

# Mice may be key to kids' asthma attacks at school

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(HealthDay)—Research investigating schoolchildren's asthma attacks

has pointed to a tiny foe: mice.

Allergens from the rodents can infiltrate the air, the study found, and may be a major cause of [asthma attacks](#) in the [school](#) environment.

It's known that many different allergy triggers—from dust mites to mold to pet dander—can fuel children's [asthma symptoms](#). But most research has focused on the triggers in kids' homes.

"In this study, we've identified the school as an important factor, too," said researcher Dr. Wanda Phipatanakul, an allergy specialist at Boston Children's Hospital.

That said, she stressed, the findings do not actually prove that schools' rodent problems were the cause of kids' symptoms.

The next step, Phipatanakul said, is a study where schools will get air purifiers and "integrated [pest management](#)," to see if that improves students' respiratory health.

Integrated pest management focuses on long-term tactics—such as sealing up building cracks, and removing clutter, standing water and other conditions that attract pests.

In the United States, over 6 million children have asthma, according to the U.S. Centers for Disease Control and Prevention, including about 17 percent of black children.

The new study, published online recently in the journal *JAMA Pediatrics*, appears to be the first in the United States to look at school allergens and students' health.

"We've seen a lot of studies looking at the home environment," said Dr.

Chantal Spencer, a pediatric pulmonologist at Icahn School of Medicine at Mount Sinai, in New York City.

"But since kids spend so much time at school, it's important to study allergen exposures there, too," added Spencer, who was not involved in the study.

She agreed that the results do not prove that mice are the root cause of kids' more severe asthma symptoms.

"Asthma is a multi-factorial disease, and it's difficult to pinpoint one allergen exposure as the problem," Spencer said.

Plus, she noted, the findings are based on inner-city schools in the northeastern United States, and may not be true of schools nationwide. "Other indoor allergens might be important in other regions," Spencer said.

Regardless, she added, the study highlights the potential role of school air quality in kids' asthma symptoms.

For the study, Phipatanakul's team focused on 284 students at 37 inner-city schools. Most were minorities, and all had asthma.

The researchers collected dust samples from the schools, to measure levels of different allergens. Over several years, the children had their lung function tested periodically, and parents were interviewed about asthma symptoms.

It turned out that mouse allergens were almost universal in the schools. But the amount seemed to matter when it came to students' lung health.

Children at schools with the highest levels tended to have asthma

symptoms more often: On average, students in the top 20 percent for mouse-allergen exposure had symptoms on almost four days out of a two-week period—versus three days among kids in the bottom 20 percent.

Some other allergens—dust mites, and cat and dog dander—were detected in many schools, but at low levels. And none was linked to the severity of students' asthma symptoms.

The researchers did account for kids' allergen exposures at home and some other factors. But, Phipatanakul said, it's still possible there are other explanations for the link between mouse allergens and students' symptoms.

The point, Phipatanakul stressed, is not to "alarm parents."

But, she said, if future studies prove that pest management, or other tactics, improve kids' lung health, "then we can help a lot of children all at once."

Spencer agreed. "Limiting allergen exposure is part of asthma management," she said. "Parents try to do a good job of that at home. If it could also be done at schools and day-care centers, that would be important."

**More information:** The American Academy of Allergy, Asthma and Immunology has more on [childhood asthma](#).

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