

Atopic Eczema and Early Introduction of Solid Foods

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Clinical Question

Does early introduction of solid foods (added when breast milk or formula is no longer used exclusively) affect the incidence of atopic eczema in childhood?

Evidence-Based Answer

In most children, solid foods may be introduced before four to six months of age without increasing the risk of atopic eczema. (Strength of Recommendation [SOR]: B, based on prospective cohort trials.) Children with *HLA* genotypes that predispose them to type 1 diabetes mellitus may be more likely to develop atopic eczema if five or more foods are introduced before six months of age. (SOR: C, based on a single cohort study.)

Evidence Summary

Evidence suggesting that early introduction of solid foods does not increase the incidence of eczema comes from two large prospective cohort studies that relied heavily on parental recall.^{1,2} The first was a four-year study ($n = 6,905$ infants) in which parents used validated questionnaires to report when common food allergens were introduced and whether their child had been diagnosed with eczema.¹ By four years of age, children who had been exposed to potential allergens before six months of age did not have an increased risk of eczema compared with exposure after six months for the following foods: cow's milk (adjusted odds ratio [AOR] = 0.95; 95% confidence interval [CI], 0.77 to 1.2), chicken eggs (AOR = 1.1; 95% CI, 0.81 to 1.4), peanuts (AOR = 0.87; 95% CI, 0.65 to 1.2), tree nuts (AOR = 1.1; 95% CI, 0.72 to 1.6), soy (AOR = 0.97; 95% CI, 0.80 to 1.2), and gluten (AOR = 1.0; 95% CI, 0.81 to 1.3).

The second study was a population-based, prospective cohort study lasting six years ($n = 2,073$ infants) in which the timing of solid food introduction and the development of eczema, asthma, and allergic rhinitis were examined.² Feeding histories and medical diagnoses were obtained using parental questionnaires. There was no difference in the rates of eczema in children introduced to solids at less than four months of age (reference group), four to six months of age (AOR = 0.92; 95% CI, 0.61 to 1.4), or after six months of age (AOR = 0.82; 95% CI, 0.49 to 1.4).

A two-year case-control study ($n = 557$ infants drawn from a larger prospective cohort study) found evidence that early introduction of solid foods may have a protective effect on the subsequent development of eczema.³ All data were obtained by parental questionnaire. Introduction of solid foods before four months of age was associated with a lower risk of eczema compared with introduction after four months of age (AOR = 0.49; 95% CI, 0.32 to 0.74).

Another prospective cohort study evaluated the effects of food diversity on the risk of developing atopic disease.⁴ All participants ($n = 3,142$) had an *HLA* gene that put them at increased risk of developing type 1 diabetes. Parental questionnaires were used to obtain food exposure history during the first year of life and the subsequent presence of allergic disease. At six months, the introduction of five or more solid foods was associated with an increased risk of atopic eczema compared with introduction of no solid foods (AOR = 1.48; 95% CI, 1.04 to 2.1). However, the number of foods introduced had no significant effect on the risk of atopic eczema at 12 months of age.

Recommendations from Others

The American Academy of Pediatrics recommends starting solid foods around four to six months of age, stating that there is no convincing evidence that delaying solids beyond this time increases rates of atopic disease.⁵ The American Academy of Allergy, Asthma, and Immunology recommends introducing solid foods at four to six months of age.⁶ It also recommends that highly allergenic foods be given after a few other solid foods have been well tolerated, and that these foods should initially be given at home rather than child care or a restaurant.

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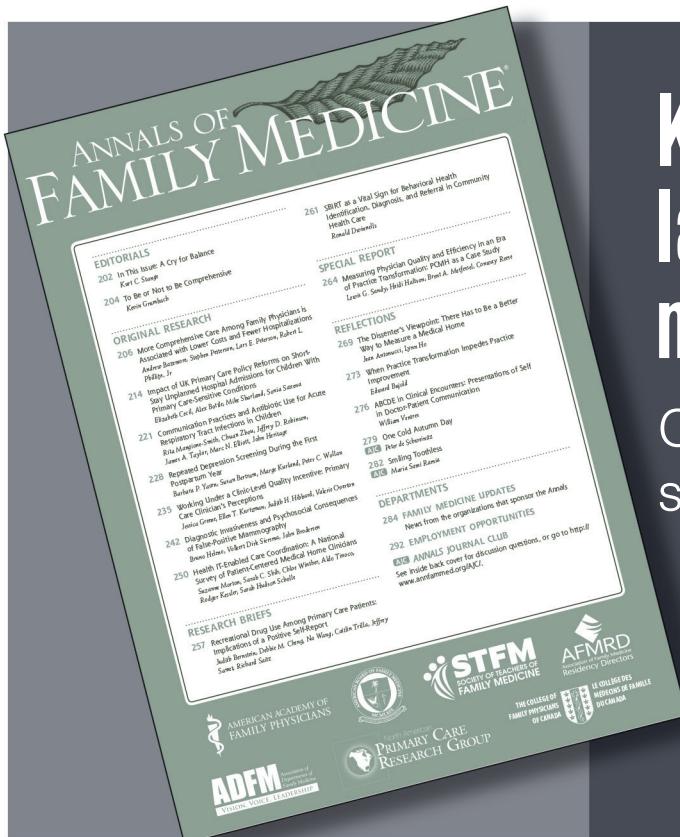
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