

[1. Non-pharmacological therapies for inflammatory bowel disease: Recommendations for self-care and physician guidance](#)

Duff W, Haskey N, Potter G, Alcorn J, Hunter P, Fowler S. Non-pharmacological therapies for inflammatory bowel disease: Recommendations for self-care and physician guidance. *World J Gastroenterol.* 2018;24(28):3055-3070. doi:10.3748/wjg.v24.i28.3055

We performed a scoping review on sought-after complementary therapies for patients with inflammatory bowel disease (IBD), specifically diet, physical activity and exercise (PA/E), and psychotherapy. We aim to update patients with IBD on therapies for self-care and provide physicians with guidance on how to direct their patients for the management of IBD. A search of MEDLINE, EMBASE, and PUBMED was completed in Sept 2016. Studies on diet, PA/E, or psychotherapy in patients with IBD were included. Medical Subject Heading terms and Boolean operators were used. The search was limited to full-text English articles describing an adult population. This review included 67 studies: Diet ($n = 19$); PA/E ($n = 19$); and psychotherapy ($n = 29$). We have made the following recommendations: (1) Diet: Consumption of diets rich in vegetables, fruit and soluble fiber may be beneficial in IBD. A trial of a low FODMAP diet can be considered in those patients with functional gastrointestinal symptoms. Restrictive diets are lacking in evidence and should be avoided; (2) PA/E: Regular low-moderate intensity activity, including cardiovascular and resistance exercise, has been shown to improve quality of life (QOL) and may improve inflammation; and (3) psychotherapy: Therapies such as cognitive-behavioural interventions, mindfulness, hypnosis, and stress management have been shown to improve QOL, but evidence is limited on their impact on anxiety, depression, and disease activity. Overall, these complementary therapies are promising and should be used to treat patients with IBD from a more holistic perspective.

[2. European Crohn's and Colitis Organisation Topical Review on Complementary Medicine and Psychotherapy in Inflammatory Bowel Disease.](#)

Torres J, Ellul P, Langhorst J, Mikocka-Walus A, Barreiro-de Acosta M, Basnayake C, Ding NJS, Gilardi D, Katsanos K, Moser G, Oheim R, Palmela C, Pellino G, Van der Marel S, Vavricka SR. European Crohn's and Colitis Organisation Topical Review on Complementary Medicine and Psychotherapy in Inflammatory Bowel Disease. *J Crohns Colitis.* 2019 May 27;13(6):673-685e. doi: 10.1093/ecco-jcc/jjz051. PMID: 30820529.

Patients with inflammatory bowel disease [IBD] increasingly use alternative and complementary therapies, for which appropriate evidence is often lacking. It is estimated that up to half of all patients with IBD use various forms of complementary and alternative medicine during some point in their disease course. Considering the frequent use of such therapies, it is crucial that physicians and patients are informed about their efficacy and safety in order to provide guidance and evidence-based advice. Additionally, increasing evidence suggests that some psychotherapies and mind-body interventions may be beneficial in the management of IBD, but their best use remains a matter of research. Herein, we provide a comprehensive review of some of the most commonly used complementary, alternative and psychotherapy interventions in IBD.

[3. The Effectiveness of Probiotics in the Treatment of Inflammatory Bowel Disease \(IBD\)-A Critical Review](#)

Jakubczyk D, Leszczyńska K, Górska S. The Effectiveness of Probiotics in the Treatment of Inflammatory Bowel Disease (IBD)-A Critical Review. *Nutrients*. 2020 Jul 2;12(7):1973. doi: 10.3390/nu12071973. PMID: 32630805; PMCID: PMC7400428.

Inflammatory bowel disease (IBD), which affects millions of people worldwide, includes two separate diseases: Crohn's disease (CD) and ulcerative colitis (UC). Although the background (chronic inflammatory state) and some of the symptoms of CD and UC are similar, both diseases differ from each other. It is becoming clear that a combination of many factors, in particular genetic background, host immune response and microbial reduced diversity status are associated with IBD. One potential strategy to prevent/treat IBD is gut modulation by probiotics. Over the last twenty years, many publications have focused on the role of probiotics in the course of IBD. The review discusses the utility of different strains of probiotics, especially *Bifidobacterium* spp., in all factors potentially involved in the etiology of IBD. The probiotic modulatory properties among different study models (cell lines, animal models of colitis, clinical study) are discussed and probiotic usefulness is assessed in relation to the treatment, prevention, and remission of diseases.

[4. A review of the diagnosis, prevention, and treatment methods of inflammatory bowel disease](#)

Seyedian SS, Nokhostin F, Malamir MD. A review of the diagnosis, prevention, and treatment methods of inflammatory bowel disease. *J Med Life*. 2019 Apr-Jun;12(2):113-122. doi: 10.25122/jml-2018-0075. PMID: 31406511; PMCID: PMC6685307.

Ulcerative colitis (UC) and Crohn's disease (CD) are classified as chronic inflammatory bowel diseases (IBD) which have similar symptoms and lead to digestive disorders and inflammation in the digestive system. The reason why they occur is still a mystery. A number of factors can be attributed to the prevalence of CD and UC, some of which include geographical location, inappropriate diet, genetics, and inappropriate immune response. Both diseases are more often diagnosed in urban areas compared to rural areas and both have their own challenges and side effects, but the patients can still have a good quality of life. Given the fact that the prevalence of this disease is higher at younger ages and that it disrupts half the life of the patient, it will, most likely, become a major health problem in the near future, even in developing countries. By reviewing valid scientific resources and evaluating new methods of addressing this disease, the present study aims to provide researchers and patients with new insights into this field and facilitate access to new treatments.

[5. Protocol for Fecal Microbiota Transplantation in Inflammatory Bowel Disease: A Systematic Review and Meta-Analysis](#)

Fang H, Fu L, Wang J. Protocol for Fecal Microbiota Transplantation in Inflammatory Bowel Disease: A Systematic Review and Meta-Analysis. *Biomed Res Int*. 2018 Sep 13;2018:8941340. doi: 10.1155/2018/8941340. PMID: 30302341; PMCID: PMC6158944.

Background: Fecal microbiota transplantation (FMT) is an emerging treatment approach for inflammatory bowel disease (IBD). The donor selection, the separation of fecal bacteria, the frequency of FMT, the way of infusion, the long-term safety, and efficacy are still uncertain.

Aim: To further study the efficacy and safety and protocol of FMT for IBD.

Methods: A systematic review and meta-analysis were conducted until February, 2018. Clinical remission was established as the primary outcome.

Results: A total of 596 paediatric and adult IBD patients were enrolled, and 459 patients received FMT therapy. 28.8% (132/459) patients achieved clinical remission during follow-up. 53% (241/459) patients achieved clinical response. The pooled estimated clinical remission for ulcerative colitis (UC) was 21% (95% CI: 8%-37%) and 30% (95% CI: 11%-52%) for Crohn's disease (CD), both with a risk of heterogeneity; 10% (95% CI: 0%-43%) for paediatric UC; 26% (95% CI: 10%-48%) for adult UC; 45% for paediatric CD (95% CI: 24%-66%); 22% (95% CI: 3%-52%) for adult CD. Meta-analysis of cohort studies showed that moderate-severe IBD patients could achieve more significant remission from FMT than mild-moderate patients ($P=0.037$). Delivery route has no impact on the efficacy of FMT in UC and CD. Based on current available evidence, a trend was observed towards higher clinical remission rate of frozen stool FMT than that of fresh stool for UC, while there was no significant difference between fresh and frozen FMT for CD. The optimal donor stool for FMT is still uncertain. Meta-analysis of RCTs showed that FMT treatment achieved significantly higher clinical remission rate than placebo for UC (28% versus 9%, $P=0.0003$).

Conclusion: FMT is an effective and safe therapy for both paediatric and adult IBD; fresh or frozen donor stool, delivery route, and antibiotic pretreatment or not have no impact on the efficacy of FMT in IBD. FMT might be a potential rescue therapy and even an initial standardized therapy for IBD. However, few data exist on long-term safety and efficacy and further validation is needed.

6. [Gut microbiota in the pathogenesis of inflammatory bowel disease](#)

Nishida A, Inoue R, Inatomi O, Bamba S, Naito Y, Andoh A. Gut microbiota in the pathogenesis of inflammatory bowel disease. *Clin J Gastroenterol*. 2018 Feb;11(1):1-10. doi: 10.1007/s12328-017-0813-5. Epub 2017 Dec 29. PMID: 29285689.

Inflammatory bowel disease (IBD), including ulcerative colitis and Crohn's disease, is a chronic and relapsing inflammatory disorder of the intestine. Although its incidence is increasing globally, the precise etiology remains unclear and a cure for IBD has yet to be discovered. The most accepted hypothesis of IBD pathogenesis is that complex interactions between genetics, environmental factors, and the host immune system lead to aberrant immune responses and chronic intestinal inflammation. The human gut harbors a complex and abundant aggregation of microbes, collectively referred to as the gut microbiota. The gut microbiota has physiological functions associated with nutrition, the immune system, and defense of the host. Recent advances in next-generation sequencing technology have identified alteration of the composition and function of the gut microbiota, which is referred to as dysbiosis, in IBD. Clinical and experimental data suggest dysbiosis may play a pivotal role in the pathogenesis of IBD. This review is focused on the physiological function of the gut microbiota and the association between the gut microbiota and pathogenesis in IBD. In addition, we review the therapeutic options for manipulating the altered gut microbiota, such as probiotics and fecal microbiota transplantation.

7. [Nutrition in Inflammatory Bowel Disease](#)

Schreiner P, Martinho-Gruerber M, Studerus D, Vavricka SR, Tilg H, Biedermann L; on behalf of Swiss IBDnet, an official working group of the Swiss Society of Gastroenterology. *Nutrition*

in Inflammatory Bowel Disease. *Digestion*. 2020;101 Suppl 1:120-135. doi: 10.1159/000505368. Epub 2020 Jan 10. PMID: 31927540.

Background: Westernization, above all associated changes in diet, has been postulated to be one of the most important factors contributing to the increasing incidence in inflammatory bowel disease (IBD), consisting mainly of Crohn's disease and ulcerative colitis.

Summary: Diet represents a crucially important and intuitively relevant topic for IBD patients. Although a substantial number of patients are prone to follow dietary advice from a variety of sources, including the lay press, there is intriguingly little scientific evidence for such an incitement. This may result in physicians being insufficiently informed about various aspects of nutrition, precluding adequate guidance of their patients with IBD. Importantly, IBD patients are at risk to develop deficiencies in iron, vitamin B12, folic acid, and several micronutrients, which may even be more pronounced in patients with active disease and those following a restrictive diet. This review aims to summarize the latest data from clinical and epidemiological studies investigating diet and its effect on the course of the disease and to outline the most important nutrient deficiencies in IBD patients. Key Messages: A western diet with an imbalance between omega-6 (n-6)/omega-3 (n-3) polyunsaturated fatty acids (PUFAs), in favor of n-6 PUFAs, may increase the risk of IBD, whereas a diet high in fruits and vegetables may decrease the risk of IBD. Many approaches to influence the course of IBD with dietary intervention exist. However, to induce or maintain remission in IBD with a change of diet is still in its infancy, and more dietary research is needed before we can apply it in daily practice. Patients with IBD, even in remission, have to be screened regularly for malnutrition.

8. [Nutrition, IBD and Gut Microbiota: A Review](#)

Mentella MC, Scaldaferrri F, Pizzoferrato M, Gasbarrini A, Miggiano GAD. Nutrition, IBD and Gut Microbiota: A Review. *Nutrients*. 2020 Mar 29;12(4):944. doi: 10.3390/nu12040944. PMID: 32235316; PMCID: PMC7230231.

Inflammatory bowel disease (IBD) is a chronic relapsing-remitting systemic disease of the gastrointestinal tract, characterized by an inflammatory process that requires lifelong treatment. The underlying causes of IBD are still unclear, as this heterogeneous disorder results from a complex interplay between genetic variability, the host immune system and environmental factors. The current knowledge recognizes diet as a risk factor for the development of IBD and attributes a substantial pathogenic role to the intestinal dysbiosis inducing an aberrant mucosal immune response in genetically predisposed individuals. This review focused on the clinical evidence available that considers the impact of some nutrients on IBD onset and the role of different diets in the management of IBD and their effects on the gut microbiota composition. The effects of the Specific Carbohydrate Diet, low fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAP) diet, gluten free diet, anti-inflammatory diet and Mediterranean diet are investigated with regard to their impact on microbiota and on the evolution of the disease. At present, no clear indications toward a specific diet are available but the assessment of dysbiosis prior to the recommendation of a specific diet should become a standard clinical approach in order to achieve a personalized therapy.

9. [Micronutrient deficiencies in inflammatory bowel disease](#)

Weisshof R, Chermesh I. Micronutrient deficiencies in inflammatory bowel disease. *Curr Opin Clin Nutr Metab Care*. 2015 Nov;18(6):576-81. doi: 10.1097/MCO.0000000000000226. PMID: 26418823.

Purpose of review: Malnutrition, protein-energy, and micronutrient deficiencies are common among patients with inflammatory bowel disease (IBD). The deficiencies are a manifestation of the complicated disease and a cause of morbidity. The present review summarizes recent advances and evidence-based knowledge regarding micronutrients in relation to patients with IBD.

Recent findings: Micronutrient deficiencies occur in more than half of patients with IBD. Most common are deficiencies of iron, B12, vitamin D, vitamin K, folic acid, selenium, zinc, vitamin B6, and vitamin B1. Deficiencies are more common in Crohn's disease than in ulcerative colitis, and more in active disease than at times of remission. Micronutrient deficiency is associated with prolonged and complicated course of disease. Iron deficiency is the most common cause for anemia. Definite diagnosis of B12 deficiency cannot be established by serum levels alone. Vitamin D and vitamin K deficiencies are thought to be associated with heightened inflammatory state. The relationship of these deficiencies with bone disease is controversial. The present review focuses on the significance, epidemiology, treatment options, and recommendations regarding micronutrient deficiencies in IBD.

Summary: Micronutrient deficiencies are common and have clinical significance. High suspicion for micronutrient deficiencies is advocated so that treatable causes of morbidity are treated appropriately and late and irreversible sequelae are prevented.

10. [Acupuncture in Inflammatory Bowel Disease - PubMed \(nih.gov\)](#)

Song G, Fiocchi C, Achkar JP. Acupuncture in Inflammatory Bowel Disease. *Inflamm Bowel Dis*. 2019 Jun 18;25(7):1129-1139. doi: 10.1093/ibd/izy371. PMID: 30535303.

Scientific research into the effects and mechanisms of acupuncture for gastrointestinal diseases including inflammatory bowel disease has been rapidly growing in the past several decades. In this review, we discuss the history, theory, and methodology of acupuncture and review potentially beneficial mechanisms of action of acupuncture for managing inflammatory bowel disease. Acupuncture has been shown to decrease disease activity and inflammation via increase of vagal activity in inflammatory bowel disease. Acupuncture has demonstrated beneficial roles in the regulation of gut dysbiosis, intestinal barrier function, visceral hypersensitivity, gut motor dysfunction, depression/anxiety, and pain, all of which are factors that can significantly impact quality of life in patients with inflammatory bowel disease. A number of clinical trials have been performed to investigate the therapeutic effects of acupuncture in ulcerative colitis and Crohn's disease. Although the data from these trials are promising, more studies are needed given the heterogeneous and multifactorial aspects of inflammatory bowel disease. There is also an important need to standardize acupuncture methodology, study designs, and outcome measurements.

11. [Physical activity and autoimmune diseases: Get moving and manage the disease](#)

Sharif K, Watad A, Bragazzi NL, Lichtbroun M, Amital H, Shoenfeld Y. Physical activity and autoimmune diseases: Get moving and manage the disease. *Autoimmun Rev*. 2018 Jan;17(1):53-72. doi: 10.1016/j.autrev.2017.11.010. Epub 2017 Nov 3. PMID: 29108826.

Physical activity, by definition, is any skeletal muscle body movement that results in energy expenditure. In the last few decades, a plethora of scientific evidences have accumulated and confirmed the beneficial role of physical activity as a modifiable risk factor for a wide variety of chronic diseases including cardiovascular diseases (CVDs), diabetes mellitus and cancer, among others. Autoimmune diseases are a heterogeneous group of chronic diseases, which occur secondary to loss of self-antigen tolerance. With the advent of biological therapies, better outcomes have recently been noted in the management of autoimmune diseases. Nonetheless, recent research highlights the salient role of modifiable behaviors such as physical inactivity on various aspects of the immune system and autoimmune diseases. Physical activity leads to a significant elevation in T-regulatory cells, decreased immunoglobulin secretion and produces a shift in the Th1/Th2 balance to a decreased Th1 cell production. Moreover, physical activity has been proven to promote the release of IL-6 from muscles. IL-6 released from muscles functions as a myokine and has been shown to induce an anti-inflammatory response through IL-10 secretion and IL-1 β inhibition. Physical activity has been shown to be safe in most of autoimmune diseases including systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), multiple sclerosis (MS), inflammatory bowel diseases (IBD), as well as others. Additionally, the incidence of RA, MS, IBD and psoriasis has been found to be higher in patients less engaged in physical activity. As a general trend, patients with autoimmune diseases tend to be less physically active as compared to the general population. Physically active RA patients were found to have a milder disease course, better cardiovascular disease (CVD) profile, and improved joint mobility. Physical activity decreases fatigue, enhances mood, cognitive abilities and mobility in patients with MS. In SLE patients, enhanced quality of life and better CVD profile were documented in more physically active patients. Physically active patients with type 1 diabetes mellitus have a decreased risk of autonomic neuropathy and CVD. Both fibromyalgia and systemic sclerosis patients report decreased disease severity, pain, as well as better quality of life with more physical activity. Further, SSc patients improve their grip strength, finger stretching and mouth opening with increased level of exercise. The purpose of this paper is to review the clinical evidence regarding the safety, barriers to engagement, and impact of physical activity on autoimmune diseases.

12. [An integrative review of physical activity in adults with inflammatory bowel disease](#)

Davis SP, Crane PB, Bolin LP, Johnson LA. An integrative review of physical activity in adults with inflammatory bowel disease. *Intest Res.* 2021 Jan 22. doi: 10.5217/ir.2020.00049. Epub ahead of print. PMID: 33472342.

Adults with inflammatory bowel disease (IBD) search for self-management strategies to manage their symptoms and improve their quality of life (QOL). Physical activity (PA) is one of the self-management strategies widely adopted by adults with IBD. This integrative review aimed to synthesize the evidence on health outcomes of PA in adults with IBD as well as to identify the barriers to engaging in PA. Using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), published literature was searched to identify the articles that addressed PA in adults with IBD. Twenty-eight articles met the inclusion criteria. Many of the reviewed studies used the terms of PA and exercise interchangeably. Walking was the most common PA reported in the studies. The findings from the majority of the reviewed studies supported the benefits of moderate-intensity exercise/PA among adults with IBD. The reviewed studies noted the following positive health outcomes of PA: improvement in QOL, mental health, sleep quality, gastrointestinal symptoms, fatigue and cardiorespiratory fitness. More importantly, participation in PA reduced the risk for development of IBD and the risk for future active

disease. The findings from the reviewed studies highlighted the following barriers to engage in PA: fatigue, joint pain, abdominal pain, bowel urgency, active disease and depression.

13. [Systematic review of complementary and alternative medicine treatments in inflammatory bowel diseases](#)

Langhorst J, Wulfert H, Lauche R, Klose P, Cramer H, Dobos GJ, Korzenik J. Systematic review of complementary and alternative medicine treatments in inflammatory bowel diseases. *J Crohns Colitis*. 2015 Jan;9(1):86-106. doi: 10.1093/ecco-jcc/jju007. Epub 2014 Nov 28. PMID: 25518050.

Objective: We performed a systematic review for Complementary and Alternative Medicine [CAM] as defined by the National Institute of Health in Inflammatory Bowel Disease [IBD], ie Crohn's disease [CD] and ulcerative colitis [UC], with the exception of dietary and nutritional supplements, and manipulative therapies.

Methods: A computerized search of databases [Cochrane Library, Pubmed/Medline, PsychINFO, and Scopus] through March 2014 was performed. We screened the reference sections of original studies and systematic reviews in English language for CAM in IBD, CD and UC. Randomized controlled trials [RCT] and controlled trials [CT] were referred and assessed using the Cochrane risk of bias tool.

Results: A total of: 26 RCT and 3 CT for herbal medicine, eg aloe-vera gel, andrographis paniculata, artemisia absinthium, barley foodstuff, boswellia serrata, cannabis, curcumin, evening primrose oil, Myrrhinil intest[®], plantago ovata, silymarin, sophora, tormentil, wheatgrass-juice and wormwood; 1 RCT for trichuris suis ovata; 7 RCT for mind/body interventions such as lifestyle modification, hypnotherapy, relaxation training and mindfulness; and 2 RCT in acupuncture; were found. Risk of bias was quite heterogeneous. Best evidence was found for herbal therapy, ie plantago ovata and curcumin in UC maintenance therapy, wormwood in CD, mind/body therapy and self-intervention in UC, and acupuncture in UC and CD.

Conclusions: Complementary and alternative therapies might be effective for the treatment of inflammatory bowel diseases; however, given the low number of trials and the heterogeneous methodological quality of trials, further in-depth research is necessary.

14. [Probiotics, fibre and herbal medicinal products for functional and inflammatory bowel disorders](#)

Currò D, Ianiro G, Pecere S, Bibbò S, Cammarota G. Probiotics, fibre and herbal medicinal products for functional and inflammatory bowel disorders. *Br J Pharmacol*. 2017 Jun;174(11):1426-1449. doi: 10.1111/bph.13632. Epub 2016 Oct 25. PMID: 27696378; PMCID: PMC5429330.

Functional bowel disorders (FBD), mainly irritable bowel syndrome (IBS) and functional constipation (FC, also called chronic idiopathic constipation), are very common worldwide. Inflammatory bowel disease (IBD), including ulcerative colitis and Crohn's disease, although less common, has a strong impact on patients' quality of life, as well as being highly expensive for our healthcare. A definite cure for those disorders is still yet to come. Over the years, several therapeutic approaches complementary or alternative to traditional pharmacological treatments, including probiotics, prebiotics, synbiotics, fibre and herbal medicinal products, have been investigated for the management of both groups of diseases. However, most available studies are biased by several drawbacks, including small samples and poor methodological quality. Probiotics, in particular *Saccharomyces boulardii* and *Lactobacilli* (among which

Lactobacillus rhamnosus), synbiotics, psyllium, and some herbal medicinal products, primarily peppermint oil, seem to be effective in ameliorating IBS symptoms. Synbiotics and fibre seem to be beneficial in FC patients. The probiotic combination VSL#3 may be effective in inducing remission in patients with mild-to-moderate ulcerative colitis, in whom Escherichia coli Nissle 1917 seems to be as effective as mesalamine in maintaining remission. No definite conclusions can be drawn as to the efficacy of fibre and herbal medicinal products in IBD patients due to the low number of studies and the lack of randomized controlled trials that replicate the results obtained in the individual studies conducted so far. Thus, further, well-designed studies are needed to address the real role of these therapeutic options in the management of both FBD and IBD.

15. [A mechanistic review on plant-derived natural compounds as dietary supplements for prevention of inflammatory bowel disease](#)

Farzaei MH, Bahramsoltani R, Abdolghaffari AH, Sodagari HR, Esfahani SA, Rezaei N. A mechanistic review on plant-derived natural compounds as dietary supplements for prevention of inflammatory bowel disease. *Expert Rev Gastroenterol Hepatol*. 2016 Jun;10(6):745-58. doi: 10.1586/17474124.2016.1145546. Epub 2016 Feb 20. PMID: 26799847.

Inflammatory bowel disease (IBD) is a recurrent idiopathic inflammatory condition, characterized by disruption of the gut mucosal barrier. This mechanistic review aims to highlight the significance of plant-derived natural compounds as dietary supplements, which can be used in addition to restricted conventional options for the prevention of IBD and induction of remission. Various clinical trials confirmed the effectiveness and tolerability of natural supplements in patients with IBD. Mounting evidence suggests that these natural compounds perform their protective and therapeutic effect on IBD through numerous molecular mechanisms, including anti-inflammatory and immunoregulatory, anti-oxidative stress, modulation of intracellular signaling transduction pathways, as well as improving gut microbiota. In conclusion, natural products can be considered as dietary supplements with therapeutic potential for IBD, provided that their safety and efficacy is confirmed in future well-designed clinical trials with adequate sample size.

16. [Effects of yoga in inflammatory bowel diseases and on frequent IBD-associated extraintestinal symptoms like fatigue and depression](#)

Wilke E, Reindl W, Thomann PA, Ebert MP, Wuestenberg T, Thomann AK. Effects of yoga in inflammatory bowel diseases and on frequent IBD-associated extraintestinal symptoms like fatigue and depression. *Complement Ther Clin Pract*. 2021 Nov;45:101465. doi: 10.1016/j.ctcp.2021.101465. Epub 2021 Jul 29. PMID: 34388560.

Quality of life (QoL) of persons with inflammatory bowel diseases (IBD) is often impaired by symptoms that do not primarily relate to intestinal inflammation. Among the most challenging extraintestinal symptoms are depression and fatigue, which are also frequent in other chronic diseases like multiple sclerosis, rheumatoid arthritis and cancer. Yoga as an ancient Indian tradition containing postures, breathing exercises and meditation may positively influence those symptoms. This review evaluates the current literature with regard to the effect of yoga-based interventions in persons with IBD and with regard to QoL, depression and fatigue in other somatic disorders. A systematic literature search yielded three trials examining the effects of yoga in patients with IBD and 37 trials addressing depressive syndromes or fatigue in somatic disorders. In summary, both in-person and video-based yoga classes are

feasible, acceptable and safe as complementary treatment in patients with IBD and significantly improve anxiety and impaired quality of life. Current literature does not provide information on the effect of yoga on depression and fatigue in patients with IBD, but research from other somatic disorders or patients with depressive disorders implies the potential of yoga in this regard for persons with IBD. This should be specifically addressed in interventional trials with standardized yoga modules including patients with IBD suffering from fatigue, depression and/or impaired QoL.

17. [Mindfulness-Based Interventions in Inflammatory Bowel Disease](#)

Hood MM, Jedel S. Mindfulness-Based Interventions in Inflammatory Bowel Disease. *Gastroenterol Clin North Am.* 2017 Dec;46(4):859-874. doi: 10.1016/j.gtc.2017.08.008. Epub 2017 Oct 3. PMID: 29173527.

Mindfulness-based interventions may be beneficial psychosocial treatments for improving the health and well-being of patients with inflammatory bowel disease. This article reviews eight studies, assessing seven psychosocial interventions, which include mindfulness and/or meditation components. Strongest effects of the interventions were found in quality of life and anxiety/depression, with inconsistent or minimal changes in other psychosocial areas, such as perceived stress and in disease-related outcomes and other physiologic functioning. Mindfulness interventions for patients with inflammatory bowel disease may be a supplemental treatment option to improve quality of life and distress in this population, although results are preliminary and interventions require additional testing.