Prevention and Risk Factors

Lack of Evidence for a Protective Effect of Prolonged Breastfeeding on Childhood Eczema: Lessons from the International Study of Asthma and Allergies in Childhood (ISAAC) Phase Two


Purpose of the Study. To determine if exclusive breastfeeding protects against childhood eczema.

Study Population. There were 51 119 randomly selected 8- to 12-year-olds from 21 different countries who participated in the International Study of Asthma and Allergies in Childhood (ISAAC) Phase Two.

Methods. Parental questionnaires were used to collect information on eczema and breastfeeding. Children were examined for eczema and skin-prick testing for common allergens. At each study center, an odds ratio (OR) was calculated. ORs were also pooled across study populations.

Results. There was a small positive association between parent-reported eczema ever with breastfeeding ever (pooled adjusted OR 1.11, 95% confidence interval [CI] 1.00–1.22) and breastfeeding <6 months (pooled adjusted OR 1.10, 95% CI 1.02–1.20). There was no significant association between parent-reported eczema ever and breastfeeding >6 months (pooled adjusted OR 1.09, 95% CI 0.94–1.26). There was little difference in risk estimate for exclusive breastfeeding (<2, 2–4, and >4 months) and for eczema symptoms in the past year and eczema on skin examination. Breastfeeding was associated with a negative association with sleep-disturbed eczema (pooled adjusted OR 0.71, 95% CI 0.53–0.96), but this was lost in children who had been exclusively breastfed for >4 months (pooled adjusted OR 1.02, 95% CI 0.67–1.54). History of maternal allergy and the child’s sensitization to Aeroallergens did not modify these associations.

Conclusions. Although the authors did not demonstrate that breastfeeding exclusively for >4 months protects against eczema, they did demonstrate a protective effect of ever having been breastfed on sleep-disturbed eczema.

Reviewer Comments. This is a significant study, as it is the largest data set exploring the association between breastfeeding and eczema in affluent and nonaffluent countries. Although these findings are consistent with recent systemic reviews of prospective studies, they contrast with a previous American Association of Pediatrics policy statement suggesting that breastfeeding for ≤4 months, compared with feeding cow milk protein formula, may prevent or delay the development of eczema.

An Explorative Study of Low Levels of Allergen-Specific IgE and Clinical Allergy Symptoms During Early Childhood


Purpose of the Study. To evaluate the relation between early presence of low levels of specific immunoglobulin E (s-IgE) sensitization to food and inhalant allergens and the development of allergic diseases during childhood.

Study Population. Study subjects included 268 children born between 1997 and 2000 who were part of a prospective study cohort. All children were born term and healthy. One-third of the children had 2 parents with allergy, one-third had mothers with allergy, and one-third had parents with no allergy, suggested by history and confirmed by results of skin prick testing.

Methods. The children were followed up prospectively from birth to 5 years and had clinical evaluations at 6, 12, 18, and 24 months and 5 years for the development of eczema, wheezing or asthma, and rhinoconjunctivitis. s-IgE against hen’s egg white, cow’s milk, codfish, peanut, soybean, cat, dog, Dermatophagoides farinae, birch pollen, and timothy pollen was assessed at each visit by using the ImmunoCAP System (Phadia AB, Uppsala, Sweden). Low levels of allergen s-IgE included concentrations between 0.1 and 0.7 kU/L.

Results. The most common s-IgE sensitizations at all ages were to egg and milk, and the presence of s-IgE to all allergens increased with increasing age. Low levels of s-IgE to milk and egg were related to eczema and further allergic sensitization at the age of 5 years. No relations between low levels of s-IgE at 6 and 12 months and respiratory symptoms at 5 years were found.

Conclusions. Children with low levels of s-IgE sensitization to food allergens had an increased risk of developing eczema by 24 months. Early-onset low levels of s-IgE can be related to further IgE sensitization during childhood.

Reviewer Comments. With improved testing technology, it is now possible to accurately measure s-IgE concentrations as low as 0.1 kU/L. This study describes the importance of low levels of s-IgE in relation to symptoms being most pronounced at young ages. However, further investigation is...