

IBtrol

White Paper Summary

3 – in – 1 IBS Support



IBS is a chronic functional bowel disorder affecting 5-10% of the global population¹, and characterized by abdominal pain and irregular bowel habits, with no known cure. Long-term symptom management is the goal of treatment. Symptoms center around bowel dysfunction, gas production and increased pain signalling between the gut and the brain. The IBS gut is characterized by an imbalance in the gut microbiome (dysbiosis)². Chemical messengers from a disordered microbiome can increase inflammatory pathways in the gut which translate as pain signalling to the brain³.

While dietary restrictions are common among IBS sufferers, prolonged adherence to such diets can lead to decreased fiber intake and depletion of anti-inflammatory microbial metabolites, worsening symptoms and impacting psychological well-being^{4,5}.

Recent dietary research has shifted toward supplementation rather than restriction to manage IBS symptoms. The slowly fermentable fiber psyllium reduces gas production peaks⁶ associated with peak symptom intensity induced by rapidly fermentable fibers⁷. Psyllium, in doses of 10g or more daily, improves overall IBS symptoms by aiding tolerance to gas-forming foods, and improving bowel function through increased stool weight and softness in constipation and by absorbing excess water and slowing gut transit in those with diarrhea⁸.

Prebiotics offer promise in improving the gut microbiota by fostering the growth of beneficial bacteria, particularly bifidobacteria. Prebiotics increase bifidobacteria in people with IBS⁹. However not all prebiotic fibers are suitable for those with IBS, inulin-type fructans (inulin, chicory, fructo-oligosaccharides and oligofructose) exacerbate IBS symptoms¹⁰⁻¹². Galacto-oligosaccharides increased bifidobacteria levels in IBS, even at low doses¹³, and are well-tolerated alongside low FODMAP diets¹⁴, offering symptom relief comparable to low FODMAP diets¹⁵.

The interest in probiotics for IBS treatment is substantial, although the effectiveness varies by strain¹⁶. Lower levels of *faecalibacterium prausnitzii*, bifidobacteria, and lactobacilli characterize IBS dysbiosis¹⁷, with reduced bifidobacteria associated with heightened pain signalling¹⁸. IBtrol includes a specific combination of highly researched lactobacilli and bifidobacteria strains that has been clinically demonstrated to improve IBS symptoms in a large human study (n=188)¹⁹.

While no singular treatment offers a cure for IBS, a multifaceted approach addressing different aspects of the disorder is necessary. Co-administration of psyllium with probiotics has shown a protective effect^{20,21}, alongside studies indicating that combining prebiotics with soluble fiber may enhance tolerance⁶. Soluble fiber remains a cornerstone for managing bowel dysfunction, yet long-term IBS management should include strategies for microbiome repair with proven prebiotics and supplementation with well characterized strains of lactobacilli and bifidobacteria probiotics to protect the gut from further microbiome instability.

IBtrol integrates clinically proven daily doses of psyllium, galacto-oligosaccharide prebiotic (Bimuno), and five extensively-researched bifidobacteria and lactobacilli strains (*Bifidobacterium lactis* Bl-04, *Bifidobacterium lactis* Bi-07, *Bifidobacterium lactis* HN019, *Lactobacillus acidophilus* NCFM, *Lactobacillus paracasei* Lpc-37). This supplement offers an alternative to restrictive diets or can complement existing dietary restrictions, aiding in symptom management, microbiome repair, and protection against food intolerances and symptom flares. Developed by Dr. Bridgette Wilson, an esteemed gastroenterology Dietitian, in collaboration with Medtrition, IBtrol provides evidence-based support for individuals with IBS.

Market for IBS supplements

The market for IBS treatments is expanding with a global IBS treatment market revenue estimated to reach USD 4.7 Billion by 2030 with a CAGR of 9.5% from 2022 to 2030²². Yet many supplements available on the market are not evidence based or only temporarily mask symptoms but don't aim to repair the gut. We believe that IBtrol, as a culmination of decades of human clinical trials and developed with a deep understanding of the root of IBS will become the leading global supplement for IBS sufferers.

References

- [1] Sperber AD, Bangdiwala SI, Drossman DA, et al. Worldwide prevalence and burden of functional gastrointestinal disorders, results of Rome Foundation global study. *Gastroenterology* 2021;160:99-114. e3.
- [2] Enck P, Mazurak N. Dysbiosis in Functional Bowel Disorders. *Annals of Nutrition & Metabolism* 2018;72:296-306.
- [3] Quigley EM. The gut-brain axis and the microbiome: clues to pathophysiology and opportunities for novel management strategies in irritable bowel syndrome (IBS). *Journal of clinical medicine* 2018;7:6.
- [4] Lenhart A, Dong T, Joshi S, et al. Effect of exclusion diets on symptom severity and the gut microbiota in patients with irritable bowel syndrome. *Clinical Gastroenterology and Hepatology* 2022;20:e465-e483.
- [5] Melchior C, Algera J, Colomier E, et al. Food avoidance and restriction in irritable bowel syndrome: relevance for symptoms, quality of life and nutrient intake. *Clinical Gastroenterology and Hepatology* 2022;20:1290-1298. e4.
- [6] Gunn D, Abbas Z, Harris HC, et al. Psyllium reduces inulin-induced colonic gas production in IBS: MRI and in vitro fermentation studies. *Gut* 2022;71:919-927.
- [7] Major G, Pritchard S, Murray K, et al. Colon Hypersensitivity to Distension, Rather Than Excessive Gas Production, Produces Carbohydrate-Related Symptoms in Individuals With Irritable Bowel Syndrome. *Gastroenterology*. Volume 152, 2017:124-133.e2.
- [8] Gill SK, Rossi M, Bajka B, et al. Dietary fibre in gastrointestinal health and disease. *Nature Reviews Gastroenterology & Hepatology* 2020:1-16.
- [9] Wilson B, Rossi M, Dimidi E, et al. Prebiotics in irritable bowel syndrome and other functional bowel disorders in adults: a systematic review and meta-analysis of randomized controlled trials. *American Journal of Clinical Nutrition* 2019;109:1098-1111.
- [10] Hustoft T, Hausken T, Ystad S, et al. Effects of varying dietary content of fermentable short-chain carbohydrates on symptoms, fecal microenvironment, and cytokine profiles in patients with irritable bowel syndrome. *Neurogastroenterology & motility* 2017;29:e12969.
- [11] Shepherd SJ, Parker FC, Muir JG, et al. Dietary triggers of abdominal symptoms in patients with irritable bowel syndrome: randomized placebo-controlled evidence. *Clinical Gastroenterology and Hepatology* 2008;6:765-771.
- [12] Cox SR, Prince AC, Myers CE, et al. Fermentable carbohydrates (FODMAPs) exacerbate functional gastrointestinal symptoms in patients with inflammatory bowel disease: a randomised, double-blind, placebo-controlled, cross-over, re-challenge trial. *Journal of Crohn's & colitis* 2017.
- [13] Silk D, Davis A, Vulevic J, et al. Clinical trial: the effects of a trans-galactooligosaccharide prebiotic on faecal microbiota and symptoms in irritable bowel syndrome. *Alimentary pharmacology & therapeutics*. Volume 29, 2009:508-518.
- [14] Wilson B, Rossi M, Kanno T, et al. β -Galactooligosaccharide in conjunction with low FODMAP diet improves irritable bowel syndrome symptoms but reduces fecal Bifidobacteria. *American Journal of Gastroenterology* 2020;115:906-915.
- [15] Huaman JW, Mego M, Manichanh C, et al. Effects of Prebiotics vs a Diet Low in Fodmaps in Patients with Functional Gut Disorder. *Gastroenterology* 2018;155:1004-1007.
- [16] So D, Quigley EM, Whelan K. Probiotics in irritable bowel syndrome and inflammatory bowel disease: review of mechanisms and effectiveness. *Current Opinion in Gastroenterology* 2023;39:103-109.
- [17] Liu H-N, Wu H, Chen Y-Z, et al. Altered molecular signature of intestinal microbiota in irritable bowel syndrome patients compared with healthy controls: A systematic review and meta-analysis. *Digestive and Liver Disease* 2017;49:331-337.
- [18] Parkes GC, Rayment NB, Hudspith BN, et al. Distinct microbial populations exist in the mucosa-associated microbiota of sub-groups of irritable bowel syndrome. *Neurogastroenterology & Motility* 2012;24:31-39.
- [19] Harris LA, Cash BD, Moftah K, et al. An open-label, multicenter study to assess the efficacy and safety of a novel probiotic blend in patients with functional gastrointestinal symptoms. *Journal of Clinical Gastroenterology* 2022;56:444.
- [20] Rusin V, Kurchak NY. The dynamics of immunological indicants on the background of therapy using probiotics and psyllium in patients with chronic pancreatitis after cholecystectomy. *Гастроентерологія* 2014;51:44-48.
- [21] Bazzocchi G, Giovannini T, Giussani C, et al. Effect of a new synbiotic supplement on symptoms, stool consistency, intestinal transit time and gut microbiota in patients with severe functional constipation: a pilot randomized double-blind, controlled trial. *Techniques in coloproctology* 2014;18:945-953.
- [22] <https://www.acumenresearchandconsulting.com/irritable-bowel-syndrome-treatment-market>. Acumen Research and Consulting. Accessed 15 March 2024.