mold CFU in indoor air of homes in order to identify risk factors for asthma/allergy in children living in Scandinavian countries," Holme says.

Other agent's possible cause

The results indicate that there could be agents other than mold spores that cause the health effects in damp buildings. In another publication based on the same study, a link between phthalates and allergic reactions among children was found.

"We should now concentrate more on the links between chemical exposure in the indoor environment and development of asthma and allergy in order to ensure the proper, corrective measures to reduce indoor environmental problems," says Holme, referring to his study published in the journal Indoor Air.

Natural ventilation causes moisture

A link is also found between houses with one or more moisture indicators and types of ventilation, types of foundation and building period. There were more cases of registered mold growth in houses with no ventilation or natural ventilation compared to houses with mechanical ventilation, and in houses with basement cellars compared to those with slab on ground. There was also greater registered mold growth in older houses compared to newer ones.

"These are not particularly surprising observations, rather they support the fact that proper ventilation reduces the risk of moisture damage or defects. In older houses it might be useful to carry out an upgrading or rehabilitation of the foundations and external thermal insulation," Holme says.