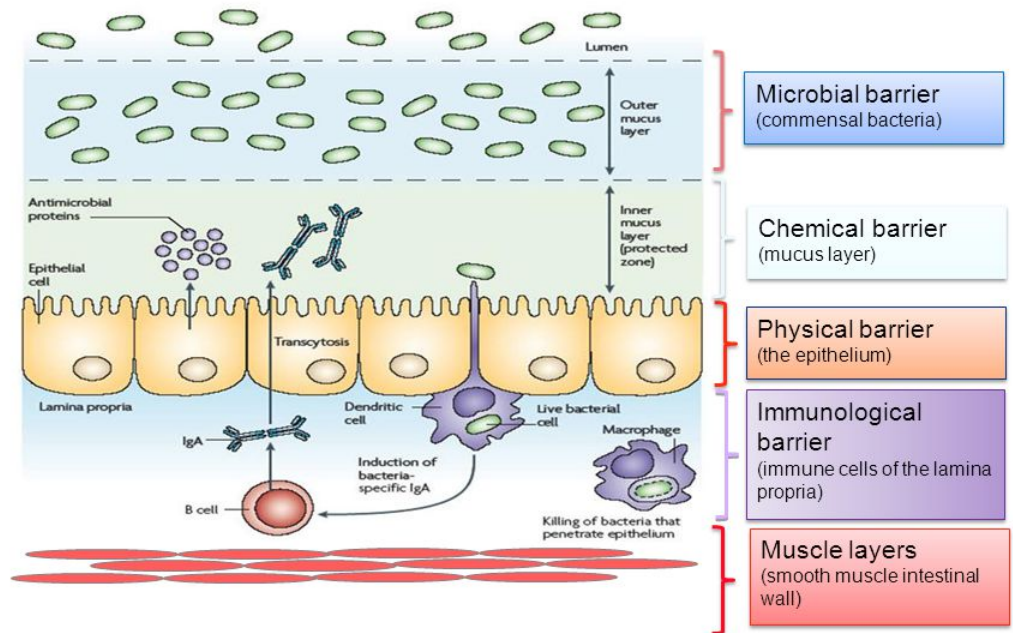


Gut Structure and Function: The lower gastrointestinal tract consists of the small and large intestines which are referred to as the gut. The gut has a multi-layer system made up of gut microbiota, mucus, and epithelial cells. The microbial barrier or the gut flora consists of commensal friendly or probiotic bacteria that not only provide nutrients such as ferment fiber, release short-chain fatty acids, and synthesize other key nutritional components such as Vitamin K2, it also suppresses the growth of unfriendly bacteria such as yeast. The mucus layer is produced by the Goblet cells in the intestinal lining which prevent bacteria from adhering to the gut lining and regulates diffusion to the host tissues by filtering the toxins from being absorbed. The intestinal epithelial layer forms the most important barrier between the internal and external environment. The tight junctions are responsible for sealing the intercellular space and functions as a selective/semipermeable barrier that facilitates the passage of ions and solutes while stopping the passage of antigens and toxins. The immunological barrier sorts between pathogens and bacterial microorganisms as well as regulates the immune tolerance and response to pathogens.



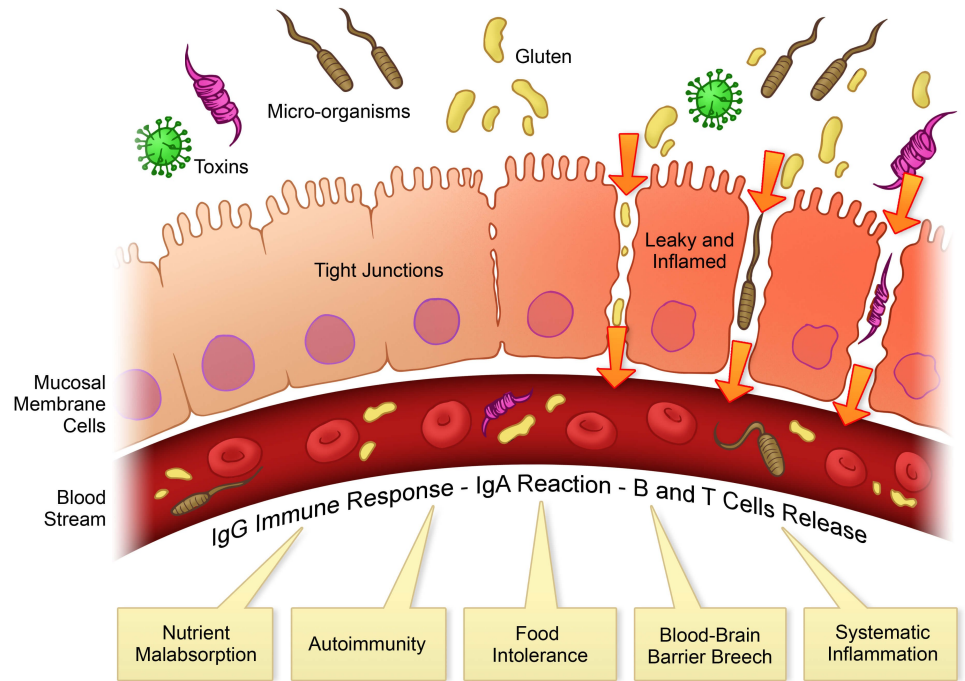
Symptoms: Leaky gut is a condition that results from increased intestinal permeability that occurs when the tight junctions in the gut loosen or become disrupted and allow substances such as bacteria, large food particles, and other unwanted substances to leak through into the bloodstream. The symptoms of leaky gut are shared with many other conditions, making it hard to diagnose. Symptoms include food allergy, gluten intolerance, brain fog especially after eating, bloating and gas. Chronic diarrhea, nutritional deficiencies, headaches, fatigue, skin rashes or eczema, cravings for sugar/carbs, joint pain, anxiety, depression, poor memory, easily distracted and difficulty completing projects are all common among leaky gut patients.

Causes: Although the cause of leaky gut and the disruption of the tight junction is still under speculation, the theory is that it is the result of damage to the intestinal lining from genetic predisposition, diet, drugs/antibiotics, or a compromised immunity.

Degeneration of the stomach lining due to gastritis or other chronic stomach conditions and the use of antacid for heartburn can result in low stomach acid production. The lumen pH should be maintained at 1-2. The low pH is required to destroy pathogens, induce and activate the digestive enzyme, pepsin which digest protein into polypeptides. At higher pH due to reduced stomach acidity, the food intake can't be fully digested and the bacteria can't be fully sterilized. When the improperly digested food with excessive amounts of germs enter into the small intestine, it can cause small intestinal bacterial overgrowth, otherwise known as SIBO. SIBO has been identified as one of the possible causes of leaky gut. SIBO is a condition in which excessive bacteria is present in the small intestine causing diarrhea, weight loss, and malabsorption. This bacterial overgrowth causes intestinal inflammation and damages the lining of the intestine, therefore, causing increased intestinal permeability. When the overgrown bacteria enter the pancreatic duct, it can also cause pancreas inflammation leading to pancreatitis.

Use of antibiotics, the intake of food that contained antibiotics, or pesticides can disrupt the gut flora causing a reduction in the healthy microbial population. The unwanted bacteria, therefore, lose the inhibition and start populating afterward causing SIBO or a candida overgrowth resulting in intestinal inflammation and increased intestinal permeability.

When increased amounts of antigens and pathogens pass through the epithelial layer, they can trigger a severe immune response causing an increased amount of tumor necrosis factor- α and interferon- γ that have been shown to further increase intestinal permeability, a vicious circle leading to the development of leaky gut syndrome.

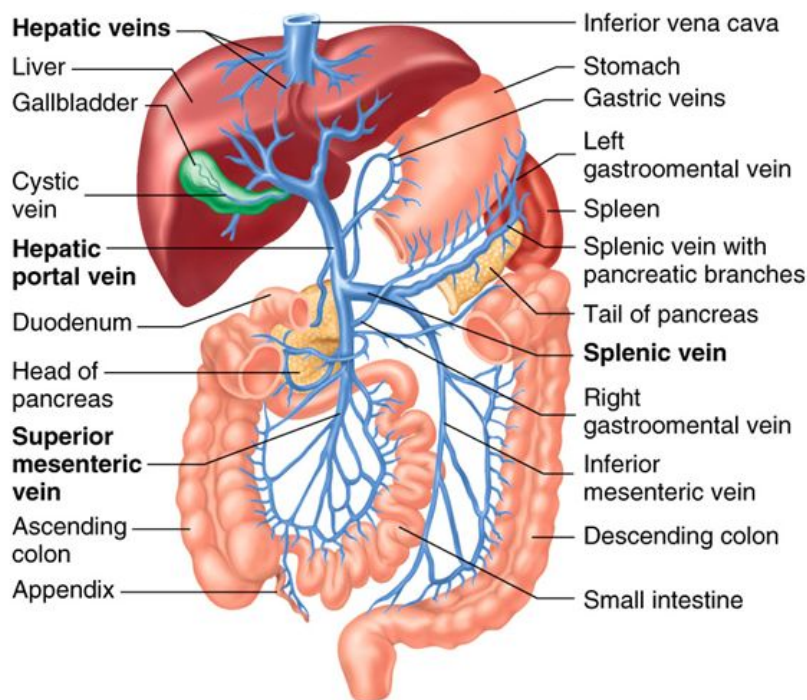


Alcohol, NSAIDs, and pathogens can also cause leaky gut by inhibiting goblet cells causing reduced mucin production. With a thinner layer of mucus barrier, the epithelial cells of the intestinal lining lose its protection and, therefore, are prone to injury causing inflammation and increased permeability. Chronic alcohol consumption has been associated with leaky gut through the byproduct of ethanol metabolism, acetaldehyde and nitric oxide, leading to an alcohol-mediated barrier dysfunction. Experimental studies in rodents have demonstrated that acute administration of alcohol induces mucosal damage in the small intestine including villus ulceration, submucosal bulging and hemorrhagic erosions and intestinal barrier dysfunction¹. NSAIDs, which have been shown to cause GI side effects, contribute to leaky gut through the production of ulcers, perforation, and hemorrhaging within the intestinal tract. A study performed on healthy individuals which consisted of both chronic and acute ingestion of NSAIDs demonstrated an altered intestinal barrier dysfunction and hypermotility².

Interactions between pathogens and the intestinal epithelial cells often lead to a disruption in the intestinal barrier. Pathogens can alter the fluid and electrolyte transport across the intestinal barrier as well as induce an inflammatory response. Pathogens can do this by binding directly to the cell surface molecules and inducing changes in the tight junctions or by promoting cell damage and death which alter the epithelial ion transport, therefore, disrupting the tight junctions.

The nutrients and other substance that pass through the intestinal lining are collected to the portal veins and carried to the liver for further metabolism and detoxification. The blood will leave the liver to the heart through the Hepatic vein. With leaky gut, an excessive amount of undigested food particles, bacteria and toxins will be loaded to the liver which can become overwhelmed and congested. Such chronic overload can exhaust the liver and cause a liver deficiency and its detoxification capacity can be greatly reduced. This explains why patients with leaky gut usually also experience liver related symptoms such as anxiety and emotional issues. When the liver is malfunctions, food particles and toxins can then enter into the blood stream causing systemic symptoms and disrupting brain function. Therefore, patients will experience brain fog especially after meals, headaches, poor memory, fatigue, skin rashes, joint pain, etc. in addition to digestive tract symptoms such as chronic diarrhea, bloating and gas, food allergy or sensitivity, cravings for sugar/carbs etc.

Associated Diseases: Increased intestinal permeability has been suggested to be a causative factor predisposing to disease development of GI diseases as well as systemic conditions. Food allergies are thought to be tied to leaky gut since the impaired intestinal barrier function allows food particles to pass through the intestinal barrier leading to an immune response. The definition of a food allergy is an immune response to a food protein, called an antigen, making leaky gut a very likely cause of this condition. The antigenic food particle and foreign molecules from bacteria can also trigger inflammation and autoimmunity including arthritis as some of the molecular structures resembles our own structures such as the knee causing joint pain and swelling. Crohn's disease which is characterized by chronic intestinal inflammation is also tied to leaky gut. Multiple studies have observed an increase in intestinal permeability in patients with Crohn's³.



Irritable Bowel Syndrome (IBS) is a chronic large intestine (colon) disorder that can cause cramping, abdominal pain, discomfort, bloating, gas, diarrhea or constipation, sometimes alternating bouts of constipation and diarrhea. IBS patients are also likely to have leaky gut, especially those with diarrhea-predominant IBS. The bacteria or virus that pass through the epithelium can irritate the enteric nerves which regulate intestinal digestion and contractions. Such toxins interrupt the function of the enteric nervous system causing abnormal intestinal smooth muscle contraction leading to chronic diarrhea or constipation.

Celiac disease, an autoimmune condition, is characterized by hypersensitivity to gluten and recent studies have found that ingesting gluten considerably increases intestinal permeability immediately after consumption in celiac patients⁴.

Wellness Recommendation

The wellness recommendation for leaky gut includes restoring stomach acidity and intestinal permeability, reducing intestinal inflammation, and resolving any associated diseases. Step one recommends SJ, Spring Capsule, Formula B, and Probiosis to restore stomach acid production as well as restore intestinal flora. Spring Capsule warms the middle jiao (upper GI tract) to improve blood flow to the stomach. SJ repairs degenerated lining in the upper GI tract to restore stomach acidity and improve digestion by nurturing the stomach Yin. Formula B improves the stomach emptying process and increases intestinal contraction to eliminate constipation by enhancing the Stomach Qi. Probiosis helps clear heat and reduce stomach and intestinal inflammation, clear pathogenic bacteria, and reduce the population of unfriendly bacteria. Patients can experience symptom improvement in 2 weeks with less bloating, gas, cramps, food sensitivities or allergies, brain fog, and increased energy. 3-4 weeks of the products are recommended for sustained results.

The second step of the recommendation includes Pearl Capsule and Formula C along with Brown and LC Balancer to help reverse the increased intestinal permeability, repair intestinal lining damage and seal the leaking gut and clear the liver congestion. Pearl Capsule nurtures small intestine Qi helping to improve the small intestine functionality and enhance the small intestine repair and regeneration activities. Formula C supports the repair of the intestinal lining and strengthens its structure through restoration of connective tissue and nurturing the Real Kidney Yin. Brown and LC Balancer help clear liver congestion caused by leaky gut and restore the liver's detoxification capability. Depending on the severity, within 2-4 weeks, patients can experience significant symptom improvement in food

allergies, brain fog, poor memory, easily distracted and difficulty completing projects. 4-8 weeks of treatment is recommended for significant improvement and sustained results.

For patients with IBS and SIBO, that may be resulting from the leaky gut, PA and Whitehead are also required to reduce intestinal inflammation and germ population as well as clear pathogenic bacteria and toxins. PA clears inflammation, infection, and bacterial overgrowth in the pancreas, duodenum, and small intestine by removing intestinal heat and toxins. It is especially helpful for patients with severe constipation. Whitehead clears inflammation, pathogenic microbial infections and bacterial overgrowth in the large intestine and rectum by removing heat and toxins in the colon. It is especially helpful for patients with severe diarrhea. Patients may experience initial diarrhea with increased bowel movements as toxins are expelled and excessive germs are unloaded from the gut. As the treatment continues, the bowel movements will become more regular and patients should experience symptom improvement in 2-3 weeks. It is then recommended to continue with Luna which nurtures the enteric nerves and Probiosis for another 2-3 weeks for significant improvement and sustained results.

For patients who have leaky gut complicated with Crohn's disease, Java and LC balancer are also required to clear the autoantibodies and resolve the autoimmune condition. For patients who are complicated with Rheumatoid arthritis, Java, LC Balancer, and WHITEE Patches are also required. Brown and LC Balancer may need to be rotated with Java and LC Balancer every 2 weeks for patients with liver deficiency.

If patients also have digestive tract infection by gram-negative bacteria or mycobacteria, they may experience persistent abdominal pain, diarrhea or constipation. Silver is recommended to help clear the gram-negative bacteria in the GI tract and the resulting abdominal pain and diarrhea. Stomacin is recommended to clear mycobacteria in the stomach and the resulting stomach cramps. Colomycin is recommended to clear intestinal mycobacteria and the resulting constipation and/or diarrhea.

If the patient has colon ulcers, fissures, or fistulas, then 4-6 weeks of Colitagen with WhiteHead is recommended. Colitagen helps repair intestinal damage and reduce colon inflammation through removing intestinal stagnation.

For patients with candida yeast overgrowth in the digestive tract, Formula F and Formula G are recommended to clear the fungus from the bile duct, small intestine, and large intestine. Patients with severe leaky gut syndrome may develop systemic infections when the bacteria, fungus, or virus enters into the bloodstream. Patients may experience symptoms of fever, chills, cough, night sweat or extreme fatigue that can't recover from rest and sleep. 2-3 weeks of Brown, Qi Booster, LC Balancer, and Bitter are required to enhance the immune function and clear the infections. Plasmin is also required for fungus in the blood.

Leaky Gut Protocol Summary

Stage	Product	Function	Recommended Time
Phase 1	SJ Spring Capsule Formula B Probiosis	Restore GI health Restore acid production Increases intestinal contractions Reduce stomach/intestinal inflammation	3-4 weeks
Phase 2	Pearl Formula C Brown LC Balancer	Enhance small intestine repair Restore intestinal permeability Clear liver congestion Clear kidney congestion	2-8 weeks
IBS/SIBO	Luna	Nurtures enteric nervous system	2-3 weeks
IBS/SIBO	PA Capsule	Reduce small intestine/pancreas inflammation	2-3 weeks
IBS/SIBO	Whitehead	Reduce colon inflammation	2-3 weeks
Intestinal Ulcers	Colitagen / Whitehead	Repair large intestinal damage	4-6 weeks
Crohn's	Java / LC Balancer	resolves autoimmune condition, clears autoantibodies	4-6 weeks
GI Infection	Silver Stomacin Colomycin	Clear gram-negative in GI Clear mycobacteria in stomach Clear mycobacteria in intestines	4-6 weeks
Candida Overgrowth	Formula F Formula G Brown / Qi / Bitter / LC Balancer Plasmin	Clears stomach fungus Clears bile duct and intestine fungus Enhance immune function Clears blood fungus	4-6 weeks

Selected Case Studies

Case 1: Successful Improvement of Constipation and Sugar / Starch Intolerance

Tom Messinger, ND, RN, Portland, OR 97214 United States

A 47-year-old female patient complained of poor GI health with symptoms of difficult/infrequent bowel movements, constipation, increased frequency/unpredictable food reactions, sugar/starch intolerance and heartburn due to specific foods.

She began an herbal regimen from Wei Laboratories focusing on GI health consisting of Spring Juice, Spring Capsule, Pearl, and Formula B. After 4 weeks, her sugar/starch intolerance was completely eliminated.

After starting on a kidney and liver protocol also from Wei Laboratories consisting of Brown, Xcel, and LC Balancer for 2 weeks her bowel movements were normalized. All of her GI symptoms completely improved and the patient was very happy with the results.

Case 2: Effective Improvement of GI Issues and Headaches

Robert Bartosh, DC, Danville, IL 61832 United States

A 26-year-old female complained of constant headaches and migraines that she had been struggling with since the age of 16. She also had GI issues including poor digestion, nausea, bloating, gas, diarrhea, abdominal pain/cramps, recent weight gain, binge eating/drinking, craving certain foods, excessive weight, compulsive eating and heavy appetite.

Dr. Bartosh recommended Wei Laboratories herbal products focusing on GI health including the Spring Juice, Spring Capsules, Pearl, and Formula B. After 2 weeks, the patient reported a reduction in headaches.

Dr. Bartosh continued with the Liver and Qi protocols of Brown and Qi Booster specifically focused on headaches. Three weeks later, the patient reported that her headaches that she has had for 10 years were completely gone. Her mood and energy levels also improved and she was able to run a 5K marathon which was her first race in a year.

Case 3: Resolution of Leaky Gut and Chronic Headaches

Josephine Owen, ND, Horse Show, NC

A female patient pursued treatment with Dr. Owen for her leaky gut syndrome as well as chronic headaches and emotional issues. Dr. Owen first recommended a treatment regimen starting with the GI tract to resolve the leaky gut and then finishing up with the liver to resolve the headaches and emotional issues. The patient took Spring Capsule to promote blood flow to the stomach, SJ to repair tissue damage, Pearl to strengthen the structural integrity of the intestinal lining and Formula B to promote intestinal contractions.

After three weeks of the GI protocol, the patient had already made significant improvement. Her headaches were reduced by 75% and she felt much more energetic with fewer bouts of weakness, tiredness or fatigue. Her stomach no longer burned, she experienced less gas and bloating, and her bowel movements greatly improved. Dr. Owen recommended moving on to the liver protocol to see further improvement with the headaches.

The patient followed a regimen of Brown to nurture and strengthen the function of the liver as well as LC Balancer to support kidney function and enhance microcirculation. After 3 weeks of liver regimen the patient had sustained improvement with her gut but was still experiencing headaches. Additionally, she had noticed pain near her gall bladder and puffiness under the eyes. Dr. Owen recommended a protocol to address liver heat toxin which could be contributing to the headaches, gall bladder support, and kidney treatment to resolve both the gall bladder issues and the puffiness.

The patient followed a regimen of Levera, a stronger liver formula to reduce inflammation and clear infections, to resolve the headaches along with Brown as a general liver support, Paramin to address bile duct inflammation, and Xcel to address kidney deficiencies as well as KS Formula to remove any residual heat in the kidney.

After three weeks following this product regimen the patient reported she was feeling much better. She has no more bloating, her bowels had normalized, her liver tested great, and her headaches had finally been greatly reduced.

Case 4: Successful Resolution of Chronic Candidiasis

Dr. Michael Biamonte, ND, Dunedin FL

Male patient, 33 years of age had a history of thrush, asthma, and eczema as child. Extreme chemical intolerances as a young adult along with very bad digestive discomfort and food and alcohol intolerances. He was tested for candidiasis and leaky gut syndrome using my own proprietary testing. Both tests are extreme. He was put on Wei Laboratories herbal supplement consisting of phase 1 candida protocol, phase 2 and phase 2B over the next 9

months along with our diet for leaky gut and candida. After 9 months, the tests had now reversed and were normal. The patient's symptoms were gone, however he tested positive for elevated mercury in his hair and urine. He was put on our heavy metal protocol and became metal free after 6 months of the program.

Case: Resolution of Leaky Gut and Food Sensitivities

Dr. Janet Yarger, DC, FASA, Chesterfield, MO Sept 2022

A female patient inquired about treatment for her leaky gut syndrome as well as many other symptoms such as arthritis, rosacea, and allergies to food.

She was recommended a protocol from Wei Labs starting with the GI tract to resolve the leaky gut. The patient took Spring Capsule to promote blood flow to the stomach, SJ to repair tissue damage, Probiosis to restore stomach acid production and restore intestinal flora, and Formula B to promote intestinal contractions.

After four weeks of the GI protocol, the patient had significantly improved. Her rashes were reduced, and she felt much more energetic with fewer bouts of food sensitivities but there were still some lingering effects.

It was recommended to move on to the second portion of the protocol to see further sustained improvement. The patient followed a regimen of Brown to nurture and strengthen the function of the liver, LC Balancer to support kidney function and enhance microcirculation, Pearl Capsule to enhance the small intestine repair and regeneration activities, and Formula C to help support the structure of the small intestine through the restoration of connective tissue. After three months, the patient had sustained improvement in her gut with significant improvement in her bloating as well as symptomatic relief for her rosacea and arthritis and was very happy with the results.

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