



Mediterranean diet during pregnancy and childhood respiratory and atopic outcomes: birth cohort study

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Adherence to a Mediterranean diet during pregnancy is not associated with a reduced risk of asthma or other allergic outcomes in the offspring, but may be associated with increased small airway function in childhood <http://bit.ly/382yGcF>

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ABSTRACT Evidence for associations between Mediterranean diet during pregnancy and childhood asthma, allergy and related outcomes is conflicting. Few cohorts have followed children to school age, and none have considered lung function.

In the Avon Longitudinal Study of Parents and Children, we analysed associations between maternal Mediterranean diet score during pregnancy (estimated by a food frequency questionnaire, using an *a priori* defined score adapted to pregnant women; score ranging from 0 (low adherence) to 7 (high adherence)) and current doctor-diagnosed asthma, wheeze, eczema, hay fever, atopy and lung function in 8907 children at 7–9 years. Interaction between maternal Mediterranean diet and maternal smoking in pregnancy was investigated.

The maternal Mediterranean diet score was not associated with asthma or other allergic outcomes. Weak positive associations were found between maternal Mediterranean diet score and childhood maximal mid-expiratory flow (forced expiratory flow at 25–75% of forced vital capacity (FEF_{25–75%})) after controlling for confounders. Higher Mediterranean diet scores were associated with increased FEF_{25–75%} z-scores adjusted for age, height and sex (β 0.06, 95% CI 0.01–0.12; $p=0.03$, comparing a score of 4–7 *versus* a score of 0–3). Stratifying associations by maternal smoking during pregnancy showed that associations with FEF_{25–75%} were only seen in children of never-/passive-smoking mothers, but no evidence for a statistically significant interaction was found.

Results suggest adherence to a Mediterranean diet during pregnancy may be associated with increased small airway function in childhood, but we found no evidence for a reduced risk of asthma or other allergic outcomes.