

Low vitamin D levels linked to allergies in kids

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A study of more than 3,000 children shows that low vitamin D levels are associated with increased likelihood that children will develop allergies, according to a paper published in the February 17 online edition of the Journal of Allergy and Clinical Immunology. Researchers from Albert Einstein College of Medicine of Yeshiva University headed the study.

Researchers looked at the serum vitamin D levels in blood collected in 2005-2006 from a nationally representative sample of more than 3,100 children and adolescents and 3,400 adults. The samples are derived from the National Health and Nutrition Examination Survey (NHANES), a program of studies designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in that it combines interviews, physical examinations and laboratory studies. One of the blood tests assessed was sensitivity to 17 different allergens by measuring levels of Immunoglobulin E (IgE), a protein made when the immune system responds to allergens.

When the resulting data was analyzed by Einstein researchers, no association between vitamin D levels and allergies was observed in adults. But for children and adolescents, low vitamin D levels correlated with sensitivity to 11 of the 17 allergens tested, including both environmental allergens (e.g., ragweed, oak, dog, cockroach) and food [allergens](#) (e.g., peanuts). For example, children who had vitamin D deficiency (defined as less than 15 nanograms of vitamin D per milliliter of blood), were 2.4 times as likely to have a peanut allergy than were children with sufficient levels of vitamin D (more than 30 nanograms of

vitamin D per milliliter of blood).

The research shows only an association and does not prove that [vitamin D deficiency](#) causes allergies in children, cautioned Michal Melamed, M.D., M.H.S., assistant professor of medicine and of epidemiology & population health at Einstein and senior author of the study.

Nevertheless, she said, children should certainly consume adequate amounts of the vitamin. "The latest dietary recommendations calling for [children](#) to take in 600 IU of vitamin D daily should keep them from becoming vitamin-D deficient," she said.

More information: The title of the paper is "Vitamin D levels and food and environmental allergies in the United States: Results from NHANES 2005-2006."

Provided by Albert Einstein College of Medicine

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