IgG Food Antibody Assessment (Serum)

63 Zillicoa Street
Asheville, NC 28801

Patient: **SAMPLE PATIENT**
DOB:
Sex:
MRN:

IgG Food Antibody Results

Dairy

Casein	VL
Cheddar cheese	VL
Cottage cheese	VL
Cow's milk	1+
Goat's milk	0
Lactalbumin	VL
Yogurt	1+

Fruits

Apple	0
Apricot	0
Banana	0
Blueberry	0
Cranberry	0
Grape	VL
Grapefruit	0
Lemon	0
Orange	0
Papaya	0
Peach	VL
Pear	0
Pineapple	1+
Plum	0
Raspberry	0
Strawberry	0

Vegetables

Alfalfa	0
Asparagus	VL
Avocado	0
Beets	0
Broccoli	VL
Cabbage	0
Carrot	0
Celery	0
Cucumber	0
Garlic	1+
Green Pepper	0
Lettuce	0
Mushroom	0
Olive	0
Onion	0
Pea	0
Potato, sweet	0
Potato, white	VL
Spinach	VL
String bean	VL
Tomato	VL
Zucchini	0

Fish/Shellfish

Clam	0
Cod	0
Crab	0
Lobster	0
Oyster	0
Red snapper	0
Salmon	0
Sardine	0
Shrimp	0
Sole	0
Trout	0
Tuna	0

Poultry/Meats

Beef	0
Chicken	0
Egg white	0
Egg yolk	0
Lamb	0
Pork	0
Turkey	0

Nuts and Grains

Almond	VL
Buckwheat	VL
Corn	0
Corn gluten	1+
Gluten	3+
Kidney bean	VL
Lentil	0
Lima bean	0
Oat	0
Peanut	0
Pecan	0
Pinto bean	0
Rice	VL
Rye	0
Sesame	3+
Soy	VL
Sunflower seed	3+
Walnut	VL
Wheat	3+

Miscellaneous

Yeast	VL
Cane sugar	VL
Chocolate	VL
Coffee	3+

Total IgE

	Inside	Outside	Reference Range
Total IgE ◆	9.2		<=87.0 IU/mL

0 None Detected VL Very Low 1+ Low 2+ Moderate 3+ High

- The performance characterisitcs of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted with ◆, the assay has not been cleared by the U.S. Food and Drug Administration.
- Total IgE level may have clinical significance regardless of specific antibody levels.
- Increasing levels of antibody detected suggest an increasing probability of clinical reactivity to specific foods.
- The Elimination Diet commentary is specific to IgG results only. Allergens inducing an IgE response should be completely avoided.

Laboratory Comments

Summary of IgG Test Results

Reactive / Non-Reactive Foods

3+ High

Coffee	Gluten	Kamut	Sesame
Sunflower seed	Wheat	Wheat bran	

1+ Low

Bean sprout	Cayenne	Coconut	Corn gluten
Cow's milk	Cumin	Curry	Flax seed
Garlic	Ginger	Navy bean	Peppermint
Pineapple	Pistachio	Triticale	Vanilla
Yogurt			

VL Very Low

Allspice	Almond	Asparagus	Basil
Black Pepper	Broccoli	Buckwheat	Cane sugar
Cantaloupe	Casein	Cheddar cheese	Cherry
Chocolate	Cottage cheese	Filbert	Garbanzo
Grape	Horseradish	Kidney bean	Lactalbumin
Millet	Mung bean	Nutmeg	Oat bran
Oregano	Parmesan cheese	Peach	Potato, white
Rice	Sage	Soy	Spinach
String bean	Thyme	Tomato	Walnut
Yeast			

0 None Detected

Alfalfa	Apple	Apricot	Artichoke
Avocado	Banana	Bay leaf	Beef
Beets	Blueberry	Cabbage	Carrot
Cashew	Celery	Chicken	Cinnamon
Clam	Cloves	Cod	Corn
Crab	Cranberry	Cucumber	Dill
Egg white	Egg yolk	Fennel	Goat's milk
Grapefruit	Green pepper	Lamb	Lemon
Lentil	Lettuce	Lima bean	Lobster
Marjoram	Mushroom	Mustard	Oat
Olive	Onion	Orange	Oyster
Papaya	Paprika	Parsley	Pea
Peanut	Pear	Pecan	Pinto bean
Plum	Pork	Potato, sweet	Raspberry
Red Snapper	Rosemary	Rye	Safflower
Salmon	Sardine	Shrimp	Sole
Strawberry	Trout	Tuna	Turkey
Watermelon	Wild rice	Zucchini	

Commentary

Overview

Immunoglobulin G (IgG) antibodies that elicit an immune response to food are in a class distinct from Immunoglobulin E (IgE) food allergy reactions. IgG-mediated food responses are described as delayed hypersensitivity reactions and have been associated in the peer-reviewed literature with an array of common clinical conditions including migraine, obesity, asthma, autoimmune diseases, and irritable bowel syndrome.

IgG Testing: Factors to Consider
IgG testing can be very useful in screening foods that a person is eating on a regular basis and which may be causing adverse reactions. However, it is possible to have adverse reactions to foods with low or non-detected levels of IgG. Because the IgG profile measures exposure of the immune system to food antigens, performing this test on a patient who is not consuming a particular food or who is taking a drug with known ability to suppress immune function (i.e. steroids) may result in the test not showing a positive reaction, potentially leading to a false negative result for the particular food. Be advised that if the patient is already on an elimination diet due to known food reactions, a negative result on an IgG food antibody profile does not necessarily mean that they can freely eat the food without experiencing symptoms.

IgG Results Interpretation
The amount of IgG antibodies is measured using a semi-quantitative ELISA assay procedure. The relative degrees of IgG present for each food are reported using a semi-quantitative level; None Detected (0), VL (very low), Low (1+), Moderate (2+) or High (3+). The degree of reactivity may not correlate with the severity of patient's response, therefore clinical correlation is advised as it can help direct treatment.

Clinical Management of Reactive IgG Foods: Elimination Diet
The purpose of an elimination diet is to pinpoint symptom-triggering foods that may be the root cause of and/or perpetuating chronic health issues. This diet is specific to food sensitivities that elicit an Immunoglobulin G (IgG) response and not those defined as classic (IgE-mediated) food allergy reactions. An elimination diet is a strategic process which depends on the oversight of the healthcare provider to ensure that a patient's nutritional requirements - macronutrient, micronutrient, and caloric needs - are adequate.

Four-Phases of an Elimination Diet

PHASE 1 – PREPARATION
A patient's clinical presentation and the IgG Food Antibody Assessment results typically determine which food(s) to temporarily remove from the diet. The average time frame for an elimination diet is 1 to 3 months. It is optimal to work with the patient to determine a start and end date for the elimination diet. Patient guidance around preparation ahead of the start date is important to ensure success. These include: (1) encouraging the patient to remove offending foods from the home and adjust grocery shopping accordingly; (2) providing the patient with resources that advance meal preparation, such as recipe books or reputable websites. Directing the patient to record foods consumed, date of consumption/elimination, and any notable changes in symptoms in a food journal can help track the progress of the diet.

Commentary

PHASE 2 – ELIMINATION

It is important to ensure the patient avoids those foods which resulted in a demonstrable reaction, either in whole food forms or as ingredients in other prepared foods to gain the greatest benefit. For patients unable to eliminate all reactive foods from their diet, focusing on the foods that elicited a stronger reaction (i.e.: 2+ and 3+) may be considered for an elimination diet. Practitioners may also encourage elimination of a complete food group when the patient shows reactivity to all foods tested within that group.

PHASE 3 – REINTRODUCTION

The reintroduction of eliminated foods is done one food at a time while monitoring for any adverse reaction. The patient should consume the test food several times throughout the day for several days. If symptoms occur with reintroduction, the patient should be instructed to remove that food once again and to evaluate whether the symptoms diminish over the next few days following elimination. Signs which may indicate an IgG food reaction include the following: headache, itching, bloating, fatigue, diarrhea or constipation, and indigestion. If the food does not cause symptoms during the reintroduction phase, it can be added back into the diet. The patient should continue this process with each food eliminated.

CAUTION: *All patients warrant counseling related to 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 the patient be treated as soon as possible. Following resolution of the immediate hypersensitivity reaction, the patient should be instructed to completely avoid consumption of that food.*

PHASE 4 – LONG TERM MANAGEMENT

An elimination diet based on food sensitivity testing is part of a comprehensive approach to overall gastrointestinal health. Based on the test results and the complete clinical presentation of the patient, a long-term plan is usually developed utilizing the results of the reintroduction phase. Clinicians may also consider assessing and treating intestinal permeability, as gut barrier integrity is important for proper immune responses to foods. Nutrients that have been found to support intestinal barrier and decrease potential inflammation are glutamine, vitamin A, vitamin D, essential fatty acids (Omega-3), probiotics, and butyrate. Botanicals that can also be considered to assist with intestinal health are slippery elm, deglycyrrhizinated licorice (DGL), Aloe vera extract, and marshmallow root.