



15º CONGRESSO BRASILEIRO DE  
**Gastroenterologia  
Pediátrica**

19º CONGRESSO LATINO AMERICANO E  
10º CONGRESSO IBERO AMERICANO DE  
GASTROENTEROLOGIA, HEPATOLOGIA E NUTRIÇÃO

Centro de Convenções de Natal . RN . Brasil  
26 a 29 de março de 2014

## **Trabalhos Científicos**

**Título:** Impact Of Formula Containing Docosahexaenoic Acid, Prebiotics, And Beta-glucan On Allergic Manifestations In Children

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**Resumo:** Objective: Nutrients such as docosahexaenoic acid (DHA), prebiotics, and beta-glucan have been associated with reduced incidence of respiratory illnesses and allergic manifestations. Our objective was to assess if a cow's milk-based formula enriched with these and other nutrients, including iron, zinc, and vitamin A, reduced the incidence of respiratory infections and diarrheal disease and, secondarily, the occurrence of allergic manifestations in healthy children. Methods: In this double-blind, randomized, controlled trial, healthy 1 to 4 year-old children from 2 daycare centers in Brazil were fed 3 servings per day of a follow-up formula (FF; n=125) containing DHA, the prebiotics polydextrose (PDX ) and galactooligosaccharides (GOS), and beta-glucan, or an unfortified, cow's milk-based beverage (Control; n=131) for up to 28 weeks. The occurrence of respiratory infections, diarrheal disease, and allergic manifestations was assessed by study pediatricians and analyzed with the Cochran-Mantel-Haenszel test. Results: The FF group had fewer episodes of allergic manifestations, which included allergic rhinitis, conjunctivitis, wheezing, allergic cough, eczema, and urticaria, compared to the Control group (p=0.021). The hazard ratio for allergic manifestations was lower in the FF group compared to Control (HR, 0.64; 95% CI 0.47-0.89; p=0.007). There was no difference in the incidence of respiratory infections or diarrheal disease between groups. Conclusions: Regular consumption of a cow's milk-based formula containing DHA, PDX/GOS, and beta-glucan, and fortified with essential nutrients, was associated with fewer episodes of allergic manifestations in the skin and the respiratory tract of healthy children, as compared to an unfortified cow's milk-based beverage.