

MEETING ABSTRACT

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Mechanisms of asthma and allergic disease – 1074. Prebiotics in infants for prevention of allergic disease and hypersensitivity

John Sinn

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Background

Prebiotics (promote growth of 'healthy' bacteria) added to infant feeds have the potential to prevent sensitisation of infants to dietary allergens.

Methods

Standard methods of the Cochrane Neonatal Review Group were used. Searches were updated October 2011. Randomised and quasi-randomised controlled trials that compared a prebiotic to control were eligible.

Results

Three studies enrolling 1315 infants and reporting outcomes of 1126 infants (85%) were included. Several ongoing studies and completed studies with no reported allergy results were identified. Overall, one study reported a significant reduction in asthma (134 infants; RR 0.31, 95% CI 0.14, 0.96; RD -0.13, 95% CI -0.25, -0.01; NNT 7.7) but no significant difference in urticaria (134 infants, RR 0.15, 95% CI 0.02, 1.16) to 2 years. Meta-analysis of 3 studies found a significant reduction in infant eczema (1126 infants, RR 0.64, 95% CI 0.44, 0.94; RD -0.04, 95% CI -0.07, -0.01; NNT 25) although there was moderate heterogeneity between studies. In subgroup analysis, individual studies reported a significant reduction in asthma and eczema to 2 years - in infants at high risk of allergy fed an extensively hydrolysed formula; and a reduction in infant eczema in low risk infants fed a cow's milk formula. The studies reporting reductions in asthma or eczema used GOS/FOS combinations, one with added acidic OS, at a concentration 0.8 g/100ml of oligosaccharide.

Conclusions

Further evidence is required before a prebiotic can be routinely recommended for prevention of allergy. A well powered, independent trial is required to answer this question.

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Obstetrics, Gynaecology and Neonatology, University of Sydney, Sydney, Australia



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