allergic urticaria, or eczema in the previous year. The prevalence of outcomes between the probiotic and placebo groups was compared.

RESULTS. There were no differences in any of the allergic disease outcomes between the probiotic and placebo groups. Both groups had a similar prevalence of allergic disease generally and asthma, allergic rhinoconjunctivitis, and eczema specifically. The prevalence of allergic sensitization, according to results of both skin prick testing and IgE testing, was also similar between the 2 groups, as were lung function and fractional exhaled nitric oxide levels. Post-hoc analyses to determine if any subpopulation exhibited evidence of benefit found that neither maternal allergic history nor delivery mode was associated with a beneficial effect of probiotic supplementation. Because adherence was high (>95%) in the parent RCT, these findings were not attributable to poor adherence. Probiotic supplementation was also not associated with adverse effects at school age, including effects on growth and gastrointestinal symptoms.

CONCLUSIONS. Supplementation with L reuteri perinatally and in infancy transiently reduced the risk of allergic sensitization, but it had no effect on allergic disease outcomes or allergic sensitization at school age.

REVIEWER COMMENTS. This long-term follow-up of one of the only “successful” probiotic trials for prevention of allergic disease indicates that any effect of probiotics is, at best, transient. However, recent studies point to a role of the gut microbiome in immune development; it is therefore possible that other approaches to modifying the gut microbiome may prove effective in the prevention of allergic disease.

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Supplementation With Probiotics in the First 6 Months of Life Did Not Protect Against Eczema and Allergy in At-Risk Asian Infants: A 5-Year Follow-up


PURPOSE OF THE STUDY. The authors had previously reported that supplementing infants at risk for allergic disease with probiotics did not prevent eczema or allergy sensitization in the first year of life. The present study evaluated the allergic outcomes of these same subjects at 5 years of age.

STUDY POPULATION. In this Singaporean study, qualifying term infants had a first-degree relative who not only had a diagnosis of asthma, allergic rhinitis, or eczema but also a positive result on skin prick testing to Dermatophagoides pteronyssinus and/or Blomia tropicalis. A total of 124 infants were given cow’s milk formula with probiotics and 121 infants were given cow’s milk formula without probiotics from the first day of life until 6 months of age. By 5 years, 87% had completed the study (112 who were on probiotics and 108 who did not receive probiotics).

METHODS. Subjects received at least 60 mL (9.26 g) per day of commercially available cow’s milk–based infant formula in this double-blind, placebo-controlled randomized study. Probiotic supplementation was with Bifidobacterium longum (BL999) and Lactobacillus rhamnosus (LPR). During regular follow-up visits over the next 5 years, children were assessed for asthma, allergic rhinitis, eczema, and food allergy.

RESULTS. At the age of 5 years, presence of eczema and eczema severity according to the SCORAD (Scoring Atopic Dermatitis) index were not significantly different between the probiotic group and the placebo group (16.9 vs 15.3; P = .295). There was also no significant difference between the 2 groups for asthma development, food allergy, and dust mite sensitization. Of note, those subjects who consumed probiotics on their own accord after the initial 6-month treatment period were statistically associated with a reduced incidence of asthma and allergic rhinitis at 5 years of age. There was no difference in growth rate (for height and weight) between the 2 study populations.

CONCLUSIONS. Early-life supplementation with probiotics did not change allergic outcomes at 5 years of age.

REVIEWER COMMENTS. Studies in Scandinavia, Australia, and Germany have had similar negative findings. Nevertheless, the authors noted that those infants who continued probiotic supplementation once a week from the age of 2 years for at least 1 year did have a reduced incidence of asthma and allergic rhinitis, no matter which study group they were part of. It seems we are not yet able to reach any final conclusions regarding probiotic supplementation and its influence on atopy.

Mouse Allergen Is the Major Allergen of Public Health Relevance in Baltimore City


PURPOSE OF THE STUDY. The goal of this study was to evaluate relationships between exposure to mouse and other perennial allergens and clinical markers of asthma.

STUDY POPULATION. A total of 150 Baltimore children (ages 5–17 years) with persistent asthma were followed up for 1 year.

METHODS. Allergy skin testing was performed to dust mites, mouse, cockroach, cat, dog, and other perennial allergens.
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