



PRECISION POINT
DIAGNOSTICS

Understanding The P88 Dietary Antigen

TEST RESULTS



Phone: +678-736-6374
Fax: +770-624-1701



9 Dunwoody Park, Suite 122
Dunwoody, GA 30338



Info@PrecisionPointDiagnostics.com
www.PrecisionPointDiagnostics.com

The information in this guide will help you to understand the P88 Dietary Antigen Test, your patient's results, and help advise treatment.

Why Food Testing Matters:

Many people realize that they are having issues with food and can tell something in their diet is affecting them. They are often led to allergy testing and may find some answers but not the entire solution. Allergy testing is useful, but only looks at one way we react to foods. Allergy testing measures an immune response known as IgE. Our body can be inflamed in different ways, not only from IgE, but Total IgG, IgG4, and complement. A diet that minimizes foods that provoke these responses will decrease many types of inflammation and symptoms and is foundational to wellness. When we are eating the least inflammatory diet, individualized to our body, we are optimizing our chance for health.

Improving wellness is the key to being able to manifest passions and stay engaged with the world around you. Inflammation, which can be created from foods, is at the heart of many conditions that are detrimental to health and quality of life. Considering our gut would cover a half a badminton court to a tennis court, stretched from end-to-end, controlling even a small amount of inflammation in something this size, provides huge benefits to our health. Research continues to emerge regarding the consequences of inflammation in our gut and how foods trigger an inflammatory process throughout the body.

As inflammation decreases, the intestinal lining or "gut" begins to heal. Rebuilding the gut results in stronger protection for the body from irritating foods. The gut contributes heavily to

our "immune tolerance." A tolerant immune system is a healthy immune system; prepared to fight infection when necessary, but not in a state of hyperactivity. An out-of-balance immune system creates inflammation that can set off a cascade of events, ultimately resulting in many symptoms and conditions or making already existing conditions worse.

If the gut barrier breaks down, this is a condition often referred to as "leaky gut." When gaps in the lining are present, larger molecules of under-digested food(s) enter the bloodstream. The body begins to attack these foods. This compromises the immune system's reserves to fight bacteria, viruses, parasites; and consequently, the body is inflamed for no productive reason.

This results in immune confusion and causes many symptoms throughout the body. Damage to the gut also decreases the number of enzymes available to help us absorb nutrients from our food, such as amylase and lipase. As these enzymes break down, we cannot absorb nutrients as well. Poor absorption of nutrients compromises every cell in the body.



What are we testing for?

Precision Points Diagnostics P88 Food Allergy & Sensitivity Test (FAST) looks at four (4) different immune responses to 88 food antigens. Our test evaluates both allergies and sensitivities, specifically:

1. IgE (immunoglobulin E) allergies are the immediate responses to a foreign substance that has entered the body via food or inhalation. IgE allergies can cause very serious symptoms like difficulty in breathing, swelling, and hives. In more serious cases, IgE reactions can lead to anaphylactic shock. Our test measures the blood level of IgE, one of the five subclasses of antibodies. Antibodies are proteins made by the immune system that attack antigens such as bacteria, viruses, and allergens. They can become confused or cross-reactive and begin attacking foods instead. High titers of IgE are associated with allergic reactions, which is when the immune system overreacts to environmental antigens such as pollen, pet dander, and/or parasitic infections.

2. IgG (immunoglobulin G, total) are antibodies that provide long-term resistance to infections and have a much longer half-life than an IgE allergy. This food sensitivity can be more subtle and many people live with it for years, if not their entire lives. Sensitivity symptoms range from fatigue, headache/nausea, seizures, hyperactivity, bloating, mood changes, or dark circles under the eyes. IgG symptoms typically occur within 3-72 hours after the offending food was ingested and they will create ongoing inflammation that can make most conditions worse.

The degree and severity of symptoms vary greatly from person to person because of

genetic makeup. The complete elimination of IgG positive foods may bring about important

improvements in symptoms of irritable bowel syndrome, autism, ADHD, cystic fibrosis, rheumatoid arthritis, and epilepsy, as demonstrated in numerous clinical studies. It is important to get tested for food sensitivities to know what foods work for the patient's body and what foods don't. If you are only looking at allergies, or IgE, then you would miss the IgG mediated symptoms, creating an incomplete patient picture.

3. C3D (Complement) is a protein of the innate immune system that is activated by microorganisms in the absence of an antibody. When C3d is activated in response to an antigen, the C3 portion attaches to the antigen. This activation, even though it is independent, will amplify the reaction that occurs with total IgG greatly increasing inflammation and symptoms of sensitivity. This same reaction that was designed to amplify inflammation to microorganisms, can be triggered in response to foods. If complement is present, it will amplify an IgG reaction as much as 1000 to 10,000-fold. Therefore, tests that only measure IgG may miss the reactions to foods that are most clinically relevant. If complement is known to have a high level of reactivity in the condition you are treating, then foods that confuse and irritate this part of the immune system should be given special attention. See below table for conditions driven by complement.



Other Conditions Associated with Complement (C3d)

Lupus	Crohn's Disease	Rheumatoid Arthritis	Ulcerative Colitis
Psoriasis	Cystic Fibrosis	Epilepsy	Gout
Scleroderma	Thyroiditis	Reiter Syndrome	Dermatomyositis
Depression	Food Reactions	Increased CRP	Acute Rheumatic Fever
Typhoid Fever	Sarcoidosis	Traumatic Spinal Cord Injuries	Periarteritis nodosum
Dermatomyositis	Scleroderma	Acute Myocardial Infarction	Ankylosing Spondylitis

4. IgG4 (immunoglobulin G subtype 4) is another antibody produced in the body to fight infection. IgG4 is used in allergy therapies to help neutralize the reaction of IgE. This is because of its potential to decrease histamine responses by blocking IgE from attaching to receptors. Too much IgG4 causes immune-mediated conditions, known as IgG4-RD that typically affects multiple organ systems in the body. For these reasons, it's important to know the levels of IgG4 in the body to be able to maintain a correct balance. An example of a tissue that is susceptible to higher levels of IgG4 is the esophagus, resulting in Eosinophilic Esophagitis. IgG4 also interferes with the thyroid, contributing to autoimmune thyroiditis, and can also cause IgG4- Related Diseases (IgG4-RD) of the ovaries and prostate.

What is Blocking Potential?

Blocking potential is a type of immune tolerance created when immune cells switch from

making IgE to IgG4, and in general when IgG4 production is greater than IgE production.

When IgG4 levels are greater than IgE levels to an antigen, the IgG4 will bind to the antigen (food or other environmental trigger) and prevent binding to IgE. This blocks the ability of IgE to cause degranulation, decreasing production of histamine. Higher levels of IgG4 block the anaphylactic ability of IgE and is part of how we develop immunotolerance to foods and environmental triggers. Certain cell signaling mechanisms, like IL-10, can increase the ability of B cells to class switch to producing IgG4 antibodies, away from IgE antibodies. The predominate anatomical location for this is in the lymph nodes. This demonstrates why thera-





pies like probiotics and some immunoglobulin therapies can help to reduce an allergic or atopic response, because they increase production of IL-10, increasing production of IgG4.

Desensitization therapies are based on this in that the constant low-level exposure to an antigen, increases IgG4 which blocks IgE. IgG4 is the least abundant subclass of IgG in serum, accounting for approximately 4% of total IgG, whereas its levels can reach up to 75% of total IgG after chronic exposure to antigen, such as allergen immunotherapy. IgG4 has low affinity for the classical activating complement receptors, minimizing its role in creating an inflammatory response. IgG4 has only one heavy and one light chain in its structure, whereas other IgG antibodies have two. These “half-mole-

cules” lack the ability to cross-link allergens and do not form immune complexes, further contributing to a lack of inflammatory potential. However, If IgG4 gets high enough, it too can cause issues, despite its inability to create an inflammatory response. There are a class of conditions referred to as IgG4-RD or IgG4 related diseases. High levels of IgG4 are unique, because IgG4 lacks the ability to bind complement like other IgG antibodies, but can lodge in tissue, and create autoimmunity. This is often observed with enlarged lymph nodes or glands, as the IgG4 has an affinity for that tissue as well as the esophagus as in eosinophilic esophagitis, and in autoimmune pancreatitis. IgG4 can also lodge in hormonal tissue such as the thyroid, ovaries and prostate, creating pathology there as well.

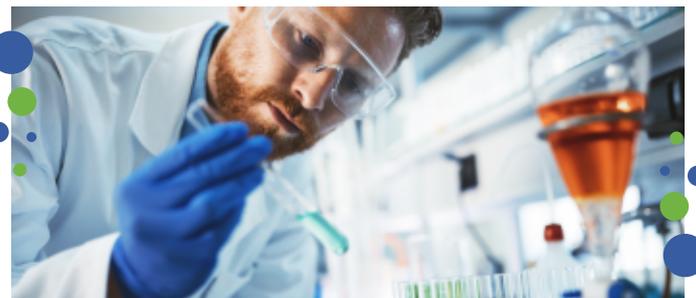
Why Food Testing Matters:

- Allergens may induce an IgG4-dominated response, either as outcome of the “modified TH2 response”, or during desensitization therapy.
- IgG4 antibodies are associated with prolonged exposure to antigens, including food antigens (egg, milk) and biologics (FVIII, adalimumab). This is part of the programming that helps to achieve immune tolerance.
- IgG4 is often associated with “tolerance”, due to its weak capacities to activate effector cells or complement. However, its generally high affinity makes it a good blocking antibody, decreasing IgE reactions.
- IL-10 and regulatory T cells have been implicated as discriminating factors in favor of IgG4.
- In IgG4-RD, besides an elevated serum IgG4, other “TH2/Treg” features often found include elevated levels of IL-4 and IL-10 in affected tissues and an elevated level of circulating IgE. To date, a specific antigen driving the massive B

cell proliferation/differentiation has not been found. Therefore, testing multiple antigens is important.

Special notation of IgG4 food in Diet

Though IgG4 does not always result in negative prognosis, with certain conditions, higher levels of IgG4 can be harmful. IgG4 is taken out of the diet, but if there is only an IgG4 reaction, you may decide in their condition it is of a lesser concern, because in general it is not as inflammatory as IgG 1-3 and may merely be blocking an IgE reaction.





Conditions Associated With IgG4

Autoimmune pancreatitis	Salivary gland disease	Orbital disease, often complicated by proptosis	Retroperitoneal fibrosis
Increased number of eosinophils	Peripheral Eosinophilia	Atopy	Lymphadenopathy
Sclerosing cholangitis	Mikulicz disease	Sclerosing sialadenitis	IgG4-related submandibular gland disease
Lacrimal gland enlargement	“Idiopathic” retroperitoneal fibrosis	IgG4-related thyroid disease	IgG4-related thyroid disease
IgG4-related kidney disease	Mimics sarcoidosis in the lung	Hypopituitarism associated with IgG4-related hypophysitis	Prostatitis
IgG4-related disease of the ovary	Constrictive pericarditis	Nasopharyngeal disease	Midline-destructive lesion
Eosinophilic Esophagitis			

Understanding your test results

Review of P88 Validation:

The P88 Dietary Antigen Test that is performed by Precision Point Diagnostics is a CMS approved and COLA accredited method for detection of antigen specific (foods) IgE, IgG4, total IgG and Complement 3d (C3d). The validation process involved the establishment of normal patient values, or reference intervals, the intra- and inter-assay precision (reproducibility) and linearity of the tests.

Establishment of Reference Intervals: The P88 is a semi-qualitative test that not only reports the empirical value, or reactivity, for each antigen, but also expresses the patient’s reactivity into 3 classes.

Though IgG4 does not always result in negative prognosis, with certain conditions, higher levels of IgG4 can be harmful. IgG4 is taken out

of the diet, but if there is only an IgG4 reaction, you may decide in their condition it is of a lesser concern, because in general it is not as inflammatory as IgG 1-3 and may merely be blocking an IgE reaction.

Low, Moderate or High

The 3 class system is based upon a quartile system. Within this system, the most reactive 25% of the population will be reported as either “Moderate” or “High,” with the most reactive 5% being reported as “High.” Therefore 75% of the population will be reported as “Low,” when a reaction is detected.

As a result of this method for determining class reactivity, each antigen possesses a unique reference range. Also, per federal regulation, Precision Point is required to evaluate the reference ranges annually. The top 10% of Complement (C3d) reactions are reported as positive.





Intra-assay and Inter-assay Precision (Reproducibility):

Intra-assay precision is defined as the reproducibility of the assay within the same testing date. In order to assess the intra-assay precision, 10 patient samples were tested in duplicate. It was determined that the test contains

95% precision. The inter-assay precision is defined as the reproducibility of the assay over a period of time. In order to assess the inter-assay precision, the same serum sample was tested over 5 days. It was determined that the test contains a 94% inter-assay precision.

Linearity

The linearity of the enzyme-linked immunosorbent assay was established by plating varying amounts of serum. It was determined that the linearity of the test is greater than 99%. Additionally, the assay has been shown to be linear at concentrations 4-fold of normal patient samples. Therefore, patient values that are reported above the reference interval are accurate because the normal patient intervals are less than the assay range of the test.

We offer two diet options for patients: a more restrictive and a less restrictive diet.

The MORE RESTRICTIVE DIET removes all foods that test positive at a moderate to high level for both sensitivities or allergies and rotates mildly reactive foods that demonstrate a positive complement activation. Complement proteins amplify the IgG inflammation reaction. Please note that a positive result for complement, even with mild sensitivity, results in a greater inflammatory response than IgG alone would dictate.

We suggest that the patient adheres to the more restrictive diet, if possible. This diet is designed to quickly calm inflammation in patients with more aggressive symptoms. It is

recommended to maintain this diet for 3-6 months, or the duration determined by the physician, to allow enough time for inflammation and symptoms to dissipate before reintroducing reactive foods. In conditions that are strongly driven by complement, you may choose to remove all complement

The LESS RESTRICTIVE DIET can be used for patients who may already have dietary restrictions and for those who would have trouble making all of the dietary changes all at once (for instance, children).

The Less Restrictive Diet is also a good option for patients transitioning to a more open diet as the gut heals. The Less

Restrictive Diet only eliminates foods that result in high or moderate with complement reactions. There is no rotation suggested for this diet.

Follow-up testing is suggested 3-6 months after implementation of one of the above diets. Test results will likely show decreased reactivity once the foods have been eliminated for a significant period of time. Antibody levels can be elevated due to recent or frequent exposure, as well as genetic disposition.





FAQS: Frequently Asked Questions

● What is the difference between Gluten and Wheat on the report?

Gluten is in whole wheat, however, wheat has other proteins that you could react to. It is possible for someone to come back positive to wheat and not gluten, and that would mean you are reactive to other proteins in the wheat instead of the gluten.

If your patient comes back positive to gluten, but not to wheat, it is because the other proteins in wheat can obscure a bit of the binding to gluten, so it is also isolated, and run separately. We do this is to catch smaller gluten reactions that did not show up because of other proteins obscuring re-actions and because you will capture lower level reactions that are only seen when gluten is isolated. Because it is such an antigenic molecule, it is important to see if even minimal amounts will trigger reactivity.

● What should I do if mold comes back positive?

The P88 Test tells you that there is a response to mold, but it doesn't tell you where exposure is coming from. Exposure can come from foods or the environment. To get a better picture of how mold is shifting immune function, markers such as TGF-Beta can be measured to see how immunoreactive a patient is to the exposure to gauge how much change must be done.

The measurement in the blood could either be from a reaction in the air, or a reaction from moldy foods. If you are concerned that mold may be a reason for inflammation throughout the body, then consider measuring a TGF-beta. If it is high, this means your immune system is highly reactive to mold. Also consider removing moldy foods. Moldy foods include: MOLDS TESTED INCLUDE: Aspergillus (A. oryzae, A. niger, A. repent, A. terries).

Key foods to avoid for elevated mold reaction are moldy cheeses, peanuts, melons and sake. For patients with severe reactions and active symptoms, and more restrictive mold diet may be needed. Consider using Konjac Fiber, which binds to mold aflatoxin.

● What foods are high in Mold?

Vinegar & Vinegar containing food (food (mayonnaise, salad dressings, catsup, chili sauce, pickled foods, relishes, green olives, mustard), Alcohol, Soured Breads, Sauerkraut, Cider & Root beer, pickled & smoked meats. All dried fruits, Canned tomatoes (unless homemade), &All canned juice.

Eat only freshly opened canned foods & freshly prepared foods. Do not eat meat or fish more than 25 hours old. Avoid food from leftovers and avoid Hamburgers if not made from freshly ground meat.

● If I am allergic to certain foods, could I have environmental triggers too?

Cross-reactivity occurs when the protein structure of one substance is similar to another. Our body's immune system may react to the similar structure as it would the true allergen. It is difficult to identify which substance is truly inducing the allergic reaction without a clinical test. Precision Point offers a thorough look at the body's immune system and its reaction to 88 commonly reactive foods in our P88 Test and 85 airborne substances in our Precision Airborne Allergen Test.





FAQS: Frequently Asked Questions

● I have a Thyroid condition, why is my Clinician looking at foods I react to?

Eating foods that you are reactive to, can make you feel worse, but also decrease thyroid activity. IgG4 reactions to foods have been shown to specifically damage the thyroid tissue. Complement or C3D reactions also damage thyroid tissue. This is the only food test that looks at the exact components that are most damaging to the thyroid. When you are eating foods you are sensitive to, it creates inflammation. This inflammation causes your body to be less able to convert your less active thyroid hormone, T4 into the more active thyroid hormone, T3. Finally, eating foods you are sensitive to, can increase antibody production, causing your body to attack your own thyroid. Eliminating foods you are sensitive to is a great first step to increasing thyroid function naturally.

● Why Test Complement and IgG together?

Complement plays a role in how inflammatory an IgG antibody is. Complement binds to IgG and creates a synergistic effect in terms of increasing inflammation. The combination of complement and IgG together can increase inflammation 1000 to 10,000-fold.

● Why Test Complement and IgG together?

Complement plays a role in how inflammatory an IgG antibody is. Complement binds to IgG and creates a synergistic effect in terms of increasing inflammation. The combination of complement and IgG together can increase inflammation 1000 to 10,000-fold.

● Why Test IgG and IgE together?

IgE and IgG should be measured together because they each independently play a role in symptoms to foods. You can either have an allergy/IgE response, or a sensitivity IgG response and both are independent of the other and create inflammation in the body.

● What are the limitations of only testing Total IgG?

Only testing IgG, is a bit like knowing total cholesterol, but not knowing how much HDL/good or LDL/bad cholesterol you have. The reason for this is that different IgG antibodies do different things depending on their subtype. IgG4 decreases IgE or allergic reactions. IgG1-III increase inflammation 3-72 hours after exposure.

Also, different subtypes are increased in certain pathologies. For example, while IgG4 is generally good, there are a handful of pathologies where it is of concern, such as auto-immune hypothyroidism and eosinophilic esophagitis.

● Is IgG4 good or bad?

IgG4 is by and large good, as it blunts an IgE response and reduces anaphylactic shock. In fact, desensitization injections and drops work by this mechanism of increasing Ig4 to induce tolerance. However, there are a handful of conditions that increase IgG4 reactions, and if the patient has one of these conditions it may be helpful to remove foods that are provoking an IgG4 reaction.



FAQS: Frequently Asked Questions

In non-responsive patients it is also reasonable to do a clinical trial of removal of IgG4, especially if removal of other foods did not create the improvement anticipated. IgG4 plays multiple roles in immune function and must be carefully evaluated with each patient.

● Is IgG4 related to autoimmune disease?

IgG4-related disease is an immune-mediated condition, meaning that it involves the occurrence of disease in organs as the result of a dysregulated immune system. Increasing evidence suggests that IgG4-RD is an autoimmune condition, much like rheumatoid arthritis and lupus. IgG4, can blunt an IgE response, but if it becomes confused, and upregulated by exposure to antigens or foods, it can begin to precipitate out into tissue creating damage. There are IgG4-related diseases which are a subset of autoimmune conditions.

● What is the difference between an allergy and sensitivity?

An allergy is mediated by IgE antibodies and creates an immediate reaction. A sensitivity is created by IgG antibodies and create a delayed response. While these general traits hold true, there are also times when IgG can amplify IgE reactions, and also some examples of if there is a remarkably high level of IgG, it can have more of an immediate reaction too. They create independent reactions but can also influence each other. IgG is most typically a delayed reaction, but if high enough titers are present, it too can react within a few hours. The interplay between parts of the immune system demonstrates why it is best to look at multiple antibodies together.

● Are IgG reactions the result or the cause of gut-based permeability?

IgG reactions are both the cause and the result of gut-based permeability. One way we develop IgG reactions is when the gut becomes more compromised or permeable. This allows for larger molecules than normal to “leak” through the gut. These larger molecules look antigenic to the immune system. T cells become sensitized and begin to make an immune response or produce antibodies. However, this is not the only way one can become sensitive to foods. Improper immune queuing in the GI tract, specifically in cells called the Peyer’s patches, can also cause this too.

Once an IgG reaction begins, it increases production of histamine and inflammation. This inflammation continues to damage the gut, thereby contributing to permeability. The best way to reduce gut-based inflammation, is to remove offending foods and work on healing the gut.

● I react to gluten, but it does not show up on my test, why?

Reactions to gluten could be because of allergies or sensitivities, but there are also a number of other reasons you can feel bad from gluten outside of sensitivities. For example, gluten more than other grains decreases the tryptophan to serotonin ratio, making production of this neurotransmitter more difficult. Also, gluten can often be contaminated with bromides that decreases other important nutrients like Iodine which compromises thyroid function.

Gluten can often be moldy, as commercial grains are measured for ppm of aflatoxin and are generally positive for this contaminate.



FAQS: Frequently Asked Questions

● Can food sensitivities be related to weight gain?

Food sensitivities can be related to weight gain in that they will create more inflammation in the body. Inflammation will cause an increase in the hormone leptin, which in turn tells adipose tissue to store more fat. Inflammatory foods create and irritation that leads to weight gain.

● Can food sensitivities be related to other issues such as headaches, pain or depression?

Yes! While the beginning of the reaction to foods start in the gut, it does not have to necessarily create gut pain, or be contained in the GI tract. The inflammatory process that starts in the gut can spread and even be more symptomatic in places outside of the gut. Many conditions such as headaches, pain and even depression have a gut-based cause but manifest in other areas of the body.

● How are reference ranges determined?

Every lab is required to develop their own reference ranges. For this reason, you should not expect ranges to be the same from lab to lab. At Precision, we look at the values over the hundreds of thousands of specimens we have run, and then looked at distributions. In general, the top 5% is determined high, and then the next 25% is moderate, and then the next 25% is lower. However, when there is epidemiologic evidence that the population in general has more difficulty with a food, such as wheat or dairy, we will consider % reactivity in populations in general, and consider research and data, alongside our distributions to create a range. That being said, we define the top 10% of reactions to dairy, wheat, and shellfish to be high.

● Why would I be reactive to something I never eat?

- I could have a cross reaction with something in the environment to the food. For example, latex can cause banana allergies because they are in the same family. (See table below)
- Sometimes there may be trace amounts of foods in other sources you are not aware of.
- There can be cross reactions from other foods in the family of the food you are showing a reaction to.

See food families below.





CROSS REACTIVITY LIST

Alder Pollen	almonds, apples, apricot, celery, cherries, hazelnuts, kiwi, nectarine, orange, peaches, pears, persimmon, plum, parsley, raspberry, strawberry, carrot, white potato, fennel
Birch Pollen	almonds, apples, apricots, avocados, bananas, carrots, celery, cherries, chicory, coriander, fennel, fig, hazelnuts, kiwifruit, lychee, nectarines, parsley, parsnips, peaches, pears, peppers, persimmon, plums, potatoes, prunes, soy, strawberries, wheat, zucchini. Potential: walnuts
Grass Pollen	almonds, apples, apricots, avocados, bananas, carrots, celery, cherries, chicory, coriander, fennel, fig, hazelnuts, kiwifruit, lychee, nectarines, parsley, parsnips, peaches, pears, peppers, persimmon, plums, potatoes, prunes, soy, strawberries, wheat, zucchini. Potential: walnuts
Mugwort Pollen	carrots, celery, coriander, fennel, parsley, peppers, sunflower, apple, kiwi, melon, lettuce, anise seeds, caraway, chamomile tea extract, cumin, almond, hazelnut, peanut, pistachio, poppy seed, honey, latex
Ragweed Pollen	banana, cantaloupe, cucumber, green pepper, paprika, sunflower seeds/oil, honeydew, watermelon, zucchini, echinacea, artichoke, dandelions, honey (if bees pollinate from wild flowers), hibiscus or chamomile tea, pumpkin, tomato, latex
Latex	apple, banana, cherry, kiwi, melon, papaya, peach, pear, pineapple, tomato, avocado, carrot, celery, white potato, almond, chestnut, hazelnut
Cow's milk	Meat: sheep, lamb, goat, buffalo
Beef	cow's milk, lamb, pork, cat dander, Lyme's Disease
Pork	cow's milk, beef, cat epithelia, dog dander
Chicken Egg	duck egg, goose egg, seagull egg, turkey egg, pet bird dander, avian feathers and meat
Crustacean	Mollusks (abalone, clam, mussel, oyster, scallop, squid), dust mite, cockroach
Dog	Meat: cat, horse, pork
Dust Mite	lobster, snail, shrimp, cockroach, other insects
Mold	Baker's and Brewer's yeast, Candida albicans, raw mushroom, latex, fruit fly





More restrictive mold diet suggestions:

Avoid the following foods:

- Peanuts
- Cheese – all cheese, especially aged cheese
- Melons
- Vinegar – and vinegar containing food (mayonnaise, salad dressings, catsup, chili sauce, pickled foods, green olives, mustard)
- Alcoholic liquors, beer, wine and sake
- Soured breads, such as pumpernickel, coffee cakes, and other foods made with large amounts of yeast
- Sauerkraut
- Cider and homemade root beer
- Pickled and smoked meats and fish, including delicatessen foods, sausages, frankfurters, corned beef, pickled tongue, ham, bacon
- All dried fruits such as apricots, dates, prunes, figs and raisins
- Canned tomatoes unless homemade
- All canned juice
- Eat only freshly opened canned foods and freshly prepared fruits
- Do not eat meat or fish more than 25 hours old
- Avoid foods made from leftovers such as meatloaf, hash and croquettes
- Avoid hamburger unless made from freshly ground meat



What should I do if yeast comes back positive?

Elevated candida markers are indicative of a current or recent intestinal overgrowth of yeast.

Some symptoms of a candida overgrowth within the body are:

- Skin and nail fungal infections such as athlete's foot, ringworm, and toenail fungus
- Feeling tired and worn down or suffering from chronic fatigue or fibromyalgia
- Digestive issues such as bloating, constipation, or diarrhea
- Autoimmune disease such as Hashimoto's thyroiditis, Rheumatoid arthritis, Ulcerative colitis, Lupus, Psoriasis, Scleroderma, or Multiple sclerosis



- Difficulty concentrating, poor memory, lack of focus, ADD, ADHD, and/or brain fog
- Skin issues such as eczema, psoriasis, hives, and rashes
- Irritability, mood swings, anxiety, or depression
- Vaginal infections, urinary tract infections, rectal itching, or vaginal itching
- Severe seasonal allergies or itchy ears
- Strong sugar and refined carbohydrate cravings

Consider further testing, such as our Comprehensive Stool or GI360™, to confirm yeast overgrowth and strain susceptibility. Diet recommendations for yeast overgrowth are a low-carb, low-sugar diet. Restrict sugar, refined grains, alcohol and vinegar. Treatment recommendations are garlic, caprylic acid, berberine, and grapefruit seed extract.



What If Foods Bother me, but there is no reaction shown on the test?

Other factors can cause reactions to foods besides allergies. For example, gluten can interfere with ability to convert amino acids into neurotransmitters. This can make us feel depressed and achy.

However, this is not an allergy or sensitivity. Another reason one can feel worse from foods is because they cause reactions in response to things like platelet activating factor which may cause an adverse response but is not an allergy or sensitivity. Also, foods that are high in histamine, can release the histamine in the body and this too can be a reason one gets allergy or sensitivity symptoms without an IgE, IgG or complement reaction.

Another concern is that certain foods are high in Histamine. You may feel worse when you eat them, but it is not because of an allergy or sensitivity, it is because of the histamine in them. Measuring markers such as diamine oxidase may be a good follow up plan. Certain foods can have other characteristics that make them reactive, but for other reasons. Some people react to foods high in histamine, amines, glutamine, that are high FODMAP, sulfur containing, etc. The table below shows other categories of foods that may be problematic for people but not because they are an allergy.

Does this mean I should never eat these foods again?

No! In fact, quite the opposite. The ultimate goal is to remove foods and work on the gut lining to retrain your immune system, so you are not reactive. There may be some reactions that are so strong, you need to avoid them life long, but for most people and most reactions, they will



normalize, and even if you have them once in a while you will not be symptomatic from them. Your clinician will likely guide you through a challenge phase where you bring foods back in one at a time and monitor your reaction to them. If you challenge foods at 2-3 weeks, this is when you will have the greatest reaction with reintroduction. The reason for that is that you have not quieted the immune response yet, and when a food is introduced after short term avoidance, the immune system is “refreshed” and rebounds aggressively. Your clinician may have you do a challenge around this time to see what you are most reactive to; however, this can of course make your symptoms worse.

Many clinicians will wait longer, 3 months to a year depending on severity of symptoms and will introduce foods months later rather than weeks later. The reason for this is it should no longer cause symptoms by waiting this long, and you will have more successfully restrained your immune system to not be reactive. Strict avoidance for longer periods of time will be more likely to restore normalcy to the food and ultimately result in being able to increase diversity in your diet, not restrict it.

●●● What are some treatments I should consider?

The elimination diet is the best way to calm the inflammation and over activity of the immune system to those reactive foods.

HIGH IGE REACTIVITY: If your patient has excessive IgE responses, consider a s-IgA test as underactive s-IgA could lead to an overactive IgE system.

HIGH COMPLEMENT: Consider Curcuminoids from turmeric as part of treatment to help reduce complement activation.

HIGH IN ANY CATEGORY: Consider immunoglobulins to help with immune system function and build healthy gut lining. Immunoglobulin usage helps a person to regain tolerance to foods. Therapies such as glutamine and probiotics will also be helpful in regaining immune tolerance. Further testing will include an Advanced Intestinal Barrier Assessment to determine gut health.





FOOD FAMILY LIST

Sometimes removing foods in the same family as those you are allergic to can further reduce inflammatory load on the body. Foods that are related can have similar protein structure and can also cause symptoms or ignite the process of pathology. Use the food family document below to determine related foods. The Precision Dietary Antigen Test also helps to identify food families that are most problematic.

FOODS: SPECIES, FAMILIES AND RELATABLE FOODS

ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Almond <i>Prunus dulcis</i>	<i>Rose</i> (stone fruits)	Almond, apricot, cherry, peach, nectarine, plum, prune
Apple <i>Malus pumila</i>	<i>Rose</i> (pomes)	Apple, apple cider, apple cider vinegar, crabapple, loquat, pear quince
Asparagus <i>Asparagus officinalis</i>	<i>Lily</i>	aloe vera, asparagus, chives, garlic, onion, ramp, shallot, leek
Aspergillus Mix <i>A. oryzae, A. niger, A. repens, A. terreus</i>	<i>Fungi</i>	Aspergillus, baker's yeast, brewer's yeast, citric acid, morel, mushroom, truffle
Avocado <i>Persea americana</i>	<i>Laurel</i>	Avocado, bay leaf, cassia bark, cinnamon, saffron
Banana <i>Musa sapientum</i>	<i>Banana</i>	Arrowroot, banana, plantain
Barley <i>Hordeum vulgare</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgur, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Beef <i>Bos taurus</i>	<i>Bovine</i>	Beef cattle, beef by-products, beef gelatin, oleomargarine, rennin, sausage, milk products like butter, cheese, ice cream, lactose, yogurt. Veal, buffalo (bison), goat, goat cheese, goat ice cream, goat milk, sheep, lamb, mutton, rocky, mountain sheep
Black Pepper <i>Piper nigrum</i>	<i>Pepper</i>	Black pepper, peppercorn, white pepper
Blueberry <i>Vaccinium myrtilloides</i>	<i>Heath or Ericaceae</i>	Bearberry, blueberry, cranberry, huckleberry
Brewer's Yeast <i>Saccharomyces</i>	<i>Fungi</i>	Aspergillus, brewer's yeast, baker's yeast, citric acid, morel, mushroom, truffle
Broccoli <i>Brassica oleracea var. botrytis</i>	<i>Mustard</i>	Broccoli, brussel sprouts, cabbage, collards, colza shoots, couve, tronchuda, curly cress, horseradish, kale, kohlrabi, mustard greens, mustard seed, radish, rape seed, rutabaga, turnip, puland cress, water cress
Cabbage <i>Brassica oleracea var. capitata</i>	<i>Mustard</i>	Broccoli, brussel sprouts, cabbage, collards, colza shoots, couve, tronchuda, curly cress, horseradish, kale, kohlrabi, mustard greens, mustard seed, radish, rape, rutabaga, turnip, puland cress, water cress
Cacao (Chocolate) <i>Theobroma cacao</i>	<i>Sterculia</i>	Chocolate, cocoa, cocoa butter, cola nut
Candida <i>Candida albicans</i>		
Cantaloupe <i>Cucumis melo cantalupensis</i>	<i>Gourd</i>	Chayote, Chinese melon, cantaloupe, cucumber, gherkin, loofah, muskmelons, casaba, Crenshaw, honeydew, Persian melon, pumpkin, pumpkin seed, pumpkin meal, squash (acorn, buttercup, butternut, Boston, spaghetti), zucchini, watermelon





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Carrot <i>Daucus carota</i>	<i>Carrot</i>	Angelica, anise, caraway, menhaden, celery root, celery seed, celery leaf, chervil, coriander, cumin, dill, dill seed, fennel, finocchio, Florence, gotu kola, lovage, parsley, parsnip, sweet cicely
Casein <i>Bos taurus</i>	<i>Bovine</i>	Beef cattle, beef by-products, beef gelatin, oleomargarine, rennin, sausage, milk products like butter, cheese, ice cream, lactose, yogurt. Veal, buffalo (bison), goat, goat cheese, goat ice cream, goat milk, sheep, lamb, mutton, rocky, mountain sheep
Cashew <i>Anacardium occidentale</i>	<i>Cashew</i>	Cashew, mango, pistachio, poison ivy, poison oak, poison sumac
Cauliflower <i>Brassica oleracea</i> <i>var. botrytis</i>	<i>Mustard</i>	Broccoli, brussel sprouts, cabbage, cardoon, cauliflower, collards, colza shoots, couve, tronchuda, curly cress, horseradish, kale, kohlrabi, mustard greens, mustard seed, radish, rape seed, rutabaga, turnip, puland cress, water cress
Celery <i>Apium</i> <i>graveolens</i>	<i>Carrot</i>	Angelica, anise, caraway, menhaden, celery root, carrot, celery seed, celery leaf, chervil, coriander, cumin, dill, dill seed, fennel, finocchio, Florence, gotu kola, lovage, parsley, parsnip, sweet cicely
Cherry <i>Prunus avium</i>	<i>Rose</i> <i>(stone fruits)</i>	Apple, Apricot, cherry, peach, nectarine, plum, prune
Chicken <i>Gallus gallus</i>	<i>Pheasant</i>	Chicken, eggs, peafowl, pheasant, quail
Cinnamon <i>Cinnamomum</i> <i>verum</i>	<i>Laurel</i>	Avocado, bay leaf, cassia bark, cinnamon, sassafras
Clam <i>Mercenaria</i> <i>mercenaria</i>	<i>Mollusks</i>	abalone, snail, squid, clam, cockly, mussel, oyster, scallops
Coconut <i>Cocos nucifera</i>	<i>Palm</i>	Coconut (meal, oil), date (sugar, palm), sago starch





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Codfish <i>Gadus morhua</i>	<i>Codfish</i>	Cod (scrod), cusk, haddock, hake, Pollack
Casein <i>Bos taurus</i>	<i>Bovine</i>	Beef cattle, beef by-products, beef gelatin, oleomargarine, rennin, sausage, milk products like butter, cheese, ice cream, lactose, yogurt. Veal, buffalo (bison), goat, goat cheese, goat ice cream, goat milk, sheep, lamb, mutton, rocky, mountain sheep
Coffee <i>Coffea arabica</i>	<i>Madder</i>	Coffee
Corn <i>Zea mays</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, Kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgar, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice
Cottonseed	<i>Mallow</i>	Althea root, cottonseed (oil), hibiscus, okra
Cow's Milk <i>Bos taurus</i>	<i>Bovine</i>	Beef cattle, beef by-products, beef gelatin, oleomargarine, rennin, sausage, milk products like butter, cheese, ice cream, lactose, yogurt. Veal, buffalo (bison), goat, goat cheese, goat ice cream, goat milk, sheep, lamb, mutton, rocky, mountain sheep
Crab <i>Paralithodes camtschatica</i>	<i>Crustaceans</i>	Crab, crayfish, lobster, prawn, shrimp
Cucumber <i>Cucumis sativus</i>	<i>Gourd</i>	Chayote, Chinese melon, cantaloupe, cucumber, gherkin, loofah, muskmelons, casaba, Crenshaw, honeydew, Persian melon, pumpkin, pumpkin seed, pumpkin meal, squash (acorn, buttercup, butternut, Boston, spaghetti), zucchini, watermelon
Egg Albumin <i>Gallus gallus</i>	<i>Pheasant</i>	Chicken, eggs, peafowl, pheasant, quail
Egg Yolk <i>Gallus gallus</i>	<i>Pheasant</i>	Chicken, eggs, peafowl, pheasant, quail





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
English Walnut <i>Juglans regia</i>	<i>Walnut</i>	Black walnut, butternut, English walnut, heartnut, hickory nut, pecan
Flax Seed <i>Linum usitatissimum</i>	<i>Flax</i>	Flaxseed
Flounder <i>Paralichthys lethostigma</i>	<i>Flounder</i>	Dab, flounder, halibut, plaice, sole, turbot
Garlic <i>Allium sativum</i>	<i>Lily</i>	aloe vera, asparagus, chives, garlic, onion, ramp, shallot, leek
Ginger <i>Zingiber officinale</i>	<i>Ginger</i>	Cardamon, East Indian Arrowroot, ginger
Gluten		Wheat, barley, rye
Goat's Milk <i>Capra aegagrus hircus</i>	<i>Bovine</i>	Beef cattle, beef by-products, beef gelatin, oleomargarine, rennin, sausage, milk products like butter, cheese, ice cream, lactose, yogurt. Veal, buffalo (bison), goat, goat cheese, goat ice cream, goat milk, sheep, lamb, mutton, rocky, mountain sheep
Grapefruit <i>Citrus X paradisi</i>	<i>Rue (Citrus)</i>	Citron, grapefruit, kumquat, lemon, lime, murcot, orange, pumelo, tangelo, tangerine
Grapes <i>Vitis vinifera</i>	<i>Grape</i>	Grape, brandy, champagne, cream of tartar, currant, wine, wine vinegar, muscadine
Green Olive <i>Olea europaea</i>	<i>Olive</i>	Olive (green or ripe), olive oil
Green Pea <i>Pisum sativum</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Green Pepper <i>Piper spp.</i>	<i>Potato</i>	Eggplant, ground cherry, pepino, melon pear, pepper (bell, sweet, cayenne, chili, paprika, pimiento), potato, tomato, tomatillo





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Halibut <i>Hippoglossus</i>	<i>Flounder</i>	Dab, flounder, halibut, plaice, sole, turbot
Honeydew melon <i>Cucumis melo</i>	<i>Gourd</i>	Chayote, Chinese melon, cantaloupe, cucumber, gherkin, loofah, muskmelons, casaba, Crenshaw, honeydew, Persian melon, pumpkin, pumpkin seed, pumpkin meal, squash (acorn, buttercup, butternut, Boston, spaghetti), zucchini, watermelon
Hops <i>Humulus lupulus</i>	<i>Mulberry</i>	Breadfruit, fig, hops, mulberry
Kidney/Pinto <i>Phaseolus vulgaris</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Lemon <i>Citrus limon</i>	<i>Rue (Citrus)</i>	Citron, grapefruit, kumquat, lemon, lime, murcot, orange, pumelo, tangelo, tangerine
Lettuce <i>Lactuca sativa</i>	<i>Composite</i>	Boneset, burdock root, cardoon, chamomile, chicory, coltsfoot, dandelion, endive, escarole, globe artichoke, goldenrod, Jerusalem artichoke, artichoke flour, lettuce (celtuce, pyrethrum, romaine, safflower oil, salsify, santolina, scolymus, scorzonera, southernwood, sunflower), sunflower (seed, meal, oil), tansy, tarragon, wormwood (absinthe), yarrow
LimaBean <i>Phaseolus lunatus</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Lobster <i>Homarus americanus</i>	<i>Crustaceans</i>	Crab, crayfish, lobster, prawn, shrimp
Mushroom <i>Agaricus campestris</i>	<i>Fungi</i>	Aspergillus, brewer's yeast, baker's yeast, citric acid, morel, mushroom, truffle





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Mustard <i>Brassicaceae</i>	<i>Mustard</i>	Broccoli, brussel sprouts, cabbage, collards, colza shoots, couve, tronchuda, curly cress, horseradish, kale, kohlrabi, mustard greens, mustard seed, radish, rape, rutabaga, turnip, puland cress, water cress
Navy Bean <i>Phaseolus vulgaris</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Oat <i>Avena sativa</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, Kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgar, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice
Onion <i>Allium cepa</i>	<i>Lily</i>	aloe vera, asparagus, chives, garlic, onion, ramp, shallot, leek
Orange <i>Citrus X sinensis</i>	<i>Rue (Citrus)</i>	Citron, grapefruit, kumquat, lemon, lime, murcot, orange, pumelo, tangelo, tangerine
Peach <i>Prunus persica</i>	<i>Rose (stone fruits)</i>	Almond, apricot, cherry, peach, nectarine, plum, prune
Peanut <i>Arachis hypogaea</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Pear <i>Pyrus communis</i>	<i>Rose (pomes)</i>	Apple, appledider, appledider vinegar, crabapple, loquat, pear, quince
Pecan <i>Carya illinonensis</i>	<i>Walnut</i>	Black walnut, butternut, English walnut, heartnut, hickory nut, pecan





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Pineapple <i>Ananas comosus</i>	<i>Pineapple</i>	Pineapple
Plum <i>Prunus domestica</i>	<i>Rose</i> (stone fruits)	Almond, apricot, cherry, peach, nectarine, plum, prune
Pork <i>Sus scrofa</i>	<i>Swine</i>	Hog, pork, bacon, ham, lard, pork gelatin, sausage, scrapple
Rice <i>Oryza sativa</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, Kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgar, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice
Rye <i>Allium cepa</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, Kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgar, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice
Salmon <i>Salmo salar</i>	<i>Salmon</i>	Salmon species
Scallops <i>Pectinidae</i>	<i>Mollusks</i>	abalone, snail, squid, clam, cockly, mussel, oyster, scallops
Sesame <i>Sesamum indicum</i>	<i>Pedaliium</i>	Sesame seed, sesame oil, tahini
Shrimp <i>Crangon penaeus</i>	<i>Crustaceans</i>	Crab, crayfish, lobster, prawn, shrimp
Spinach <i>Spinacia oleracea</i>	<i>Goosefoot</i>	Quinoa, beet, chard, lamb's quarters, spinach, sugar beet, tampala





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Soybean <i>Glycine max</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Squash, Zucchini <i>Cucurbita pepo</i>	<i>Gourd</i>	Chayote, Chinese melon, cantaloupe, cucumber, gherkin, loofah, muskmelons, casaba, Crenshaw, honeydew, Persian melon, pumpkin, pumpkin seed, pumpkin meal, squash (acorn, buttercup, butternut, Boston, spaghetti), zucchini, watermelon
Strawberry <i>Fragaria X ananassa</i>	<i>Rose (Berries)</i>	Blackberry, boysenberry, dewberry, loganberry, longberry, youngberry, raspberry
String Bean / Green Bean <i>Phaseolus vulgaris</i>	<i>Legume</i>	Alfalfa, sprouts, beans, fava, lima, mung (sprouts), navy, string, kidney, black-eyed pea, cowpea, carob, carob syrup, chickpea, garbanzo, jicama, kudzu, lentil, licorice, pea, peanut, peanut oil, red clover, senna, soybean, lecithin, soy (flour, grits, milk, oil), tamarind, tonka bean, coumarin
Sweet Potato <i>Ipomoea batatas</i>	<i>MorningGlory</i>	Sweet potato
Tea <i>Thea sinensis</i>	<i>Tea</i>	All tea: black tea, white tea, green tea etc. Does not include herbal teas
Tomato <i>Solanum lycopersicum</i>	<i>Potato</i>	Eggplant, ground cherry, pepino, melon pear, pepper (bell, sweet, cayenne, chili, paprika, pimiento), potato, tomato, tomatillo
Tuna <i>Thunnus albecarus</i>	<i>Mackerel</i>	Albacore, bonito, mackerel, skipjack, tuna
Turkey <i>Meleagris gallopavo</i>	<i>Turkey</i>	Turkey, turkey eggs
Vanilla <i>Vanilla planifolia</i>	<i>Orchid</i>	Vanilla





ANTIGEN/SPECIES	FAMILY	FOODS IN FAMILY
Watermelon <i>Citrullus lanatus</i>	<i>Gourd</i>	Chayote, Chinese melon, cantaloupe, cucumber, gherkin, loofah, muskmelons, casaba, Crenshaw, honeydew, Persian melon, pumpkin, pumpkin seed, pumpkin meal, squash (acorn, buttercup, butternut, Boston, spaghetti), zucchini, watermelon
White Potato <i>Solanum tuberosum</i>	<i>Potato</i>	Eggplant, ground cherry, pepino, melon pear, pepper (bell, sweet, cayenne, chili, paprika, pimiento), potato, tomato, tomatillo
Whole Wheat <i>Triticum aestivum</i>	<i>Grass</i>	Barley, malt, maltose, bamboo shoots, corn, corn meal, corn oil, cornstarch, corn syrup, hominy grits, popcorn, Kamut, lemon grass, citronella, millet, oat, oatmeal, rice, rice flour, rye, spelt, sorghum grain, sorghum syrup, sugarcane, cane sugar, molasses, raw sugar, sweet corn, triticale, wheat, wheat bran, wheat bulgar, wheat flour, gluten, wheat graham, whole wheat, wheat germ, wild rice





REFERENCE:

1. J Int Med Res. 2012;40(1):204-10. The value of eliminating foods according to food-specific immunoglobulin G antibodies in irritable bowel syndrome with diarrhoea. Guo H, Jiang T, Wang J, Chang Y, Guo H, Zhang W.
2. Scand J Gastroenterol. 2005 Jul;40(7):800-7. Food-specific IgG4 antibody-guided exclusion diet improves symptoms and rectal compliance in irritable bowel syndrome. Zar S, Mincher L, Benson MJ, Kumar D.
3. Turk J Gastroenterol. 2012 Feb;23(1):19-27. The effects of provocation by foods with raised IgG antibodies and additives on the course of Crohn's disease: a pilot study. Uzunismail H, Cengiz M, Uzun H, Ozbakir F, Goksel S, Demirdağ F, Can G, Balci H.
4. Digestion. 2010;81(4):252-64. doi: 10.1159/000264649. Epub 2010 Jan 30. Clinical relevance of IgG antibodies against food antigens in Crohn's disease: a double-blind cross-over diet intervention study. Bentz S, Hausmann M, Piberger H, Kellermeier S, Paul S, Held L, Falk W, Obermeier F, Fried M, Scholmerich J, Rogler G. Division of Gastroenterology and Hepatology, University Hospital Zurich, Zurich, Switzerland.
5. Immunobiology. 2012 Nov;217(11):1067-79. The immunoglobulin, IgG Fc receptor and complement triangle in autoimmune diseases. Karsten CM, Kohl J.
6. Germany. Int J Rheumatol. 2012;2012:602809. Epub 2012 Aug 26. Pathologies Associated with Serum IgG4 Elevation. Ebbo M, Grados A, Bernit E, Vely F, Boucraut J, Harle JR, Daniel L, Schleinitz N.
7. Thirty four years since the discovery of gastrointestinal melatonin. Bubenik GA.
8. Med Hypotheses. 2009 Sep;73(3):438-40. doi: 10.1016/j.mehy.2009.03.037. Epub 2009 Apr 29. The gluten syndrome: a neurological disease. Ford RP.
9. Pediatrics. 2004 Jun;113(6):1672-6. Range of neurologic disorders in patients with celiac disease. Zelnik N, Pacht A, Obeid R, Lerner A. adults.
10. Med Hypotheses. 2008;70(1):73-80. Epub 2007 Jun 14. The minicolumnopathy of autism: A link between migraine and gastrointestinal symptoms. Casanova MF.
11. J Altern Complement Med. 1999 Dec;5(6):575-86. The abdominal brain and enteric nervous system. McMillin DL, Richards DG, Mein EA, Nelson CD.
12. Clin Obstet Gynecol. 2013 Apr 4. [Epub ahead of print] Headaches During Pregnancy. Digre KB.
13. J Immunol. 2011 Sep 1;187(5):2646-55. Epub 2011 Aug 1. A strain of Lactobacillus casei inhibits the effector phase of immune inflammation. Schiffer C, Lalanne AI, Cassard L, Mancardi DA, Malbec O, Bruhns P, Dif F, Daeron M.
14. Acta Med Indones. 2010 Oct;42(4):236-40. Recurrent aphthous stomatitis caused by food allergy. Wardhana, Datau EA.
15. Scand J Gastroenterol. 2012 Sep;47(8-9):914-9. doi: 10.3109/00365521.2012.690045. Epub 2012 May 18. Functional bowel symptoms, fibromyalgia and fatigue: a food-induced triad? Berstad A, Undseth R, Lind R, Valeur J.
16. Ann Allergy. 1991 Feb;66(2):181-4. Intestinal permeability in patients with chronic urticaria-angioedema with and without arthralgia. Paganelli R, Fagiolo U, Cancian M, Scala E.
17. Clin Infect Dis. 2013 Mar 26. IgG Anticardiolipin Antibodies and Progression to Q Fever Endocarditis. Million M, Walter G, Bardin N, Camoin L, Giorgi R, Bongrand P, Gouriet F, Casalta JP, Thuny F, Habib G, Raoult D. Unite de Recherche sur les Maladies Infectieuses et Tropicales Emergentes, Faculte de Medecine, CNRS UMR 7278, IRD 198, Aix-Marseille Universite, 27 Bd Jean Moulin, 13005 Marseille, France.
18. Marijn van der Neut-Kofschoten, et al Anti-Inflammatory Activity of Human IgG4 Antibodies by Dynamic Fab Arm Exchange. SCIENCE VOL 317 14 SEPTEMBER 2007 pgs1554-1555.
19. Volpi, Nicola and Maccari, Francesca(2009) 'Serum IgG Responses to Food Antigens in the Italian Population Evaluated by Highly Sensitive and Specific ELISA Test', Journal of Immunoassay and Immunochemistry, 30: 51 — 69.
20. Kemeny DM, et al Sub-class of IgG in allergic disease. I. IgG sub-class antibodies in immediate and non-immediate food allergy. Clin Allergy. 1986 Nov; 16(6):571-81.
21. Stapel SO, Testing for IgG4 against foods is not recommended as a diagnostic tool: EAACI Task Force Report. Allergy. 2008 Jul;63(7):793-6. Epub 2008 May 16.
22. Statement of the AAAAI Work Group Report: Current approach to the diagnosis and management of adverse reactions to foods [web page]. October 2003. , 2013
23. Dixon H. Treatment of delayed food allergy based on specific immunoglobulin G RAST testing relief. Otolaryngol Head Neck Surg. 2000; 1234:48-54
24. Nagisa Sugaya N, Nomura S. Relationship between cognitive appraisals of symptoms and negative mood for subtypes of irritable bowel syndrome. BioPsychoSocial Medicine 2008; 2:9-14.
25. Atkinson W et al. Food elimination based on IgG antibodies in irritable bowel syndrome: a randomized controlled trial. Gut 2004; 53:1459-1464.
26. Drsko 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. 2006; 25: 514-522.
27. Bentz S. et al. Clinical relevance of IgG antibodies against food antigens in Crohn's disease: a double-blind cross-over diet Scharomycesmannan antibodies (ASCA) of Crohn's patients crossreact with mannan from other yeast strains, and murine ASCA IgM can be experimentally induced with Candida albicans. Inflamm Bowel Dis. 2007; 13: 1339-1346.
28. Hadjivssilou M, Grunewald RA, Davies-Jones GAB. Gluten sensitivity as a neurological illness. NerolNeurosurg Psychiatry. 2002; 72: 560-563.
29. Vladimir T et al. Higher plasma concentration of food-specific antibodies in persons with autistic disorder in comparison to their siblings. Focus Autism other Dev Disabl. 2008; 23: 176-185.
30. Severance EG et al. Subunit and whole molecule specificity of the anti-bovine casein immune response in recent onset psychosis and schizophrenia. Schizophr Res. 2010; 118: 240-247.
31. Huber A et al. Diet restriction in migraine, based on IgG against foods: a clinical double-blind, randomized, cross-over trial. Int Arch Allergy Immunol. 1998; 115: 67-72.

