Test Suggests Kids More Prone to Allergies Than Their Parents

The finding lends credence to the belief that allergies, asthma are on the rise.

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MONDAY, March 21 (HealthDay News) -- Scientists have found significant differences in a blood marker for allergies between parents and their children, indicating that kids today may be more subsceptible to allergies than previous generations were.

This appears to be the first quantitative, objective evidence that allergies and asthma are on the rise in the world today.

The findings were presented Monday at the annual meeting of the American Academy of Allergy, Asthma and Immunology (AAAAI) in San Antonio.

Although there have been numerous reports that allergies and allergic disease such as asthma are on the rise, most of the evidence so far has been anecdotal, said Brock Williams, the author of the study and a clinical professor of allergy immunology at Children's Mercy Hospital in Olathe, Kan.

To see if there might be any objective evidence for these claims, Williams and his colleagues tested IgE levels in 1,481 people -- 667 parents and 804 children. At least one parent in each family had to have asthma.

"IgE is the factor in the blood that is responsible for producing symptoms of allergies," Williams explained. "An increase in allergy and asthma should be reflected in IgE levels."

As it turned out, children had IgE levels at a minimum of four or five times higher than their parents. The children also had higher IgE levels for specific allergens: 45.3 percent of parents and 60.1 percent of their children had IgE readings for dust mites. Levels were also elevated, although not as sharply, for cat and mold.

"It looks like the increase in asthma and in allergic disease could actually be due to increased sensitization to mites," Williams said. Dust mites are fairly ubiquitous, except in high, dry locations such as Denver, where last year's AAAAI meeting was held.

"There are more dust mites in San Antonio than Denver," said Dr. Kathleen Sheerin, public education chair of the AAAAI and moderator of the news conference. "We're suffering this year."

There are several hypotheses explaining the increase but no sure answer.

It's "fairly plausible that we've made it happier for mites to live in our indoor environments," Williams said. "We spend more time indoors. Kids spend more time indoors. We have regulated temperature. We feed them pretty well because they eat skin scales from humans."

Children are also treated today for infectious illnesses, which might mean they don't build up their immune systems enough, although Williams was quick to emphasize he did not advocate not treating kids for infections.

In other presentations Monday, two studies looked at the link between obesity and allergies in children. Both conditions are on the rise in children, as well as adults.

Dr. Kentaro Matsuda, assistant professor of pediatrics at Kurume University School of Medicine in Fukuoka, Japan, found that obese children had significantly higher IgE levels than normal-weight children. His study involved 49 obese children and 49 children who served as controls. The elevated IgE levels did not seem to be related to allergic disorders, but there was as correlation between IgE levels and leptin levels. Leptin is a hormone that regulates appetite, which may start to explain a link between obesity, allergies and future development of asthma.

Obesity has been associated with respiratory problems in older people. A second study wanted to see if there were differences in asthma severity and air flow between obese asthmatic children and their normal weight asthmatic counterparts.

The researchers looked at the charts of 278 children aged 5 to 20 years. Forty percent of the children were normal weight, 41 percent were obese, 17 percent were overweight and 2 percent were underweight.

Obese children did not have more severe asthma, said Dr. Sitesh Roy, assistant professor of pediatrics at the University of Mississippi in Jackson. Nor did they have a reduced level of asthma control. There was, however, a slight reduction in the FEV1/FVC ratio, a measure of airflow obstruction.

"The difference was small and still in the mild-to-minimal obstructive range, but this still could be a very valid finding," Roy said. "This may indicate some degree of increased airway inflammation, but it also could be a more mechanical factor."

More information

For more on pediatric allergies, visit the AAAAI (www.aaaai.org).

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