

2.2.2 Irritable bowel syndrome (IBS)

- The effect of fiber on IBS symptoms is variable and specific to fiber type [14,22,23].
- Soluble fiber supplements—including linseed, methylcellulose, partially hydrolyzed guar gum, and psyllium—have demonstrated therapeutic benefit in a number of clinical trials, particularly for patients with constipation-predominant IBS (IBS-C) [3,14,22,23].
- Highly fermentable fibers, such as oligosaccharides, inulin, and wheat bran fiber (by virtue of its oligosaccharide content) may contribute to increased gas production, thus exacerbating symptoms of bloating, flatus, and gastrointestinal discomfort in IBS [14,22,23].
- Reducing the intake of highly fermentable fibers, as part of a low FODMAP dietary approach (see section 3), is recommended for the management of IBS and provides symptomatic relief in approximately 75% of patients [14,22].

Conclusion: Highly fermentable fibers, including oligosaccharides and inulin, and also wheat bran may exacerbate symptoms of IBS. The best evidence indicates that reducing the intake of these fermentable fibers as part of a low FODMAP dietary approach (see section 3) is effective in managing symptoms in the majority of IBS patients. Conversely, soluble fiber supplements including psyllium, linseed, and methylcellulose may be of therapeutic benefit, particularly in IBS-C.

2.2.3 Inflammatory bowel disease (IBD)

- Evidence for a therapeutic effect of dietary fiber in IBD is lacking. However, due to the potential anti-inflammatory and immune-modulating effects of fiber, this warrants further investigation [24].
- Restriction of dietary fiber in IBD is unnecessary except in the case of significant intestinal stenosis [24].
- Reducing the intake of highly fermentable fibers, as part of a low FODMAP dietary approach, may be useful in symptomatic management of IBD patients who have coexisting IBS (see section 3) [25,26].

Conclusion: There is currently a paucity of evidence supporting a therapeutic role of dietary fiber in IBD. Further high-quality studies are therefore required. The intake of dietary fiber should not be restricted in IBD patients, except in the case of intestinal obstruction. IBD patients with coexisting IBS may benefit from reducing their intake of highly fermentable fibers as part of a low FODMAP dietary approach.

2.2.4 Diverticular disease

- Higher intakes of dietary fiber may be associated with a reduced risk of diverticular disease [27,28].
- It is not clear whether a high-fiber diet is beneficial in patients with diverticulosis, as its pathogenesis is probably multifactorial and complex. More studies are needed in order to evaluate the role of fiber in the pathogenesis and treatment of diverticular disease [27,28].
- A few poor-quality studies have suggested that fiber may improve symptoms associated with uncomplicated diverticulosis and decrease the risk of diverticulitis. However, high-quality evidence is lacking [27,28].