

Remission Rates and Safety of Fecal Microbiota Transplantation in Inflammatory Bowel Disease in Adult Patients: A Systematic Review

INPLASY202620020

doi: 10.37766/inplasy2026.2.0020

Received: 5 February 2026

Published: 5 February 2026

Corresponding author:

Charbel Al Khoury

charbel.alkhoury@lau.edu.lb

Author Affiliation:

Lebanese American University.

Alharoun, O; Abdo, N; Dimassi, S; Kanbar, T; Ossaily, K; Tahhan, S; Bou Saba, J; Al Kazzi, M; Sinno, A; Al Khoury, C.

ADMINISTRATIVE INFORMATION

Support - This review received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202620020

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 5 February 2026 and was last updated on 5 February 2026.

INTRODUCTION

Review question / Objective To systematically evaluate clinical remission rates and safety profiles of FMT in IBD.

Condition being studied Inflammatory bowel disease (IBD), including ulcerative colitis (UC) and Crohn's disease (CD), is a chronic gastrointestinal disorder that substantially impairs quality of life. Conventional therapies are often limited by suboptimal efficacy, adverse effects, and diminishing response over time. Fecal microbiota transplantation (FMT) has emerged as a therapeutic strategy aimed at restoring microbial balance, reducing inflammation, and improving outcomes.

METHODS

Search strategy Google Scholar; Scopus.

Participant or population Adults with active inflammatory bowel disease (Crohn's disease or

ulcerative colitis) who have received fecal microbiota transplantation.

Intervention FMT via colonoscopy, alternative approaches (capsules, enemas, tubes), and comparative treatment.

Comparator Conventional therapy, placebo, or no intervention.

Study designs to be included Randomized controlled trials, controlled clinical trials, and observational studies.

Eligibility criteria Studies were excluded if they involved pediatric populations, animal models, or non-peer-reviewed sources.

Inclusion criteria were as follows:

- Studies focusing on FMT in the management of IBD, including CD and UC.
- Clinical trials (randomized controlled trials, controlled clinical trials, and observational studies) published after 2015.

– Studies reporting outcomes on clinical remission rate, safety, adverse events, long-term symptom management, or mechanisms of FMT.

Exclusion criteria included:

- Review articles, protocols, commentaries, and case reports.
- Studies not published in English.

Information sources The following sources were searched:

- Google Scholar: Search conducted for studies using key terms related to FMT and IBD, including safety and efficacy.
- Scopus: Search conducted using TITLE-ABS-KEY criteria with specific terms for IBD, FMT, treatment, and safety. Filters excluded reviews and protocols and limited results to publications after 2015.

Main outcome(s) Clinical remission rates following fecal microbiota transplantation in adults with inflammatory bowel disease, stratified by disease type and route of administration.

Quality assessment / Risk of bias analysis The assessment of bias risk in the studies was conducted using criteria derived from the Cochrane Risk of Bias Tool (version 2.0). Each study was analyzed across three principal domains: two reviewers independently assessed risk of bias, and disagreements were resolved through discussion or consultation with a third reviewer.

Randomization – This domain evaluated whether suitable protocols were implemented for the allocation of participants.

Blinding – This aspect examined if participants, investigators, or outcome assessors were blinded to mitigate performance and detection bias.

Outcome Assessment – This domain focused on clarity, objectivity, and consistency in the measurement and reporting of outcomes.

Each domain was classified as having a "Low," "High," or "ModerateUnclear" risk of bias, depending on the methodologies employed in the studies. Reviewers independently evaluated each study in duplicate, and any discrepancies were addressed through discussion. The bias assessment process did not utilize any automated tools.

Strategy of data synthesis Studies were grouped according to intervention characteristics, patient populations, and study methodologies relative to the pre-specified inclusion criteria: FMT via colonoscopy, alternative approaches (capsules, enemas, tubes), and comparative treatment. Data preparation involved extracting and standardizing

remission rates, ranges, and standard deviations. Missing values were marked as "Not reported" and excluded from quantitative summaries but described narratively; ambiguous values were omitted to maintain integrity. Results were tabulated and described narratively, with descriptive statistics calculated using Python (Version X.X, Pandas). Descriptive analyses were necessary due to marked heterogeneity in study design, populations, intervention, and outcome definitions, precluding meta-analysis. A PRISMA flow diagram illustrates study selection.

Heterogeneity was explored qualitatively by comparing delivery methods, baseline patient characteristics, and donor microbiota composition. Subgroup analyses were not performed due to insufficient data. Sensitivity analyses were not conducted as no statistical pooling was undertaken, through future meta-analyses could incorporate such testing. Risk of bias from missing results was not formally assessed, as all studies reported relevant outcomes. Certainty of evidence was likewise not graded using tools such as GRADE because of the descriptive synthesis, and substantial heterogeneity that prevented meta-analysis.

Subgroup analysis Subgroup analyses were not performed due to insufficient data.

Sensitivity analysis Sensitivity analyses were not conducted as no statistical pooling was undertaken, through future meta-analyses could incorporate such testing.

Language restriction The search is limited to studies in English.

Country(ies) involved Lebanon.

Keywords Inflammatory Bowel Disease, Fecal Microbiota Transplantation, Systematic Review, Clinical Remission, Safety, Crohn's Disease, Ulcerative Colitis.

Contributions of each author

Author 1 - Othman Alharoun.

Author 2 - Nourelhoda Abdo.

Author 3 - Sarah Dimassi.

Author 4 - Teddy Kanbar.

Author 5 - Kawthar Ossaily.

Author 6 - Sally Tahhan.

Author 7 - Jimmy Bou Saba.

Author 8 - Mariline Al Kazzi.

Author 9 - Aia Sinno.

Author 10 - Charbel Al Khoury.