IBS & the Microbiome

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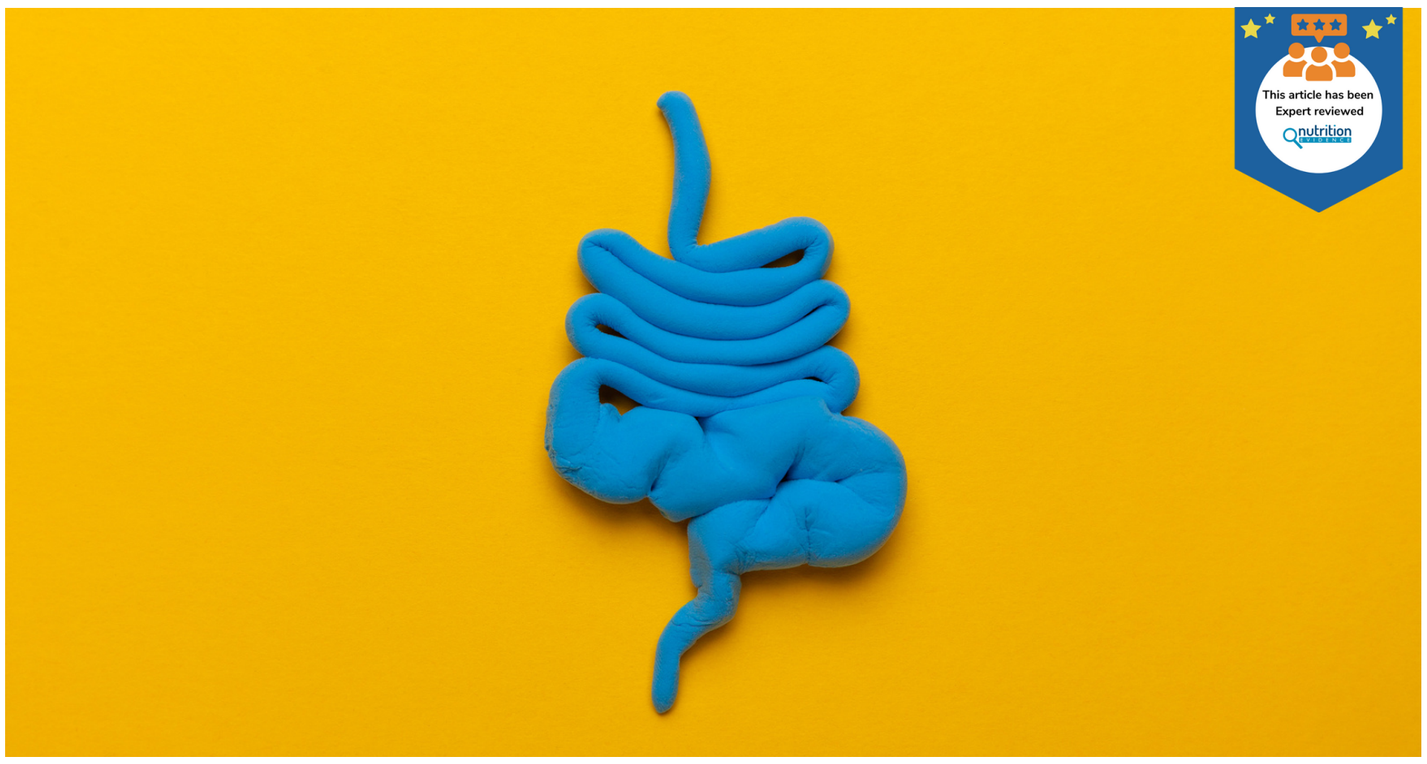


EFFECT OF THE PROBIOTIC STRAIN, LACTIPLANTIBACILLUS PLANTARUM P9, ON CHRONIC CONSTIPATION: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY

Ma, T ; Yang, N ; Xie, Y ; et al. Pharmacological research. 2023;191:106755
With Expert Review from Kirsty Baxter

Chronic constipation (CC) is a common gastroenterological problem encountered in clinical practice, and it negatively impacts patients' quality of life. Growing evidence indicates that the occurrence of CC is closely linked to gut dysbiosis. Several main probiotics have been used to relieve constipation. The main aim of this study was to systematically evaluate the beneficial effects of Lactiplantibacillus plantarum P9 (P9) administration on alleviating CC and impact on the host gut microbiota and its metabolites. This study was a 42-day longitudinal double-blind randomised controlled trial which enrolled a total of 181 patients with CC. Subjects were randomly assigned to the probiotic or placebo group. Subjects in P9 group received one sachet of P9 powder per day after meal. Results show that P9 administration significantly improved patients' defecation frequency. In fact, P9 administration effectively alleviated constipation, and the symptom relief effects were linked to desired changes and interactions with different types of host microbes. Authors conclude that administering P9 could effectively relieve chronic constipation in adults and improve some aspects of their quality of life.

EFFICACY AND DOSE RESPONSE OF LACTIPLANTIBACILLUS PLANTARUM IN DIARRHEA-PREDOMINANT IRRITABLE BOWEL SYNDROME.

Martoni, CJ ; Srivastava, S ; Damholt, A ; Leyer, GJ
World journal of gastroenterology. 2023;29(28):4451-4465
With Expert Review from Chloe Steele

This randomised, double blind, placebo-controlled trial recruited 307 females and males aged 18-70 years with IBS-D based upon the Rome IV diagnostic criteria with Bristol Stool Scale stools of type 6 or 7 and aimed to determine the tolerability and efficacy of varying supplemental doses of Lactiplantibacillus plantarum (Lpla33) on symptoms. Individuals were randomised to receive an eight-week intervention in one of three study groups: Group 1B: Lpla33 at 1 × 109 vs group 10B: 1x1010 colony forming units (CFU) per day vs placebo. Results showed improvement in the primary outcome of IBS-D symptom severity (IBS-SSS) with both Lpla33 doses compared to placebo at the end of the trial (P=<0.001) in as quickly as 28 days. At the end of the study the higher dose Lpla33 was more effective at improving IBS-SSS compared to the lower dose (P=<0.05). Improvements to IBS remission or mild IBS were seen in 48.1% in group 1B, 72.6% in group 10B and only 11.1% of placebo (P= <0.001). L. plantarum at doses of 1 × 109 and 1 × 1010 CFU/day is a well-tolerated and efficacious therapy for the improvement of symptoms related to IBS-D, with symptoms such as abdominal pain severity and duration, QoL and perceived stress all improved.

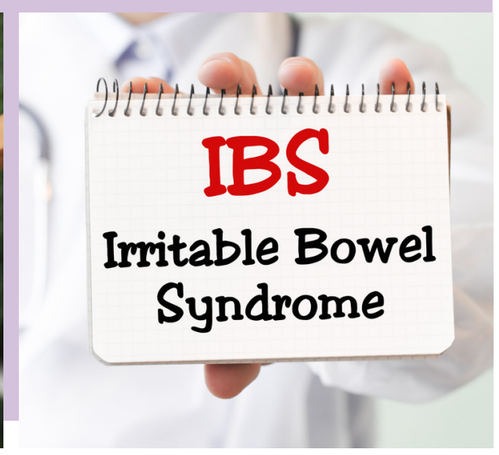
EFFICACY OF A SYNBIOTIC CONTAINING LACTOBACILLUS PARACASEI DKGF1 AND OPUNTIA HUMIFUSA IN ELDERLY PATIENTS WITH IRRITABLE BOWEL SYNDROME: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL.

Oh, JH ; Jang, YS ; Kang, D ; et al.
Gut and liver. 2023;17(1):100-107
With Expert Review from Ana-Paula Agrela

This randomised, double-blind, placebo-controlled trial aimed to investigate the impact of a synbiotic combination, comprising of L. paracasei DKGF1 and prebiotics extracted from Optuntia humifusa, on Irritable Bowel Syndrome (IBS) in elderly patients.

Sixty-seven IBS patients were randomly assigned to either a synbiotic group (n=33) or a placebo group (n=34) for a 4-week intervention.

There was significant improvement in IBS symptoms as measured by the SGA score, in the synbiotic group versus the placebo group. Participants also reported an improvement in psychological well-being in the synbiotic group compared to the placebo group. However, there was no significant improvement among the patients with IBS diarrhoea in the synbiotic group compared to the placebo group.



EFFICACY OF DIET RESTRICTION WITH OR WITHOUT PROBIOTIC FOR TREATMENT OF PATIENTS WITH IBS-D: PHASE I-II CLINICAL TRIAL.

Zhao, XS ; Shi, LJ ; Ning, BL ; Zhao, ZM ; Li, XX ; Zhu, MH ; Zhang, YB ; Fu, J
Immunity, inflammation and disease. 2023;11(5):e857

Irritable bowel syndrome (IBS) is a functional intestinal disorder that can significantly affect quality of life. IBS patients suffer from intermittent abdominal pain/ discomfort, altered bowel habits, and abdominal bloating/distension. The aim of this study was to assess the effects of dietary restriction and probiotic use on IBS-D patients. This study was a 2 × 2 factorial design, single-centre, randomised trial. Phase 1 was a 12-week dietary intervention, with 214 participants randomised to an IgG positive restricted diet (IgG res diet) or a control diet (cold/spicy/fried restricted). In Phase 2, 167 participants were randomised into either an IgG res diet + placebo or an IgG res diet + probiotic for 12 weeks. Symptom Severity Scale (IBS-D-SSS) and IgG titer were assessed at the beginning and the end of the study. Results showed that both diets reduced IBS-D symptom severity scores and decreased immunoglobulin (IgG) antibody titer, although the IgG res diet had a greater impact. IBS symptom scores decreased with the addition of a Bifidobacterium probiotic along with dietary exclusion, however, IgG titers did not change with the probiotic compared to placebo. Authors concluded that diet restriction with appropriate and effective probiotics, provides greater symptom reductions for patients with IBS-D.

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