primary studies - published RCT

The impact of probiotics on pulmonary, gastrointestinal, and growth outcomes in pediatric cystic fibrosis: a randomized controlled trial.

Code: PM40437397 **Year:** 2025 **Date:** **Author:** Rahmani P

Study design (if review, criteria of inclusion for studies)

Double-blind randomized clinical trial

Participants

110 CF patients were examined.

Interventions

Probiotic consumption. Patients were divided into two equal groups of 55 subjects. Patients in the probiotic group consumed Lactobacillus reuteri at the rate of 10(8) CFU/d for one month, and the control group received a placebo.

Outcome measures

Pulmonary, gastrointestinal, and growth-related outcomes as well as quality of life were assessed after one month of intervention as well as at three-month follow-up.

Main results

The results of our study showed that in both intervention and control groups, weight increases significantly after 12 weeks (Pâ€‰=â€‰0.01). However, no remarkable difference was reported between the two groups after 12 weeks (Pâ€‰=â€‰0.09). In addition, no significant changes were observed between the two groups after 4 and 12 weeks regarding BMI and FEV1. Based on the findings, the score of the CFQ questionnaire in the intervention group increased significantly in the 4th and 12th week. No significant differences were observed between the two groups in terms of factors related to lung function or exacerbations after 12 weeks.The only notable effect reported was related to pain attacks in the probiotic group compared to the placebo group after 4 weeks (Pâ€‰=â€‰0.02).

Authors' conclusions

In general, treatment with probiotics improved the quality of life in patients with CF. However, no significant effect was observed on pulmonary, gastrointestinal, and growth-related outcomes.

http://dx.doi.org/10.1186/s12887-025-05789-0

See also

BMC Pediatr. 2025 May 28;25(1):430. doi: 10.1186/s12887-025-05789-0.

Keywords

Adolescent; Child; Lactobacillus; Probiotics; Supplementation; Oral; Immunoregulatory; pharmacological_intervention; Adult;