

A Doctor's guide to Irritable Bowel Syndrome

Dr Paul Froomes

BMedSci MBBS FRACP MD Gastroenterologist





Introduction

Irritable bowel syndrome (IBS) is one of the most common gastrointestinal disorders in the western world with around one in five* people experiencing the unpleasant symptoms of IBS at some time in their lives. Symptoms include abdominal pain, cramps, diarrhoea, constipation, fatigue, brain fog, joint pains, sweet food cravings and weight gain.

People suffering from IBS experience altered bowel habits, frequently suffering from constipation, diarrhoea, or alternating episodes of both. However, their intestines contain no structural or pathologic abnormalities. Although IBS is extremely common, it is poorly understood.

There is no test that can diagnose IBS. And, because the symptoms of IBS occur with so many diseases, a long list of conditions must be ruled out before IBS can be diagnosed. It is important to note that IBS is not an inflammatory bowel disease, such as Crohn's disease and ulcerative colitis. These conditions are characterized by inflammation in the lower digestive tract, including the colon and (in Crohn's) the small intestine. IBS produces no pronounced inflammation and no outward signs that anything is wrong.

So far, the causes of IBS remain a mystery. The disease tends to strike almost exclusively among adults, and it is more common among women than men. A number of explanations have been proposed, including hypersensitivity and increased motor reactivity in the large intestine, often triggered by diet and stress. This affects the movement of stool and gas through the colon, resulting in constipation, diarrhoea, or both. IBS flare-ups can be triggered by a number of factors, including specific foods, allergies,

* www.betterhealth.vic.gov.au

diet, and stress. In fact, the onset of IBS is often associated with a major psychological stress or event such as bereavement or sexual abuse and rape. (Kasper DL et al 2005)

Because IBS is so poorly understood, few conventional drugs show consistent results.

IBS also tends to occur with other pain disorders, such as fibromyalgia (49 percent of patients also have IBS), chronic fatigue syndrome (51 percent), chronic pelvic pain (50 percent), and temporomandibular joint dysfunction (64 percent). (Whitehead WE et al 2002)

Because IBS is so poorly understood, few conventional drugs show consistent results. Instead, many patients are rotated among various drugs aimed at controlling their abnormal bowel habits, bowel cramps, antidepressants or medications that affect serotonin receptors. For most patients, however, these extraordinary steps are unnecessary, and the best therapy is natural, based on diet management, synbiotics and supplements that encourage healthy digestion as well as lifestyle changes that have been proven to reduce symptoms and bring IBS under control.

THE GASTORINTESTINAL SYSTEM

Stomach

Digestive System

The digestive system is made up of the gastrointestinal tract which is a series of organs that all work together to help digest the food and liquid you consume. Once digested, our bodies absorb the vital nutrients that we need and excrete waste materials that are indigestable.

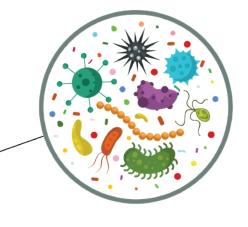
Small Intestine

Large Intestine

Appendix

Microbiome

Your 'gut microbiome' is made up of the trillions of micro-organisms - mainly bacteria - that live in your gut. It's complex and plays an important role in the digestion process and your general health.



An imbalance of bacteria living in your gut is called 'gut dysbiosis' and can cause IBS symptoms like weight gain, fatigue, low mood, brain fog and many other issues. These bacteria produce toxins that inhibit proper digestion of food, irritate the gut nervous system and disrupt normal bowel movements. They can even cause sweet food cravings, weight gain and skin rashes.

Rectum

Anus

What is IBS?

There is no actual medical test used to diagnose Irritable Bowel Syndrome. It is the name that the medical community has given to a constellation of gut symptoms that are due to disturbed gut function and not a disease.

The most common symptoms of IBS include periodic bouts of abdominal pain accompanied by diarrhoea, constipation, or both. Flatulence, belching, and bloating may also occur. The episodes may subside with a bowel movement. However, IBS patients may pass only a small amount of stool that may or may not contain mucus, and they may continue to feel an urgent need to defecate. (Bodemar Cetal 2001; Chey Wr et al 2001)

IBS is often divided into three major variants:

Diarrhea-predominant IBS: Three to seven bowel movements per day; loose, watery stools; and fecal urgency. One or more of these symptoms must be present.

Constipation-predominant IBS: Fewer than three bowel movements per week; hard or lumpy stools; and straining during bowel movements. One of more of these symptoms must be present.

Alternating diarrhoea and constipation IBS

The table below summarises the medical diagnostic criteria for Irritable Bowel Syndrome, which you can see, is all based on symptoms. IBS can be diagnosed using the criteria in this table. (Drossman DA et al. 2006)

Rome IV criteria for the diagnosis of IBS

The Rome IV criteria for the diagnosis of Irritable Bowel Syndrome require that patients have had recurrent abdominal pain on average at least 1 day per week during the previous 3 months that is associated with two or more of the following: [1]

- Related to defecation (may be increased or unchanged by defecation)
- Associated with a change in stool frequency
- Associated with a change in stool form or appearance

1. J Neurogastroenterol Motil. 2017; 23(2):151-163

And let's face it, if they don't name it, then the pharmaceutical companies can't produce a drug for it. These symptoms include: gas, bloating, wind, indigestion, heartburn, reflux, abdominal pain, cramps, diarrhea, constipation, alternating diarrhea/constipation, abnormal frequency or urgency or any other symptom that you experience in your gastrointestinal system that causes you discomfort.

The traditional medical approach.

You've already been through this, so you could probably write this next section. But, let's take a look at what the typical IBS patient has experienced when trying to solve the problem and then their experience with the traditional medical approach.

All IBS patients seem to share a common path, from first realizing that something has changed, to finally seeking medical attention. It begins with a new abdominal discomfort, some stomach gurgling, a little heartburn, maybe gas and bloating that you never had before or a change in bowel habits. You don't really notice at first, it's not that big of a deal.

But, it continues, you thought it might go away, it doesn't, so you self-medicate with over the counter products. For gas and bloating, heartburn or reflux, antacids like Buscopan, Colofac, Coleze, IBS Support, Slippery Elm, Rani 2, Quickeze would be the patient's first choice.

It's such a common condition that the dinnertime news programs are full of these advertisements making them the number one selling category of over the counter medications. If they don't work, it's off to your local doctor for a quick visit for a prescription for peppermint oil, Colofac, Buscopan or Nexium. Did you know that the most common side effects of Colofac and Buscopan are dry mouth, blurred vision and constipation, and Nexium are headaches, diarrhoea and abdominal pain? They may create more problems themselves.

If your complaint is diarrhoea or loose bowel movements, you take Imodium or Gastrostop. If it's constipation, it's Metamucil, Coloxyl with senna,

Fybogel and a stool softener like Movicol. If the constipation continues, it's again off to your friendly doctor for an even stronger laxative.

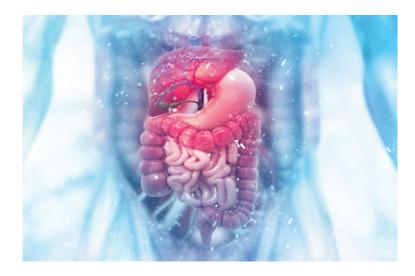
Now, somewhere along the way the patient realizes that certain foods exacerbate the problem and they begin to avoid them or become afraid to eat. Some are afraid to leave the house and when they do, they have to know every bathroom between their home and destination. The IBS now rules your life.

Some side effects from prescribed medicines include dry mouth, blurred vision, constipation, headaches, diarrhoea and abdominal pain?

They may create more problems themselves.

If there's pain involved, you try aspirin, Panadol, ibuprofen or other non-steroidal anti-inflammatory (NSAIDS) pain relievers. NSAIDS are the second most common over the counter medication sold today. These may

or may not work either and puts you in a position for your doctor to want to remove your gallbladder, since they've found nothing else to explain the symptoms, and the medical profession still believes, you don't really need it anyway. Sure, you can live without your gall bladder, but you do need it for proper digestion.



Removal of the gallbladder rarely results in any relief and in most cases, creates additional digestive complaints because you now have a reduced inability to digest rich fatty foods in an efficient manner. This may actually increase pain, gas and bloating especially after red meat. It is too simplistic, to suggest there are irrelevant organs in the human body as we now recognise that both the appendix and gall bladder perform important functions.

Since none of these over the counter medications, prescriptions or dietary changes resolve the problem, it's once again off to our well-intentioned doctor. By now they're probably tired of seeing someone that they don't really have the tools or knowledge to help, so you are referred to a Gastroenterologist.

Gastroenterologists are specialists in the intestinal tract, trained to perform unique testing to rule out a more serious condition or cancer, and are all very good at that, but IBS frequently escapes their interest. So the patient begins a series of tests that can include colonoscopy, endoscopy, barium enemas, MRI's and cat scans. You've been tested up this way and down that way and your doctor walks into the room and proudly announces that all the tests are negative and there's nothing serious wrong with you, it's just an irritable bowel, and everybody knows that you can live with that minor ailment.

Do not despair. All of this is an essential part of the journey because a correct diagnosis is the only way you are going to get the correct treatment. After all, my IBS solution is not going to fix bowel cancer or Diverticulosis or Crohn's disease. Please get properly checked out by your doctor and Gastroenterologist first. So now, you are reassured, but, you still have all your symptoms and you know there's something very wrong.

More time goes by and the patient tries to cope as best they can after being told that they will just have to learn to live with it. But many patients paths through the traditional medical establishment probably have one more remaining surprise, particularly if you're a woman. Continued visits to your physician to make the same complaint over and over again results in an unspoken, industry wide red flag that you need a prescription for an antidepressant or a referral to counseling.

At this point, some practitioners resort to telling you that it is all in your head. This is unfortunate, too often IBS sufferers are told that their bowel problems are due to them being too emotional, too tense or over anxious and that maybe you should just calm down, go home and feel better about feeling so bad? Who wouldn't be tense living with IBS? In fact, by the time people get to see me, many of them have indeed developed secondary psychological symptoms of anxiety, stress, poor sleep, fatigue and even depression as a direct result of the chronic gut symptoms that now run their lives.

What a journey! No results, your quality of life continues to deteriorate, you might be on anti-depressants that you don't need and you are wasting a lot of money. You also believe that the prescriptions and over the counter medications are safe to take, after all, they are FDA approved. Unfortunately, all prescription and over the counter medications have side effects and unintended consequences.

The use of antacids seems reasonable and safe, and I will discuss their use and side effects a little later. Fiber products are usually not high quality, tending to be rough on the insides of your digestive tract and can escort nutrition out of your body. This causes a malabsorption problem, creating long term consequences. Chronic usage of aspirin and NSAIDS can damage the gastrointestinal system.

At this point, some practitioners resort to telling you that it's all in your head.

The desperate approach of removing the gallbladder also has unintended consequences. Unless you have gallstones, it rarely will be the cause of your discomfort. Although you still make bile and digest fat, once the gall bladder is lost, you now have no extra ability to store bile and release bile on demand, which is a digestive enzyme that is released when you eat fatty foods and means you can't digest the fat in your food as efficiently as before.

What is the cause of pain, gas and bloating? It's the inability to digest food in a timely manner. It is also quite common for the patient to gain weight after the surgery. Once again, a therapy without success, and that actually

exacerbates the problem. The answer is not to avoid fatty foods, because you need fat in your diet for human health, but to supplement the deficiency with a digestive enzyme specific for fat.



Such a bleak picture, could your doctor be right, there is no cure and you must learn to live with IBS? I believe the answer to that question is definitely not. The answer is so simple. But, one has to go back to the basic biochemistry, physiology and microbiology of the gut to find the answers.

While the pharmaceutical companies and great medical minds continue to research the complex neuroendocrine pathways of the gut in order to develop better drugs to treat IBS, the real solution to IBS is to correct the underlying gut microbial imbalance and restore normal digestive function. This approach which is outlined here holds the key to what helps the IBS patient return back their gut back to healthy balance and function.

Quick start guide

Let me summarize what you'll be learning as you read the remainder of this book. There is a lot of information presented here, so here is a summary of the high points.

1) Diet and Bacteria

There are only 2 areas of concern when it comes to overcoming any symptoms associated with the gastrointestinal system. These 2 areas govern the entire health of your gastrointestinal system: **DIET and GUT BACTERIA.** We all have a population of good bacteria living inside of us, it's necessary for human health and proper gastrointestinal function. If we were to lose the optimal levels of these bacteria, then in time, the chemistry will change, and in time, symptoms begin. Everybody gets their own set of symptoms and the timing of the onset of these symptoms is also different in everyone. I have 12 year old patients and I have 90 year old patients.

2) Antibiotics

Although it's not the only reason, the primary reason that we lose our population of beneficial bacteria is the use of Antibiotics. Antibiotics are designed to kill bacteria. Normally used to cure infections, each time you take them, they also destroy a portion of the good bacteria as well. It doesn't matter whether you've taken 2 or 200 courses in your lifetime. It also doesn't matter if you took them all before you were 10 years old or throughout your life time. Each time you took them you destroyed a portion of the bacterial population and even though they are living, reproducing organisms, they don't always reproduce back to proper proportions and in fact, they may reproduce to abnormal levels. This situation also leaves you in a position of being more susceptible to picking up additional bacteria from the environment.

3) Other reasons for Bacterial imbalance

There are secondary reasons for losing the beneficial bacterial balance. They are over-the-counter medications, prescription drugs, poor diet and alcohol. We've all practiced a combination of any or all of these lifestyle issues. And once the bacteria and chemistry are out of balance, the cells of the intestinal lining can become damaged and 'leaky gut' develops. The leaky gut then leads to multiple food intolerances.

4) Re-establish proper bacterial balance

The good news is that we can quite easily re-establish proper bacterial balance. We can also return the chemistry to normal by feeding the tissue of the gastrointestinal system the nutrients that are normally found in the food that we eat. We understand enough about the biochemistry and physiology of the gastrointestinal tract to use a nutritional product that does just that.

5) Improving digestion

We can improve digestion with digestive enzymes which helps with gas, bloating, indigestion, heartburn and reflux.

6) Temporary dietary modifications

We will couple this all-natural product protocol with temporary, at least we hope they're temporary, dietary modifications of the common foods that induce intolerance.

7) Identifying bacterial balance

To understand what may be causing your symptoms you may wish to order a Stool Microbiome Test. This comprehensive test identifies the various strains of bacteria in your microbiome and highlights specific bacterial imbalances which may be contributing to your symptoms.

Why you have IBS

Risk factors and triggers

People with IBS appear to have hypersensitive nerves within the large intestine. Under certain conditions (such as stress or consumption of certain foods), the normal passage of stool and gas may cause pain. Research has suggested that IBS patients have extra sensitive pain receptors in the gastrointestinal tract, which may be related to an abnormal level of serotonin, a neurotransmitter involved in regulating digestion and mood. Their level of serotonin may help explain why people with IBS are likely to be anxious or depressed (Kasper DL et al 2005).

Other significant factors implicated in IBS include recent infection within the gastrointestinal (GI) tract, which can disturb the digestive flora necessary to help break down remaining nutrients in the colon. (De Schryver AM et al 2000); Talley NJ et al 2002) Research has shown that in rare cases, IBS has developed following salmonella or Campylobacter pylori infections.

The diagnosis of IBS is a diagnosis of exclusion, meaning that all other possible diseases must be ruled out before a physician arrives at the diagnosis of IBS. Typically, the diagnosis begins with a medical history, including questions about the duration, severity, and characteristics of symptoms. The physician will ask about diet, stress, any medications currently being taken, and changes in bowel function. Most people with IBS have mild symptoms.

Laboratory tests, including complete blood count, thyroid function, erythrocyte sedimentation rate, and urinalysis, may be done to rule out other potential causes. Depending on symptoms, additional testing may include a

lactose tolerance test and a check for the presence of blood, bacteria, and parasites in faeces. (NIDDK 2006)

The colon may be examined with flexible sigmoidoscopy or colonoscopy. If indicated, a biopsy from the colon can be performed. A colonoscopy is indicated when an individual is anemic or has lost weight or if polyps are found. However, in IBS the large intestine appears normal. (NIDDK 2006; Lindor KD et al 2005)



Gender plays a clear role, as more than 60-65% of IBS patients are women, according to the American College of Gastroenterology. Age is also a factor; IBS usually begins during the late teens or early 20s. Although the connection is still poorly understood, emotional stress is often a significant component of IBS. (Delvaux M 2004) The intestinal wall is lined with layers of

nerve cells that are connected to the brain. Even comparatively low levels of stress can cause intestinal muscles to spasm, which can lead to diarrhea or constipation. There is also evidence of disordered serotonin production among people with IBS, which may lead to their symptoms.

The types of food and the way a person eats can trigger or worsen IBS symptoms. The digestive system must work hard to break down large meals or meals eaten too quickly. Fatty food, fructose, artificial sweeteners (e.g., sorbitol), dairy products, chocolate, alcohol, and carbonated beverages can trigger or aggravate episodes.

Many people with IBS also suffer from reduced levels of nutrients, partly because people often forgo eating during flare-ups and partly because IBS affects the absorption of nutrients. A deficiency in one nutrient can cause a chain reaction and upset the balance of the entire body, leading to imbalances in other vitamins and minerals (NIDDK 2006). It is important that people with IBS maintain a healthy intake of nutrients, usually by supplementing with a good multivitamin.

There are many reasons that you may be experiencing these symptoms. We all have had contact with these possible causes at some time. How many of us have had antibiotics? All of us, right? It's such an important subject that we will take a very close look at them later in this discussion.

How IBS develops in the first place

IBS is really just a state of digestive imbalance. How this happens will be explained next. But the good news, and the crux of this program, is about how this imbalance occurs and how to correct it and resolve IBS for good.

How many of us have had other drugs prescribed by our doctors. All drugs have potential side effects. According to the Physician's Desk Reference, the number one caution of most drugs is its effect on the gastrointestinal system. We all use over-the-counter medications, don't we? Antacids, pain killers, cough syrup, anti-histamines, etc. These also have potential effects on our gastrointestinal tract. And most importantly, our diet. I'll talk about specifics later, but I'm sure you understand that your diet affects all functions in the body.

The major causes of gastrointestinal problems are:

- 1. Use of Antibiotics
- 2. Lack of Digestive Enzymes
- 3. Prescription and Self-Medication: NSAIDS and Aspirin
- 4. Diet: Poor Food Choices & FODMAPs
- 5. Gut Bacteria: Abnormal Bacteria, Parasites or Yeast

Let's look at each of these more closely.

1. Use of Antibiotics

You've already heard me mention that the problem that needs to be conquered is an imbalance in BACTERIA, CHEMISTRY and DIET. Once the bacterial levels are lost, then the chemistry in the bowel will change, food sensitivities develop and symptoms start. I have also suggested that one of the primary reasons bacterial levels are lost is the use of antibiotics. Designed to kill infections caused by bacteria, not only do they do a great job on infections like sore throats, ear infections, bronchitis or urinary tract infections, they unfortunately also destroy a portion of the optimal levels of good and bad bacteria living in our gastrointestinal system. And it doesn't matter if you have taken 2 or 200 courses, whether you took them all before you were 5 years old or throughout your lifetime. Each time, you destroyed a portion of the healthy bacterial balance, so important for gastrointestinal health.

This potentially also allows bad bacteria to overgrow their normal levels or makes it easier for you to pick up abnormal bacteria from the environment. The good news is that we can re-establish proper bacterial balance, restore chemistry and reduce food sensitivities in every person with IBS.

2. Lack of Digestive Enzymes

If you have gas, bloating, indigestion, heartburn, reflux, GERD, pain or cramps, 90% of the time it's caused by foods that you are unable to tolerate (more on that later) coupled with a lack of digestive enzymes, such as hydrochloric acid (stomach acid), reduced bile flow and pancreatic enzymes such as amylase, protease and lipase. But wait, many of you think you have too much stomach acid, that's why you're taking Somac, Quickeze, Pepcidine, Rani 2, Pariet or Nexium.

In reality, there are very few people that actually produce sufficient amounts of acid in the stomach. Sure Doc, but why do I feel so much acid, it burns and hurts, and it comes up into my throat? Hang in there, this is a long explanation.

If you ask a physician or nurse: What are the symptoms of a person who is producing too much stomach acid? They will easily list the symptoms I have mentioned above. But if you ask: What are the symptoms of a person producing too little stomach acid? You get silence. It's because they have never thought about it in this way. The symptoms are the same. Whether low gastric acidity is due to drugs like Nexium, Losec, Somac and Pariet or autoimmune diseases like diabetes, thyroiditis, pernitious anaemia, the results can be maldigestion, small intestinal bacterial overgrowth and malabsorption. The symptoms of which include dyspepsia, bloating, wind, cramping and irregular stools with diarrhoea and or constipation. Sound familiar?

How do you know which category you fall into? Have you diagnosed

yourself? Do the 3 or 4 commercials you see every night during the network evening news have you convinced that you need antacids for your symptoms? Yeah, but Doc, when I take antacids, I feel better.

Well, some of you do. Some of you get temporary relief and then it stops working. But one thing you all have in common, it never cures your problem. Many of you have taken antacids for years or even decades. You have a bottle in your kitchen, bathroom, office and automobile. It is not a cure; it merely suppresses your symptoms. But wait, there's worse news.

The bottom line is that too many people are taking an antacid because they think they are producing too much acid (which they aren't) and they think the problem is solved (which it isn't).

Antacids buffer (meaning lowers) the amount of acid you are producing, ultimately impairing digestion. In addition, lowered acidity in the stomach inhibits minerals such as calcium, iron, B12, magnesium and potassium from being broken down properly, a process that begins in the stomach, and impairs their ability to be absorbed. And if that's not bad enough, acid is a potent weapon that fights any bacteria that is in the food you eat. Buffer it away and your chances of catching food poisoning, contracting pneumonia, developing vitamin/mineral deficiencies, developing osteoporosis or having an abnormal bacteria take hold in your gastrointestinal tract are greatly increased. (Denis M et al, 2010)

The bottom line is that too many people are taking an antacid because they think they are producing too much acid (which they aren't) and they think the problem is solved (which it isn't). In reality, the process of digestion

is inhibited and minerals aren't prepared properly for absorption in the small intestine. Therefore, you don't get all the available nutrition from your food. Welcome to another cause of malabsorption. Your doctor can order a fasting blood test to assess if you are a low acid producer.

I should also explain that there is a sphincter muscle at the bottom of your esophagus that's supposed to close and prevent any splash of the acid that is in your stomach into your esophagus. If this muscle isn't working properly, it doesn't matter how much acid your stomach is producing, if it splashes through the sphincter muscle onto the base of the esophagus, you will feel a burning. One of the main reasons that any muscle or specifically sphincter muscles in the body don't work properly is a calcium deficiency. Didn't I just mention the taking of antacids impairs the ability of minerals such as calcium to be absorbed? Get the picture?

3. Prescription and Self-Medication: NSAIDS and Aspirin

We live in a society that thinks it can solve its problems with pills. We are constantly exposed to advertisements in newspapers and TV for over-the-counter medication. Advertising works, therefore, we all self-medicate.

What could possibly be wrong with an aspirin? If we have a headache, we reach for it. If it's a bad headache or if we have aches and pains somewhere else, we might choose Panadol, Codeine, Naprogesic or something similar. A cough? Cough Syrup. If we have sinus congestion, with drainage down the back of the throat or out the nose, we take a decongestant and anti-histamine. Stops you right up.

How about something to help you sleep or help you wake up? Medicine for diarrhea or constipation? These aren't cures. Just temporary relief. And we already mentioned all of those antacids. Did you ever stop and think that there is a reason that you have a headache, a cough, sinus drainage? Is your body trying to accomplish something? Might these symptoms be a normal reaction? A cough helps clear your lungs. Sinus drainage rids you of unwanted mucous that harbor germs. Should we really interfere with what the body is trying to do?

Do you have a headache because of a lack of Panadol in your bloodstream? Of course not, but isn't that why you take the Panadol? Pain relievers don't solve what is causing your pain; they only mask it, actually blocking receptors in your body that sense pain. Some cure.

Did you ever stop and think that there is a reason that you have a headache, a cough, sinus drainage? Is your body trying to accomplish something? Might these symptoms be a normal reaction?

Just as the number one side effect of prescription medications is gastrointestinal problems, over-the-counter medications also have consequences. In a published report in the New England Journal of Medicine, a study conducted at Boston University School of Medicine discussed significant and potentially fatal side-effects of non-steroidal anti-inflammatory drugs (NSAIDS) such as Aspirin, Panadol, Codeine, Naprosyn, Naprox, Voltaren and Indocid". The lead researcher called this a silent epidemic because warning signs don't precede gastrointestinal complications. What have I been telling you? You may or may not have the symptoms that I have been describing. You may not even be aware of this process.

The complications the lead researcher is referring to are gastric damage, ulcers and bleeding. They also have been linked to arthritis. That means there is a change in chemistry and inflammation. He added that these complications could be potentially fatal. Sounds extreme, doesn't it? Not when you realize that between 7,600 and 16,500 deaths occur every year from ulcer-related complications associated with NSAIDS use and over 76,000 are hospitalized each year from NSAIDS use. But for our purposes, it is important to realize that the use of over-the-counter medications generally and NSAIDS in particular, contribute to the problem that we are trying to solve. Use them if you can't function without them, but eliminate them if possible. (Wolfe M et al, 1999)

4. DIET: Poor Food Choices & FODMAPs

How many of you have a perfect diet? Put your hand down! No one does. Do you pay attention at all to what you eat? How much fast food is in your diet? How much fried food? How much milk, white bread, cakes, pastries, chocolates cheeses and ice cream? How much of it is processed, already prepared and packaged? I could go on, but some of you have had poor nutritional habits for a long time and some of you have made changes only recently. How many of you hardly eat at all? Either way, your choices have consequences.

The point of all of this is to give you an idea of what contributes to creating an environment that may cause your symptoms. Most people have had antibiotics, self-medicated and eaten poorly. Combine this with a lack of digestive enzymes and it's no wonder that your bowels are out of balance, you can't get proper nutrition from your food and symptoms develop.

Of even more significance, however has been the discovery of FODMAPs or specific carbohydrate maldigestion and malabsorption in people with IBS. FODMAP is the acronym for the medical term: Fermentable Oligo-, Di-and Mono-saccharides And Polyols. Authors recently published the following report describing how dietary sugars affect people with IBS.

'Symptoms of pain, bloating, wind, constipation and/or diarrhoea are commonly present in various gastrointestinal disorders and are often attributed to a functional gut disturbance. Dealing with such symptoms is currently unsatisfactory and is minimally featured in conventional medical literature. Fructose is receiving increasing attention as a factor in the diet that, when malabsorbed, may induce these symptoms. However, fructose is only one of many poorly absorbed, short-chain carbohydrates (FODMAPs) in the diet. Others include fructans, lactose (in hypolactasic individuals), polyols and galactans. FODMAPs are theoretically attractive targets for dietary change due to their high osmotic activity and rapid fermentability, leading to luminal distension and the potential for subsequent symptom induction in those with less adaptable bowels and/or vis-ceral hypersensitivity. A global approach to the reduction of dietary FODMAPs is proposed and current evidence supports its efficacy in relieving symptoms in the majority of patients with functional gut disorders. After years of unsatisfactory dietary manipulation, it is evident that a low FODMAP diet is successful in providing relief from functional gut symptoms, whether in the setting of a FGD or IBD.'

(Barrett J & Gibson P, 2007, Barrett J & Gibson P, 2012)

5. GUT BACTERIA: Abnormal Bacteria, Parasites or Yeast

We are unable to know for sure if there are abnormal levels of bacteria, parasites or yeast in your gastrointestinal system without the benefit of sending stool samples to a lab. Some of you might say that your doctor has already had you submit a stool sample and you have no problems. Make sure you know what was tested. A complete comprehensive stool analysis for bacterial subtypes, pathogenic bacteria, viruses and parasties (in fixative) needs to be performed on more than one occasion. Many studies have shown that chronic parasite infection can mimic IBS exactly and these kinds of infections can be and must be treated. Examples of such parasite infections include Giardia Lamblia, Blastocystis hominis and Dientamoeba fragilis. (Wood NJ, 2011, Jakoob J et al, 2010, Tungtrongchitr A et al, 2004).

If you have a chronic parasitic bowel infection, you don't have IBS at all and eradication of the infection will cure you.

Clinical manifestations of Giardia, Blastocysitis or D.fragilis infection also vary from asymptomatic carriage to acute and chronic diarrhoea with abdominal pain, bloating and offensive wind. These IBS-like symptoms can be continuous, intermittent, sporadic or recurrent, sometimes lasting years without correct diagnosis. It is essential that all patients with IBS undergo routine parasitological investigations in order to rule out the presence of protozoan parasites as the causative agents of the clinical signs. (Stark D et al. 2007)

Also, don't believe the information that claims that there is fecal material hanging on the inside of the bowels that only a cleanse can remove. These websites, books and mailers are only trying to sell you products. I assure you, the cause of your condition revolves around restoration of DIET and GUT BACTERIA

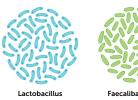
Bacteria or yeast can be a potential contributing cause of your gastrointestinal problems. If found together, their consequences can be even worse. Remember that in the section about antibiotics, I mentioned that when the beneficial bacterial levels fall below normal levels, the bad bacteria tend to overgrow and that's when problems begin. You may also have been exposed to bacteria from having lived on a farm and your exposure to animals and manure. People on farms may have more frequently swum in lakes or streams. Anyone who has traveled in third world countries may also have been exposed. It is also possible to come into contact with bacteria by eating common fruits and vegetables.

Yeast is normal in your gastrointestinal system, but at very low levels. Women are familiar with vaginal yeast infections, but men and women both can suffer from systemic yeast infections. This situation can lead to multiple symptoms commonly associated with a condition called Candida. It is important to have this condition diagnosed through stool or blood before embarking on a plan to kill the yeast and following the rigorous diet that is

also necessary for its elimination. You can order a stool microbiome test at TheIBSDoctor.com.au

Few medications can help people with IBS. Two drugs act as serotonin receptor antagonists and may be used for either diarrhoea or constipation associated with IBS. The drugs affect serotonin receptors in the brain and act by stimulating or inhibiting muscle contractions in the intestines.

GOOD PROBIOTIC BACTERIA







BAD DYSBIOTIC BACTERIA









They are prescribed only when other medications have failed, typically in more-serious cases of IBS. One type, a 5-HT3 antagonist called Calmactin® or cilansetron, is used in cases of diarrhea-predominant IBS in the USA. A second type, a 5-HT4 antagonist known as Rsotrans® or prucalopride is a short-term treatment for constipation-predominant IBS. Not all of these are available in Australia.

Conventional treatment

More commonly, antispasmodics (such as Colofac®, Buscopan®, and Coleze®) may be prescribed to relax the smooth muscles of the intestine, helping prevent or relieve painful spasms. They are taken 30 to 45 minutes before meals to relieve cramping that follows eating. Side effects may include drowsiness, dry mouth, blurred vision, and inability to urinate. Antispasmodics can make constipation worse and may best be used in combination with tricyclic antidepressants. (Cremonini F et al 2004)

Antidepressants may be prescribed because IBS is often associated with mood disorders. However, the use of antidepressants remains controversial because some experts say it is difficult to determine whether depression exacerbates IBS or results from it. Sufficient evidence appears to support the use of low doses of antidepressants for alleviating pain (Spiller R 2002) in patients in whom other medications are insufficient and in those with IBS associated with mood disorders. The mechanisms of antidepressant drugs include luminal relaxation, blunting of colon hypersensitivity, and modulation of central nervous system pain-processing pathways. (Haster WL 2001)

Antidiarrheal agents (e.g., loperamide, diphenoxylate, and difenoxin) may be prescribed for diarrhea-predominant GI tract disorders. (Alaradi O et al 2002) Loperamide has also been shown to stimulate intracellular calcium levels, although its exact functions are not clearly understood. Some antidiarrhoeals may be more helpful than others. Overall, physicians usually do not recommend long-term treatment with antidiarrhoeals.



What have we discovered so far?

- The reason you have symptoms is because you have lost your bacterial balance and the digestive function of your gastrointestinal system has changed leaving you with increased gut permeability and poor digestion.
- The main cause of this happening is the use of antibiotics, infections, processed food chemicals etc.
- Any other symptoms you might be experiencing may be related to the imbalances in your gastrointestinal system.
- The good news is that we can re-establish proper bacterial balance coupled with dietary changes and possibly eliminate your other symptoms.

The IBS Doctor program

Introduction

Understanding the information just presented to you is as important as what to do about it. I have many different types of people come into my office each day and many of them have been on a search for a solution for a very long time.

The search usually begins at their doctor's office and after a while becomes very frustrating. Frustration leads to searching Google for anything that they can get their hands on. Various topics are highlighted: exercise, massage, vitamins, herbs, homeopathy, visualization, biofeedback, reflexology, yoga, meditation or magnets. Varying degrees of success are reached.

Further exploration leads the sufferer to the local health food stores. There they receive well-intentioned advice from employees who work in the store because they are "into health" and have done more reading than the average customer. Following a plan like this usually leads to a cupboard full of various vitamins, minerals and herbs. Also accompanying this approach is significant cost. Partial success may be found, but never a cure. The taking of supplements by themselves without a plan is just like taking prescriptive medication without a plan. Not as toxic of course and without side effects, but it is an attempt at symptom suppression, not a cure.

That is why I developed The IBS Doctor. A website dedicated to offering people medically based, scientifically proven solutions for fighting IBS. The IBS Doctor cuts though all the confusion and lays down a path to recovery for people who have been suffering debilitating symptoms for years.

Interestingly enough, some patients may have already tried some of the suggestions that The IBS Doctor program covers. The problem is that they have not tried all of my suggestions at the same time.

Remember that you do not have a disease, you have a lifestyle problem that has resulted in a set of symptoms that are nothing more than your body trying to tell you something.

Some of the symptoms associated with IBS are similar to serious conditions like chronic bowel infection, Coeliac disease, Ulcerative colitis, Crohn's disease or even bowel cancer, please consult you Doctor to have these symptoms properly investigated before you assume you have IBS.

ibsdoctor.com.au

The IBS Doctor program revolves around 3 areas:

- 1. Dietary Measures
- 2. Eradicate bad bacteria that cause IBS
- 3. Re-establish good bacteria that improves IBS

The program utilities everything I have talked about in this book and condenses it into an easy-to-follow 28-day program which you can do at home.

Designed to repair the gut and give you back your life, the program uses all natural supplements aimed at correcting gut bacterial imbalances paired with specific dietary changes that assist with each part of the program. The program is broken into 2 phases followed by and ongoing maintenance phase.

Phase 1 – Cleanse. (Days 1-14)

This phase cleanses away the bad bacteria in your gut with a course of natural antimicrobial, immune boosting and biofilm disrupting supplements and easy-to-follow dietary advice.

Phase 2 – Reload. (Days 15-28)

Having cleansed away biofilms and bad bacteria from the gut the next phase involves reloading the gut with good healthy probiotic bacteria. This includes a microbiome reload diet and a regime of natural probiotics and prebiotic supplements designed to improve microbiome balance and restore healthy gut function.

Phase 3 - Maintenance (Ongoing)

Once you have completed the course, it's important to maintain your gut microbiome and your general health with the IBS Doctor - Gut Reload Diet and daily probiotic and prebiotic supplements. The Maintenance program is essentials for ongoing success. If you don't follow it, you will go backwards, and your symptoms may return.

To register for the program, visit ibsdoctor.com.au

Stool Microbiome Test

Of course, not every person responds in the same manner. Some people with more severe cases, will have a harder time eliminating their symptoms. If you want to dig deeper into the imbalances present in the makeup of your gut bacteria, you can order a Microbiome Test Kit that does this.

This test measures the levels of bad bacteria and good bacteria in your gut from a sample of your stool. A Complete Microbiome Test Kit will be sent to you in the mail by Nutripath Laboratories. This comprehensive test identifies the various strains of bacteria in your microbiome and highlights specific bacterial imbalances which may be contributing to your symptoms. Gut Microbiome Profiling is in addition to the IBS Doctor program and is supplied at additional cost. You don't need to do the Stool Microbiome Test to do the program.

If there is an imbalance, then it is very important that you complete the gut microbiome repair program. For more information visit ThelBSDoctor.com.au

Simple measures you can do:

Emotional stress is linked to IBS attacks. Relaxation techniques such as biofeedback and meditation can help prevent episodes. Regular exercise helps keep the digestive tract active and healthy, especially in people prone to diarrhea. Regular sleep is important to maintaining overall health and reducing stress. Most patients with IBS would also benefit from a good multivitamin to ensure they are receiving adequate levels of vital nutrients.



The benefits of good bacteria

Good bacteria make nutrients for us like:

- B group vitamins
- Vitamin K
- Amino Acids
- Short chain fatty acids
- CoQ10 for energy production
- Glucosamines for joints
- Serotonin for mood

These nutrients:

- Improve digestion of food
- Calm the gut nervous system
- Restore normal bowel movements
- Reduce sweet food cravings
- Control body weight
- Improve mood and concentration
- Clear the skin
- Boost energy

They also keep us healthy by:

- Maintaining good digestion
- Regulate bowel movement
- Bind carcinogens
- Modulate appetite and body fat
- Stabilize mood and stress
- Protect us against gastroenteritis
- Boost the immune system
- Teach us to tolerate foods



The effects of bad bacteria

Bad dysbiotic bacteria stops production of all the nutrients listed on the left. They also make toxins like LPS, ETX, aldeh, lactate, amine and H2S which causes the intestinal barrier to become 'too permeable' also known as Leaky Gut and triggers inflammation.

This causes IBS symptoms like:

- Abdominal pain
- Cramps
- Diarrhoea
- Constipation
- Fatigue
- Low mood
- Brain fog
- Skin rashes
- Joint pains
- Sweet food cravings
- Weight gain

These toxins also:

- Inhibit proper digestion of food
- Irritate the gut nervous system
- Disrupt the normal bowel movements.

What to expect from the program

Everyone is different and everyone will have slightly different reactions to this program. But one thing is for sure: You will see a positive impact on your health and quality of life.

Here are the changes that you can realistically expect if you don't experience any reactions or stubborn symptoms:

- 1) Gas and bloating, heartburn, reflux and indigestion should disappear in a few days.
- 2) Diarrhoea should change to a more solid, consistent and well-formed bowel movement within a couple of weeks if not sooner. With constipation, it's more difficult to see a quick change, but positive signs should happen in a couple of weeks.
- 3) Other symptoms such as fatigue, inability to sleep, headaches, mild depression, asthma, skin rashes, eczema, psoriasis, chronic infections and allergies will also begin to improve because you are slowly getting healthier. Your body is healing all by itself.

Here's why all of this happens. Look at the changes you are making to your life. You are changing your diet, eating more of what is good for you and less of what isn't. That alone has the potential to make a person healthier. When you follow a gut friendly diet and add in natural therapeutic products that restore a healthy gut microbiome, you suddenly have a simple program that has the potential to allow your body to heal itself form the gut outwards. All we are doing is removing the interference that has caused your body to rebel

and scream at you to please do something different. You have now changed your lifestyle.

After you have restored the proper balance in your gastrointestinal system, don't go back to all your old ways. Restoration of health is all about lifestyle change. Learn this new lifestyle and never go back. Continue to nurture your gut bacteria with a good healthy diet and the daily prebiotic fiber and probiotic supplements that form Phase 3. Making this lifestyle change will hopefully see you living a happier, healthier life.



Additional thoughts

Anxiety and stress does not cause Irritable Bowel Syndrome. I get asked this question all the time as if the patient is looking for a reason that they can't be cured. They do know one thing: Each time they get anxious or experience stress, their symptoms rise up and smack them. Therefore they draw a conclusion that anxiety and stress causes IBS. It doesn't, it only exacerbates an already unhealthy gastrointestinal system.

What patients will notice as they go through the IBS Doctor program is that life will still present all of the challenges they are used to and they will still react the same way, anxiously, but their gut will not express itself with the same uncomfortable symptoms as before. As explained earlier, imbalances in bacteria and chemistry are responsible for your symptoms, anxiety or stress only makes them worse if the imbalances are in place.

What if I get an infection and need to take an antibiotic? Yes of course take one. But only take it as a last resort or instructed by your doctor. I always recommend that my patients take additional Vitamin C and nutritional support that we know have an effect on infections and boosts your immune system. No matter what you do, see if you can muscle your way through the infection to see if your body catches up to it and you don't need the antibiotic after all. If you get to the point that you need the antibiotic, then by all means take one. But, if antibiotics were the cause of the problem in the first place by destroying your bacterial balance, then you must take a prebiotic fiber and a probiotic to counter the negative effect. The supplements in the Phase 3 Maintenance program would be fine.

Through this process you avoid entering into that vicious cycle of changes to bacterial balances leading to digestive dysfunction leading to gut symptoms.

What does the future hold if you find that you can't tolerate a specific food very well? It means at least you know what is causing the problems. Does it mean that you can't ever have that food? Only if you want to avoid it. Before, you didn't have a clue as to what caused your problems, now at least you have an answer and you also have a choice: If I eat that food, I might get a little uncomfortable later or I can avoid it altogether. How about a combination. Avoid it most of the time, but once in a while...You decide.

If you're constipated.

21

Surprisingly, many people don't drink enough water. Constipation is usually hard fecal material that doesn't move well through the intestines causing bowel movements to be days apart or hard to pass or a combination of both. Do you know what the large intestine is designed to do? Essentially, it is designed to do three things. Extract the last nutrients, like fat-soluble vitamins and electrolytes from the indigestible foods we have eaten, to harbour trillions of healthy bacteria that ferment the fiber we eat and produce healthy by-products that have health benefits to us, and finally also to absorb water from the waste left over after we have digested our food. So it regulates the amount of water in the fecal material. Too little water and you're constipated, too much and you have diarrhea.

If you don't drink enough water (which means at least 6 glasses per day) you may be in a constant state of mild dehydration. There are some very important organ systems dependent on water for maintaining your life. How about the brain? How about your heart? There are others also. The body is very smart, if you don't take in enough water, it will take the water from wherever it can get it. From the bowel is the easiest place and also the kidneys. This then creates a hard stool that will either occur infrequently or will be hard to pass.

Getting enough water everyday may be very helpful as you rebalance the bacteria and chemistry of the gastrointestinal system. Additional causes of dehydration are also any drinks that contain caffeine (coffee, tea, soft drinks), which is a diuretic that stimulates kidney excretion of water out of the body. How many of you are also taking a diuretic along with you blood pressure medication? You all need additional water.

Let me scare the ladies out there just a little bit. Have you ever seen an older person who has lost some of their height? Lesson in anatomy: You have 24 spinal vertebral bodies in you back. Each vertebra is separated by a disc. Each disc is made up mostly of water. If you are in a constant state of dehydration, remember the body is very smart and will get water from wherever it can. Imagine if you lost only 0.75mm in each spinal disc due to dehydration. You would lose a total of 18mm in height. Drink your water!

Rather than drinking large amounts, I suggest you drink small amounts frequently. The body only needs so much and you will have to excrete what you don't need at that time. If you drink small amounts, the body will use it for your normal processes and not have excess to excrete. And you won't have to run to the bathroom all the time.

While we're on constipation, consider that one of the reasons that a bowel movement is stimulated at all is stomach distention from the last meal. Eat something, it expands the stomach, this induces a stimulus to the bowel to have a bowel motion. It's called the 'Gastro-colic Reflex'. Simple design, huh?

Don't be afraid of healthy fiber rich food and don't diet by calorie restriction. A normal size balanced meal will gently distend the stomach, and trigger a good gastrocolic reflex and stimulate the colon to contract, and this can reduce constipation. Eating many small meals instead of 3 good sized ones may be bad for you if you're constipated.

Your medications effect on your symptoms.

Some patients come to me not taking any medications and some take 15 different prescriptions. Could the medications you are taking cause some of the stubborn symptoms you are complaining about? Absolutely. So, try and get familiar with the possible side effects of your medications. I suggest you seach the 'side effects' for any medication you are on. Or, put the name of the medication and the side effect you are concerned about, such as gas, diarrhea, constipation, etc. You will be surprised what you will learn. Then you can experiment, with your doctor's permission of course, either stopping or just reducing the does of the medication for a few days and see if any remaining symptoms go away. You can also ask you doctor for a different drug that might not have the same symptoms.

Unsolicited Advice

I am a holistic physician. That means I'm concerned about the "whole" patient. So, I have some additional advice that you didn't really ask for, but I think it's important that you at least know about. These are some simple suggestions that everyone ought to be able to incorporate into their lifestyle. If you can't, don't worry, these aren't important for you to get over IBS, just important for you to be able to express your health to its fullest.

Again: The following advice is to help you lead a healthier lifestyle. It is not part of the program for eliminating the symptoms associated with IBS.

Pure Water

One of the simplest health suggestions that can be made, although I am always surprised by the number of patients I see who admit to drinking very little water, is to drink 6-8 glasses of water per day. This creates another question: What type of water? The best water is the purest. This is water without chemicals, bacteria or minerals. What, no minerals? That's right. Your local tap water contains fluroide and chlorine which is designed to kill bacteria. Unfortuately it also kills the good bacteria living in your gastrointestinal system which can lead to IBS Symptoms.

Therefore, purchase a good quality water purifier and filter your tap water. Of course the purest water is water that has been distilled or filtered by Reverse Osmosis. If you can find a supplier for this water I highly recommend it. Bottled water is about as pure as tap water and can be used when you are not near your home filter.

Fats and Oils

Are you worried about your fat intake? Do you count fat grams? If you do, you are probably doing yourself a disservice because too little of the right fats can also be bad for you. But what are the right fats?

There are three types of fats: saturated (from animal products), polyunsaturated and mono-unsaturated (from plants). Saturated fats as a small potion of your total fat intake are healthy. Mono-unsaturated are the best, necessary for optimal health and poly-unsaturated are better than saturated, but are not quite as healthy as mono-unsaturated.

Any oil that is hydrogenated or partially hydrogenated should be avoided completely. You will be surprised when you begin to read labels how much hydrogenated or partially hydrogenated oil is used in your food. Again, we are back to my comment about eating foods that are as nature intended them to be. Hydrogenated oils are not as nature intended. Technically, they are oils

that have had a molecule of hydrogen added to them. This makes them solid and it also makes them unrecognizable by the human body.

The best oil to use is extra virgin olive oil. It is mono-unsaturated. Use it for cooking and for salads. Occasional use of sesame oils, coconut oil or other poly-unsaturated oils for special dishes is O.K. once in a while.

A group of oils that have tremendous benefit to the human body are called Omega 3 oils. They are most easily found in fish. How many of us have parents or grandparents who took cod liver oil everyday. They were on the right track, although we now understand the biochemistry of why it was a good thing to do. Flaxseed oil or eating flaxseed everyday also provides Omega 3 oils. The importance of these oils can't be underestimated because they participate in biochemical events that are extraordinarily important for any patient experiencing pain.

The best oil to use is extra virgin olive oil.

It is mono-unsaturated.

Use it for cooking and for salads

In a nutshell, it is important to know that in the human body, there are compounds called prostaglandins. There are two kinds of them, those that cause pain and those that eliminate pain. Guess which ones are produced by eating the right kinds of oils? That's right, the ones that eliminate pain. That means olive oil, canola oil, almonds, fish oil and flaxseed oil. There are others,

but these are the main ones. How many of you suffering from Irritable Bowel incorporate these into your diet on a daily basis? With the unfounded fear that we have about fats and oils and the average fast food diet, these oils are severely lacking in our diet.

The addition of a fish oil supplement may also be wise. Many people have begun to use flaxseeds or flax oil, knowing how good they are for them. It may be better to use the fish oil because some people have an impaired ability to convert the oils found in flaxseeds into the next biochemical compound, which is the same found in fish oil. Eating fish or taking a fish oil supplement is always a better choice than flax.

And stay away from products (mostly chips) that contain olestra. This is a synthetic fat substitute that the human body doesn't absorb, but causes two problems. Right on the label is a warning that the use of this product may cause gastrointestinal problems, specifically abdominal cramping and loose stools in some people. The warning continues that the product may inhibit the absorption of some vitamins and other nutrients. So just in case, they have added Vitamin A, D, E and K. Artificial vitamins no less and the least expensive, poorest quality they can buy. Does this sound like a food product that you want to use?

Sugar and Artificial Sweeteners

We all love sugar don't we? It's a drug, you know. It causes a dependency, a craving. That's not good. Sugars add empty calories to your diet without any nutritional contribution. It also makes you fat. It contributes to insulin resistance problems and potentially diabetes. You should stay away from it, especially refined sugars such as pure cane sugar and brown sugar.

Guess what's worse? That's right, artificial sweeteners. We have already discussed that in order to get well you should eat only foods as nature intended them to be. Artificial sweeteners don't fall into that category.

The worst culprit of all is aspartame, also called NutraSweet and Equal but others containing polyol sugars like sorbitol and mannitol are also bad. Clinical experience shows that if you have headaches, and drink diet soft drinks and eat other foods that contain these products, the headaches go away by eliminating them from your diet. There is anecdotal evidence that these products cause petit mal seizures (that's when you black out for a split second), and is linked to MS, Parkinson's, Alzheimer's and many other neurological disorders. They can also be malabsorbed by many people and cause lactic acidosis, and bloating wind, cramps and diarrhoea. Clinically, whenever I see a patient with unexplained symptoms that traditional medicine cannot identify or treat successfully, I ask the patient if they consume any type of artificial sweeteners. If the answer is yes, eliminating them from their diet reaps amazing rewards.

Also, Splenda, Sucralose and Acesulfame K are also artificial sweeteners in spite of the manufacturer's attempts to sweet talk the public into thinking they are derived from natural substances like sugar. Splenda and Sucralose both are derived from sugar but their dirty little secret is the addition of a chlorine molecule to the partial sugar molecule. The same chlorine used in DDT or the water in your pool. No thank you! Acesulfame K is also a non tested product with yet unknown side effects. Beware, avoid like poison because they all have long term health risks. Follow a simple rule: If man has created, altered or processed the product, your body will not understand it and will react to it. The only one that has not been associated with these problems and the one I recommend is the plant derived, non fermentable sweetener called Stevia.

Summary

So, there you have it. I've tried my best to give you all the information that you need to resolve IBS. I hope I've communicated to you properly the way that I think things work.

In this ebook you have learned why you have your condition and what things you need to address to treat it.

If you would like to start your journey to rid yourself of IBS then sign up to The IBS Doctor 28-Day program now.

Good luck and I wish you only the best of health!

To register for the program, visit ibsdoctor.com.au



About the Author



Dr Paul Froomes BMedSci, MBBS, FRACP, MD

Dr Paul Froomes is a Melbourne-based Consultant Physician and Gastroenterologist and is considered one of the leading authorities on the treatment of IBS in Australia. For over 20 years he has specialised in diagnosing and managing disorders related to imbalances in the microbial structure of the gut microbiome.

Board certified in colonoscopy, gastroscopy, general gastroenterology and hepatology, Dr Foomes studied medicine at Monash University and completed his specialist physician training with the Royal Australian College of Physicians at the Austin Hospital, Melbourne. He completed a post doctorate master's degree in liver disease at the University of Melbourne and has published many scientific research papers on cirrhosis and inflammatory bowel disease.

Dr Froomes has subsequently undergone further specialist endoscopy training in Sydney in advanced endoscopic techniques and additional specialist oesophageal physiology training in Adelaide. His areas of interest include liver disease, fatty liver, hepatitis, inflammatory bowel disease, reflux oesophagitis, swallowing disorders, colon cancer screening, hpylori, diverticulosis, peptic ulcer disease, Coeliac disease and irritable bowel syndrome.

Dr Froomes practices at John Fawkner Hospital, Coburg Endoscopy Centre, Northwest Endoscopy, Epworth Freemasons and Victorian Gut Centre. He consults in his Moonee Ponds Consulting Rooms, Victorian Gut Centre, Bundoora, and at Beingwell Healthcare, Prahran.

Dr Froomes is involved in hands on patient management in both public and private practice and participates in GP education programs and medical student teaching. He has been a college examiner in the past for the Royal Australian College of Physicians.

Bibliography

Ambizas EM, Ginzburg R. Lubiprostone: a chloride channel activator for treatment of chronic constipation. Ann Pharmacother. Jun 2007;41(6):957-964

Asahina S, Hasegawa K, Tsuboi K. [Depression in patients of irritable bowel syndrome]. Nihon rinsho. Japanese journal of clinical medicine. Aug 2006:64(8):1527-1531.

Atkinson W, Lockhart S, Whorwell PJ, Keevil B, Houghton LA. Altered 5-hydroxytryptamine signaling in patients with constipation- and diarrhea-predominant irritable bowel syndrome. Gastroenterology. Jan 2006;130(1):34-43.

Atkinson W, Sheldon TA, Shaath N, Whorwell PJ. Food elimination based on IgG antibodies in irritable bowel syndrome: a randomised controlled trial. Gut. Oct 2004;53(10):1459-1464.

Attar A, Lemann M, Ferguson A, et al. Comparison of a low dose polyethylene glycol electrolyte solution with lactulose for treatment of chronic constipation. Gut. Feb 1999;44(2):226-230.

Azpiroz F. Gastrointestinal perception: pathophysiological implications. Neurogastroenterology and motility: the official journal of the European Gastrointestinal Motility Society. Jun 2002;14(3):229-239.

Bafutto M, Almeida JR, Leite NV, Oliveira EC, Gabriel-Neto S, Rezende-Filho J. Treatment of postinfectious irritable bowel syndrome and noninfective irritable bowel syndrome with mesalazine. Arquivos de gastroenterologia. Jan-Mar 2011:48(1):36-40

Balsari A, Ceccarelli A, Dubini F, Fesce E, Poli G. The Fecal Microbial-Population in the Irritable Bowel Syndrome. Microbiologica. 1982;5(3):185-194.

Barbara G, Zecchi L, Barbaro R, et al. Mucosal permeability and immune activation as potential therapeutic targets of probiotics in irritable bowel syndrome. J Clin Gastroenterol. Oct 2012;46 Suppl: S52–55.

Barish CF, Drossman D, Johanson JF, Ueno R. Efficacy and safety of lubiprostone in patients with chronic constipation. Dig Dis Sci. Apr 2010;55(4):1090-1097.

Barrett JS & Gibson PR. Fructose and lactose testing. Australian Family Physician 2012 (5);293-296.

Barrett JS, Gibson PR.Clinical Ramifications of Malabsorption of Fructose and Other Short-chain Carbohydrates. Practical Gastroenterology 2007 8:51-65.

Barrett JS, Gibson PR. Fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAPs) and nonallergic food intolerance: FODMAPs or food chemicals? Therap Adv Gastroenterol. Jul 2012;5(4):261–268.

Berman SM, Suyenobu BY, Naliboff BD, et al. Evidence for Altered Central Noradrenergic Modulation in Irritable Bowel Syndrome (IBS). Gastroenterology. May 2009;136(5):A170-A170.

Biesiekierski JR, Newnham ED, Irving PM, et al. Gluten causes gastrointestinal symptoms in subjects without celiac disease: a double-blind randomized placebo-controlled trial. Am J Gastroenterol. Mar 2011:106(3):508-514: quiz 515.

Bouhnik Y, Alain S, Attar A, et al. Bacterial populations contaminating the upper gut in patients with small intestinal bacterial overgrowth syndrome. Am J Gastroenterol. May 1999;94(5):1327-1331.

Bradford K, Shih W, Videlock EJ, et al. Association between early adverse life events and irritable bowel syndrome. Clin Gastroenterol Hepatol. Apr 2012:10(4):385-390 e381-383.

Brandt LJ, Chey WD, Foxx-Orenstein AE, et al. An evidence-based position statement on the management of irritable bowel syndrome. Am J Gastroenterol. Jan 2009:104 Suppl 1:S1-35.

Brennan BP, Fogarty KV, Roberts JL, Reynolds KA, Pope HG, Jr., Hudson Jl. Duloxetine in the treatment of irritable bowel syndrome: an open-label pilot study. Hum Psychopharmacol. Jul 2009;24(5):423-426.

Bundy R, Walker AF, Middleton RW, Booth J. Turmeric extract may improve irritable bowel syndrome symptomology in otherwise healthy adults: a pilot study. J Altern Complement Med. Dec 2004a;10(6):1015-1018.

Bundy R, Walker AF, Middleton RW, Marakis G, Booth JC. Artichoke

leaf extract reduces symptoms of irritable bowel syndrome and improves quality of life in otherwise healthy volunteers suffering from concomitant dyspepsia: a subset analysis. J Altern Complement Med. Aug 2004b;10(4):667-669.

Bures J, Cyrany J, Kohoutova D, Forstl M, Rejchrt S, Kvetina J, . . . Kopacova M, Small intestinal bacterial overgrowth syndrome. World journal of qastroenterology: WJG. Jun 28 2010;16(24):2978-2990.

Camilleri M, Lasch K, Zhou W, Irritable Bowel Syndrome: Methods, Mechanisms, and Pathophysiology. The confluence of increased permeability, inflammation, and pain in irritable bowel syndrome. American journal of physiology. Gastrointestinal and liver physiology. Oct 2012;303(7):6775-785.

Cappello G, Spezzaferro M, Grossi L, Manzoli L, Marzio L. Peppermint oil (Mintoil) in the treatment of irritable bowel syndrome: a prospective double blind placebo-controlled randomized trial. Dig Liver Dis. Jun 2007;39(6):530-536

Carroccio A, Mansueto P, Iacono G, et al. Non-Celiac Wheat Sensitivity Diagnosed by Double-Blind Placebo-Controlled Challenge: Exploring a New Clinical Entity. Am J Gastroenterol. Jul 24 2012.

Carroll IM, Chang YH, Park J, Sartor RB, Ringel Y. Luminal and mucosalassociated intestinal microbiota in patients with diarrhea-predominant irritable bowel syndrome. Gut Pathog. 2010;2(1):19.

Carroll IM, Ringel-Kulka T, Keku TO, et al. Molecular analysis of the luminaland mucosal-associated intestinal microbiota in diarrhea-predominant irritable bowel syndrome. Am J Physiol Gastrointest Liver Physiol. Nov 2011;301(5):G799-807

Carroll IM, Ringel-Kulka T, Siddle JP, Ringel Y. Alterations in composition and diversity of the intestinal microbiota in patients with diarrheapredominant irritable bowel syndrome. Neurogastroenterol Motil. Jun 2012;24(6):521-e248.

Chang L. The role of stress on physiologic responses and clinical symptoms in irritable bowel syndrome. Gastroenterology. Mar 2011:140(3):761-765.

Chassard C, Dapoigny M, Scott KP, et al. Functional dysbiosis within the gut microbiota of patients with constipated-irritable bowel syndrome. Aliment Pharmacol Ther. Apr 2012;35(7):828-838.

Chen CQ, Fichna J, Bashashati M, Li YY, Storr M. Distribution, function and physiological role of melatonin in the lower gut. World J Gastroenterol. Sep 14 2011;17(34):3888-3898.

Choi CH, Jo SY, Park HJ, Chang SK, Byeon JS, Myung SJ. A randomized, double-blind, placebo-controlled multicenter trial of saccharomyces boulardii in irritable bowel syndrome: effect on quality of life. Journal of clinical gastroenterology. Sep 2011;45(8):679-683.

Ciorba MA. A Gastroenterologist's Guide to Probiotics. Clin Gastroenterol Hepatol. Sep 2012;10(9):960-968.

Corinaldesi R, Stanghellini V, Cremon C, Gargano L, Cogliandro RF, De Giorgio R, . . . Barbara G. Effect of mesalazine on mucosal immune biomarkers in irritable bowel syndrome: a randomized controlled proof-of-concept study. Alimentary pharmacology & therapeutics. Aug 2009;30(3):245-252

Costabile A, Kolida S, Klinder A, et al. A double-blind, placebo-controlled, cross-over study to establish the bifidogenic effect of a very-long-chain inulin extracted from globe artichoke (Cynara scolymus) in healthy human subjects. Br J Nutr. Oct 2010;104(7):1007-1017.

Cremonini F, Nicandro JP, Atkinson V, Shringarpure R, Chuang E, Lembo A. Randomised clinical trial: alosetron improves quality of life and reduces restriction of daily activities in women with severe diarrhoea-predominant IBS. Aliment Pharmacol Ther. Sep 2012;36(5):437–448.

Cui N, Wu BP, Wu SZ. [Association of peripheral blood estradiol, progesterone and testosterone levels with irritable bowel syndrome]. Nan fang yi ke da xue xue bao = Journal of Southern Medical University. Mar 2006;26(3):367-368.

Dang J, Ardila-Hani A, Amichai MM, Chua K, Pimentel M. Systematic review of dg J, Ardila-Hani A, Amichai MM, Chua K, Pimentel M. Systematic review of Rome III. Neurogastroenterol Motil. Sep 2012;24(9):853–8397.

Davis KD, Pope G, Chen J, Kwan CL, Crawley AP, Diamant NE. Cortical thinning in IBS: implications for homeostatic, attention, and pain processing. Neurology, Jan 8 2008;70(2):153-154.

Denis M. McCarthy. Adverse Effects of Proton Pump Inhibitor Drugs: Clues and Conclusions. Curr Opin Gastroenterol 2010;26(6):624-631.

Di Palma JA, Cleveland MV, McGowan J, Herrera JL. A randomized, multicenter comparison of polyethylene glycol laxative and tegaserod in treatment of patients with chronic constipation. Am J Gastroenterol. Sep 2007:10:209:1964-1971

Di Palma JA, Herrera JL. The Role of Effective Clinician-Patient Communication in the Management of Irritable Bowel Syndrome and Chronic Constitution. J Clin Gastroenterol. Jul 17 2012

Di Sabatino A, Corazza GR. Nonceliac gluten sensitivity: sense or sensibility? Annals of internal medicine. Feb 21 2012;156(4):309-311.

Dorofeyev AE, Kiriyan EA, Vasilenko IV, Rassokhina OA, Elin AF. Clinical, endoscopical and morphological efficacy of mesalazine in patients with irritable bowel syndrome. Clinical and experimental gastroenterology. 2011

Drisko J, Bischoff B, Hall M, McCallum R. Treating irritable bowel syndrome with a food elimination diet followed by food challenge and probiotics. J Am Coll Nutr. Dec 2006;25(6):514-522.

Drossman DA, moderator. AGA Clinical Symposium -- Rome III: New Criteria for the Functional GI Disorders. Program and abstracts of Digestive Disease Week; May 20-25, 2006; Los Angeles, California. [5p461-469]

Duboc H, Rainteau D, Rajca S, et al. Increase in fecal primary bile acids and dysbiosis in patients with diarrhea-predominant irritable bowel syndrome. Neurogastroenterol Motil. Jun 2012;24(6):513-e247.

Duigenan S, Gee MS. Imaging of pediatric patients with inflammatory bowel disease. AJR Am J Roentgenol. Oct 2012;199(4):907-915.

Dunlop SP, Coleman NS, Blackshaw E, Perkins AC, Singh G, Marsden CA, Spiller RC. Abnormalities of 5-hydroxytryptamine metabolism in irritable bowel syndrome. Clinical gastroenterology and hepatology: the official clinical practice journal of the American Gastroenterological Association. Apr 2005;3(4):349–357.

Edwards D, Heufelder A, Zimmermann A. Therapeutic Effects and Safety of Rhodiola rosea Extract WS(R) 1375 in Subjects with Life-stress Symptoms - Results of an Open-label Study. Phytother Res. Aug 2012;26(8):1220-1225.

Fernandez-BanaresF,Esteve-PardoM,deLeonR,Hum- bert P, Cabre E, Llovet JM, Gassull MA. Sugar malab- sorption in functional bowel disease: Clinical implications. Am J Gastroenterol. 1993;88:2044-2050.

Ferri: In: Ferri's Clinical Advisor 2013, 1st ed. Copyright @ 2012 Mosby, An Imprint of Elsevier. Available at: http://www.mdconsult.com/books/page.do?sid=13794559465eid=4-u-1.0-8978-0-323-08373-7.00018-2-sc290156isbn=978-0-323-08373-75uniqld=381015809-97. Accessed November 12 2012

Fichna J, Storr MA. Brain-Gut Interactions in IBS. Frontiers in pharmacology. 2012:3:127.

Ford AC, Talley NJ, Schoenfeld PS, Quigley EM, Moayyedi P. Efficacy of antidepressants and psychological therapies in irritable bowel syndrome: systematic review and meta-analysis. Gut. Mar 2009;58(3):367-378.

Gallo-Torres H, Brinker A, Avigan M. Alosetron: ischemic colitis and serious complications of constipation. The American journal of gastroenterology. May 2006;101(5):1080-1083.

Gao J, Gu F, Abdella NH, Ruan H, He G. Investigation on culturable microflora in tibetan kefir grains from different areas of china. J Food Sci. Aug 2012;77(8):M425-433.

Ghoshal UC, Ranjan P. Post-infectious irritable bowel syndrome: the past, the present and the future. Journal of gastroenterology and hepatology. Apr 2011;26 Suppl 3:94-101.

Gordon M, Naidoo K, Akobeng AK, Thomas AG. Osmotic and stimulant laxatives for the management of childhood constipation. Cochrane Database Syst Rev. 2012;7:CD009118.

Grassi M, Petraccia L, Mennuni G, Fontana M, Scarno A, Sabetta S, Fraioli A. Changes, functional disorders, and diseases in the gastrointestinal tract of

elderly. Nutricion hospitalaria : organo oficial de la Sociedad Espanola de Nutricion Parenteral y Enteral. Jul-Aug 2011;26(4):659-668.

Greenwood-Van Meerveld B, Gibson M, Gunter W, Shepard J, Foreman R, Myers D. Stereotaxic delivery of corticosterone to the amygdala modulates colonic sensitivity in rats. Brain research. Mar 2 2001;893(1-2):135-142.

Guglielmetti S, Mora D, Gschwender M, Popp K. Randomised clinical trial: Bifidobacterium bifidum MIMBb75 significantly alleviates irritable bowel syndrome and improves quality of life--a double-blind, placebo-controlled study. Aliment Pharmacol Ther. May 2011;33(10):1123-1132.

Hanai H, lida T, Takeuchi K, et al. Curcumin maintenance therapy for ulcerative colltis: randomized, multicenter, double-blind, placebo-controlled trial. Clin Gastroenterol Hepatol. Dec 2006;4(12):1502-1506

Hauser G, Tkalcic M, Pletikosic S, Grabar N, Stimac D. Erythrocyte sedimentation rate - possible role in determining the existence of the low grade inflammation in Irritable Bowel Syndrome patients. Medical hypotheses. Jun 2012;78(6):818-820.

Hayee B, Forgacs I. Psychological approach to managing irritable bowel syndrome. Bmj. May 26 2007;334(7603):1105-1109.

Heitkemper MM, Chang L. Do fluctuations in ovarian hormones affect gastrointestinal symptoms in women with irritable bowel syndrome? Gender medicine. 2009;6 Suppl 2:152-167.

Hellhammer J, Hero T, Franz N, Contreras C, Schubert M. Omega-3 fatty acids administered in phosphatidylserine improved certain aspects of high chronic stress in men. Nutr Res. Apr. 2012;32(4):241-250

Holtmann G, Liebregts T, Collet W, Windeck T. Functional dyspepsia and irritable bowel syndrome - Treatment effects of artichoke-leaf-extract: A placebo-controlled, randomised, multicenter trial. Gastroenterology. Apr 2003:124(4):4182-4182

Jane ZY, Chang CC, Lin HK, Liu YC, Chen WL. The association between the exacerbation of irritable bowel syndrome and menstrual symptoms in young Taiwanese women. Gastroenterology nursing: the official journal of the Society of Gastroenterology Nurses and Associates. Jul-Aug 2011;34(4):277-296

Jarrett ME, Burr RL, Cain KC, Hertig V, Weisman P, Heitkemper MM. Anxiety and depression are related to autonomic nervous system function in women with irritable bowel syndrome. Digestive diseases and sciences. Feb 2003;48(2):386-394.

Johannesson E, Simren M, Strid H, Bajor A, Sadik R. Physical activity improves symptoms in irritable bowel syndrome: a randomized controlled trial. Am J Gastroenterol. May 2011;106(5):915-922.

Kanazawa M, Hongo M, Fukudo S. Visceral hypersensitivity in irritable bowel syndrome. J Gastroenterol Hepatol. Apr 2011;26 Suppl 3:119-121.

Kerckhoffs AP, Akkermans LM, de Smet MB, et al. Intestinal permeability in irritable bowel syndrome patients: effects of NSAIDs. Dig Dis Sci. Mar 2010;55(3):716-723

Keszthelyi D, Dackus GH, Masclee GM, Kruimel JW, Masclee AA. Increased proton pump inhibitor and NSAID exposure in irritable bowel syndrome: results from a case-control study. BMC Gastroenterol. Sep 5 2012;12(1):121.

Kligler B, Chaudhary S. Peppermint oil. Am Fam Physician. Apr 1 2007;75(7):1027-1030.

Klotz U. The pharmacological profile and clinical use of mesalazine (5-aminosalicylic acid). Arzneimittel-Forschung. Feb 2012;62(2):53-58.

Lacy BE, Levy LC. Lubiprostone: a novel treatment for chronic constipation. Clin Interv Aging. 2008;3(2):357-364.

Ladabaum U, Sharabidze A, Levin TR, et al. Citalopram provides little or no benefit in nondepressed patients with irritable bowel syndrome. Clin Gastroenterol Hepatol. Jan 2010;8(1):42-48 e41.

Lee HR, Pimentel M. Bacteria and irritable bowel syndrome: the evidence for small intestinal bacterial overgrowth. Current gastroenterology reports. Aug 2006;8(4):305-311.

Lee L, Clarke JO, Pearson RL. Irritable bowel syndrome. First Consult 2012; http://www.mdconsult.com/das/pdxmd/body/379362381-3/0?type=med8eid=9-u1.0-_1_mt_1014787#Contributors. Accessed 11/8/2012.

Lembo AJ, Schneier HA, Shiff SJ, et al. Two randomized trials of linaclotide for chronic constipation. N Engl J Med. Aug 11 2011;365(6):527-536.

Liu JH, Chen GH, Yeh HZ, Huang CK, Poon SK. Enteric-coated peppermintoil capsules in the treatment of irritable bowel syndrome: a prospective, randomized trial. J. Gastroenterol. Dec 1907;32(6):755-768.

Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC. Functional bowel disorders. Gastroenterology. Apr 2006;130(5):1480-1401

Lovell RM, Ford AC. Global prevalence of and risk factors for irritable bowel syndrome: a meta-analysis. Clin Gastroenterol Hepatol. Jul 2012;10(7):712-721

Lu WZ, Gwee KA, Moochhalla S, Ho KY. Melatonin improves bowel symptoms in female patients with irritable bowel syndrome: a double-blind placebo-controlled study. Aliment Pharmacol Ther. Nov 15 2005;22(10):927-934

Lundin KE, Alaedini A. Non-celiac Gluten Sensitivity. Gastrointestinal endoscopy clinics of North America. Oct 2012;22(4):723-734.

Lydiard RB, Falsetti SA. Experience with anxiety and depression treatment studies: implications for designing irritable bowel syndrome clinical trials. The American journal of medicine. Nov 8 1999;107(5A):655-735.

Lydiard RB. Irritable bowel syndrome, anxiety, and depression: what are the links? The Journal of clinical psychiatry. 2001;62 Suppl 8:38-45; discussion 46-37

Mach T. The brain-gut axis in irritable bowel syndrome--clinical aspects. Medical science monitor: international medical journal of experimental and clinical research. Jun 2004;10(6):RA125-131.

Macpherson H, Tilbrook H, Bland MJ, Bloor K, Brabyn S, Cox H, . . . Whorwell P. Acupuncture for irritable bowel syndrome: primary care based pragmatic randomised controlled trial. BMC gastroenterology. Oct 24 2012;12(1):150

Manheimer E, Cheng K, Wieland LS, Min LS, Shen X, Berman BM, Lao L. Acupuncture for treatment of irritable bowel syndrome. Cochrane database of systematic reviews. 2012;5:CD005111.

Manning AP, Thompson WG, Heaton KW, Morris AF. Towards positive diagnosis of the irritable bowel. Br Med J. Sep 2 1978;2(6138):653-654.

Masand PS, Pae CU, Krulewicz S, Peindl K, Mannelli P, Varia IM, Patkar AA. A double-blind, randomized, placebo-controlled trial of paroxetine controlled-release in irritable bowel syndrome. Psychosomatics. Jan-Feb 2009;50(1):78-86

May B, Kuntz HD, Kieser M, Kohler S. Efficacy of a fixed peppermint oil/ caraway oil combination in non-ulcer dyspepsia. Arzneimittel-Forschung. Dec 1996;46(12):1149-1153.

Mayer EA, Naliboff BD, Chang L, Coutinho SV. V. Stress and irritable bowel syndrome. American journal of physiology. Gastrointestinal and liver physiology. Apr 2001;280(4):G519-524.

Mayer EA. Clinical practice. Irritable bowel syndrome. The New England journal of medicine. Apr 17 2008;358(16):1692-1699.

Mayo Clinic. Irritable bowel syndrome. Definition. Available at: http://www.mayoclinic.com/health/irritable-bowel-syndrome/DS00106. July 29, 2011. Accessed November 12, 2012.

Mearin F, Lacy BE. Diagnostic criteria in IBS: useful or not? Neurogastroenterol Motil. Sep 2012;24(9):791-801.

Merat S, Khalili S, Mostajabi P, Ghorbani A, Ansari R, Malekzadeh R. The effect of enteric-coated, delayed-release peppermint oil on irritable bowel syndrome. Dig Dis Sci. May 2010;55(5):1385-1390.

Mitchell SA, Mee AS, Smith GD, Palmer KR, Chapman RW. Alverine citrate fails to relieve the symptoms of irritable bowel syndrome: results of a double-blind, randomized, placebo-controlled trial. Aliment Pharmacol Ther. Jun 2002;16(6):1187-1195.

National Digestive Diseases Information Clearinghouse (NDDIC). Irritable Bowel Syndrome. Available at: http://digestive.niddk.nih.gov/ddiseases/pubs/ ibs/index.aspx. Last updated July 2, 2012. Accessed November 12, 2012.

Nelis GF, Vermeeren MA, Jansen W. Role of fructose- sorbitol

malabsorption in the irritable bowel syndrome. Gastroenterology. 1990:99:1016-1020.

Nobaek S, Johansson ML, Molin G, Ahrne S, Jeppsson B. Alteration of intestinal microflora is associated with reduction in abdominal bloating and pain in patients with irritable bowel syndrome. Am J Gastroenterol. May 2000;95(5):1231-1238

Noreen EE, Sass MJ, Crowe ML, Pabon VA, Brandauer J, Averill LK. Effects of supplemental fish oil on resting metabolic rate, body composition, and salivary cortisol in healthy adults. J Int Soc Sports Nutr. 2010;7:31.

O'Mahony L, McCarthy J, Kelly P, et al. Lactobacillus and bifidobacterium in irritable bowel syndrome: symptom responses and relationship to cytokine profiles. Gastroenterology. Mar 2005;128(3):541-551.

Ong DK, Mitchell SB, Barrett JS, et al. Manipulation of dietary short chain carbohydrates alters the pattern of gas production and genesis of symptoms in irritable bowel syndrome. J Gastroenterol Hepatol. Aug 2010; 25(8):1366-1373

Orr WC, Crowell MD, Lin B, Harnish MJ, Chen JD. Sleep and gastric function in irritable bowel syndrome: derailing the brain-gut axis. Gut. Sep 1997;41(3):390-393.

Ostgaard H, Hausken T, Gundersen D, El-Salhy M. Diet and effects of diet management on quality of life and symptoms in patients with irritable bowel syndrome. Mol Med Report. Jun 2012;5(6):1382-1390.

Pallotti F, Fogacci E, Frisoni C, Serra M, Bellacosa L, Carini G, . . . Barbara G. [Post-infectious irritable bowel syndrome]. La Clinica terapeutica. 2011;162(2):157-161.

Patel MM, Amin AF. Development of a novel tablet-in-capsule formulation of mesalamine for inflammatory bowel disease. Pharm Dev Technol. Feb 5 2012

Pietzak M. Celiac disease, wheat allergy, and gluten sensitivity: when gluten free is not a fad. JPEN. Journal of parenteral and enteral nutrition. Jan 2012;36(1 Suppl):685-75S.

Plengvidhya V, Breidt F, Jr., Lu Z, Fleming HP. DNA fingerprinting of lactic acid bacteria in sauerkraut fermentations. Appl Environ Microbiol. Dec 2007;73(23):7697-7702.

PubMed Health. Alosetron. AHFS Consumer Medication Information 2010; http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0000163/. Accessed

PubMed Health. Propantheline. AHFS Consumer Medication Information 2011; http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0000812/. Accessed 11/7/2012

Pyleris E, Giamarellos-Bourboulis EJ, Tzivras D, Koussoulas V, Barbatzas C, Pimentel M. The prevalence of overgrowth by aerobic bacteria in the small intestine by small bowel culture: relationship with irritable bowel syndrome. Dig Dis Sci. May 2012;57(5):1321-1329.

Qin HY, Wu JC, Tong XD, Sung JJ, Xu HX, Bian ZX. Systematic review of animal models of post-infectious/post-inflammatory irritable bowel syndrome. Journal of gastroenterology. Feb 2011;46(2):164-174.

Quigley EM, Quera R. Small intestinal bacterial overgrowth: roles of antibiotics, prebiotics, and probiotics. Gastroenterology. Feb 2006;130(2 Sund 1):758-90

Rajilic-Stojanovic M, Biagi E, Heilig HG, et al. Global and deep molecular analysis of microbiota signatures in fecal samples from patients with irritable bowel syndrome. Gastroenterology. Nov 2011;141(5):1792-1801.

Reddymasu SC, Sostarich S, McCallum RW. Small intestinal bacterial overgrowth in irritable bowel syndrome: are there any predictors? BMC Gastroenterol. 2010;10:23.

Reix N, Guhmann P, Bietiger W, Pinget M, Jeandidier N, Sigrist S. Duodenum-specific drug delivery: in vivo assessment of a pharmaceutically developed enteric-coated capsule for a broad applicability in rat studies. Int J

Roerig JL, Steffen KJ, Mitchel JE, Zunker C. Laxative abuse: epidemiology, diagnosis and management. Drugs. 2010;70(12):1487-503.

Ruepert L, Quartero AO, de Wit NJ, van der Heijden GJ, Rubin G, Muris JW. Bulking agents, antispasmodics and antidepressants for the treatment of

irritable bowel syndrome. Cochrane Database Syst Rev. 2011(8):CD003460.

Ruigomez A, Garcia Rodriguez LA, Johansson S, Wallander MA. Is hormone replacement therapy associated with an increased risk of irritable bowel syndrome? Maturitas. Feb 25 2003;44(2):133-140.

Sachdeva S, Rawat AK, Reddy RS, Puri AS. Small intestinal bacterial overgrowth (SIBO) in irritable bowel syndrome: frequency and predictors. Journal of gastroenterology and hepatology. Apr 2011;26 Suppl 3:135-138.

Saha L, Malhotra S, Rana S, Bhasin D, Pandhi P. A preliminary study of melatonin in irritable bowel syndrome. J Clin Gastroenterol. Jan 2007:41(1):29-32

Schwille-Kiuntke J, Frick JS, Zanger P, Enck P. Post-infectious irritable bowel syndrome--a review of the literature. Zeitschrift fur Gastroenterologie. Aug 2011;49(8):997-1003.

Serghini M, Karoui S, Boubaker J, Filali A. [Post-infectious irritable bowel syndrome]. La Tunisie medicale. Mar 2012;90(3):205-213.

Shanahan F, Whorwell PJ. IgG-mediated food intolerance in irritable bowel syndrome: a real phenomenon or an epiphenomenom? Am J Gastroenterol. Jul 2005;100(7):1558-1559.

Shi ZM, Zhu YS, Wang QX, Lei MN, [Comparative study on irritable bowel syndrome treated with acupuncture and western medicine]. Zhongguo zhen jiu = Chinese acupuncture & moxibustion. Jul 2011;31(7):607-609.

Singh RH and Singh L. Studies on the anti-anxiety effect of the medyha rosayanna drug. Brahmi (Bapopa monniera Wettst) Part 1. J Res Ayur Siddha. 1980:1:133-48.

Skoog SM, Bharucha AE. Dietary fructose and gas- trointestinal symptoms: A review. Am J Gastroen- terol. 2004;99:2046-2050.

Song GH, Leng PH, Gwee KA, Moochhala SM, Ho KY. Melatonin improves abdominal pain in irritable bowel syndrome patients who have sleep disturbances: a randomised, double blind, placebo controlled study. Gut. Oct 2005;54(10):1402-1407

Spiegel BM, Farid M, Esrailian E, Talley J, Chang L. Is irritable bowel syndrome a diagnosis of exclusion?: a survey of primary care providers, gastroenterologists, and IBS experts. Am J Gastroenterol. Apr 2010:105(4):848-858

Spiller R, Lam C. An Update on Post-infectious Irritable Bowel Syndrome: Role of Genetics, Immune Activation, Serotonin and Altered Microbiome. J Neurogastroenterol Motil. Jul 2012;18(3):258-268.

Spiller R. Clinical update: irritable bowel syndrome. Lancet. May 12 2007;369(9573):1586-1588.

Stark D, van Hal S, Marriott D, Ellis J, Harkness J. Irritable bowel syndrome: a review on the role of intestinal protozoa and the importance of their detection and diagnosis. Int J Parasitol. 2007 Jan;37(1):11-20. Epub 2006

Starks MA, Starks SL, Kingsley M, Purpura M, Jager R. The effects of phosphatidylserine on endocrine response to moderate intensity exercise. J Int Soc Sports Nutr. 2008;5:11.

Stasi C, Rosselli M, Bellini M, Laffi G, Milani S. Altered neuro-endocrineimmune pathways in the irritable bowel syndrome: the top-down and the bottom-up model. Journal of gastroenterology. Jul 6 2012.

Staudacher HM, Whelan K, Irving PM, Lomer MC. Comparison of symptom response following advice for a diet low in fermentable carbohydrates (FODMAPs) versus standard dietary advice in patients with irritable bowel syndrome. J Hum Nutr Diet. Oct 2011;24(5):487-495.

Stuardi T, Macpherson H. Acupuncture for Irritable Bowel Syndrome: Diagnosis and Treatment of Patients in a Pragmatic Trial. Journal of alternative and complementary medicine (New York, N.Y.). Oct 26 2012.

Suarez-Hitz KA, Otto B, Bidlingmaier M, Schwizer W, Fried M, Ehlert U. Altered psychobiological responsiveness in women with irritable bowel syndrome. Psychosom Med. Feb-Mar 2012;74(2):221-231.

Tana C, Umesaki Y, Imaoka A, Handa T, Kanazawa M, Fukudo S. Altered profiles of intestinal microbiota and organic acids may be the origin of symptoms in irritable bowel syndrome. Neurogastroenterol Motil. May 2010;22(5):512-519, e114-515.

Symons P, Jones MP, Kellow JE. Symptom provoca- tion in irritable bowel syndrome. Effects of differing doses of fructose-sorbitol. Scan J Gastroenterol. 1992; 27:940-944.

Thabane M, Marshall JK. Post-infectious irritable bowel syndrome. World journal of gastroenterology: WJG. Aug 7 2009;15(29):3591-3596.

Thompson WG. The Road to Rome. Gastroenterology. 2006;130:1552-1556

Torpy JM, Golub RM. JAMA patient page. Irritable bowel syndrome. JAMA: the journal of the American Medical Association. Oct $5\ 2011;306(13):1501.$

Trinkley KE, Nahata MC. Treatment of irritable bowel syndrome. Journal of clinical pharmacy and therapeutics. Jun 2011;36(3):275-282.

Tubaki BR, Chandrashekar CR, Sudhakar D, et al. Clinical efficacy of Manasamitra Vataka (an Ayurveda medication) on generalized anxiety disorder with comorbid generalized social phobia: a randomized controlled study. J Altern Complement Med. 2012;18(6):612-21.

Tungtrongchitr A, Manatsathit S, Kositchaiwat C, Ongrotchanakun J, Munkong N, Chinabutr P, Leelakusolvong S, Chaicumpa W.Blastocystis hominis infection in irritable bowel syndrome patients. Southeast Asian J Trop Med Public Health. 2004 Sep;35(3):705-10.

Usai P, Manca R, Cuomo R, Lai MA, Boi MF. Effect of gluten-free diet and co-morbidity of irritable bowel syndrome-type symptoms on health-related quality of life in adult coeliac patients. Digestive and liver disease: official journal of the Italian Society of Castroenterology and the Italian Association for the Study of the Liver. Sep 2007;39(9):824-828.

Verdu EF, Armstrong D, Murray JA. Between celiac disease and irritable bowel syndrome: the "no man's land" of gluten sensitivity. The American journal of gastroenterology. Jun 2009;104(6):1587-1594.

Villarreal AA, Aberger FJ, Benrud R, Gundrum JD. Use of broad-spectrum antibiotics and the development of irritable bowel syndrome. WMJ. Feb 2012:111(1):17-20

Volta U, De Giorgio R. New understanding of gluten sensitivity. Nat Rev Gastroenterol Hepatol. May 2012;9(5):295-299.

Wahnschaffe U, Schulzke JD, Zeitz M, Ullrich R. Predictors of clinical response to gluten-free diet in patients diagnosed with diarrheapredominant irritable bowl syndrome. Clinical gastroenterology and hepatology; Jul 2007;5(7):844-850; quiz 769.

Walker AF, Middleton RW, Petrowicz O. Artichoke leaf extract reduces symptoms of irritable bowel syndrome in a post-marketing surveillance study. Phytother Res. Feb 2001;15(1):58-61.

Wolfe M, Lichtenstein D, Singh G. Gastrointestinal toxicity of nonsteroidal antiinflammatory drugs. NEJM 1999, 340;24:1888-1899.

Wood NJ. Infection: Giardia lamblia is associated with an increased risk of both IBS and chronic fatigue that persists for at least 3 years. Nat Rev Gastroenterol Hepatol. 2011 Oct 11;8(11):597.

Yadav SK, Jain AK, Tripathi SN, et al. Irritable bowel syndrome: therapeutic evaluation of indigenous drugs. Indian J Med Res. 1989;90:496-503.

Yakoob J, Abbas Z, Khan R, Hamid S, Awan S, Jafri W. Small intestinal bacterial overgrowth and lactose intolerance contribute to irritable bowel syndrome symptomatology in Pakistan. Saudi journal of gastroenterology; Nov-Dec 2011;17(6):371-375.

Yakoob J, Jafri W, Beg MA, Abbas Z, Naz S, Islam M, Khan R. Blastocystis hominis and Dientamoeba fragilis in patients fulfilling irritable bowel syndrome criteria. Parasitol Res. 2010 Aug;107(3):679-84. doi: 10.1007/s00436-010-1918-7. Epub 2010 Jun 8

Yamini D, Pimentel M. Irritable bowel syndrome and small intestinal bacterial overgrowth. J Clin Gastroenterol. Nov-Dec 2010:44(10):672-675.

Zernicke KA, Campbell TS, Blustein PK, et al. Mindfulness-Based Stress Reduction for the Treatment of Irritable Bowel Syndrome Symptoms: A Randomized Wait-list Controlled Trial. Int J Behav Med. May 23 2012.

Zijdenbos IL, de Wit NJ, van der Heijden GJ, Rubin G, Quartero AO. Psychological treatments for the management of irritable bowel syndrome. Cochrane database of systematic reviews. 2009(1):CD006442.



ibsdoctor.com.au

Medical disclaimer

Information from The IBS Doctor is not intended as a substitute for your own independent health professional's advice, diagnosis or treatment. Always seek the advice of your physician or other qualified health providers within your country or place of residency with any questions you may have regarding a medical condition. Neither The IBS Doctor, nor the publisher of this content takes responsibility for possible health consequences of any person or persons reading or following the information from The IBS Doctor. All viewers of this content, especially those taking prescription or over-the-counter medications, should consult their physicians before beginning any nutrition, supplement or lifestyle program.

The content of this booklet and The IBS Doctor website is for general information purposes only. It does not constitute medical advice. Use of this booklet or The IBS Doctor website, or the receipt of any information from The IBS Doctor via any means of communication, is not intended to create, nor does it create, a doctor-patient relationship between us. Any assistance you may receive using any information from The IBS Doctor does not constitute specific advice and accordingly must not be relied upon without confirmation from your independent medical professional.

If you think that you may be suffering from any medical condition, you should seek immediate medical attention from your own independent medical professional. You should never delay seeking medical advice from your independent medical professional, disregard such medical advice or discontinue medical treatment because of information on this website.

For full terms and conditions and our privacy statement please visit ibsdoctor.com.au

© Copyright 2021. The IBS Doctor Pty. Ltd. All rights reserved. The information contained in this booklet is owned solely by The IBS Doctor. You are not permitted to reproduce any information from this booklet or The IBS Doctor website for the purposes of sale or the use by any third party.





