developing allergic diseases (adjusted OR: 3.04 [95% CI: 1.08–8.60]), specifically eczema and hay fever but not asthma or food allergy. Age at the time of immigration was not associated with lower odds of any allergic disorders.

CONCLUSIONS. The findings from this large, prospective, US population–based study suggest that either infections or certain microbial exposures in early childhood may confer protection against atopic disorders. However, because the odds of developing allergic disease dramatically increase after a decade of living in the United States, protective effects may not be lifelong.

REVIEWER COMMENTS. These findings further support the role of environmental factors in the development of allergic disease. Limitations of this study, however, include self-report of allergic disease without clinical verification. The majority of the participants currently reside in a metropolitan area, and it is unknown what proportion of foreign-born families moved from a developing country (compared with an industrialized country) to the United States. Country of origin was not ascertained, although race/ethnicity data were collected as a proxy. Other potential confounding factors not evaluated include diet, allergenic exposures, use of antibiotics, use of antibacterial cleaning products, and history of helminthic infections.


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Primary Prevention of Food Allergy in Children and Adults: Systematic Review

PURPOSE OF THE STUDY. The goal of this study was to systematically review the literature on how to prevent the development of food allergy.

METHODS. A systematic review was performed on articles published through September 2012. Meta-analyses, randomized controlled trials, and prospective cohort studies designed to prevent food sensitization and/or the development of food allergy were identified from Medline, Embase, Cochrane, CINAHL, Web of Science, TRIP Database, and ClinicalTrials.gov and were assessed for systematic bias. Because the studies varied in terms of design, target populations, and interventions, a meta-analysis was not performed.

RESULTS. Seventy-four studies were included in this systematic review. For infants at high risk for developing food allergy (defined by the authors as children with a family history of allergic disease), there was evidence to support avoiding cow’s milk and using extensively or partially hydrolyzed whey or casein formulas for the first 4 months of life to prevent the development of food allergy. In contrast, the evidence was conflicting for other primary prevention techniques, including maternal restriction of common food allergens during pregnancy or while breastfeeding, the use of probiotics during infancy, breastfeeding during infancy, or delaying the introduction of solid foods beyond 4 months.

CONCLUSIONS. In this systematic review of the literature, the only intervention for which there is evidence of preventing the development of food allergy is to avoid cow’s milk during the first 4 months of life in children at high risk.

REVIEWER COMMENTS. This article is an updated systematic review of the literature regarding primary prevention of food allergy. As highlighted in this review and in others, data regarding primary prevention of food allergy remain weak and conflicting. Current evidence does not support avoiding allergenic foods during pregnancy or while breastfeeding, delaying the introduction of solid foods, or breastfeeding during infancy for primary prevention of food allergy. This study highlights the fact that further research on effective interventions to prevent food allergy is necessary.


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Prenatal Food Allergen Exposures and Odds of Childhood Peanut, Tree Nut, or Sesame Seed Sensitization

PURPOSE OF THE STUDY. The goal of this study was to examine whether prenatal exposure to peanut or sesame seed oil as a vehicle for progesterone injection increases the child’s odds of peanut (PN), tree nut (TN), or sesame seed (SS) allergy.

STUDY POPULATION. A total of 1272 food-allergic children were evaluated at Boston Children’s Hospital. Control subjects were children allergic to foods including dairy or eggs but not PN, TNs, or SS. Case subjects included those allergic to PN, TNs, and/or SS.

METHODS. Parents completed a questionnaire addressing demographic characteristics, family history, child’s history of allergies, use of assisted reproduction, and prenatal exposure to food allergens. The child’s skin prick and specific immunoglobulin E test results were reviewed. Two samples of progesterone suspended in SS oil were assayed for SS protein content during the study.

RESULTS. A total of 1272 questionnaires were analyzed. There were no statistical differences between case subjects and control subjects in demographic characteristics, parental atopy, or birth history. History of parental infertility, in vitro fertilization treatment, progesterone support, and
Primary Prevention of Food Allergy in Children and Adults: Systematic Review
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