

# CHANGES IN THE MICROBIOME AND THE EFFECTS OF A SYNBIOTIC INTERVENTION IN HOME-QUARANTINED PATIENTS WITH MILD SARS-COV-2 INFECTION: A RANDOMIZED, DOUBLE-BLIND, PLACEBO CONTROLLED, TELEMEDICINE STUDY (SYNCOV STUDY)

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**A randomized placebo-controlled telemedical study found that patients with mild COVID-19 in home quarantine showed microbiome alterations and reduced gastrointestinal quality of life but did not benefit clinically from a 30-day multispecies synbiotic intervention.**

## KEY POINTS

- Thirty patients with COVID-19 in home quarantine were randomized 2:1 to receive a multispecies synbiotic or placebo for 30 days, with symptoms tracked remotely and stool samples analyzed by 16S sequencing.
- Respiratory symptoms and gastrointestinal quality of life both improved significantly during the study irrespective of synbiotic intervention.
- COVID-19 patients showed significant microbiome alterations compared to non-infected controls, characterized by increased Bacteroidetes and decreased Christensenellaceae, Ruminococcaceae, and Gammaproteobacteria taxa.
- The synbiotic intervention significantly modulated beta-diversity and introduced the probiotic strain *E. faecium* W54, but did not affect COVID-19-related microbial taxa.
- This study is relevant for gastroenterologists and infectious disease specialists interested in the gastrointestinal manifestations of COVID-19 and the role of probiotics in viral infections.

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