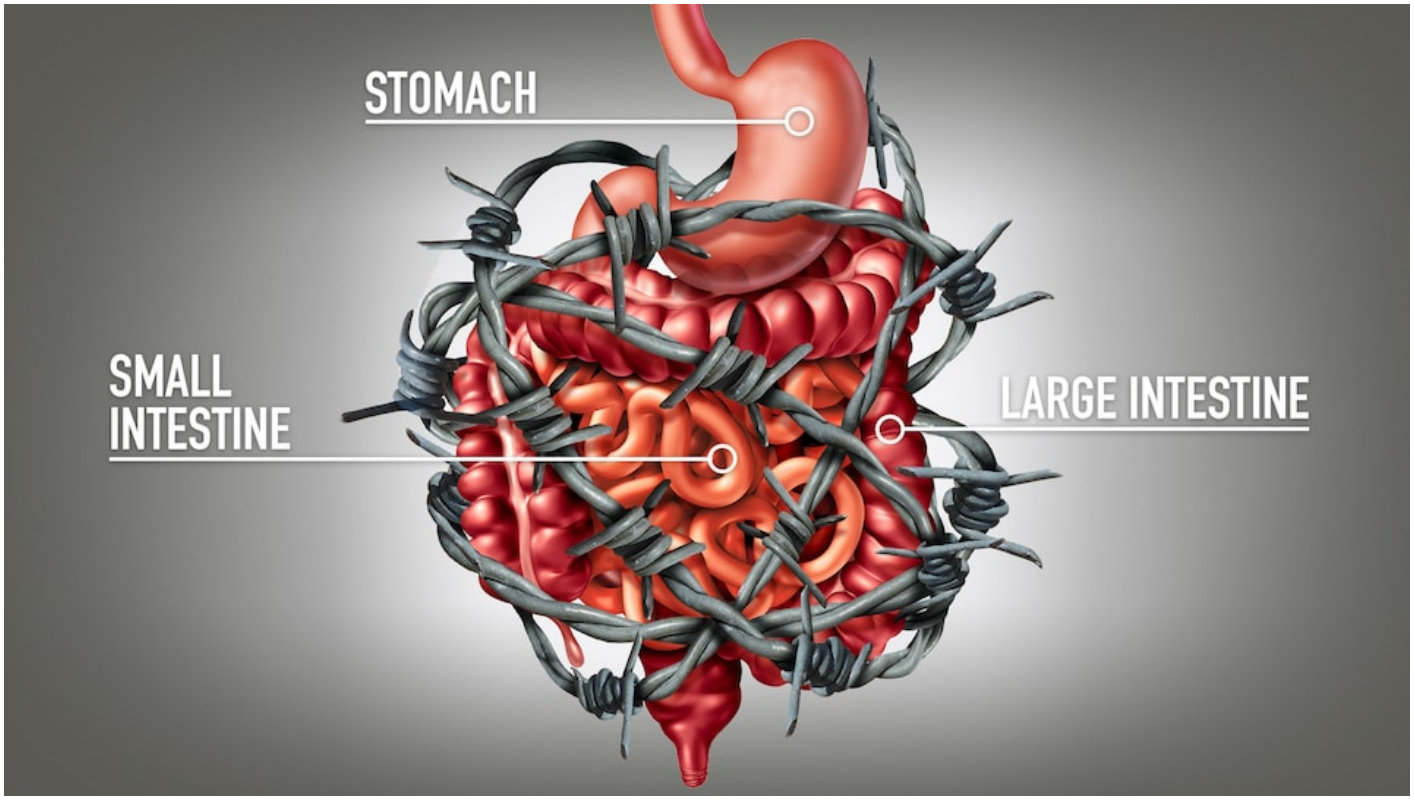
Understanding Small Intestinal Bacterial Overgrowth (SIBO)

If you frequently feel bloated after eating or you experience repeated bouts of abdominal pain or discomfort, gas, cramps, diarrhea, or constipation, you probably already suspect dysfunction in your gastrointestinal (GI) tract, also known as your digestive system or “gut.” However, the problem may not be with your digestive system itself but what is inside a part of it, specifically the microorganisms living in your small intestine.

The *small intestine* is a narrow tube-like organ approximately 20 feet long that connects the stomach to the large intestine and is responsible for extracting most nutrients from food. The *large intestine* is a much wider and shorter tube-like organ that primarily absorbs water from undigested food and carries solid waste out of the body.



Bacteria and other microorganisms (both beneficial and potentially harmful) naturally reside in both the small and large intestines. Beneficial microbes perform essential functions, such as producing nutrients that the body cannot obtain from food alone. However, when bacteria (good or bad) multiply too fast in the small intestine, it leads to a condition called *small intestinal bacterial overgrowth (SIBO),* which results in symptoms described at the beginning of this post.

Left untreated, SIBO can lead to nutritional deficiencies, unplanned weight loss, and osteoporosis. SIBO can also damage the lining of the small intestine, which can cause *increased intestinal permeability* (aka *leaky gut*) – a condition in which large protein molecules pass through the intestine into the bloodstream, triggering immune reactions that can result in food allergies or sensitivities, chronic inflammation, and autoimmune diseases.

If you have been experiencing any of the symptoms of SIBO, you have probably tried numerous over the counter and prescription medications to treat the symptoms – antacids, laxatives, and anti-diarrheal preparations. Perhaps they helped for a short time, but they probably did not provide the long-term relief you were searching for. That's because these medications treat only the symptoms, leaving the root cause untouched.

With SIBO, it's very important to treat the condition at the root instead of masking the symptoms.

Who is at Risk for SIBO?

Several factors place a person at an increased risk of developing SIBO, including the following:

- Narcotic medications
- Anti-spasm medications, such as those used to treat irritable bowel syndrome (IBS)
- Long-term use of proton pump inhibitors (PPIs), a commonly prescribed and over the counter class of medicines for reducing stomach acid and treating heartburn
- *Hypochlorhydria* – a condition in which the stomach produces insufficient stomach acid
- Frequent use of antibiotics, which can alter the balance of bacteria in the small intestine
- A compromised immune system
- Excess sugar or alcohol, which feed bacteria
- Certain chronic, systemic illnesses, such as diabetes, lupus, or scleroderma (a condition that affects the connective tissues)
- *Diverticulosis* – tiny bulging pouches (diverticula) in the small intestine
- Irritable bowel syndrome (IBS), which is typically caused by SIBO or by an inflammatory bowel disease (IBD) such as

Crohn’s
- Long-term celiac disease (gluten intolerance)
- *Gastroparesis* – a condition that affects the stomach muscles or nerves, inhibiting proper muscle function, which results in the inadequate grinding of food and the impaired emptying of the stomach contents into the small intestine
- Organ system dysfunction, including cirrhosis, renal failure, and pancreatitis
- Surgery that has changed the small intestine’s structure, such as gastric bypass surgery
- Scar tissue in the small intestine as the result of radiation therapy or multiple abdominal surgeries
- *Amyloidosis* – a buildup of amyloid protein deposits in the small intestine that changes its structure

Diagnosing Small Intestinal Bacterial Overgrowth and Its Underlying Causes

SIBO is easy to diagnose through the use of non-invasive hydrogen and methane breath testing. During the test, you drink a small amount of test sugar and then blow air into a bag at regular intervals. Tests results indicate whether you have SIBO.

At BioDesign Wellness Center, we also perform the following tests:

- **Blood tests for vitamin and mineral levels:** SIBO can affect vitamin and mineral levels in two ways. First, if SIBO damages the lining of the small intestine, it can inhibit the absorption of nutrients from food. Second, bacteria in the gut produce many vitamins; if certain vitamin-producing bacteria are crowded out by other bacteria, low levels of that vitamin will result. As gut health and function are restored, we supplement with vitamins and minerals to ensure that all cells in the body

are receiving proper nutrition.

- **Physical exam to assess vagus nerve function:** A weak gag reflex is an indication that vagus nerve function is impaired. The vagus nerve stimulates the stomach muscles. If the nerve isn't signaling the stomach muscles to contract, *motility* issues arise. (*Motility* refers to the muscle contractions that mix and propel the contents of the stomach through the gastrointestinal tract.) Any vagus nerve function impairment must be addressed.
- **Gastrointestinal Microbial Assay Plus (GI MAP) stool testing:** This non-invasive stool test uses DNA technology to identify parasites, bacteria, and viruses and asses overall digestive function. This test shows the composition of gut microbes, so we can work on re-establishing a healthy balance of good bacteria in the gut.

Treating Small Intestinal Bacterial Overgrowth

Conventional treatments for Small Intestinal Bacterial Overgrowth are often limited to the use of antibiotics and dietary restrictions (including avoiding FODMAPs, as explained later in this post). However, this treatment approach has severe limitations. Underlying causes of SIBO must be addressed, including these common causes:

- History of constipation, often stemming from a sluggish gallbladder, which leads to poor digestion of fats
- Emotional stress, which impacts serotonin levels in the gut thus altering gut motility
- Chronic stress, which alters the response of the vagus nerve, impacting digestion
- Low stomach acid, which results in poor digestion of protein, allowing for putrefaction in the gut
- Chronic infections (such as sinus and urinary tract

infections) that increase dependence on antibiotics, which negatively impact gut health
- Use of proton pump inhibitors (PPIs) to reduce the production of stomach acid, a common treatment for acid reflux or gastroesophageal reflux disease (GERD), which can cause or contribute to SIBO

An effective SIBO treatment plan needs to address not only the bacterial overgrowth but also all the underlying causes of that overgrowth; for example:

- **A sluggish gallbladder**, far more common in women than in men, often goes undiagnosed because the problem is subclinical. In fact, the majority of women we see with gallbladder issues have no readily detectable medical findings associated with a gallbladder problem. It's not until we perform a history and physical exam during our initial consultation that the problem is identified. The signs are vague – bloating after eating (similar in SIBO), feeling poorly after eating a fatty meal or fried food, experiencing shoulder pain (referred from the gallbladder), stomach pain, heartburn (often coming from poor gallbladder function), constipation, or loose stools (again like SIBO). Dietary changes and supplements can be used to restore gallbladder function.
- **Improperly digested fats** set the stage for bacterial overgrowth and inflammation in the digestive tract. Although carbohydrates are often identified as the prime suspects behind SIBO because they feed bad bacteria in the gut, we have found clinically that fat digestion is just as important and often overlooked. Treatments to improve liver and gallbladder function along with short-term supplementation with pancreatic enzymes and long-term changes to diet can improve fat digestion.
- **The vagus nerve** can lose its *tone* when the brain is

subjected to chronic stress. Think of tone in terms of tuning a musical instrument. The vagus nerve needs to be tuned to produce the proper tone for signaling digestion. When subjected to chronic stress, the brain signals for cortisol and adrenaline, which alters the tone of the vagus nerve over time leading to impaired digestion. There are exercises to stimulate the vagus nerve as well as nutrients to calm the mind, thereby restoring vagus nerve tone and function.

In each of these cases, treating the underlying cause of mall Intestinal Bacterial Overgrowth, in addition to reducing the microbial population in the small intestine, leads to a better long-term outcome.

What About the Low FODMAP Diet?

FODMAPs are foods containing hard-to-digest carbohydrates and sugar alcohols. (FODMAP stands for **F**ermentable **O**ligo-, **D**i-, **M**ono-saccharides **A**nd **P**olyols.) The low FODMAP diet is typically used to treat IBS and other functional gastrointestinal disorders (FGIDs), but it can be very useful in SIBO treatment, as well. Keep in mind, however, that diet is only one of the many possible contributing factors – all contributing factors must be addressed.

For many people with SIBO there a few commonly known trigger foods, so not all FODMAP foods need to be avoided or eliminated from the diet. In fact, a diet that is too restrictive can lead to nutritional deficiencies and cause people to abandon the diet altogether. In our experience, the most common trigger foods for SIBO are:

- Dairy
- Garlic
- Onions

Every person is different, so we work closely with patients to identify their trigger foods and make targeted dietary adjustments, so the diet is easier to adopt.

What are the Treatment Options for SIBO?

At BioDesign Wellness Center, we don’t believe in masking your symptoms with dangerous medications. We realize it’s important to treat not only the bacterial overgrowth but also the conditions that may have caused that overgrowth. Our treatments are tailored to the individual and may include the following:

- Modifying the diet
- Increasing physical activity to increase motility (the movement of food and waste products through the digestive system)
- Using pre- and probiotics to restore a healthy balance of gut microbes
- Addressing any nutritional deficiencies
- Restoring healthy immune function
- Restoring health gallbladder function
- Restoring healthy nerve function (which impacts motility)

We’ll utilize the 5 Pillars of Health to balance your gut bacteria and treat your SIBO effectively. Our doctors know how to prevent your SIBO from coming back, and you’ll be able to enjoy a life free of bloating, gas, diarrhea, and other unpleasant symptoms.

Contact Us Today to Control Your SIBO

If you’ve been unsuccessful treating our SIBO with a traditional approach, our doctors can probably help to eliminate your symptoms once and for all. By understanding the 5 Pillars of Health and making changes in your lifestyle, you’ll be able to live a life free of SIBO once and for all. Call our customer

experience manager, Lori, at (813) 445-7770 to schedule a consultation.

_ _ _ _ _ _ _ _ _ _ _ _ _

Disclaimer: *The information in this blog post about Small Intestinal Bacterial Overgrowth (SIBO) is provided for general informational purposes only and may not reflect current medical thinking or practices. No information contained in this post should be construed as medical advice from the medical staff at BioDesign Wellness Center, Inc., nor is this post intended to be a substitute for medical counsel on any subject matter. No reader of this post should act or refrain from acting on the basis of any information included in, or accessible through, this post without seeking the appropriate medical advice on the particular facts and circumstances at issue from a licensed medical professional in the recipient's state, country or other appropriate licensing jurisdiction.*

Heartburn Medication is Again Linked to Fatal Risks

Heartburn has been in the news a lot lately – and we're not referring to the type you might experience while watching a talking head or pundit on CNN, Fox News, or MSNBC.

Rather, we're referencing recent reports that drugs commonly used to alleviate symptoms associated with heartburn, gastroesophageal reflux disease (GERD), acid reflux, and stomach and small intestine ulcers, may raise the risk of numerous fatal health conditions. Among these risks are cardiovascular disease,

chronic kidney disease, and upper gastrointestinal cancer.

One such study – *Estimates of mortality associated with proton pump inhibitors among US veterans* – was published in May of 2019 in the *British Medical Journal*. In that peer-reviewed study, researchers from the Department of Veterans Affairs-Saint Louis, Saint Louis University, and Washington University School of Medicine in Saint Louis concluded taking *proton pump inhibitors* (PPIs) is associated with a small excess of cause-specific mortality, including death in 45 out of every 1,000 people taking these drugs due to the above-mentioned medical risks.

Previous studies, including one published in 2006 in the *Journal of the American Medical Association*, concluded long-term PPI therapy is associated with an increased risk of hip fracture.

Understanding Heartburn and Proton Pump Inhibitors

Heartburn – which is also referred to as *acid indigestion* – is

that uncomfortable experience wherein the contents of your stomach reverse course and back up into the esophagus. And, because the stomach's strong digestive mechanism produces acid, the influx of partially broken-down foodstuff results in a sour, unpleasant taste experience in the back of the mouth or even the tongue.

Proton pump inhibitors (PPIs), first developed in the 1980s, were designed to treat acid-related disorders such as acid indigestion/heartburn and related discomfort in the upper gastrointestinal tract. According to data from the U.S. National Institutes of Health, between 15 to 20 million adults in the United States now use prescription PPIs to treat gastrointestinal (GI) disorders to reduce the excessive production of acid.

Technically speaking, PPIs inhibit active parietal cell acid secretion. Said differently, PPIs are designed to reduce the production of acid in the wall of the stomach, thereby preventing ulcers and assisting in the healing of ulcers that exist on the esophagus, stomach, or small intestine.

The brand names of the drugs referred to in the Saint Louis study referenced above may be familiar to you. They include:

- Aciphex (Rabeprazole)
- Dexilant (Dexlansoprazole)
- Nexium (Esomeprazole)
- Prevacid (Lansoprazole)
- Prilosec (Omeprazole)
- Protonix (Pantoprazole)
- Zegerid (Omeprazole and sodium bicarbonate)

Additionally, the research – which was funded by grants from the United States Department of Veterans Affairs and the Institute for Public Health at Washington University in Saint Louis –

found that more than 50 percent of the people taking PPIs did so without a documented medical need. Researchers also found out that around 80 percent of people who consume PPIs, consume low doses of the prescription drugs referenced above – roughly equivalent to dosages commonly found in over-the-counter versions of those same drugs.

Functional Medicine's Approach to Heartburn

At BioDesign Wellness Center, we are a Tampa Functional Medicine practice that is devoted to discovering – and then treating – the root causes of issues such as heartburn, acid reflux, and GI disorders. And we're hesitant to prescribe medical-grade PPIs or even recommend taking over-the-counter versions. In our opinion, consuming PPIs just isn't safe, especially when other approaches that address the symptoms these drugs are supposed to alleviate are readily available.

The 5 Pillars of Health – which account for the role of detoxification, nutrition, hormones, nervous system, and exercise in a healthy system – play a significant role in how we uncover and treat the underlying causes of heartburn, acid reflux, and GERD. Within three months of treatment here at BioDesign Wellness, most of our patients who previously relied on PPIs to manage their pain, no longer require such over-the-counter or prescription medications.

Some of the areas we test for and treat include:

- Low levels of acid production (this is especially an issue for the elderly)
- Hypothyroidism (which can often lead to heartburn and reflux symptoms)
- Stress (patients often self-report a correlation between stress and their stomach issues)
- Weak stomach lining

- Poor bile production
- Issues with the gallbladder.

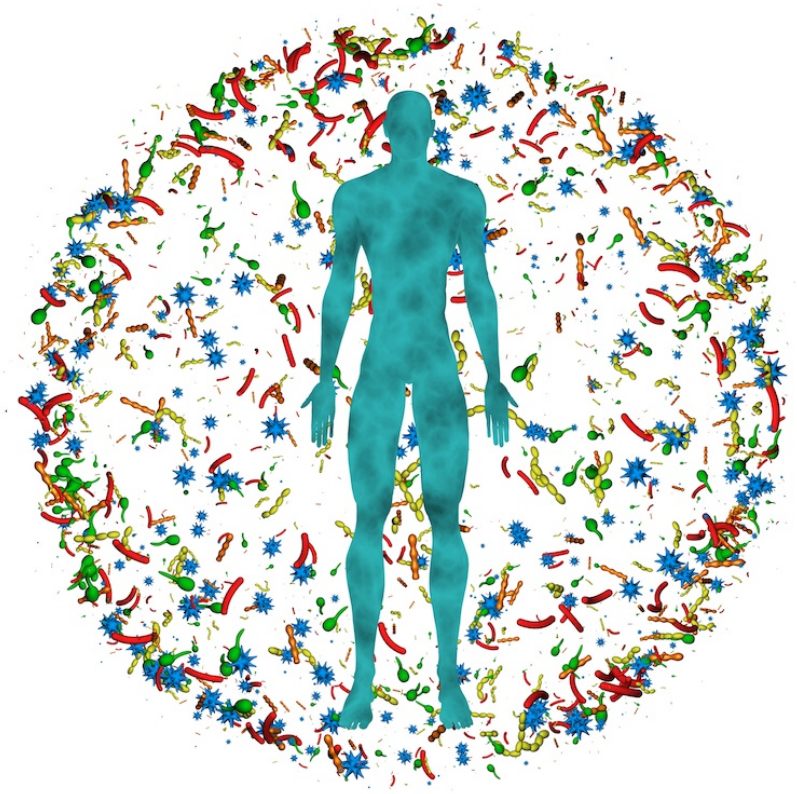
The bottom line on PPIs should now be clear. Using PPIs to treat chronic heartburn, acid reflux, or GERD is questionable at best. In our view, the U.S. Food and Drug Administration should consider mandating clear warnings about the potential for fatal health risks when taking PPIs for two weeks or longer.

If you're ready to ditch your heartburn medication and address the root causes of your stomach and GI disorders, please call our office today to schedule an appointment. While here, we will discuss testing and a plan that can result in the elimination of your dependence on heartburn medication. Contact our patient care coordinator, Lori, by calling (813) 445-7770.

_____

Gut Microbiota: Restoring a Healthy Balance

By now, most people are aware of the importance of gut microbiota to their overall health. *Gut microbiota* is the term used to reference the collection of bacteria and other microorganisms living in our intestines. In fact, the number of microbes living in your gut outnumbers the total human cells that comprise your body! This increasing awareness of the importance of the gut microbiota to one's health has driven explosive growth in the probiotics market. According to Zion Market Research, the Global Probiotics Market is expected to increase from $40 billion in 2017 to nearly $66 billion by 2024.



Regardless of the amount of money being spent on gut health, each person's gut microbiota is as unique as their fingerprint.

If you stayed in a hotel room for a week, researchers could swab the room and identify it was you, based solely on the bacteria you left behind! Yet, some of you are routinely taking over-the-counter probiotics without knowing whether you really need them, which microbes you need, or the quality of the product. In some cases, we're seeing patients who are taking too much of a good thing and feeling *worse* for their efforts (and their money).

By the end of this post, you will know how to do probiotics right – by testing *first* and then taking quality probiotics, if necessary, to restore a healthy balance.

Recognizing the Impact of Gut Microbiota on Health

A great deal of research over the last 20 years has explored the good and bad bacteria in the human body, with an emphasis on the digestive tract. The findings clearly show the role that microbiota plays are far reaching into all systems of the body. A healthy microbiota is associated with the following health benefits:

- Improved moods and energy (by balancing brain chemicals such as serotonin and dopamine)
- Prevention and reduced flare-ups of autoimmune conditions
- Balanced hormones and endocrine function
- Enhanced gene expression (for example, for healthy cardiovascular function)
- Support for normal detoxification
- Healthy production and assimilation of vitamins
- Improved immunity to pathogenic bacteria and viruses
- Improved digestion, including recovery from irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD)

When a person's gut microbiota is imbalanced or becomes more pathogenic, we see more autoimmunity, digestive disorders, cardiovascular disease, diabetes, cancer, and unhealthy

expression of hormones and brain chemicals leading to mood disorders, depression, and anxiety.

Like Cops and Robbers

The gut microbiota comprises microbes that can be divided into the following three categories:

- **Beneficial:** Common good bacteria
- **Opportunistic:** Common bad bacteria that can cause problems if they overpopulate the community
- **Pathogenic:** Bad guys that cause harm and need to be eliminated

As explained later in this post, lab tests are now available to identify the specific microbes populating the gut, so that your treatment provider can evaluate your specific needs and recommend targeted treatments and actions you can take to restore a healthy balance.

To better understand the relationship between good, opportunistic, and pathogenic microbes, imagine them as cops and robbers. The cops stand guard, maintain order, serve, and protect. If a community reduces its police force or weakens it by taking away its weapons, cutting its budget, or placing restrictions on how they conduct investigations, then opportunists are likely to find crime more attractive, and the real bad guys will become bolder. Over time, the opportunists and bad guys overwhelm the cops' ability to maintain order, and the entire community suffers.

The community also suffers if the police force is corrupt or overly aggressive. If law enforcement suppress the entire population or even kill off some of the good guys, the productive members of the community, no longer have the freedom to thrive.

However, if the community maintains a robust police force, provides sufficient funding, and fosters good community relations, productive members of the community thrive, opportunists are kept in check, and the bad guys are prevented from doing too much damage.

The same is true of the gut microbiota. You want a thriving community of good bacteria that prevents the opportunists and pathogens from getting the upper hand. However, you don't want overly aggressive police force (antibiotics) that kills both good and bad microbes, because that creates an imbalance that allows the opportunists and pathogens to gain traction. Likewise, you want to avoid foods that contain pesticides and herbicides (such as glyphosate) that do essentially the same thing – kill off both good and bad microbes and disturb the sensitive balance.

Other things that can really wreak havoc on our microbiota equilibrium include:

- Sugar
- Alcohol
- Processed foods
- Various prescription medications (including proton pump inhibitors)
- Stress
- Age
- a sedentary lifestyle
- A lack of fiber in the diet
- Insufficient exercise

Exercise has been shown in both animal and human studies to influence the gut microbiota, increasing diversity and providing for better ratios of good to bad bacteria. The ratio of *Bacteroidetes* and *Firmicutes* – the two most common bacterial families in the gut microbiota – is directly associated with

body composition. Obese individuals have significantly higher levels of *Firmicutes* and lower levels of *Bacteroidetes* compared to normal-weight and lean adults. Animal studies confirm that repeated exercise can increase *Bacteroidetes* and decrease *Firmicutes,* which favorably alters the microbiota to support a healthier body composition.

Rebalancing Your Microbiota

The good news is the microbiota can be redirected to restore robust health! Here are five ways you can start rebalancing your microbiota today without taking a single supplement:

- Eat a balanced diet complete with vegetables, fiber, healthy protein sources, and fat. In other words, start feeding your microbiota what it needs to be healthy.
- Limit your consumption of sugar (*including soda, alcohol, fruit juice, and other sweet drinks*) and processed foods. This tactic starves the opportunistic and pathogenic microbes.
- Engage in intense exercise regularly. Vigorous exercise changes ratios of bacteria to favor weight loss by having the bacteria increase your metabolism.
- Avoid antibiotics and reduce your reliance on prescription medication.
- Find ways to reduce stress at home and work.

Remember, to a large extent, you are in control of your microbiota. However, because our culture is inundated with stress and encourages overuse of medications, poor food choices, and a sedentary lifestyle, our microbiota suffers the consequences, and our health suffers from the resulting imbalance.

Taking the Next Step: Testing and Treatment

Many people are reaching for probiotics and experiencing different results. Some feel better, others feel worse, and many feel no change at all. To reap the most benefit from probiotics, do it right – test *first*. Don't blindly take probiotics anymore!

Thanks to DNA-PCR technology and the insights gained over the last twenty years of researching the human and gut microbiota, today a simple stool test can pinpoint healthy microbes and pathogens in your microbiota. At BioDesign Wellness Center, we use the GI Map DNA test to check for the quantity and ratios of good bacteria and opportunistic bacteria. Here at BioDesign Wellness Center in Tampa, we commonly run stool testing on those who have digestive complaints, autoimmunity, environmental health issues, chemical sensitivity, obesity, or an inability to lose weight. With test results in hand, we can look for pathogens including but not limited to H-Pylori, Salmonella, Clostridium Difficile, parasites, protozoa, and viruses (including Epstein Barr and the Noro Virus, which is found on cruise ships).

In addition, we look for chemical markers of inflammation that can differentiate between IBS or more advanced inflammation seen in Chron's disease or Colitis. We see how well a patient is digesting food based on pancreatic secretions and fat digestion markers, and we look at Zonulin, a marker for leaky gut. Your stool is also checked for blood. Putting this all together we can then design a comprehensive plan to restore gut health. By having a map of your gut microbiota, we can see what is missing and what needs to be replenished. We can also determine whether something needs to be treated in terms of infection or inflammation.

Targeted probiotics can then be used, now that we know what strains you are low on and which may be elevated. This is, of course, different from randomly taking a probiotic when we don't

know if it’s truly the one that needs to be replenished.

Probiotics – Just Part of the Solution

Probiotics are only part of a comprehensive solution. Based on test results, we can tell whether you need prebiotics to feed good bacteria, anti-inflammatories to reduce gastrointestinal (GI) inflammation, nutrients to support healing of the intestinal lining, immune support to boost immunity during the healing process, and possibly support for digesting food in the stomach or gallbladder. The steps you take to heal your gut microbiota and restore optimal health will be guided by your labs, symptoms, and ultimately your healthcare provider (which we recommend be someone with training in Functional Medicine).

Take the next step today. If you have any of the conditions mentioned in this post or you are not feeling as healthy and fit as you would like, schedule an appointment for an evaluation and testing. Don’t waste money on probiotics, prebiotics, and other supplements until you know what your body needs!

___

Leaky Gut (Intestinal Permeability): Part 2 – Tests and Treatments

In Part 1 of this two-part series on leaky gut and intestinal permeability, we explained what leaky gut is, described its symptoms, and revealed its most common causes/triggers. We also pointed out that many in the conventional medical community still do not recognize leaky gut as a legitimate medical illness. However, those of us in the medical community who are more familiar with diagnosing and treating the condition believe otherwise. We know that there are several lab tests for diagnosing leaky gut (or ruling it out), and we have witnessed the positive impact treatment has had on the lives of our patients.

In this part, we describe the various tests we use for diagnosing or ruling out leaky gut and the treatment protocol we follow to restore gut health, address related conditions caused by leaky gut, and start making our patients feel better overall.

Testing for Leaky Gut

There are currently three main tests for leaky gut, each of which provides unique information that can guide treatment:

- Intestinal Permeability Assessment (a urine test)
- Array 2 –Intestinal Antigenic Permeability Screen (a blood test)
- GI-Map (a stool test)

The best test can be determined during a discussion with your physician. At BioDesign, we commonly use blood tests and stool tests.

Intestinal Permeability Assessment

The Intestinal Permeability Assessment directly measures the ability of two non-metabolized sugar molecules to permeate the intestinal mucosa. You drink a premeasured amount of lactulose and mannitol, and then you provide urine samples over the next six hours. The degree of intestinal permeability or malabsorption is reflected in the levels of the two sugars recovered in the urine samples.

Array 2 –Intestinal Antigenic Permeability Screen

The Intestinal Antigenic Permeability Screen measures the antibodies to proteins that bind or hold the intestinal barrier together. Imagine these proteins acting like glue to hold two pieces of paper together. If the glue starts to melt, then the papers peel apart. In the gut, the proteins occludin, zonulin, and actin hold the cells intact, preventing undigested food,

viruses, bacteria, and *lipopolysaccharides* (LPS) from passing through the intestines into the bloodstream. (Lipopolysaccharides are the major component of the outer membrane of gram-negative bacteria, and they are toxic.)

Levels of antibodies to the proteins that hold the intestinal barrier together and to lipopolysaccharides are a good indication that the barrier has been compromised.

Above: *Dr. Chad Larson Explains the Significance of the Array 2 – Intestinal Antigenic Permeability Screen from Cyrex Labs on Vimeo.*

GI-Map

The GI-Map test identifies leaky gut through testing zonulin and also uses a DNA technology to find the most common pathogenic and beneficial bacteria, viruses, and parasites in the stool sample. This provides your doctor a way to understand what needs to be treated in order to support healing your gut and improving intestinal barrier dysfunction. It also provides a look at bacteria that are known to initiate autoimmune responses. By identifying these bacterial targets, treatment can be further individualized.

This is no ordinary stool test like those commonly performed at a Gastro or internal medicine office. This test digs deeper into the presence of normal, pathogenic, and opportunistic gut bacteria and markers of fat and protein digestion; gut inflammation, and leaky gut. It is an excellent test for identifying specific bacterial, parasitical, or viral strains that often account for hidden infections associated with leaky gut and other chronic health problems.

Treating Leaky Gut in 5 Steps

At BioDesign Wellness Center, we treat patients with leaky gut by taking an individual approach. Sure, there are some go-to treatments like glutamine to help repair intestinal lining cells and Aloe to soothe inflammation. However, each of these on its own is not enough. Without, the proper understanding of what is causing the leaky gut, treatment rarely leads to long-term resolution, even for the most committed patients. Therefore, we start with a detailed history and timeline of each concern presented by the patient.

Step One: We want to find out about previous traumas, infections, use of antibiotics, living environments, tick bites, travel, and so on. Then we detail the patient's family history of autoimmunity, digestive issues, and food allergies. Next, we go into detail about each symptom the patient is experiencing, from intestinal distress to brain fog.

Step Two: This is followed by a physical exam, detailing not only vital signs, but specific areas of pain in the abdomen, checking for swelling in the arms, legs, or lymphatic system. The exam can often identify problems that may be located farther up the digestive tract – in the gallbladder (very common), liver, or stomach. This is important as it's often missed by many patients who are either self-treating or received a cursory examination by a "rushed" provider.

Step Four: The next logical step is to run tests as described above. This is where we start to further confirm and detail the problem. Many patients are surprised to see that we find previously undetected inflammation markers elevated in the stool test, even after their visit to a gastroenterologist who already ran a colonoscopy. This is because we are checking for markers of inflammation that cannot be detected by the naked eye in a colonoscopy, only chemically. The inflammation is occurring in the tissues and cells that cannot be seen during routine testing

and examination. Blood tests often reveal vitamin and nutritional deficiencies due to the malabsorption.

Step Five: After we receive the lab results, patients return to the office, where together we review the findings. We carefully explain each detail in the lab results, so patients feel confident that they understand the underlying issues that must be addressed. We then lay out a treatment plan, and we follow up with the patient on a regular basis until the underlying issues are resolved and symptoms subside.

Treatment includes dietary planning, therapies using natural supplements to heal the gut, solutions to address fat digestion, nutrients to replenish deficiencies, and treatments for any infections or inflammation revealed in the stool test.

If you are experiencing any of the symptoms described in Part 1 of this two-part post or any other unexplained symptoms or have been receiving treatment with less than outstanding results, we strongly encourage you to see a medical professional who has a thorough understanding of the diagnosis and treatment of leaky gut and other underlying conditions. Don’t settle for cursory examinations, tests and quick fixes that address only symptoms. The best approach to treating any medical condition is to get to the root of the problem and treat it from starting there.

– – – – – – – – –

Disclaimer: ***The information in this blog post – the second in our two-part series on Leaky Gut – is provided for general informational purposes only and may not reflect current medical thinking or practices. No information contained in this post should be construed as medical advice from the medical staff at BioDesign***

Wellness Center, Inc., nor is this post intended to be a substitute for medical counsel on any subject matter. No reader of this post should act or refrain from acting on the basis of any information included in, or accessible through, this post without seeking the appropriate medical advice on the particular facts and circumstances at issue from a licensed medical professional in the recipient's state, country or other appropriate licensing jurisdiction.