

Gastrointestinal Disorders

Gastrointestinal (GI) disorders, including functional bowel diseases such as irritable bowel syndrome (IBS) and inflammatory bowel diseases such as Crohn's disease (CD) and colitis, afflict more than one in five Americans, particularly women. While some GI disorders may be controlled by diet and pharmaceutical medications, others are poorly moderated by conventional treatments. Symptoms of GI disorders often include cramping, abdominal pain, inflammation of the lining of the large and/or small intestine, chronic diarrhea, rectal bleeding and weight loss.

Patients with these disorders frequently report using cannabis therapeutically. According to survey data published in 2011 in the *European Journal of Gastroenterology & Hepatology*, "Cannabis use is common amongst patients with IBD for symptom relief, particularly amongst those with a history of abdominal surgery, chronic abdominal pain and/or a low quality of life index." [1] Several anecdotal reports [2-3] and a handful of case reports [4-5] also exist in the scientific literature.

Preclinical studies demonstrate that activation of the CB1 and CB2 cannabinoid receptors exert biological functions on the gastrointestinal tract. [6] Effects of their activation in animals include suppression of gastrointestinal motility, [7] inhibition of intestinal secretion, [8] reduced acid reflux, [9] and protection from inflammation, [10] as well as the promotion of epithelial wound healing in human tissue. [11]

Observational trial data reports that cannabis therapy use is associated with a reduction in Crohn's disease activity and disease-related hospitalizations. Investigators at the Meir Medical Center, Institute of Gastroenterology and Hepatology assessed 'disease activity, use of medication, need for surgery, and hospitalization' before and after cannabis use in 30 patients with CD. Authors reported, "All patients stated that consuming cannabis had a positive effect on their disease activity" and documented "significant improvement" in 21 subjects.

Specifically, researchers found that subjects who consumed cannabis "significantly reduced" their need for other medications. Participants in the trial also reported requiring fewer surgeries following their use of cannabis. "Fifteen of the patients had 19 surgeries during an average period of nine years before cannabis use, but only two required surgery during an average period of three years of cannabis use," authors reported. They concluded: "The

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results indicate that cannabis may have a positive effect on disease activity, as reflected by a reduction in disease activity index and in the need for other drugs and surgery." [12]

In a follow up, placebo-controlled trial, inhaled cannabis was reported to decrease Crohn's disease symptoms in subjects with a treatment-resistant form of the disease. Nearly half of the patients in the trial achieved disease remission. [13]

Today, many experts believe that cannabinoids and/or modulation of the endogenous cannabinoid system represents a novel therapeutic approach for the treatment of numerous GI disorders – including inflammatory bowel diseases, functional bowel diseases, gastro-oesophageal reflux conditions, secretory diarrhea, gastric ulcers and colon cancer. [14-16]

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