Maternal vitamin D and E intakes during pregnancy are associated with asthma in children.

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**Abstract**

Are maternal vitamin D and E intakes during pregnancy associated with asthma in 10-year-old children? In a longitudinal study of 1924 children born to women recruited during pregnancy, maternal vitamin D intake during pregnancy was assessed by the Food Frequency Questionnaire (FFQ) and vitamin E by FFQ and plasma a-tocopherol; respiratory questionnaires were completed for the 10-year-old children. Their treatment for asthma was also ascertained using administrative data. Longitudinal analyses included data collected at 1, 2, 5 and 10 years. Symptom data were available for 934 (49%) children and use of asthma medication for 1748 (91%). In the children maternal vitamin D intake during pregnancy was negatively associated with doctor-diagnosed asthma at 10 years of age (OR per intake quintile 0.86, 95% CI 0.74-0.99) and over the first 10 years (hazard ratio 0.90, 95% CI 0.81-1.00). Maternal plasma a-tocopherol at 11 weeks gestation was negatively associated with children receiving asthma treatment (OR per standard deviation increase 0.52, 95% CI 0.31-0.87). Maternal vitamin E intake was negatively associated with doctor-diagnosed asthma (OR 0.89, 95% CI 0.81-0.99) in the first 10 years. Low maternal vitamin D and E intakes during pregnancy are associated with increased risk of children developing asthma in the first 10 years of life. These associations may have significant public health implications.

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PMID: 25359350 [PubMed - indexed for MEDLINE]