

Irritable Bowel Syndrome

IBS as a disorder of the gut which features abdominal pain and cramping, an abnormal bowel pattern (diarrhoea, constipation or both) and abdominal bloating.

IBS is not life-threatening, doesn't cause permanent damage to the bowel and will not develop into a more serious condition. IBS affects 15-20% of the population, the majority will have mild symptoms but for those with more severe symptoms, day-to-day activities employment and quality of life may be affected.

IBS is a functional disorder, which means that there are no structural or biochemical abnormalities and it often overlaps with other functional disorders such as chronic fatigue syndrome and fibromyalgia.

IBS may be caused by a combination of factors including those affecting the brain such as stress & emotion as well as food, bacteria and genetic factors.

If you are experiencing these symptoms you should discuss with your General Practitioner who will arrange for further investigation.

Diet and IBS

There are many misconceptions about IBS. While diet may play a role, IBS is not a food allergy and is not caused by eating wheat. A high fibre diet is not suitable for everyone with IBS, nor should everybody with IBS eliminate dairy products from their diet. Allergy testing is used to confirm or eliminate food allergies but is not generally useful in IBS. Keeping a food diary is the best way to detect other food intolerances/non-immune reactions to certain foods. A trial elimination of a suspect food may be warranted but if no improvement in symptoms is observed that food should be reintroduced. Unmonitored elimination diets may cause nutritional deficiencies.

A high-fibre diet improves overall health and increasing dietary fibre can improve abnormal bowel pattern in people with IBS, especially those with constipation. However, increasing fibre can make some people worse and a trial elimination of insoluble fibre (that found in bran and cereals) may be worthwhile in diarrhoea-predominant IBS.

Coeliac disease should be excluded in some people with IBS. In non-coeliacs a trial elimination of wheat- containing foods may be warranted but if no improvement in symptoms is observed wheat should be reintroduced.

Lactose intolerance is caused by a shortage of the lactase enzyme needed for digestion of dairy products. If a trial elimination of dairy products is attempted it is essential to supplement with calcium and vitamin D. If successful, yoghurt and some dairy products may be reintroduced. If not successful all dairy products should be reintroduced.

In general it is recommended to minimise consumption of alcohol and caffeine, eat smaller meals more frequently, minimise intake of high-fat food, gradually increase intake of fibre if constipated, and restrict intake of fructose and sorbitol. In some cases a trial elimination of wheat or dairy products may be warranted but it is recommended trying only one thing at a time and reintroducing the food if there was no improvement.

Symptoms of IBS are often worse at times of stress and higher rates of anxiety and depression are found in IBS sufferers (12 % in IBS patients versus 6 % in those without IBS). Traditional medications for IBS have included laxatives, antispasmodics and anti-diarrhoeals, however, low doses of antidepressants have been found to be useful, even in the absence of depression. New drugs aim to act on the brain-gut axis and affect serotonin and its receptors in the gut. Cognitive behavioural therapy and hypnotherapy have also been shown to be useful in those with severe symptoms.

Bloating and IBS

Bloating (abdominal gassy distension) is one of the commonest symptoms of IBS. However, IBS patients do not produce excessive amounts of gas; gas is retained within the small intestine leading to sensations of fullness and possible visible swelling of the abdomen.

Colpermin, a peppermint-based non-prescription medication taken 3 times daily, 30 minutes before meals, has been found useful to treat bloating. Peppermint tea or mint tea can also be used.

Probiotics (live bacteria which when consumed in sufficient quantities provide health benefits) have been shown to be beneficial for IBS, particularly bifidobacteria.

Many vegetables may cause bloating, including onions, peas, beans, tomatoes and artichokes. Vegetables which do not result in gas production include carrots, parsnips, courgette, cucumber, mushrooms and peppers.

Fruits which may cause bloating include oranges, grapefruit and bananas. Fruits which do not generally cause bloating include pears, apricot, strawberries, peaches, raspberries, melon, grapes and plums.

Consumption of red meat should be minimised as well as preserved meats like bacon, rashers and sausages. Fish, particularly white fish, is much easier to digest.

Dairy products may trigger IBS symptoms, and patients who are not lactose-intolerant may still benefit from substitution with soya or sheep milk.

Fatty foods should be avoided as should spicy ethnic and processed foods in general.

It is recommended to drink water regularly during the day. Beer and spirits are best avoided with alcohol in general best restricted to less than 5 units per week. Smoking may worsen bloating.

Exercise is very beneficial in IBS especially for bloating and constipation and should be taken regularly especially for those who spend their working lives driving or at a desk.

Constipation in IBS

Constipation means a change from the normal bowel frequency, with the motions being small, hard and painful to pass. In IBS, constipation arises because the colon/large intestine is sluggish and the muscular contractions of the colon are weak.

Fibre – soluble and insoluble - is found in fresh fruit and vegetables and whole grains as well as bran. The bulk and soft texture of fibre help prevent constipation. The average Irish diet is lacking in fibre because too many refined and processed foods are consumed.

Most people who are mildly constipated do not need laxatives. However, for those who have made lifestyle changes and are still constipated, laxatives may be required. Bulk-forming laxatives such as Fybogel, Normacol, Reulan and Celevac are generally considered safest. Stimulant laxatives such as Senna, Senokot, Dulcolax are effective for short-term use but should be avoided for longterm use to avoid damaging the nerves in the colon, making it dependent on the use of laxatives.

Diarrhoea in IBS

Diarrhoea is a frequent symptom of IBS and may be exacerbated by a high-fibre diet. For those patients, white bread may be easier to digest than brown and a food diary may be used to identify foods which cause diarrhoea. Coffee, particular strong espresso-type coffee can irritate the bowel in IBS and is best avoided. Some patients find spelt easier to digest than wheat products.

IBS Research at the Alimentary Pharmabiotic Centre

The interaction between the brain and the gut, known as the brain-gut axis is being studied at the APC. In health, it controls digestive processes, modulates gut-associated immunity and co-ordinates the overall physical and emotional state of the organism with regard to activity in the GIT. In disease, altered brain-gut axis is involved in range of GI disorders, such as IBS and obesity.

Research at the APC is focused on understanding the basis of brain-GIT interactions, how they are altered by stress and how they contribute to disease processes in an effort to develop novel therapeutic strategies. We are also characterising the colonic microbiota in IBS and identifying microbial and immune biomarkers. We aim to developing a better understanding of the pathophysiology of post-infectious IBS, and IBS in general, and aid the discovery of novel drug treatments.

Probiotics have been shown to have beneficial therapeutic effects in IBS, but the mechanisms are unknown. Some evidence suggests that probiotics differentially release factors that activate G-protein coupled receptors (GPCRs), thereby regulating cells of the CNS and the GIT. Hence, we aim to discover GPCRs that are activated by probiotics and play a role in IBS.