follow-up period (group A), and 13 had recurrent wheezing (group B). There was no significant difference in birth weight, male-to-female ratio (1:1), or age at hospitalization (group A: 6.3 ± 5.3 months; group B: 4.2 ± 3.3 months) between groups. There was a trend for children in group A to have been breastfed more than those in group B (83% vs 46%; $P = .18$). Similarly, children in group A tended to have higher birth weight than those in group B (3303 ± 647 vs 2864 ± 486 g; $P = .15$). Children in group A (non-wheezers) had significantly higher sCD14 levels on hospital admission than those in group B (wheezers) (14521 ± 1773 vs 11243 ± 3264 pg/mL; $P < .05$). sCD14 levels correlated with age at hospitalization ($P < .01$). The sCD14 level was >11 000 pg/mL in 5 of 6 (83%) children in group A and 6 of 13 (46%) children in group B. This level was chosen as this level felt to be the best predictor for subsequent recurrent wheezing.

Conclusions. In infants hospitalized for RSV bronchiolitis, high serum sCD14 levels correlate with protection from subsequent recurrent wheezing and may modulate the influence of RSV development of lower airway disease.

Reviewers’ Comments. Membrane-bound CD14 on monocytes and macrophages binds lipopolysaccharide (LPS) and transfers it from LPS-binding protein to Toll-like receptors (TLRs). CD14/TLR activation by LPS enhances interleukin 12 and interleukin 18 synthesis, TH1 differentiation, and inhibition of the atopic phenotype. It is not clear from this study if increased sCD14 levels are the result of a differential responsiveness to RSV in group A or if sCD14 levels predated acquisition of the RSV infection. Nonetheless, this study adds another layer to our understanding of the early role of innate immune responsiveness and the subsequent risk of development of atopic disease.

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THE INTRODUCTION OF SOLIDS IN RELATION TO ASTHMA AND ECZEMA


Purpose of the Study. Some feeding guidelines recommend delayed introduction of solids for the prevention of asthma and allergy. This study sought to explore whether late introduction of solids is protective against the development of asthma, eczema, and atopy.

Study Population. A total of 642 unselected children recruited before birth and followed to the age of 5.5 years.

Methods. A questionnaire was administered yearly. Food exposure was derived from the first-year questionnaire: “When did you start feeding your son/daughter the following foods?: fruits, vegetables, infant rice, cereal products, meat, fish, milk products, egg.” Median age at which each solid food was introduced and length of time the infant was breastfed were determined. Wheezing was defined as wheezing in the absence of a cold or infection in the preceding 12 months, and eczema was defined as a positive response to “has a doctor ever told you that your son/daughter has eczema?” Skin-prick tests to grass, cats, and dust mites were performed at age 5.5 years, and atopy was defined as at least 1 positive skin test.

Results. No effect of the early or late introduction of solid foods in relation to any of the outcomes was observed. No association between exclusive breastfeeding at the age of 8 weeks and any of the outcomes was found.

Conclusion. The results do not support the recommendations given by present feeding guidelines, which state that a delayed introduction of solids is protective against the development of asthma and allergy.

Reviewers’ Comments. Published feeding guidelines on the delayed introduction of solid foods to prevent allergy state that “conclusive studies are not yet available to permit definitive recommendations.” Nonetheless, recommendations are made regarding delaying the introduction of certain foods until certain ages. Some meta-analyses have favored breastfeeding for prevention of eczema (and other atopic diseases), but individual studies on both sides continue to be published. This study suggests that delayed introduction of solid foods does not prevent asthma, eczema, or atopy. The most obvious type of allergy that such a delay might prevent is allergy to the food itself, but this “prevention” is somewhat self-fulfilling, because you cannot become allergic to a food to which you have not been exposed. This is complicated further by exposure to foods in breast milk. Additionally, many toddlers who become allergic to foods, particularly milk and egg, routinely outgrow the allergy. Although this study is helpful in examining the relationship (or lack thereof) between the introduction of solid foods and asthma, eczema, and atopy, we need more research to tell us if delayed introduction of solid foods will prevent or merely delay the development of food allergy.

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EFFECTS OF BREAST-FEEDING OF THE DEVELOPMENT OF ATOPIC DERMATITIS DURING THE FIRST 3 YEARS OF LIFE—RESULTS FROM THE GINI-BIRTH COHORT STUDY


Purpose of the Study. Most studies have shown a protective effect of breastfeeding on atopic disease, but some have shown an increased risk. This study examined the impact of exclusive breastfeeding for the first 4 months of infancy on the prevalence of atopic dermatitis (AD) during the first 3 years of life.

Study Population. A large birth cohort of healthy term neonates in Germany enrolled between 1995 and 1998 for a study designed to investigate risk factors for and course and prevention of allergic disease.

Methods. Group I (interventional) consisted of infants with a family history of allergy who were either exclusively breastfed for the first 4 months or were not breastfed or supplemented (by randomization) with hydrolyzed formula (study formula) or conventional cow’s milk formula. Group NI (noninterventional) consisted of infants whose parents did not wish to participate in the intervention trial or who did not have a family history of allergy. Both groups received a yearly self-administered questionnaire on health, nutrition, and living conditions. Parents in group I also received dietary recommendations to avoid allergenic food and participated in structured interviews at the study centers.

Results. Of the 5538 infants recruited at birth, 4194 (75.7%) completed the 3-year questionnaires. Of these, 3903 (93.1%) completed data on feeding regimen and physician-diagnosed AD. Fifty-two percent of these infants were breastfed exclusively and 522 (13.4%) were bottle-fed exclusively during the first 4 months of life. The overall prevalence of physician-diagnosed AD and intermittent itchy rash for at least 6 months was 20% and 9.1%, respec-
The Introduction of Solids in Relation to Asthma and Eczema

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