

ORIGINAL RESEARCH COMMUNICATION

Maternal diet during pregnancy in relation to eczema and allergic sensitization in the offspring at 2 y of age^{1, 2, 3}

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Background: Maternal diet during pregnancy might be one of the factors that influences fetal immune responses associated with childhood allergy.

Objective: We analyzed the association between maternal diet during the last 4 wk of pregnancy and allergic sensitization and eczema in the offspring at 2 y of age.

Design: Data from 2641 children at 2 y of age were analyzed within a German prospective birth cohort study (LISA). Maternal diet during the last 4 wk of pregnancy was assessed with a semi-quantitative food-frequency questionnaire, which was administered shortly after childbirth.

Results: High maternal intake of margarine [adjusted odds ratio (aOR): 1.49; 95% CI: 1.08, 2.04] and vegetable oils (aOR: 1.48; 95% CI: 1.14, 1.91) during the last 4 wk of pregnancy was positively associated and high maternal fish intake (aOR: 0.75; 95% CI: 0.57, 0.98) was inversely associated with eczema during the first 2 y in the offspring. High celery (aOR: 1.85; 95% CI: 1.18, 2.89) and citrus fruit (aOR: 1.73; 95% CI: 1.18, 2.53) intakes increased the risk of sensitization against food allergens. In turn, sensitization against inhalant allergens was positively related to a high maternal intake of deep-frying vegetable fat (aOR: 1.61; 95% CI: 1.02, 2.54), raw sweet pepper (aOR: 2.16; 95% CI: 1.20, 3.90), and citrus fruit (aOR: 1.72; 95% CI: 1.02, 2.92).

Conclusions: We suggest that the intake of allergenic foods and foods rich in n-6 polyunsaturated fatty acids during pregnancy may increase and foods rich in n-3 polyunsaturated fatty acids may decrease the risk of allergic diseases in the offspring.

Key Words: Maternal diet • pregnancy • allergic diseases • children

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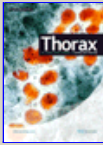


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