

AOS increased total bacteria count at day 14 ( $p=0.02$ , 95%CI 1.18-13.04), but not at day 30 ( $p=0.31$ , 95%CI 0.60-5.03). Enteral supplementation of  $_{SC}GOS/_{LC}FOS/AOS$  decreased faecal pH ( $p=0.01$ , 95%CI 0.54-0.93) and increased acetic acid ( $p=0.03$ , 95%CI 1.01-1.21). There was no effect on sIgA ( $p=0.50$ , 95%CI 0.28-13.27). Antibiotics delay the intestinal colonisation ( $p < 0.001$ , 95%CI 0.08-0.22).

**Conclusions:** Enteral supplementation with a prebiotic mixture consisting of neutral and acidic oligosaccharides increases the postnatal intestinal colonisation. However, administration of broad spectrum antibiotics decreased the growth of all intestinal microbiota. We suggest that caution should be given when considering initiation with broad spectrum antibiotics in preterm infants.

90

**EFFECT OF DAILY INTAKE OF PREBIOTIC (FRUCTOOLIGOSACCHARIDE) ON WEIGHT GAIN AND REDUCTION DIARRHEA MORBIDITIES AMONG URBAN CHILDREN IN BANGLADESH**

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**Background and aims:** Feeding prebiotic agents have been shown to be useful in preventing enteric diseases by selectively stimulating growth of bifidobacteria and lactobacilli in the gut. There is currently insufficient evidence to support their use to prevent diarrhea in children. We evaluated the effect of daily intake of fructooligosaccharide (FOS), a prebiotic agent on diarrhea morbidities and nutritional status in urban children in Bangladesh.

**Methods:** A double-blind randomized controlled clinical trial was conducted on 150 children aged 25-59 months to receive 50-ml of isotonic solution with 2-g of FOS or an identical solution without FOS (Placebo) once daily over six consecutive months. Children's mothers were interviewed weekly

to obtain history of diarrhea, stool consistency, and other morbidities. Anthropometry was also measured.

**Results:** The number of diarrhea episodes was less in FOS group compared to the placebo group. However, the difference was not statistically significant. The total mean days with diarrhea as well as each episodes of diarrhea were significantly shorter in the FOS group (3.3 vs. 6.3 d,  $p=0.039$  and 2.5 vs. 3.2 d,  $p=0.008$ , respectively). The body weight gain during the six-month period in the FOS group ( $0.86\pm 0.55$  kg) and the placebo group ( $0.89\pm 0.48$  kg) was not significantly different, and so were the height and the mid-arm circumference.

**Conclusions:** Daily intake of FOS shortens duration of diarrhea episodes, but is not useful in promoting weight gain or in preventing diarrhea. Further studies with optimizing doses are needed to define better role of FOS in diarrhea in children.

91

**CAN POSTNATAL SUPPLEMENTATION WITH PROBIOTICS REDUCE THE RISK FOR ALLERGIC DISEASE IN INFANCY?**

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**Background and aims:** The increasing allergy prevalence may depend on a reduced microbial exposure early in life. Probiotics may prevent eczema in infants. Prenatal maternal supplementation might be crucial for this effect. The mixture of probiotic strains used in the present study reduced eczema when previously supplemented both pre- and postnatally. The aim of this study was to evaluate the effect of only postnatal probiotic supplementation on allergic manifestations during the first two years of life and to explore the impact of environmental factors on allergy development.

**Methods:** In the double-blind placebo-controlled PRODIA study, infants with HLA risk genotype for type 1 diabetes were supplemented from two until