

The Nutrition Code GP Newsletter - Volume 1

Irritable Bowel Syndrome and Nutrition

What is Irritable Bowel Syndrome (IBS)?

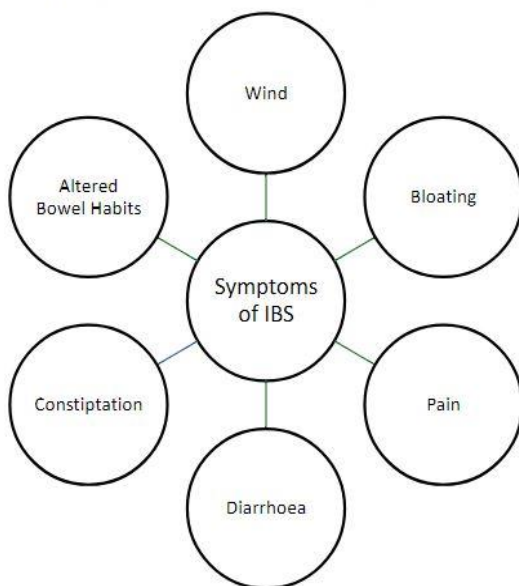
Irritable bowel syndrome (IBS) is a common functional gastrointestinal disorder. It is characterised by gastrointestinal symptoms that are not explained by other disorders, and that are not detectable on physical or biochemical examination.

Other conditions to consider:

- Coeliac disease
- IBD (Crohn's, ulcerative colitis)
- Diverticular disease
- Gynaecological conditions (i.e. endometriosis)
- Parasite or GI infection

Note: IBS may occur in conjunction with any of the above conditions.

Symptoms of Irritable Bowel Syndrome



What causes IBS?

The exact causes of IBS are unknown. However, it is thought that the following scenarios may contribute:

1. Abnormal muscle contractions:

Contractions that are stronger than normal may cause gas, bloating and diarrhoea. Weak intestinal contractions may cause bloating, abdominal cramping and constipation.

2. GI hypersensitivity:

Poorly coordinated signals can cause your body to overreact to normal gut patterns

3. GI inflammation. Some people with IBS have an increased number of immune-system cells in their intestines. This immune-system response is associated with pain and diarrhea.

4. GI infection. IBS can develop after a severe bout of diarrhoea (gastroenteritis) caused by bacteria, parasite or a virus. IBS might also be associated with small intestinal bacterial overgrowth (SIBO).

5. Changes to, or poor, gut bacteria. Unfavourable changes to gut bacteria may follow GI infection, medications (i.e. antibiotics) or a change in diet (i.e. less wholefoods, more processed foods). Research indicates that microflora in people with IBS might differ from microflora in healthy people.

What are the dietary triggers of IBS?

- **Fermentable carbohydrates (FODMAPs)**
- Dietary fibre (excess or inadequacy)
- Fatty, spicy or acidic foods
- Caffeine and alcohol
- Meal size and eating patterns (i.e. fast eating)

What are the non-dietary triggers of IBS?

- Stress
- Hormones (i.e. females during menstruation)
- Poor sleep quality
- Some medications

The Low FODMAP Diet

What are FODMAPs?

FODMAPs are fermentable, short-chain carbohydrates that are poorly absorbed in most people. These include excess fructose, lactose, polyols, fructans and galactans (see appendix table).

Why do FODMAPs trigger symptoms in people with IBS?

Compared to most people, IBS sufferers will either have:

- **Poor absorption:** A reduced capacity to absorb FODMAPs, exacerbating symptoms
- **GI hypersensitivity:** Nerves supplying the gut are more sensitive, causing exaggerated pain or discomfort in response to gas production, when FODMAPs are fermented in the large intestine.
- **Small intestinal bacterial overgrowth (SIBO):** When FODMAPs are fermented by bacteria in the small intestine, the gas produced can cause significant pain, distension and bloating.
- **Poor intestinal microflora:** Poor diet, previous infection, use of medications and/or other triggers may contribute to a more 'reactive' gut environment.

How do FODMAPs trigger gut symptoms?

Draw water into the small intestine: FODMAPs increase the concentration of bowel contents, so water is drawn into the bowel to dilute them (i.e. osmotic effect).

Increase gas production in the large intestine: FODMAPs are fermented by gut bacteria, causing gas production

Increased water and gas in the bowel can cause abdominal distention, bloating, flatulence, and altered gut motility resulting in constipation and/or diarrhoea.

How to implement a low FODMAP diet:

Typically, the low FODMAP diet pathway is initiated with an 'elimination phase', followed by guided reintroduction of individual foods/FODMAP categories. FODMAP re-challenges are recommended after a period of maintenance.

When implementing the low FODMAP diet, it is important to remember that:

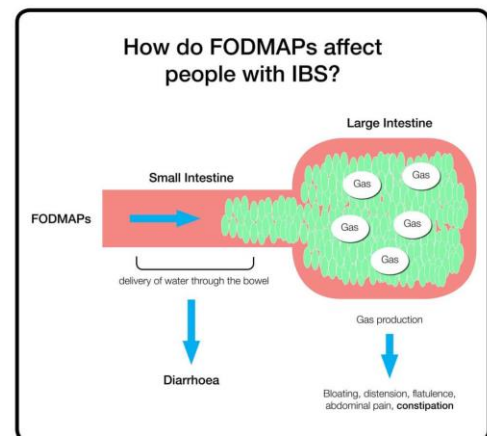
Everyone is different, and will therefore experience different 'intolerance' patterns. For example, a person may be sensitive to only one, to some, or to all five FODMAP groups. Furthermore, two people may both be intolerant to one particular FODMAP category/food, however, the quantity of this food required to trigger a symptom may differ.

The Low FODMAP diet is not intended to be a long term, or lifelong diet. Most people will experience changes in the FODMAP tolerance levels over time. So – why restrict something forever, when you may not need to? Also - most FODMAPs are also 'pre-biotics', and can be beneficial for the growth and survival of healthy gut bacteria.

For these reasons, it is recommended that the low FODMAP diet be *personalised* for each individual.

How can a dietitian help? An experienced dietitian can help individuals identify which specific FODMAP foods trigger their symptoms (if any), and in what quantities. Dietitians can also help individuals by planning a customised and balanced diet that considers their current food triggers, and any other nutrition goals, without over-restricting. Furthermore, a dietitian can advise individuals on how to approach FODMAP re-introduction for bowel health in the future.

A low-FODMAP diet has been scientifically proven to relieve symptoms of IBS in 86% of sufferers (1)!



Probiotics and Natural Aids

Will probiotics assist with IBS management?

Maybe, or maybe not. A recent systematic review reported that 'Of 15 studies that examined global IBS symptoms as a primary endpoint, 8 reported significant benefits of probiotics vs placebo' (2). This same review notes that 'many of the new publications did not report benefits of probiotics, possibly due to inclusion of new, less efficacious preparations (2).

Of the many probiotic varieties available and tested, *Lactobacillus*, *Bifidobacterium* and *Saccharomyces (diarrhea specific)* seem to have accumulated the most positive outcomes. However, at present, there are no best practice guidelines for the prescription of probiotic supplements, for the management of IBS.

What we recommend for generalized IBS: Bioceuticals Ultra Biotic 45 billion / Bioglan BioHappy 50 billion. Twice daily.

What we recommend for travel diarrhea/post antibiotic therapy: Bioceuticals SB-Floractiv, Ethical Nutrients Travel Bug. Twice daily.

What about herbal preparations?

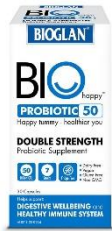
Peppermint oil (i.e. Mintec capsules): There is a 'high' level of evidence suggesting that peppermint oil can assist with the management of abdominal pain in patients with IBS (3). Peppermint oil has muscle relaxing properties, effective in the stomach and intestinal tract.

Internal usage appears to speed up the early phase of digestion in the stomach while reducing colonic motility. It doesn't seem to influence or improve other symptoms of IBS.

Oral supplementation of peppermint oil for the purpose of gastrointestinal health and motility involves consuming anywhere between **0.1-0.2mL** of the oil daily in 2-3 divided doses, not with meals or warm fluids.

Iberogast: A herbal preparation containing 9 active ingredients, which are: peppermint oil, chamomile, lemon balm, St Mary's thistle, caraway, liquorice, greater celandine, bitter candytuft and angelica.

According to the primary clinical trial listed on the Iberogast website, a 4-week study involving 208 participants with IBS: 'On average, patients found Iberogast to treat some symptoms 20% better than placebo, and the proportion of patients with complete relief was more than 50% greater than placebo' (4). Positive results with Iberogast were for patients who had predominant symptoms of diarrhea, constipation, and altering stool consistencies.



This resource was prepared based on available evidence and best practice guidelines, as of May 2018. If you have any questions or feedback in relation to this resource, please feel free to contact Samantha. E: samantha@thenutritioncode.com.au

1. Nanayakkara WS et al. Efficacy of the low FODMAP diet for treating irritable bowel syndrome: the evidence to date. Clin Exp Gastroenterol. 2016; 9: 131-142.

2. Hungin APS et al. Systematic review: probiotics in the management of lower gastrointestinal symptoms – an updated evidence-based international consensus. Alimenter Pharmacol Ther 2018.

3. <https://examine.com/supplements/peppermint/>

4. Madisch A, et al. Treatment of irritable bowel syndrome with herbal preparations: results of a double-blind, randomized, placebo-controlled, multi-centre trial. Alimentary Pharmacology & Therapeutics. 2004;19: 271-279.

