

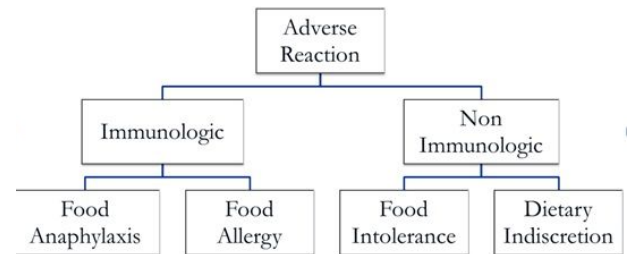
Food Allergies, Sensitivities, & Intolerances Protocol

Food allergies (FA) occur when the immune system identifies a protein that has been ingested as an invader and reacts by producing IgE antibodies to fight it. FA are an important public health problem that affects adults and children, and may be increasing in prevalence. The triggering of a histamine reaction can cause near immediate symptoms including itching, hives, swollen lips, face, or tongue, wheezing, and dizziness. FA may also induce airway contraction causing an inability to breathe. The most life-threatening allergic reactions involve anaphylaxis, where a person may lose consciousness and exhibit dangerously low blood pressure. People who suffer from common food allergies typically know about their allergens based on the extreme reactions and immediate response times. The condition is usually managed by allergen avoidance or the treatment of symptoms.

Food sensitivities are also an immune reaction that involve increased levels of certain IgG antibodies which react to the food molecules. Unlike a food allergy in which the molecules of the allergic food trigger a significant and immediate immune reaction, food sensitivities involve a delayed immune response which is rarely life-threatening and tricky to diagnose. The immune reaction is also dose dependence, so at low amounts, people may not show any symptoms. Food sensitivities are more common than true food allergies and accounts for 80% of food allergies total. People who have food sensitivities may even not be aware of it due to the delayed reaction and vague symptoms that people may not think are related to ingested food. Some of the symptoms include feeling sick and tired, fatigue, fibromyalgia, headaches, joint pain, gastrointestinal distress such as irritable bowel syndrome, skin rashes, food cravings, brain fog or mood swings.

Gluten sensitivity is a prevalent issue characterized by adverse immune reactions to gluten, a protein found in wheat, barley, and rye in people who do not have celiac disease. It is estimated that about 6% to 7% of the U.S. population may be gluten-sensitive, meaning some 20 million people in the United States alone could have the condition. Symptoms of gluten sensitivity in this population can include digestive problems, headaches, rashes, and eczema-like skin symptoms, brain fog and fatigue.

Food intolerance occurs when the digestive system can't process or digest a certain food. Food intolerance does not involve the immune system and there is no immune-mediated reaction. Symptoms of food intolerance are mostly confined in the digestive tract which include gas, bloating, diarrhea, constipation, cramping, and nausea. The most common food intolerance being lactose intolerance. Gluten, another common intolerance, not only can cause food sensitivity but also food intolerances.



Summary

Food reactions can have IgE-mediated, IgG-mediated or a combination of IgE-mediated and IgG-mediated pathophysiology along with food intolerance from digestive enzyme malfunctioning. They can affect the skin, gastrointestinal tract, respiratory tract and/or cardiovascular system. Patients often have a combination of these conditions. Although the exact causes of these common health conditions are not fully understood, researchers have identified some risk factors which include the intestinal permeability, gut dysbiosis and stomach acidity.

Acidity Levels

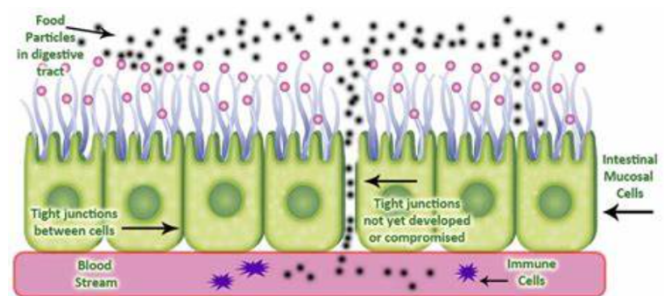
Recent research has shown that FA, sensitivities and intolerances may be related to stomach acidity. The gastric lumen performs most optimally at a pH of 3.2 and below. This is necessary for protein denaturation and digestive enzyme function. After initiating protein cleavage in the stomach, resulting peptide fragments are peristaltically transported into the duodenum where low pH levels of the chyme trigger secretin secretion. This hormone stimulates a subsequent release of pancreatic proteases and peptides into the intestinal lumen, and peptide fragments are

further degraded to short AA chains or single AAs serving as nutrition of the human body. Physiological gastric digestion extensively reduces IgE binding and histamine releasing capacity. Low stomach acid production due to degeneration of the stomach lining from gastritis or other chronic stomach conditions and the use of antacid for heartburn can cause reduced stomach acidity. Several experimental studies in mouse models repeatedly revealed a direct link between gastric acid suppression by all different forms of available pharmacological acid reducing medication (Sucralfate, H2 receptor blockers, proton pump inhibitors, antacids and base powder) and the development of FA, sensitivities and intolerances.

Each digestive enzyme has an optimum pH level where it performs best. Improper pH levels can change the shape of an enzyme to the point where it's not recognizable to the body. When this take place, whatever action the enzyme was supposed to play a part in either doesn't happen or it happens at a much slower or reduced rate. This can hinder the proper digestion of food and lead to the discomfort experienced in those with food intolerances. Even if patients use a supplemental enzyme, such as lactase, they are going into a body with a pH level that is not suitable. The partially or undigested protein can act as an antigen triggering immune response causing FA or sensitivities when the mucosal lining is weakened or damaged allowing the food antigen to pass through the intestinal barrier and enter into the blood stream.

Mucosal Barrier Function

Columnar intestinal epithelial cells constitute the major part of the surface area in the human body, separate the sterile 'milieu intérieur' from the external environment and are devoted to the absorption of nutrients. This mucosal barrier has the difficult task of developing an 'oral tolerance' to the enormous quantities of antigens regularly ingested and to the commensal organisms that develop an active immune suppression of digestive pathogens. The tight junctions between columnar cells reinforce the physical line of defense, and a thick mucus layer contains factors that trap particles, bacteria and viruses. This mucosal barrier also has strong immunity components, which are either innate (e.g. polymorphonuclear neutrophils, macrophages, natural killer cells, epithelial cells and toll-like receptors) or adaptive (e.g. intraepithelial and lamina propria lymphocytes, secretory IgA and cytokines).



Inflammation, Dysbiosis and Increased Gut Permeability

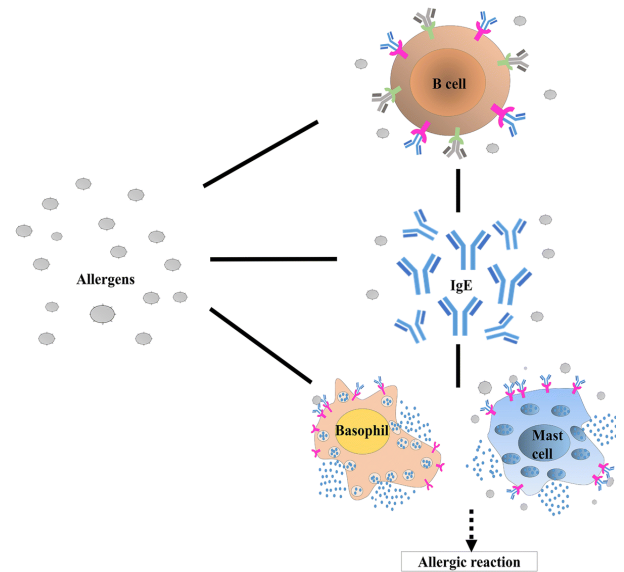
The microbial barrier consists of commensal friendly or probiotic bacteria that suppresses the growth of unfriendly bacteria. The low pH is required not only to induce and activate the digestive enzyme but also destroy pathogens. Decreased stomach acidity affects both food digestion and food sterilization. In reduced stomach acidity, large amount of improperly digested food along with excessive amounts of germs can enter into the small intestine, causing intestinal inflammation and damages the lining of the intestine, resulting in intestinal permeability and allowing the food antigen to pass through the intestinal barrier and enter into the blood stream triggering allergic reactions. Such condition is also referred to as leaky gut. Leaky gut can cause food allergies, sensitivities and intolerance and patients will experience symptoms of 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.

IgE-Mediated Allergies

This mucosal barrier might be less efficient or 'immature' in infants and young children. This would explain the increased prevalence of both GI tract infections and FA in the first years of life: the activity of the secretory IgA system is not fully mature until 4 years of age. This process of IgE-associated FA is termed allergic sensitization. Sensitization can occur via multiple routes including the respiratory tract, skin, and GI tract. Repeated allergen contact activates allergen-specific T cells and induces IgE responses during the secondary immune response. Allergy symptoms are caused by repeated contact with the oral allergen, via the immediate reaction (allergen-induces cross-linking of mast cell-bound IgE by allergen and then activation of allergen-specific T cells), and then by other inflammatory cells, such as eosinophils and basophils, during late-phase and chronic inflammation. Factors

that affect the epithelial barrier and the extent of allergen degradation affect the amount of allergen intrusion and the magnitude and type of inflammation. After allergen ingestion, inflammation develops not only in the intestine, but in other organs, such as the skin, respiratory tract, and circulatory system. These allergens and allergen fragments are internalized and distributed throughout the body.

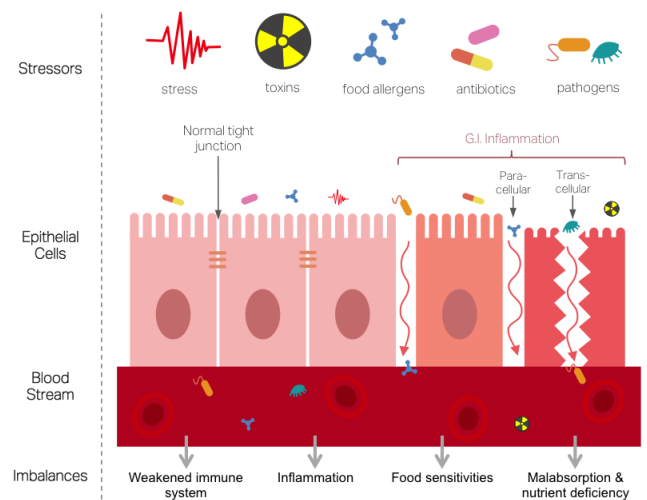
Symptoms of IgE-mediated food allergies range from mild to severe appearing within 5 -30 minutes following food ingestion. The severity of symptoms is not predicted by the level of specific IgE, but the likelihood of symptom onset is directly related. Anaphylaxis is the most severe form of the clinical manifestation of IgE-mediated food allergy, and injectable epinephrine is the first-line treatment. High levels of IgE in the blood is why we see this inflammatory process causing other conditions besides for FA including asthma and eczema. The high levels of inflammation can also disrupt the gut barrier (tight junctions between columnar cells) and cause leaky gut syndrome later in life.



Leaky gut and the symptoms related to IgE reactions can manifest other chronic issues like joint pain, IBS, and depression and anxiety. It has been suggested that a chronic immune response such as this can have a negative impact on the brain, damaging its own structural barrier, the Blood Brain Barrier (BBB). When the BBB is compromised, inflammation can occur which can cause symptoms of headache, brain fog, dizziness, and lead to mental health problems such as depression and anxiety.

IgG-Mediated Food Allergies

A food sensitivity is caused by a reaction mediated by the IgG antibodies of the immune system. The IgG antibodies, instead of attaching to mast cells like IgE antibodies, bind directly to the food molecules as it enters the bloodstream, forming different circulating immune complexes. The allergy symptoms do not appear immediately after the ingestion of the food, rather, are delayed in onset and appear from two hours up to several days after ingesting the allergic food. Such delayed onset of allergic reactions can affect any part of the body generating a variety of symptoms and conditions including gastrointestinal tract conditions such as vomiting, bloating and diarrhea, irritable bowel syndrome, non-GI related problems such as arthritis, psoriasis, obesity and heart disease as well as neurological issues such as brain fog, migraine, headaches, ADHD or even autism.



Non-celiac gluten sensitivity (NCGS) is an example of IgG-mediated FA and is one of the most common gluten-related ailments in the general population. NCGS patients experience symptomatic response to gluten without evidence of celiac disease. The etiology remains unknown. The most common complaints are abdominal pain bloating, and/or change in bowel patterns but some patients complain of other symptoms that don't involve the intestines, such as foggy mind, or feeling sluggish or tired.

Wellness Recommendation

The wellness recommendation for food allergies and intolerances includes SJ, Spring Capsule, Formula B, and Probiosis. SJ, Spring Capsule, Formula B, and Probiosis help to address the gut itself. Spring Capsule nurtures the stomach through improving stomach blood supply to improve food digestion. Herbal ingredients in the formula have been shown to protect intestinal mucosal cells against injury, improve absorptive function, and help enhance stomach acid/digestive enzymes. This is important for the function of the gut since the mucin lining creates a

protective layer which is altered in FA and provides optimal pH for protein denaturation and enzyme function in food intolerances. SJ helps to repair the lining of the GI tract to restore acidity and ensure proper protein denaturation. Herbal ingredients have protective effects on gastric mucosal damage. Formula B improves the stomach emptying process. Herbal ingredients strengthen the digestive system. Probiotics help clear inflammation and reduce the population of pathogenic and unfriendly bacteria within the GI tract. 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 significant improvement.

For patients who have IgE-Mediated food allergies it is recommended to add in Bitter. Bitter addresses the malfunction of the immune system seen in allergies by cooling down the blood through reducing high levels of pro-inflammatory cytokines, histamine, and IgE. It also calms down the overreaction of the immune system to their own metabolic debris which sensitized their immune system. Patients may have reduced level of reactions to the allergic food. However, they still should take caution about ingesting excessive amounts of the allergic food.

If the patient also suffers from leaky gut, a second phase is required. After 3-4 weeks on the above formulas, it is recommended to use Formula C, Pearl, LC Balancer and Brown to help reverse the increased intestinal permeability, repair intestinal lining damage, 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.

If the patient is suffering from mental health issues such as anxiety and depression, it is recommended to add in Brown and LC Balancer. Brown and LC Balancer help support the liver and kidney to process and remove the brain toxins. Brown, a Liver Yin product, has been shown to decrease depression-like behavior through stimulating dendritic patterns in the hippocampus, increasing levels of serotonin, and increasing energy metabolism. LC Balancer, a kidney Yin product, helps to improve kidney and adrenal function as well as increase the uptake of nutrients to improve symptoms such as fatigue and lack of motivation. Patients can experience symptom improvements in one to two weeks with increased energy and motivation and one to three months is recommended for sustained results. If patients have diagnosed or severe depression and anxiety, refer to the Wei Labs Stress, Anxiety, and Depression Protocol for the full recommendation.

Condition	Recommended Products
Food allergies, sensitivities, intolerances	SJ, Spring Capsule, Formula B, Probiosis
IgE-Mediated food allergies	Bitter
Leaky gut	After 3-4 weeks, add Formula C, Pearl, LC Balancer, Brown
Anxiety, depression	Brown, LC Balancer

Selected Case Study

Case 1: 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, Probiotics 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.

Case 2: 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.