Vitamin D-rich foods during pregnancy may reduce allergy risk in children

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Higher intake of foods containing vitamin D during pregnancy - but not supplemental vitamin D intake - was associated with reduced risk of development of allergies in children, according to a study led by an investigator from the Icahn School of Medicine at Mount Sinai and published today in The Journal of Allergy and Clinical Immunology.

The research team conducted a prospective study of 1,248 mothers and their children in the United States over time, from the first trimester of pregnancy until the children reached about 7 years old. They found that higher intake of food-based vitamin D (equivalent to the amount of vitamin D in an 8-ounce serving of milk per day) during pregnancy was associated with 20 percent less hay fever at school age. There was no risk reduction linked to vitamin D intake by supplement.

"Expectant mothers have questions about what they should eat during pregnancy, and our study shows that it's important to consider the source of nutrients in a mother's diet," said Supinda Bunyavanich, MD, MPH, Assistant Professor in the Department of Pediatrics, Department of Genetics and Genomic Sciences and The Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai. Foods that contain vitamin D include fish, eggs, dairy products, mushrooms and cereals.

Vitamin D modulates the immune system, and its potential role in asthma and allergy has been of interest. Many prior studies have examined vitamin D and allergy outcomes at single points in time, but this study comprehensively assessed vitamin D levels at multiple points (during pregnancy, at birth and at school age) and by different methods (food frequency questionnaire and tests of serum 25(OH)D levels in both the mothers and school-age children).

"This study may influence nutritional counseling and recommendations to expectant moms to include vitamin D-rich foods in their diets," said Bunyavanich.

Provided by The Mount Sinai Hospital