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The importance of probiotics for children

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Probiotics are "friendly" microorganisms (typically bacteria or yeasts) that can live in the gastrointestinal tract or on other mucosal surfaces and have beneficial effects on human physiology and health. Probiotic organisms are believed to work in part by enhancing digestion and immune function by competing with pathogenic microorganisms for binding sites on mucosal surfaces.*

Numerous studies have found that probiotics can moderate occasional diarrhea in children. In one double-blind study, 200 children were randomly assigned to receive 250 mg per day of *Saccharomyces boulardii* for five days. In another double-blind trial, 269 children were randomly assigned to receive 250 mg of *S. boulardii* twice per day.¹ In both trials, *S. boulardii* provided statistically significant support for healthy stool transit time.*

The positive effects of probiotics in children are not limited to the gastrointestinal tract. Various probiotics have also been used to support immune health. In one study, 571 healthy children (aged 1-6 years) attending daycare centers were randomly assigned to receive milk with or without *Lactobacillus* GG for seven months over the winter. Results suggested that *L. GG* provided statistically significant support for respiratory health.² In another study, 201 healthy infants attending daycare centers were randomly assigned to receive, in double-blind fashion, a formula supplemented with *B. lactis*, *L. reuteri*, or no

probiotics for 12 weeks. Probiotic supplementation indicated statistically significant support for overall health, immune function and GI comfort.^{3*}

Supplementation with select probiotic strains have also been found to promote dental health in children. In one study, 594 children were randomly assigned to receive milk that did or did not contain *L. GG*. Researchers reported that probiotic supplementation provided statistically significant support for dental health; the beneficial effect was most pronounced in children three to four years of age. *L. GG* may work in part by moderating the growth of *Streptococcus mutans*.⁴ The strain *Streptococcus salivarius* K12 has been shown to persist in the oral cavity for as long as three weeks after oral administration as a lozenge⁵, which raises the possibility that this strain may be able to promote dental health by competing with other oral bacteria. In addition, *S. salivarius* K12 has been reported to help protect ear and throat health.^{6*}

Based on the available evidence, probiotic supplementation in children appears to be a worthwhile strategy to help promote overall good health. A wide range of probiotic strains have been investigated in multiple clinical trials and results suggest that the efficacy of different strains may differ depending on the health condition. Additional research is needed to further explore these specific benefits.

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