

Irritable Bowel Syndrome

(and related conditions)

Irritable bowel syndrome (IBS) is common, affecting about 1 in 5 of us. The name is a clue and tells us that something is making the bowel irritable. Our job is to find out what. This can sometimes lead to a cure (see below).

Typical symptoms are abdominal cramps accompanied by changes in bowel movements (usually diarrhea but sometimes constipation) or changes in the appearance of the stool. Clues are rushing to the toilet after eating food and relief of abdominal cramps after a bowel movement. There is nearly always wind or bloating.

Conventional treatment is with anti-spasmodic treatment (to ease the cramps) and medication to regulate bowel movements. This helps but is unsatisfactory in the long term as it does nothing to deal with the underlying causes.

Common Causes

The commonest cause of IBS is **food intolerance**. Milk, grains, yeast, corn, eggs and sugar can all trigger IBS. The most likely food to trigger IBS is wheat (symptoms after eating cereals or bread should raise suspicion). Milk is the second most likely. Some people are intolerant to several foods.

A clue to food intolerance is if you crave a certain food or eat it a lot. Eating the same food every day makes food intolerance more likely.

The best way to check for this is with an exclusion diet. Usually this means doing the Stone age diet (see ***food intolerance leaflet*** for details). It is a challenging diet but doesn't take long. If symptoms settle after one week on this diet you will know that food is the cause. Then you need to add in foods one at a time. This will tell you which food is triggering the symptoms.

Other ways to test for food intolerance are blood tests like ALCAT (see ***Allergy leaflet for details***) but these are expensive, not available on the NHS and not as accurate as an exclusion diet.

The other main food-related strategy for IBS is **the low FODMAPs diet**. This is the best strategy if you react more to do fruit and vegetables and get a lot of wind. 74% to 86% of patients with IBS improve on a FODMAPs diet. The leaflet "***the FODMAPs diet***" tells you which foods to avoid. These are foods which can ferment and cause wind. There are lots of them. I would suggest starting by removing the

FODMAPs foods which you commonly eat and see if the IBS improves and only remove all the FODMAPs foods if this isn't enough. Usually some of these will cause much worse reactions than others. You need to work out which ones.

The FODMAPs diet gives us a dilemma. Many of the FODMAPs vegetables are prebiotics which help provide food for good bacteria – they include leeks, onion, garlic, artichokes and asparagus. I would suggest reducing these only if they give definite symptoms. This should not be a long-term diet as it could damage gut health over time by reducing good bacteria.

Sugar alcohols can cause symptoms too. These are used as artificial sweeteners, sometimes in products labelled “no added sugar”. They include xylitol, sorbitol, mannitol and maltitol. They are also found in chewing gum. They can cause cramps, gas, bloating and diarrhoea.

Overlapping Conditions

In the majority of cases, IBS will resolve with the above but it can be more complicated. There are two conditions which overlap with IBS. These are **dysbiosis** and **increased intestinal permeability (also known as leaky gut)**. In fact in one study a third of people with food intolerance developed fungal dysbiosis over a two year period and about a third of those with fungal dysbiosis developed food intolerances.

Neither condition is well understood. Neither is likely to be recognised or treated by mainstream medicine.

Dysbiosis

Dysbiosis simply means abnormal gut bacteria. This occurs when the numbers of harmful bacteria and fungi increase and the numbers of good bacteria decrease.

This can make a big difference to our health as our friendly bacteria are responsible for 85% of our immunity and also produce vitamins, proteins, neurotransmitters like serotonin and melatonin (responsible for our mood and our sleep), produce compounds that protect us against cancer (butyrate) and break down toxic chemicals.

Unfortunately, dysbiosis is all too common today as harmful bacteria and fungi multiply quickly on diets high in sugar and refined foods and low in soluble fibre and after taking antibiotics and medicines like the pill or proton pump inhibitors (stomach acid blockers).

Good bacteria breed in the large intestine and need plenty of fibre (especially from vegetables). A good diversity of gut bacteria is essential for a healthy gut. Eating a wide variety of vegetables, herbs (and low sugar) fruits will build a healthy gut flora. Using probiotics, having fermented foods like kefir, sourdough and sauerkraut and avoiding sugar will also help. There are some specialized tests for gut flora (see **gut fermentation leaflet** for more details).

The commonest type of dysbiosis is **fungal dysbiosis** (this used to be called the candida syndrome, but other fungi can be involved and fungal dysbiosis is a better name). The symptoms are similar to IBS with cramps, bloating, changes of bowel habit, brain fog and food (especially sugar) craving. However there are clues: anal itching, frequent fungal infections like vaginal or oral thrush, onset after antibiotics, and worsening of symptoms with sugar or alcohol. Typically, there is a poor response to a food intolerance diet.

Fungi live off sugar so **starving them of sugar with a low sugar and low refined carbohydrate diet** is an essential first step. **Also reduce yeasty foods**, such as blue and mouldy cheeses such as brie can cause problems as can yeasty foods such as marmite, bread, vinegar (contained in ketchup and salad dressings), alcohol and mushrooms. Fruits can be taken in moderation but avoid dried fruits, overripe, tropical or sweet-tasting fruits and fruit juices.

On this diet improvement should occur within a month but the diet typically needs to be continued for 3 to 6 months. Sometimes antifungal medication like fluconazole is needed. Herbs and nutrients caprylic acid, oregano oil, p'au d'arco can also help. Rotate these to get best results. Probiotics are also useful.

SIBO (small intestinal bacterial overgrowth) is a closely related condition. However, in this case it is pathogenic bacteria not fungi causing the problem. In reality the two conditions overlap and the symptoms are almost identical.

Small intestinal bacterial overgrowth happens when the normally sterile small intestine gets colonized by pathogenic bacteria. It is thought to be common but is difficult to diagnose, partly because many of the most useful tests are either not available on the NHS or there is limited access to them (they are mainly breath tests). The result is it is under-diagnosed. See **SIBO leaflet**.

This condition also causes abdominal cramps, diarrhoea or constipation, wind and bloating. The latter symptoms can be marked.

Both conditions have the same causes: diets high in sugar diets and refined foods (also made worse by artificial sweeteners, emulsifiers, fizzy drinks) and low in soluble fibre, drugs such as PPIs (acid-blocking drugs such as omeprazole and lansoprazole),

antibiotics, the pill, non-steroidal anti-inflammatory drugs (NSAIDs such as ibuprofen).

Leaky Gut

The gut membrane can get damaged by allergic reactions to food, by harmful bacteria and fungi, food intolerance, gluten intolerance and drugs such as non-steroid anti-inflammatory drugs (like ibuprofen). Emulsifiers in processed food which destroy the protective mucus than lines the gut are another factor.

When enough damage occurs, holes appear in the gut membrane, allowing toxic substances into the body. Some of these are highly inflammatory like lipopolysaccharides (LPS). This may lead to fatigue and brain fog and trigger auto-immune reactions (even from friendly bacteria that migrate outside the gut), hence the name leaky gut (or intestinal permeability).

There are some specialized tests for leaky gut. If IBS is severe then you can be fairly sure that leaky gut is present. I would normally recommend taking L glutamine 500mg three times daily before meals and butyric acid 500mg three times daily after meals if this should happen. Butyric acid is the most important and should heal leaky gut in 3 months if combined with a good diet. Some probiotic help leaky gut (***see Probiotic Leaflet***).

Ultra-Processed Food

Today 57% of the food we eat in the UK is ultra-processed. We are only beginning to recognise the danger from these foods: they are thought to be linked with 22% of deaths in the UK and they are also linked with increasing obesity, cancers, diabetes, heart disease and a range of other conditions.

Several substances in ultra-processed foods are linked with damage to the gut. Top of the list is emulsifiers (these include polysorbate 80, carboxymethylcellulose and lecithin). A study in Nature in 2015 in mice found emulsifiers, at concentrations lower than we normally eat, caused a range of problems including colitis, destruction to the mucosal layer of the gut, damage to the microbiome (the gut organisms essential for our health) and widespread inflammation. Maldextrins, also found in many UPFs, can also cause harm to the mucosal layer of the gut and many other chemicals, including artificial sweeteners in UPF, are linked to damage to the microbiome.

Ultraprocessed foods are defined as foods containing chemicals not found in our kitchens. They are usually wrapped in plastic and contain multiple ingredients. Typically, they are high in sugar, adulterated fats and salt. Emulsifiers or flavourings on the label are a useful warning sign that it is UPF. They may be an unrecognised factor in IBS.

Psychological Factors

Many people with IBS notice worsening of their symptoms when under stress and some cases of IBS have resolved with therapies like hypnosis. However usually there are other factors as well (as above) and it is best to use an approach that deals with all the causative factors.

Other Factors

If IBS starts suddenly after an episode of gastro-enteritis or a course of antibiotics I would suspect dysbiosis (especially SIBO).

In one study patients given preventative antibiotics before surgery developed 6 times as much IBS as those not given it.

When IBS starts after a trip to a tropical country there may be another cause. This includes giardiasis (see below), worms and parasites which can also trigger IBS-like symptoms.

Could it be Something Else?

There are several conditions that can closely mimic IBS.

If the symptoms are severe or atypical then you will need investigation. Symptoms such as bloody diarrhoea, weight loss, nocturnal diarrhoea and rectal bleeding will warrant further investigation.

Inflammatory Bowel Disease

This is a key illness to rule out and includes Crohn's disease and ulcerative colitis especially if symptoms are severe. A blood test for inflammatory markers (CRP, ESR) and a stool test for calprotectin will usually rule out as it will be raised in inflammatory bowel disease.

Microscopic colitis

This is a mild form of inflammatory bowel disease and includes collagenous colitis and lymphocytic colitis. However the normal tests for inflammatory bowel disease (see above) will be negative which makes diagnosis very difficult. It can **only be diagnosed by biopsy** (usually during a colonoscopy). In other words it could easily be confused with irritable bowel syndrome.

The symptoms are similar to irritable bowel but severe diarrhoea, often 5-10 times daily, is characteristic. There can be faecal incontinence, abdominal cramps and weight loss.

Drugs appear to be a leading contributory factor. Top of the list are PPIs (lansoprazole, omeprazole) but a range of other drugs such as anti-inflammatory drugs (NSAIDs), anti-depressants (SSRIs), aspirin, statins and beta-blockers can be implicated. They most likely do this by damaging beneficial gut bacteria.

Giardiasis

This illness is important as once it is fully treated the "IBS" can be cured. It mimics all the symptoms of IBS such as diarrhoea (sometimes constipation), abdominal cramps, wind and bloating, offensive stools, nausea (and sometimes vomiting). It can lead to food intolerances. *(Other organisms can cause symptoms mimicking IBS including Cystospora cayetanesis -often found in Nepal and Cystisospira Belli)*

Clues to this diagnosis are worsening at night (when the protozoa is more active) and jelly-like stools. Other symptoms can be low energy, headaches and a metallic taste.

It is probably responsible for a much bigger proportion of IBS cases than most doctors recognise. Although tropical travel can be a factor, most cases do not involve this. It can be caught from pets, animals and from children (who have a higher incidence). People who use acid-blocking medicines are more vulnerable,

The best way of picking up is to have three stool samples done for ova and parasites (one sample will only pick up 50-70% whereas three samples picks up 90% of infections). The ELISA immunosorbent test for giardia in the stools (where available) will accurately pick it up.

It is commonly treated with metronidazole or tinidazole but the herb wormwood may be the most effective treatment. Usually these will cure it. However re-infection is common if other members of the family carry the condition.

Coeliac disease and non-coeliac gluten sensitivity

These can present with symptoms similar to IBS (5% of those with typical IBS symptoms have coeliac disease). The symptoms of coeliac disease include diarrhoea or constipation, nausea, vomiting, wind, fatigue, weight loss and anaemia. A blood test will usually exclude this illness. Non-coeliac gluten sensitivity can cause similar symptoms: diarrhoea or vomiting, abdominal cramps, wind, fatigue, joint pain and headaches. This condition can be difficult to exclude with standard blood tests. Both these problems are getting much more common (see **gluten leaflet**).

Ovarian Cancer

Marked abdominal swelling and bloating can be a feature of **ovarian cancer**. Bowel and urinary symptoms and back pain can also occur in this condition. It may need to be ruled out (usually with a scan and CA125 blood test).

Bile Acid Diarrhoea

About 10% of people diagnosed with IBS really have **bile acid diarrhoea**. This can also present with abdominal pain, wind and diarrhoea. Deficiency of Vitamin B12 can occur. Usually the diarrhoea is more frequent than in IBS and can occur at night and the stools are often foul-smelling, pale and difficult to flush away. It can be diagnosed with the SeHCAT test (not widely available) or a trial on cholestyramine, colestipol or colesevelam.

Other Considerations

If pain is always in the same place I would be wary of diagnosing IBS and would suggest further investigation.

Other Treatments

The mainstay of treatment of IBS is removing the dietary triggers. Removing sugar and refined carbohydrates from the diet, using probiotics and adding fermented foods can be useful strategies. I think having a high index of suspicion for giardia is also essential as diagnosis can lead to cure.

Some supplements are useful. Silicol gel is a widely available supplement which supports the thick mucus layer which protects the gut lining. It also helps to remove harmful substances. Trials suggest it reduces the severity of symptoms by half. Aloe vera juice is often helpful.

Deficiency of Vitamin D is common in irritable bowel (78% of patients) and this can harm the ability of gut bacteria to produce other vitamins, notably B5. Supplementing Vitamin D has not yet been shown to help IBS but I would suggest having it checked and taking at least 2000 iu daily if levels are low. Vitamin A and B5 help support a healthy gut and pantethine helps fight fungal infections. Digestive enzymes may also be useful. There are other supplements which help but this is outside the scope of this leaflet.