

Schools environment associated with asthma symptoms

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Children with asthma use inhalers to relieve some of their symptoms, which include coughing, wheezing, chest tightness and shortness of breath. Credit: Tradimus, Wikimedia commons.

Do air-borne allergens in schools affect students' asthma symptoms?

A new article by Wanda Phipatanakul, M.D., M.S., of Boston's Children's Hospital and Harvard Medical School, Boston, and coauthors examined that question in a study that included 284 students (ages 4 to 13) enrolled at 37 inner-city schools in the northeastern United States.

Classroom and home dust samples linked to the students were collected and analyzed for common indoor [allergens](#), including rat, mouse, cockroach, cat, dog and dust mites. Associations between [school](#) exposure to allergens and [asthma](#) outcomes were adjusted for exposure to the allergens at home.

Mouse allergen was the most commonly detected allergen in schools and homes. Higher exposure to mouse allergen at school was associated with increased [asthma symptoms](#) and lower lung

function, according to the results.

None of the other [airborne allergens](#) were associated with worse asthma outcomes. While cat and dog allergens were commonly detected in the schools, dust mite levels were low and cockroach and rat allergens were mostly undetectable in schools and homes.

Limitations of the study include results that may not be generalizable to other cities where other allergens may be predominant in schools.

"These findings suggest that exposure reduction strategies in the school setting may effectively and efficiently benefit all children with asthma. Future school-based environmental intervention studies may be warranted," the authors conclude.

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