

## [A Guide to Eliminating IBS](#)

### **Irritable Bowel Syndrome**

60 million people in the US, that is 20% of Americans, have irritable bowel syndrome (IBS).<sup>1</sup> Typical symptoms include bloating, cramps, gas, distention, diarrhea, constipation and abdominal pain. Often times, these symptoms causes much distress and misery.

Functional medicine uses a whole new paradigm to solve the puzzle of chronic symptoms such as IBS. Fortunately, through the systematic methods of Functional Medicine, IBS can be cured.



### **What Causes IBS?**

For most diseases, the most common causes are: allergens, infections or imbalances of your gut flora, toxins, stress and poor diet. Particularly for IBS, if you can identify the root cause-which can be very different for different people-you can begin solving and eliminating the IBS mystery.

### **Food Allergies or Sensitivities**

Food sensitivities are very common; they are not true allergies like peanut or shellfish allergies that trigger a severe reaction quickly. Instead, food sensitivities are much milder, and take longer to manifest what can still be significant effects on our health, such as irritation to our bowel.

[Top 5 common food sensitivities are gluten, dairy, soy, corn and eggs.](#)

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<sup>1</sup><http://www.niddk.nih.gov/health-information/health-statistics/Pages/digestive-diseases-statistics-for-the-unit-ed-states.aspx>



Gluten is a protein found in wheat, barley, rye and spelt. It is the most prevalent sensitive food found in our diet today. It causes inflammatory responses in your body even if you do not have Celiac disease.

Dairy also contains a protein casein and whey that can cause irritation and inflammation in your gut. Many people also cannot digest lactose in dairy, which commonly causes bloating, gas and diarrhea.

An elimination diet is the most effective way to find out what your food sensitivity is. You can also ask your doctor for some tests that assess your reaction to certain food and gluten.

Digestive enzymes are often very helpful in reducing food intolerance. Partially digested carbohydrates and proteins can be very irritating to the intestines, causing diarrhea, allergies and gas. Using digestive enzymes speeds intestinal healing by reducing the allergenic potential of foods and aiding in the absorption of food.

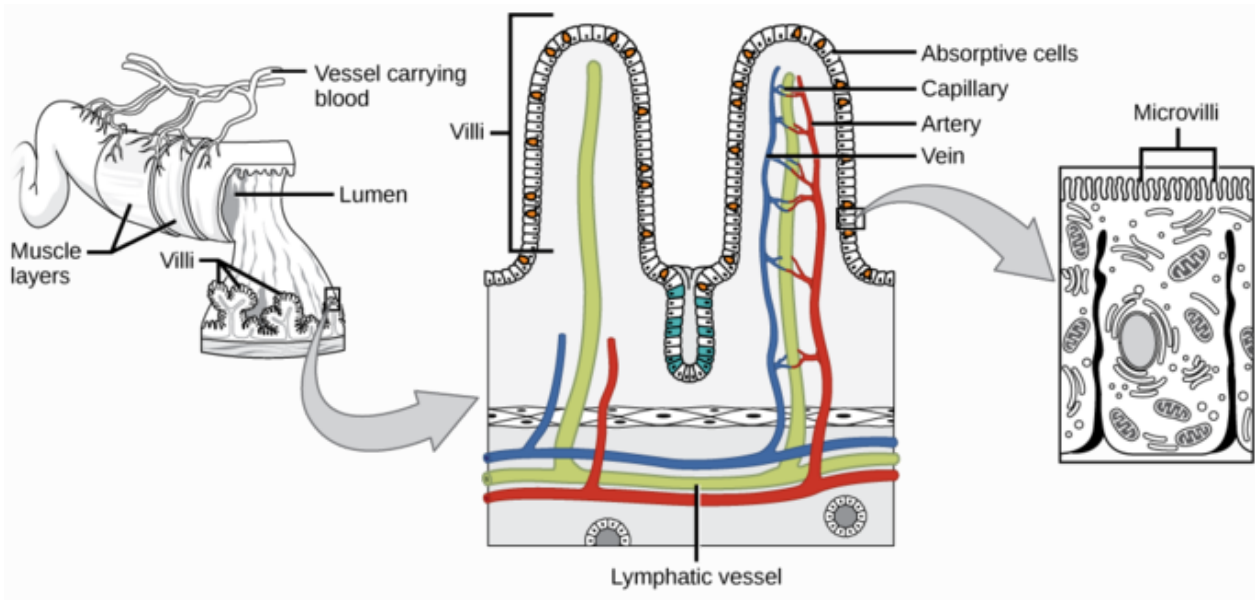
## Learning about the Digestive System

The digestive system, which includes the small and large intestines, is designed to facilitate the transformation of food matter into the nutrients that sustain our body.

### Small intestine

The small intestine is a 6 meter long tube with a highly-folded surface containing finger-like projections and mini protrusions called villi and microvilli. These microvilli are lined with cells on the inner wall of the intestine that absorb nutrients from the digested food and make them

available to the bloodstream on the other side of the wall.



#### Villi of the small intestine

Digested food is chemically broken down with the help of enzymes from the liver, pancreas, gallbladder, and gland cells of the intestinal wall. As a result, the small intestine is able to absorb nutrients such as fatty acids, carbohydrates, amino acids and vitamins. Any remaining undigested food is then moved via peristalsis into the large intestine.<sup>2</sup> The small intestine is usually sterile from any bacteria.

#### Large Intestine

The large intestine reabsorbs water and mineral salts from undigested food material and processes waste material; it also absorbs vitamins that are synthesized by the normal gut microflora living in the large intestine.

#### Gut Microflora Imbalances

These healthy intestinal flora is essential for optimal gut health. There are over 500 bacterial species and about 3 lbs of bacteria in our large intestine. Our gut has 10 times more cells than the human body. This collection of bacteria which we call the **human microbiome** perform many useful functions, and are being studied for how it influences our weight, immune system

<sup>2</sup> Digestive System: Small and Large Intestines.” Boundless Biology. Boundless, 07 Mar. 2016. Retrieved 14 Mar. 2016 from <https://www.boundless.com/biology/textbooks/boundless-biology-textbook/animal-nutrition-and-the-digestive-system-34/digestive-systems-195/digestive-system-small-and-large-intestines-750-11983/>

and nervous system.<sup>3 4</sup> We now know that the microbiome needs be balanced for you to be healthy.

## Small Intestinal bacterial Overgrowth (SIBO)

Our small intestine is not only for food absorption. It also houses 60 percent of our immune system. There is thin cell layer that separates the ingested food, microbes and bacteria in our gut from the immune system, and if that lining breaks down, then our immune system is activated and inflammation is triggered both locally and systemically through the blood vessels that line the gut wall.

One way the immune system can become activated is when there is more bad bacteria than good bacteria in our large intestine. The bacteria move into the small intestine where they should not be, and start to ferment sugary and starchy foods such as bread, pasta, certain fruits and vegetables, and create gas. This small intestinal bacterial overgrowth (SIBO) process is what commonly causes the symptoms of IBS such as bloating, gas pain and flatulence.

You can diagnose SIBO with a breath test, which measures the methane and hydrogen gas production by the bacteria, or a urine test that measures byproducts of the bacteria after they are absorbed into your system.<sup>5</sup> For treatment, we can use oil of oregano or berberine. There is a nonabsorbable antibiotic called Rifaximin that studies have shown can improve symptoms of IBS by removing the bacterial overgrowth after just 10 days of treatment.<sup>6</sup>

Yeast, which normally live in our gut, can also become overgrown when there are imbalances in the gut flora. Just like weeds taking over in an unattended garden.

## Leaky Gut

Remember the cells with microvilli in the small intestine that we talked about earlier that are in charge of absorption? These cells have tight junctions between them, which control what passes through the lining of the small intestine, guarding the body from any foreign substance or toxins or bacteria from the food we eat. However, due to imbalances of gut flora, or food allergies, or chronic or acute stress responses, these junctions can stop working properly,

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<sup>3</sup> E Le Chatelier et al., "Richness of human gut microbiome correlates with metabolic markers," *Nature* 29, no 500 (2013): 541-6.

<sup>4</sup> Adam Hadhazy, Think Twice: How the Gut's "Second Brain" Influences Mood and Well-Being, Scientific American, a division of Nature America, Inc

<sup>5</sup> Lin, H. (2004) Small Intestinal bacterial overgrowth. *The Journal of the American Medical Association.* 292:8552-858

<sup>6</sup> Pimenetel, M., Par, S. Mirocha, J. Kane, S. and Y.Kong. (2006). The effect of nonabsorbed oral antibiotics (rifaximin) on symptoms of irritable bowel syndrome. *Annals of Internal Medicine.* (145)8:557-563.

allowing toxins and undigested food to leak into our bloodstream causing more global inflammatory response and systemic illness.

## What Imbalances Gut Health?

**1) A junk diet.** This nutrient-poor diet makes all the wrong bacteria and yeast grow in the gut, leading to a damaged ecosystem.



**2) Medication overuse.** Anti-inflammatories, antibiotics, acid blocking drugs, and steroids damage the gut or block normal digestive function.

**3) Infections and gut imbalances.** These include small intestinal bacterial overgrowth (SIBO), yeast overgrowth, worms, amoebas and parasites.

**4) Toxic overload.** Including mercury and mold toxins.

**5) Inadequate digestive enzymes and stomach acid.** Stress, acid-blocking medications, and zinc deficiencies can all contribute to lack of adequate digestive enzyme function.

**6) Stress.** Chronic stress alters your gut nervous system, creating a leaky gut and changing the normal bacteria in the gut.



## 5 'R' program for IBS Treatment

Functional Medicine doctors use a four-step strategy to reduce inflammation and heal the gut. Many people find when they use these steps, they lose weight, feel better, and their symptoms improve:

- 1) Remove** the bad bugs, drugs, and food allergens, poor habit, emotional stressors  
(This requires running some stool tests and food allergy tests.)
- 2) Replenish** needed enzymes, fiber, and prebiotics.  
(This includes eating real food as well.)
- 3) Repopulate** your gut with good bacteria (probiotics and fermented foods).
- 4) Repair** the gut lining with omega 3 fatty acids, zinc, glutamine, magnesium and other healing nutrients from supplements and whole foods
- 5) Rebalance and Restore** healthy lifestyle and emotional wellbeing

## 10 Steps to Eliminating IBS



### 1) Eat Real food. Whole food.

My 6 year old son has a book that teaches him how to determine if a food is real or not: if it gets rained on, and it disintegrates, then it is not real food.

Eliminate :     “High-Fructose Corn Syrup”  
                  “Trans fats” or “Partially hydrogenated” oils  
                  Any food additive you can’t pronounce!  
                  Artificial sweeteners (splenda, nutrasweet)



### 2) Enjoy your food. Chew it, not swallow it.

Take at least 30 minutes per meal, and chew 20 times with each bite. This allows our brain to send the signals of being hungry or full, and for our body to receive it. It also allows our body

make enzymes to help with digestion. If we reduce the amount of undigested food in our gut, then there will be less to ferment, and therefore less gas and bloating.

### **3) Try a strict Elimination Diet for 4 weeks**

STOP dairy, gluten, grains, and legumes (soy, peanuts and beans). Record any symptom changes, then after 4 weeks, reintroduce each food group back into your diet one at a time 3 days apart. If you have a food that triggered symptoms, then continue to avoid for another 3 months.

### **4) Try a low FODMAP diet: FODMAP= Fermentable Oligo-Di-Monosaccharides and Polyols**

If you still have symptoms after step 3 for 4 weeks, try a low FODMAP diet. Especially if your symptoms are bloating, flatulence or gas pain.

FODMAPs are carbohydrates / sugars that are found in foods.<sup>7,8</sup> These include:

**Fermentables / Fructose** (fruits, honey, high fructose corn syrup (HFCS), etc)

**Lactose** (dairy)

**Fructans** (wheat, garlic, onion, inulin etc)

**Galactans** (legumes such as beans, lentils, soybeans, etc)

**Polyols** (sweeteners containing isomalt, mannitol, sorbitol, xylitol, stone fruits such as avocado, apricots, cherries, nectarines, peaches, plums, etc)

FODMAPs pull water into the digestive tracts, and may not be digested or absorbed well, as a result, they will be fermented by bacteria in the gut when eaten too frequently. IBS symptoms of bloating, constipation, gas pain, and flatulence will be exacerbated especially if you have SIBO.

### **5) Eat protein in every meal.**

Protein helps you feel full and prevents blood sugar imbalances that feed bad bacteria in our gut. Examples of protein are nuts, seeds, eggs, and sustainably farmed animal protein.

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<sup>7</sup> Shepherd SJ, Parker FJ, Muir JG and Gibson, PR Dietary triggers of abdominal symptoms in patients with irritable bowel syndrome- randomised placebo-controlled evidence Clin. Gastroenterol. Hepatol. 2008;6(7):765-771

<http://www.sciencedirect.com/science/article/pii/S1542356508001511>

<sup>8</sup> Halmos, EP, Power VA, Shepherd SJ, et al. A Diet Low in FODMAPs Reduces symptoms of Irritable Bowel Syndrome Gastroenterology 2014;146(1)67-75





### 5) Eat healthy fats in every meal.

Omega 3 fatty acids (O3FA) help repair gut linings and decrease inflammation and are found in cold water fish. I use the acronym SMASH for choosing my high O3FA fish: salmon, mackerel, anchovies, sardines and herring. Seaweed and flaxseed are also good sources of O3FA. Choose grass fed over grain fed meat because grass fed meats support a higher omega 3 to omega 6 ratio. Use healthy oils like coconut oil and olive oil. Eat lots of avocados, nuts and seeds.



### 6) Eat soluble fibers.

Good gut bacteria feeds on short chain fatty acids found in soluble fibers. Soluble fibers dissolve in water. Short chain fatty acids attract water and form a gel, which slows down digestion. The emptying of your stomach is delayed and soluble fiber makes you feel full.

#### Low-FODMAP foods with soluble fiber:

Blueberries, oranges, eggplant, carrots, grapefruit (1/4 or less), potatoes; oatmeal (1/4 cup), oat bran, brown rice, flax and sunflower seeds (2 tablespoons), chickpeas (1/4 cup) and lentils (1/2 cup)



### **6) Get enough sleep.**

We need sleep to rest and rejuvenate. Sleep deprivation causes stress and inflammation in our body, so go to bed between 10 - 11 pm, and aim for 8 hours of sleep.

### **7) Move your body.**

Walk or move vigorously for 30 minutes 5 days a week. Add a mix of strength training or interval training in order to build more muscles. Check out 7 minute workout. Exercise increases our metabolism and reduce stress, and it can prevent many diseases.



### **8) Practice relaxation and reduce your stress.**

Stress can cause dysbalance of the gut and decrease digestive enzymes. It also causes inflammation and decreases healing of the gut. It is important to identify stressors in your life and actively reduce them. If it is difficult to wrap your fingers around this task, consider a health coach or a life coach. Schedule down time(s) **every day** in your calendar. Meditate, do guided relaxations, yoga, and listen to music.

### **9) Take a probiotic and eat fermented foods.**

Reinoculate your gut with good bacteria will help restore balance from the bad bacteria. Take probiotics that has at least 25 million live CFU's from strains of Lactobacillus, Bifidobacterium and Saccharomyces boulardii, twice a day, 30 minutes before meal time.

You can also eat fermented foods such as kimchi, sauerkraut and non soy based miso.

**10) Repair and Replenish your gut.**

Take Magnesium Glycinate, Zinc, L-glutamine, de-glycyrrhinated licorice (DGL), butyric acid, Vitamin A and Fish oil for 3 months to help nourish and rebuild the gut wall. Take tumeric and Quercetin to help reduce inflammation in a leaky gut. Take digestive enzymes before each meal for 3 months to help improve digestion and absorption, and decrease excess food for fermentation.



If your symptoms are not improving after trying these steps for 2 months, ask your local functional medicine doctor for a stool test and also a SIBO breath test to help clarify your symptoms and identify any potential infections that need treatment.