

When probiotics are clinically useful: What the studies show

Use	Randomized Controlled Trial (RCT) Findings	AAP Comments/ Recommendations
To prevent/treat acute infectious diarrhea	Probiotics have modest benefit for prevention. For existing diarrhea, probiotics reduce number of diarrheal stools and duration by about 1 day; LGG is most effective and benefit is strain specific.	Evidence supports use of LGG early in the course of infectious diarrhea.
To prevent/treat antibiotic-associated diarrhea	Probiotics have beneficial effects in prevention.	Probiotics may be used to reduce the incidence of antibiotic-associated diarrhea. Their use cannot be recommended for treatment.
To prevent/treat atopic disease	Study results vary—some supporting a preventive effect of giving probiotics to mothers late in pregnancy and to both mothers and infants (at risk for atopic disease) during the first 6 months of lactation.	Evidence is insufficient to support routine probiotic supplementation in pregnant women or infants to prevent allergic disease in childhood. Results of eczema treatment have been encouraging, but probiotics have not yet been proven effective.
To prevent necrotizing enterocolitis (NEC) in low-birth-weight neonates	Meta-analysis of 9 RCTs showed enteral probiotic supplementation significantly reduced incidence of NEC and mortality.	Results of meta-analysis must be viewed with caution because RCTs varied considerably with regard to probiotics used, doses, end points, and other study parameters.
To prevent/treat colic	No RCTs have been conducted to evaluate probiotics for preventing colic. In terms of treatment, an RCT in 90 exclusively breastfed infants with colic found that <i>L. reuteri</i> improved symptoms within 1 week of administration.	Probiotics may be beneficial in treating colic in exclusively breastfed infants or formula-fed infants, but more confirmatory studies are required to recommend them for this purpose.

AAP = American Academy of Pediatrics; LGG = *Lactobacillus GG*; *L. reuteri* = *Lactobacillus reuteri*.

Thomas DW, Greer FR; American Academy of Pediatrics Committee on Nutrition; American Academy of Pediatrics Section on Gastroenterology, Hepatology, and Nutrition. *Pediatrics*. 2010;126:1217-1231.