



Inflammatory Bowel Disease Treated with a Plant-Based Diet – An Update

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Submission: August 26, 2024 **Published:** September 04, 2024

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Abstract

Research has continued to show that a plant-based diet can be an effective treatment of inflammatory bowel disease. Studies performed on patients with Crohn's disease and Ulcerative colitis in Japan, using a lacto-ovo-semi-vegetarian diet, showed that more than 50% could remain relapse-free after several years. Several case studies have also demonstrated the ability to avoid relapse by following a whole-food plant-based diet.

Treating CD and UC patients with a plant-based diet has the advantages of having no adverse reactions or contraindications, and it can treat common comorbidities.

Keywords: Inflammatory Bowel Disease; Plant-Based Diet; Crohn's disease; Ulcerative colitis

Abbreviations: IBD: Inflammatory Bowel Disease; CD: Crohn's Disease; UC: Ulcerative Colitis; PBD: Plant Based Diet; WFPBD: Whole Food Plant Based Diet

Introduction

Inflammatory Bowel Disease (IBD) is often a difficult disease to treat. Since the publication of our articles on the prevention and treatment of Crohn's disease (CD) [1,2] and Ulcerative Colitis (UC) [3] with a plant-based diet, research has continued to show that a plant-based diet can be an effective treatment of inflammatory bowel disease. Here we present the latest research.

Dietary factors implicated in disease development of IBD are a Western-style diet pattern, in part due to the adverse effects on the gut microbiome. A single-group, prospective study was performed in tertiary hospitals in Japan on patients with Crohn's disease. Remission was induced in 24 consecutive newly diagnosed adult patients with Crohn's disease during hospitalization via 3 standard infliximab infusions together with a lacto-ovo-semi-vegetarian diet, a kind of plant-based diet (PBD), to counter the Westernized diet, hoping for an increase in beneficial microbiota in the gut. Patients were instructed to continue the diet after discharge, but infliximab infusions were discontinued. The median follow-up period was 8.6 years. Thirteen cases remained relapse-free during this period. The relapse-free rate at 1, 2, 3, and 4 years was 79%, 66%, 57%, and 52%, respectively [4]. Based on other research, we believe that an entirely plant-based diet would have been even more effective.

An earlier study by the same researchers looked at patients with ulcerative colitis, treated as inpatients and provided with

the same kind of plant-based diet. Cumulative relapse rates for 51 initial episode cases of UC (18 mild, 30 moderate, 3 severe) at 1 and 5 years were 14% and 27%, respectively. For hospitalized patients, the experience of a plant-based diet during hospitalization seemed to contribute to increased adherence to the diet, by increasing self-management skills, which in turn decreased the risk of relapse [5,6].

In a small Australian study, 14 patients with mild to moderate ulcerative colitis were enrolled in an 8-week dietary trial. The patients were educated on following a lacto-ovo vegetarian diet. 11 patients reported 100% compliance over the 8 weeks. Clinical response and improved quality-of-life measures occurred within the first 2 weeks, and these responses were maintained for the rest of the study [7].

Recent case studies of patients with ulcerative colitis looked at a stricter whole-food plant-based diet (WFPBD). In a recent study, the authors describe three case histories of patients with ulcerative colitis and the successful use of a WFPBD for remission induction and maintenance with over 2 years of follow-up. All showed significant improvement and remission. However, after the end of the study, one patient went back to a Western-style diet and relapsed. The three case histories presented, with more than 2 years of follow-up, highlight the potential role of a WFPBD in the treatment approach for people with UC [8].

In another case study, the patient was a 37-year-old white female with history of Crohn's disease, diagnosed in 2001. Historically, she had failed multiple medications. She did not tolerate amino salicylates, including sulfasalazine or mesalamine. She had a severe infusion reaction to infliximab. Additionally, 6-mercaptopurine, vedolizumab, certolizumab, and adalimumab provided limited to poor response. In 2010, the patient underwent a laparoscopic left hemicolectomy with ascending colon to rectal anastomosis after failing cyclosporine for fulminant colitis involving the rectum, sigmoid, descending colon, splenic flexure, distal transverse colon. Over the following years, the patient continued to have ileal and rectal recurrence. She participated in multiple clinical trials but had no benefit.

At the follow-up visit in April 2020, the patient reported improvement in stool frequency, abdominal pain, and hematochezia after switching to a strict vegan diet. She eliminated animal products in favor of a diet based exclusively on grains, legumes, vegetables, and fruits. Labs were notable for a decrease in CRP to 0.59. Ten months after implementing the dietary changes, a repeat colonoscopy demonstrated marked endoscopic improvement. The patient continued on her vegan diet and to feel well to the date of publication [9].

Treating CD and UC patients with a plant-based diet has the advantages of having no adverse reactions or contraindications. In some cases a plant-based diet can serve as a monotherapy for CD and UC and in others as a useful adjunct. It can also treat common comorbidities. For instance, patients with Crohn's disease and ulcerative colitis have an increased risk of type 2 diabetes [10] and coronary artery disease [11]. A plant-based diet can be an effective prophylaxis and treatment for both type 2 diabetes and coronary artery disease [12,13].

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DOI: [10.19080/ARGH.2024.20.556049](https://doi.org/10.19080/ARGH.2024.20.556049)

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