Elimination Diet Guide







Program Overview

Many patients suffer from what are commonly called "food sensitivities." Food sensitivities are reactions to certain foods that one may be eating and are likely due to an immune response to those foods in the GI tract or throughout the body. It is believed that the immune protein immunoglobulin G (commonly called "IgG") is the culprit behind food sensitivity reactions. IgG is one type of antibody made by the immune system, and it can create delayed responses to foods.¹ This is why food sensitivities are also called "delayed food hypersensitivities."

IgG food sensitivities may play a large role in many common health complaints, such as:

- Irritable Bowel Syndrome (IBS)²⁻⁴
- Major Depressive Disorder⁴
- Migraine headaches⁵⁻⁷
- Skin rashes such as eczema⁸
- Joint aches⁹
- Autoimmune disease¹⁰
- Crohn's Disease¹¹
- Obesity¹²



IgG food sensitivities can be difficult to detect because symptoms can occur up to several days after consuming a particular food. This makes it challenging for individuals to make the connection between consuming a particular food and the adverse reaction that follows. One of the most common ways to test for food sensitivities is to measure the level of IgG response to certain foods via a blood test. The **IgG Food Antibody Assessment** is a comprehensive test that looks for underlying food sensitivities by measuring IgG.

When food sensitivities are uncovered with the IgG Food Antibody Assessment, your doctor may suggest an elimination diet. This therapy involves the removal of certain foods for a specific period of time to allow for a reduction in the immune response and to help the GI tract repair. This handout will walk through the basics of how to perform an elimination diet, and why it is important in your overall health goals.

Food Allergy versus Food Sensitivity

Although the terms "food allergy" and "food sensitivity" are often used interchangeably, they are not the same. Food allergies are not related to IgG antibodies, but rather are caused by IgE antibodies. IgE antibodies are responsible for causing true allergic reactions such as allergies to dust, cat/dog dander, and ragweed. Similar to environmental allergies, food allergies can cause immediate, and sometimes life-threatening, reactions. The most well-known example of this type of food allergy is the common peanut allergy, though humans can have allergies to many different types of foods.

When people consume foods that trigger an allergy, they are more likely to experience a sudden onset of symptoms. These symptoms include throat or tongue swelling, itching, skin rash, rapid heartbeat, nausea or vomiting, dizziness, fainting, shortness of breath, or difficulty breathing. Even though some food allergies can produce life-threatening symptoms (such as anaphylaxis), it is also possible to have a food allergy that results in milder symptoms. Due to the potential life-threatening reactions that are associated with IgE-allergies, it is best to avoid these foods and discuss this further with your healthcare provider. Together you can decide the best options for management of food and/or other IgE-allergies.¹³

How did I get Food Sensitivities?

There is some debate regarding the exact mechanism of how foods can trigger this type of immune reaction. The most common hypothesis is that food sensitivities are caused by a dysfunctional gut lining. In a healthy GI tract, the gut lining acts as a wall to protect us from the outside world. This barrier is made up of tiny cells that are held together by what are called "tight junctions." As their name suggests, tight junctions keep the GI tract's cells locked together, which maintains a strong gut barrier. However, in some situations these junctions can open, allowing the GI tract to become more permeable. When the tight junctions forming the barrier in the gut remain permeable for longer periods of time, substances can "leak" through. This is known as "intestinal permeability" or "leaky gut," and it is can cause an immune response to those proteins that leak through the gut wall. This immune response may result in the production of IgG antibodies to foods.⁴ There are multiple dietary and lifestyle factors that can contribute to increased intestinal permeability. These factors include alcohol,¹³ stress,^{14,15} chronic non steroidal anti-inflammatory drug (NSAID) use,¹⁶ Western-type diets (high consumption of red meat, animal fat, and sugar),¹⁷ as well as prolonged strenuous exercise.¹⁸⁻²⁰

Understanding Your Results

The IgG Food Antibody Assessment is a blood test designed to detect the presence of IgG antibodies (and therefore reactivity) to particular food proteins. Food antibody results are listed as 0 (none detected), VL (very low), +1 (low), +2 (moderate), or +3 (high). The level of reactivity is based on your body's immunoglobulin G (IgG) antibody levels, or your response to that particular food.

0 None Detected	VL Very Low	1+ Low	2+ Moderate	3+	High
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There are a few things to know when looking at your IgG Food Antibody results:

- Avoidance of a particular food for several months or more may result in a negative finding despite a potential underlying sensitivity.
- It is possible to have a positive result for a food you never eat. This is because food proteins can be similar across different types of foods families. For example, there may be a food protein in peanuts that looks very similar to a protein in almonds. Therefore, you may have a positive result for peanuts even though you only eat almonds.
- In general, it is common for a few foods to show up as "very low." With some exceptions, your clinician will likely focus on the foods that have a "moderate" or "high" finding when interpreting your results.
- Finally, your measured antibody response may not correlate with the severity of your symptoms. Therefore, your healthcare provider will correlate your overall symptoms and clinical history when interpreting your results.

Clinical Management of Reactive IgG Foods: Elimination Diet

Your healthcare provider will provide detailed instructions regarding the clinical management of reactive IgG foods. An elimination diet is a common treatment strategy to address IgG food sensitivities. An elimination diet is an eating plan whereby foods that are suspected of causing adverse reactions are temporarily removed from the diet. These foods are then carefully reintroduced at a later date. Elimination diets can pinpoint symptom-triggering foods that may cause or worsen chronic health issues you may be experiencing. This diet is specific to food sensitivities caused by IgG-mediated reactions, and not food allergies (IgE-mediated reactions). Because an elimination diet may significantly alter your overall food intake, we encourage the oversight of a healthcare provider to ensure that your nutritional requirements and caloric needs are adequate.

Four-Phases of an Elimination Diet

PREPARATION

A person's individual symptoms are combined with the IgG Food Antibody Assessment results to determine which food(s) to temporarily remove from the diet. Additional foods that were not tested can be included in the elimination diet based on your clinical history. Your healthcare provider will assist you in deciding which foods to eliminate. The average time frame for an elimination diet is 1 to 3 months. Planning for a successful elimination diet includes making appropriate preparations. Important preparation steps include:

- Removing offending foods from the home and adjusting grocery needs accordingly.
- Reviewing resources to assist with meal preparation, such as recipe books or reputable websites.

Many clinicians recommend their patients record what foods are consumed in a food journal to help track the progress of the diet. This includes what foods are eaten, what date/time these foods are eaten, and any notable changes in your symptoms. A sample journal is provided at the end of this handout for your own use. You may wish to make several copies of this page to use throughout the elimination diet. Lastly, it is important to determine a start and end date with your healthcare provider.

#2 ELIMINATION

It is essential that you completely avoid the foods your healthcare provider recommended you eliminate and/or that elicited a strong reaction via IgG Food Antibody Assessment. If you are unable to eliminate all reactive foods from the diet, focus on the foods that elicited a stronger reaction. Foods are grouped by botanical food families which are very similar in protein structure. Therefore, if you are sensitive to one member of a food family, you may also experience adverse reactions to other members of the same food family. For example, if you experience adverse reactions to bananas, you may also experience an adverse reaction to plantains.

Review ingredients in prepared and prepackaged items to ensure minimal or no exposure to reactive foods. There may be alternate ways that some foods are listed on ingredient labels. For example, some food products may list eggs as mayonnaise or albumin. If you are instructed to avoid eggs for the elimination diet, you should also avoid mayonnaise and products listing albumin. Please refer to the chart below as an additional resource to help identify alternative names for foods.

#3 REINTRODUCTION

Eliminated foods are reintroduced one food at a time while monitoring for any adverse food reactions. You are encouraged to consume the test food several times throughout the day for one day. Meanwhile, keep track in your journal which food is being reintroduced and any adverse reactions over the following three days.

It is recommended you consume pure sources of the food. For example, if you are reintroducing eggs, eat scrambled eggs rather than mayonnaise which has been processed and contains other ingredients. If you experience an adverse reaction, the food should be immediately removed for the duration of the elimination diet. Your clinician may want you to wait until the adverse reaction resolves before moving on to another food. Common symptoms that may indicate an IgG food reaction include headache, itching, bloating, fatigue, diarrhea, constipation, joint pain, indigestion, or worsening of your chronic health complaints. If the food does not cause symptoms during the reintroduction phase, it can be added back into the diet. Continue the process with each food that was previously eliminated.

Caution: It is NOT recommended that you reintroduce a known food allergy. Ask your healthcare provider to discuss the signs and management of immediate hypersensitivity reactions prior to food reintroduction following an elimination diet. If reintroduction of a food causes an immediate allergic reaction (i.e. swelling of face, mouth, tongue, etc.,; wheezing, rash/hives, or other allergic symptoms), it is imperative that you be treated as soon as possible. Following resolution of the immediate hypersensitivity reaction, consult with your healthcare provider on how to proceed with food reintroduction.

#4LONG-TERM MANAGEMENT

An elimination diet based on food sensitivity testing is part of a comprehensive approach to overall gastrointestinal health. Based on your test results and symptoms, a long-term plan is usually developed utilizing the results of the reintroduction phase. Your healthcare provider may also consider treating increased intestinal permeability based on the results of your immunology food profile. The goal of addressing intestinal permeability is to strengthen the gut barrier. This will reduce the amount of partially digested food proteins that enter the bloodstream, causing an adverse immune reaction. There are several nutrients that have been found to support intestinal barrier function and decrease inflammation, including:

Essential fatty acids (omega-3)

• Glutamine¹⁴⁻¹⁶

Probiotics^{14,20,21}

• Vitamin A¹⁴

• Zinc^{17,18}

• Vitamin D¹⁹

Butyrate^{14,22,23}

Botanicals that can also assist with intestinal health are slippery elm, deglycyrrhizinated licorice (DGL), aloe vera extract, and marshmallow root. Your healthcare provider will provide further instructions.

Dietary Recommendations for Common Food Sensitivities

Dairy, wheat, and eggs commonly cause food sensitivities (IgG-mediated reactions) in humans. These foods are difficult to eliminate from the diet because they are found in a wide variety of products. If you are reactive to any of these foods, be careful to avoid the items containing them while maintaining a balanced diet with a healthy intake of essential nutrients and vitamins.

Gluten

Gluten is a protein component of grains including wheat, spelt, barley (malt), rye, oats, and kamut. Some patients have a condition called Celiac disease, an autoimmune disease that requires strict, lifelong avoidance of gluten. Others have gluten sensitivity and may not require lifelong avoidance of gluten, but do benefit from minimizing gluten. Gluten can also be found in unexpected places including medicine, toothpaste, and cosmetics. Many products are now labeled as gluten-free. As a general guide, the above-mentioned grains, as well as the foods listed under wheat in this handout should be avoided, because wheat is the most common gluten-containing food. Speak with your healthcare provider about whether gluten avoidance is appropriate for you. Helpful resources for gluten avoidance include:

- Celiac Disease Foundation: <u>https://www.Celiac.org</u>
- University of Chicago Celiac Disease Center: http://www.cureceliacdisease.org

Wheat

Wheat and wheat products may be listed on the label as...

- Wheat, hard wheat, red wheat, stone ground wheat, cracked wheat
- Flour, enriched flour, unenriched flour, bleached or unbleached flour
- Graham flour
- Durum flour
- Wheat bran
- Wheat germ
- Wheat berries
- Bulgur
- Farina
- Semolina

Foods likely to contain wheat:

• Baked goods, baking mixes (cakes, cookies, biscuits etc.)

Foods likely to contain wheat Cont'd:

- Instant breakfast, malted and Postum drinks
- Beer and whiskey
- Some soups and bouillon cubes
- Gravies and sauces thickened with flour
- · Luncheon meats (bologna, ham) and meatloaf
- Ice cream cones
- Dumplings, croquettes, or patties
- Soy sauce



Milk

Dairy may be listed on labels as...

- Milk, milk solids, non-fat milk solids
- Yogurt, kefir
- Whey
- · Cream, sour cream, half & half, whipped cream
- Lactose, lactalbumin
- Cheese, cream cheese, cottage cheese
- Butter or artificial butter flavor
- Buttermilk or buttermilk solids
- Casein, caseinate, sodium caseinate (check lab results for + casein)

Dairy-Free Sources of Calcium:

- Soy products like tofu, tempeh, and calcium-fortified soymilk
- Calcium-fortified rice milk
- Green leafy vegetables (kale, spinach, romaine lettuce, etc.)
- Broccoli
- Canned salmon with bones
- Sardines
- Beans (kidney, pinto, navy, soy)
- Figs
- Rhubarb
- Blackstrap molasses
- Almonds

Foods likely to contain dairy:

- Butter and many margarines
- Shakes and hot chocolate mixes and drinks
- Many "non-dairy" products (coffee creamer, whipped topping)
- Many baked goods (bread, crackers, desserts)
- Many baking mixes (pancake mix)
- Macaroni and cheese
- Canned foods (soups, spaghetti, ravioli)
- Mashed potatoes (often prepared with butter and/or milk)
- Many salad dressings (ranch, blue cheese, creamy, Caesar)
- Creamy, cheese, or butter sauces (often on vegetables or meats)
- Cream soups and chowders



Corn

Corn may be listed on the label as...

- Baking powder
- Maize
- Starch cereal, corn, food, modified
- Glucose syrup
- Hominy
- Vegetable gum, protein, paste, starch
- High fructose corn syrup
- Masa harina

Foods likely to contain Corn:

- Cereals
- Beverages and alcohol
- Baked goods
- Jams and jellies
- Snack foods
- Cookies
- Syrups
- Deli meats
- Grits
- Candies

- Hominy
- Infant formulas
- Popcorn
- Other convenience foods
- Canned fruits

Egg

Eggs may be listed on food labels as...

- Egg protein
- Ovalbumin
- Egg white
- Ovomucoid
- Egg yolk
- Ovomucin
- GlobulinOvovitellin

Albumin

Vitellin

- Livetin
- Powdered egg

Foods that may contain Egg:

- Baked goods
- Macaroons
- Batter mixes
- Malted drinks
- Bavarian cream
- Marshmallows
- Boiled dressing
- Mayonnaise
- Bouillon
- Meatloaf
- Breaded foods
- Meringues

- Breads
- Noodles
- Cake flours
- Pancakes
- Creamy fillings
- Liquid egg replacers
- Puddings
- Custards
- Quiche
- Egg drop soup
- Salad dressings
- Flan



- Sauces
- French toast
- Sausages
- Fritters
- Soufflé
- Frosting
- Tartar sauce
- Hollandaise sauce
- Waffles
- Ice cream

Synonyms for Food Ingredients

Casein, caseinate	Milk
Cereal binder	Usually wheat
Cereal filler	Usually wheat
Cereal protein	Usually wheat
Cereal starch	Usually wheat or corn
Dextrose	A sugar derived from corn
Edible starch	Usually wheat or corn
Flour	Usually wheat flour
Fructose	A type of sugar
Glucose syrup	A sugar derived from corn
Hydrolyzed protein	Usually yeast
Hydrolyzed vegetable protein	Usually yeast

Lactalbumin	Milk
Lactose	Milk sugar
Leavening	Yeast
Lecithin	Usually egg or soya
Maltose	A type of sugar
Modified starch	Usually wheat or corn
Ovalbumin	Egg
Starch	Usually wheat or corn
Sucrose	Sugar
Vegetable Oil	Usually a mixture of oils,
	including corn oil
Vegatable protein	Usually soya

Substitutes for Common Food Sensitivities

Substitutes for Milk:

- Soy soy milk, soy cheese, soy yogurt, soy sour cream, soy cream cheese, soy creamer, soy frozen desserts
- Rice rice milk, rice cheese, rice butter, rice frozen desserts
- Almond milk and cheese
- Oat milk and cheese
- Potato milk (high in starch and no protein)
- 100% vegetable oil, non-hydrogenated alternative to butter or margarine
- Rice-based pudding

Substitutes for Wheat:

- Cereals amaranth, millet, or kamut* flakes; puffed rice, millet or corn; and grits or oatmeal*
- Grains rice, amaranth, millet, quinoa, barley*, buckwheat, teff, corn, kamut*, wild rice
- Flours potato, rice, soy, barley*, buckwheat, corn, teff, tapioca
- Breads millet, teff, kamut* or rice bread
- Pastas corn, quinoa, lentil, and rice
- Thickeners cornstarch, potato starch, arrowroot or kuzu
- Snacks or sides rice crackers and cakes, polenta, corn tortillas
 - *Gluten-sensitive people may not tolerate kamut, oats, or barley

Substitutes for Eggs:

- Egg replacement powder
- 1 tbsp. baking powder
- 1 tsp gelatin (for puddings and custards)
- 2 tbsp. flour; 1/2 tsp oil; 1/2 tsp baking powder; 2 tbsp. water;
- 2 tbsp. water; 1 tbsp. vegetable oil; 1/2 tsp baking powder
- 1 tbsp. flaxseed powder; 3 tbsp. warm water
- 1 tbsp. gelatin or 1 tbsp. fruit pectin; 3 tbsp. warm water
- Non-fat yogurt, mashed banana, applesauce, pumpkin, or other pureed fruit or vegetables are good replacements for eggs in muffins or cakes.
- To replace eggs in casseroles, burgers, or loaves try mashed vegetables, tahini, nut butters, or rolled oats.

Substitutes for Soy:

 Legumes & Beans – green pea, kidney bean, peanut, lentil, split pea, butter bean, lima bean, chickpea, black-eyed pea, carob, green bean, snap bean, string bean, adzuki, white bean, fava bean, garbanzo bean, northern bean, pinto bean, black bean, snow pea, navy bean

- Flours potato, rice, lentil, barley, buckwheat, corn, teff, amaranth, tapioca, quinoa, spelt, kamut
- Cow or goat milk and cheese
- Rice milk and cheese
- Oat milk and cheese

Substitutes for Mustard (seed or greens):

- Condiments relish, mayonnaise, tomato sauce, vinegar, salsa
- Seasonings onion, garlic, white or black pepper, basil, oregano
- Greens collards, turnips, kale, spinach

Substitutes Tuna/Salmon:

- Other fish bass, codfish, flounder, grouper, mahi-mahi, mullet, halibut, orange roughy, perch, sardine, red snapper, scrod, sole, trout, whiting, mackerel
- · Lean meats lamb, pork, chicken, turkey, beef, veal, buffalo
- Protein-rich foods nuts, seeds, beans, legumes, eggs, dairy or soy products

Substitutes for Peanut:

- Nuts/seeds soynuts, almonds, walnuts, sunflower seeds, brazil nuts, pecans, cashews, pumpkin seeds, pine nuts, pistachios
- Nut butters sesame, cashew, almond

Substitutes for Beef/Pork/Chicken/Turkey:

- Other meats lamb, mutton, fish, buffalo
- Protein-rich foods nuts, seeds, legumes, dairy products, eggs

Vegetable-based protein – tofu, TVP (texturized vegetable protein), veggie burgers, tempeh (soy)

Substitutes for Corn:

- Vegetables acorn squash, buttercup squash, banana pepper, peas, carrots, butternut squash, pumpkin, sweet potato, tomato, beans, yams, red pepper, yellow squash, winter squash, and eggplant
- Grains rice, amaranth, millet, quinoa, barley, buckwheat, teff, kamut
- Thickeners tapioca starch, potato starch, arrowroot or kuzu
- · Snacks or sides rice crackers and cakes, flour tortillas

Clinical Management of Reactive IgE Foods: Avoidance

Detection of food allergies (IgE-mediated reaction) warrants complete avoidance due to potentially life-threatening reactions. Symptoms include swelling of the throat or tongue, trouble breathing or shortness of breath, hives or skin rash, rapid heartbeat, nausea and vomiting, dizziness, and fainting. Your healthcare provider may prescribe medication in order to minimize an allergic response. In addition, you may consider an appointment with an allergist who can help identify other foods that may trigger an allergic reaction as well as discuss management of your symptoms.²⁴

Clinical Management of Reactive IgE Environmental Molds or Inhalants

It can be difficult to completely avoid exposure to molds or other environmental elements that you are allergic to. However, there are ways to try to minimize your exposure. High-efficiency particulate air (HEPA) filters meet certain standards to remove fine airborne particles including allergens.

- Grass/Pollen Allergies If you are allergic to a type of grass, close your windows when others are mowing grass and avoid mowing grass yourself. You can also minimize exposure to many types of allergens simply by removing your shoes when entering your house.
- Dust Allergies Consistent laundering of fabrics (i.e. curtains, blankets, pillowcases, etc.) in hot water and drying in high heat can reduce exposure. Another potential solution is to purchase dust-free hypoallergenic covers for pillows and blankets. Consider changing air duct filters on a regular basis and utilizing quality home air purification systems.
- Animal Allergies Bathe/groom/brush your pet on a regular basis and clean furnishings, carpeting and bedding where the pet sleeps to reduce dander.
- Mold Allergies Try to keep household humidity between 30% and 50%. HEPA filters, exhaust fans, dehumidifiers, regular cleaning practices, and fixing water leaks may help to reduce the mold burden.
- Travelling with Allergies Portable air filters may be a consideration to improve indoor air quality while away from home.



Some patients use medications and/or allergy shots to manage symptoms.

Bioflavonoids and botanicals have been shown to help minimize one's allergic response to environmental molds or inhalants.²⁵ These include quercetin, grape seed extract, curcumin, vitamin C, *Zea mays, Urtica dioica*, and *Euphrasia officinalis*. Speak with your healthcare practitioner regarding supplementation and allergen reduction strategies.

Food & Lifestyle Journal

Date	•
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Day Event	Food Intake (include food, condiments,	Symptoms (physical and emotional) and
Dising	drinks, supplements, medications, etc.)	activities (exercise, stress, sleep quality, etc.)
RISING		
Time:		
Breakfast		
Time:		
Snack		
Time:		
Lunch		
Time:		
Snack		
Time:		
Dinner		
Time:		
Snack		
Time:		
Bed Time		
Time:		

Notes:

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