

child growth standards should be evaluated further before their adoption in the Czech Republic and other countries with local growth references.

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DIETARY FATTY ACID COMPOSITION DURING PREGNANCY AND RISK OF ASTHMA IN THE OFFSPRING

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Background: Epidemiological studies suggest that the increasing frequency of asthma and allergic diseases are in part related to changes in dietary habits. More margarines and vegetable oils are consumed, while the reverse is true for oily fish and fish-products, leading to an increase in the intake of n-6 polyunsaturated fatty acids (PUFA) and decrease in the intake of n-3 PUFA. Fatty acids (FA) modulate the immune system and have been proposed to affect the incidence of IgE-mediated allergic diseases. We explored the association of dietary FA composition during pregnancy with the risk of asthma in the offspring.

Methods: Dietary intake was assessed by a validated 181-item food frequency questionnaire covering the 8th month of pregnancy. The occurrence of asthma was assessed at the age of 5 years with a questionnaire modified from International Study of Asthma and Allergies in Childhood (ISAAC). Logistic regression was used for statistical analyses.

Results: Lower maternal intake of α -linoleic acid (18:3n-3), linoleic acid (18:2n-6), n-6-PUFA, n-3-PUFA and total PUFA during pregnancy were associated with an increased risk of asthma in the offspring. The ratios of n-6 to n-3-PUFA and 18:2n-6 to 18:2n-3 and the maternal intake of oils, fish and fish products were not associated with the risk of asthma.

Conclusion: In the present study, higher intakes of PUFA, n-3-PUFA and 18:3n-3 during pregnancy were protective against asthma in the offspring. The finding that higher intake of total n-6-PUFA and 18:2n-6 also protects against asthma does not support the original lipid hypothesis.

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PECULIARITIES IN FATTY ACIDS PROFILE IN CHILDREN WITH FOOD ALLERGY

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Elimination diet (ED) in children with food allergy (FA) could be responsible of inadequate caloric and essential fatty acids (EFA) intake. We investigated the plasmatic profile of EFA in children with FA on ED. Methods. Prospective multicenter study including children with FA (6-36 m) on ED for at least 30 days compared to healthy children. EFA were measured by capillary gas-chromatography at the enrolment (T0) and after 6 m (T1) of elimination diet established after specific dietary counseling. Results. We enrolled 86 children with FA, and 66 healthy controls. The length of ED diet was 10.8 m (95%CI 8-14 m). Table reports EFA profiles in