# Positive Effect of Probiotics on Constipation in Children: A Systematic Review and Meta-Analysis




## Abstract

**Context:** Constipation in children is a prevalent, burdensome, and psychologically important pediatric issue, the treatment of which remains a global challenge. The use of probiotics has been reported for management of the .gastrointestinal microbiota

**Objective:** This study reviewed the existing literatures of 6 Randomized Control Trials (RCTs) to ascertain some baseline understanding and available information for the effects of probiotics on stool frequency and consistency in .children with constipation

.**Data Sources:** PubMed, Springer, Elsevier Science, Cochrane Library, Scopus, Ovid (Medline, EMBASE, PsycINFO), Orbis, and Web of Science from the earliest record in each database to 15 September, 2016

.**Study selection:** Eligible studies were randomized controlled trials that compared the effect of probiotics interventions to any control intervention on stool frequency and consistency

.**Data Extraction:** Studies were identified by searching electronic databases. The meta-analysis was performed by Review Manager 5.3 software using a randomized model

**Results:** Six studies were identified. The use of probiotics significantly increased the stool frequency [mean difference (MD), 0.73; 95% confidence interval (CI), 0.14–1.31;*P* = 0.02]. Subgroup assessment showed a significantly .(increased stool frequency in Asian patients (MD, 1.18; 95% CI, 0.33–2.02; *P* = 0.006), but no significant difference in stool consistency (MD, −0.07; 95% CI, −0.21–0.06; *P* = 0.27

**Limitations:** Only six RCTs met the criteria and were included. Each RCT in this study was performed in a different country, and some of the included studies had a small sample size, which might have influenced the reliability and .validity of the conclusions

**Conclusion:** The present study shows that probiotics increase stool frequency and have beneficial effects in Asian children. However, caution is needed when interpreting these outcomes because of the existence of heterogeneity. Evidence from larger samples and more adequately powered RCTs with results obtained by standardized measurements are necessary to determine which species and dosage of probiotics and what length of treatment are most .efficacious for constipation in children



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