



Using the Elimination Diet in Clinical Practice: Explanations and Case Studies

Kathleen O'Neil Smith, MD., FAARM



The views and opinions expressed herein are solely those of the presenter and do not necessarily represent those of Genova Diagnostics. Thus, Genova Diagnostics does not accept liability for consequences of any actions taken on the basis of the information provided.





Christine Stubbe, ND
Medical Education Specialist - Asheville



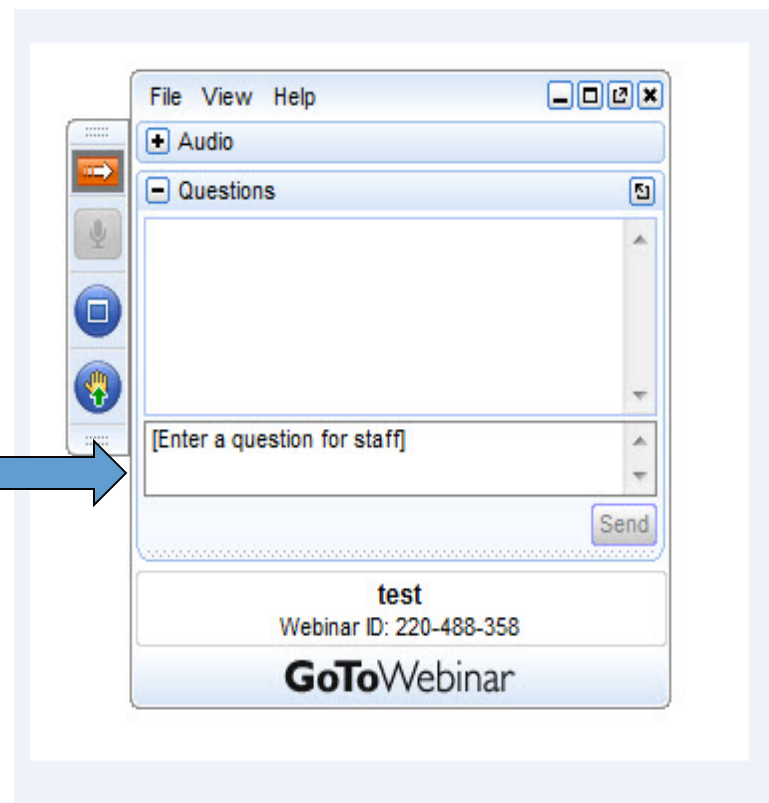
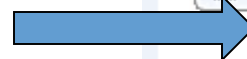
Kathleen O'Neil Smith, MD., FAARM



Technical Issues & Clinical Questions

Please type any technical issue or clinical question into either the “Chat” or “Questions” boxes, making sure to send them to “Organizer” at any time during the webinar.

We will be compiling your clinical questions and answering as many as we can the final 15 minutes of the webinar.





Need More Resources?

Ensure you have an account!

The screenshot shows the Genova Diagnostics website homepage. At the top, there is a navigation bar with social media icons (Twitter, LinkedIn, YouTube, Facebook) and links for International, About Us, Contact Us, Search, myGDX, and US. The main header features the Genova Diagnostics logo and navigation links for HOME, CLINICIANS, and PATIENTS. Below the header is a banner for "NutrEval® with Genomics" with the tagline "The Nutritional Test You Rely On Just Got Better!" and a "LEARN MORE" button. The main content area is divided into three columns, each with a red circle around it:

- Getting Started:** Simple account setup. Licensed healthcare practitioners may begin the process of opening a free account here. Includes a "NEW USERS" button.
- Test Menu:** A comprehensive menu of our diagnostic tests, including test descriptions, specimen requirements and kit instructions. Includes a "SEARCH TESTS" button.
- myGDX Login:** Clinicians: Log in to the myGDX™ portal to order test kits and materials, download patient results, edit account information. Includes a "LOGIN" button.

At the bottom, there is a section for "Online Education" with a red circle around it. It includes the text: "Visit our Medical Education section for access to myGDX Webinars, Educational Modules, Conferences, and myGDX – short learning modules that demonstrate the clinical utility and diagnostic significance of key biomarkers. The modules are absolutely free to view!" and a "LEARN NOW" button.



Using the Elimination Diet in Clinical Practice: Explanations and Case Studies

Kathleen O'Neil Smith, MD., FAARM



The views and opinions expressed herein are solely those of the presenter and do not necessarily represent those of Genova Diagnostics. Thus, Genova Diagnostics does not accept liability for consequences of any actions taken on the basis of the information provided.





Objectives

1. Become familiar with IgG mediated food testing and indications for ordering an IgG food test
2. Review case histories and discuss how to use elimination diets in clinical practice to help your patients with IBS, bloating, headache, fatigue, sleep disturbance, anxiety and other related conditions
3. Learn additional testing that assists the clinician in addressing GI health and healing





Medical maxim ...

“Death begins in the colon.”

Practical application ...

“When in doubt, treat the gut.”



Why Use Food Antibody Assessment?

- The incidence of food sensitivities has increased dramatically over the years
- It is estimated that up to 20% of the population have adverse reactions to foods
- IgG food Ab testing screens for foods associated with patient symptoms
- Food elimination diets based on IgG testing have been found to improve patient outcomes by 25% more than elimination diets alone



Food Antibody Assessment





IgG (Total) Food Antibody Assessment

IgG Food Antibody Results			
Dairy Casein 0 <input type="checkbox"/> Cheddar cheese VL <input type="checkbox"/> Cottage cheese VL <input type="checkbox"/> Cow's milk VL <input type="checkbox"/> Goat's milk VL <input type="checkbox"/> Lactalbumin 0 <input type="checkbox"/> Yogurt VL <input type="checkbox"/> Fruits Apple 0 <input type="checkbox"/> Apricot 0 <input type="checkbox"/> Banana 0 <input type="checkbox"/> Blueberry VL <input type="checkbox"/> Cranberry 0 <input type="checkbox"/> Grape 1+ <input type="checkbox"/> Grapefruit 1+ <input type="checkbox"/> Lemon 0 <input type="checkbox"/> Orange 0 <input type="checkbox"/> Papaya 0 <input type="checkbox"/> Peach VL <input type="checkbox"/> Pear 0 <input type="checkbox"/> Pineapple 0 <input type="checkbox"/> Plum VL <input type="checkbox"/> Raspberry VL <input type="checkbox"/> Strawberry VL <input type="checkbox"/>	Vegetables Alfalfa VL <input type="checkbox"/> Asparagus 0 <input type="checkbox"/> Avocado 3+ <input type="checkbox"/> Beets VL <input type="checkbox"/> Broccoli VL <input type="checkbox"/> Cabbage 3+ <input type="checkbox"/> Carrot 3+ <input type="checkbox"/> Celery 3+ <input type="checkbox"/> Cucumber 0 <input type="checkbox"/> Garlic 1+ <input type="checkbox"/> Green Pepper VL <input type="checkbox"/> Lettuce VL <input type="checkbox"/> Mushroom 1+ <input type="checkbox"/> Olive VL <input type="checkbox"/> Onion VL <input type="checkbox"/> Pea VL <input type="checkbox"/> Potato, sweet VL <input type="checkbox"/> Potato, white VL <input type="checkbox"/> Spinach 1+ <input type="checkbox"/> String bean 1+ <input type="checkbox"/> Tomato VL <input type="checkbox"/> Zucchini VL <input type="checkbox"/>	Fish/Shellfish Clam 0 <input type="checkbox"/> Cod 0 <input type="checkbox"/> Crab VL <input type="checkbox"/> Lobster 1+ <input type="checkbox"/> Oyster 0 <input type="checkbox"/> Red snapper 0 <input type="checkbox"/> Salmon 0 <input type="checkbox"/> Sardine 0 <input type="checkbox"/> Shrimp 0 <input type="checkbox"/> Sole 0 <input type="checkbox"/> Trout 0 <input type="checkbox"/> Tuna 0 <input type="checkbox"/> Poultry/Meats Beef 0 <input type="checkbox"/> Chicken 0 <input type="checkbox"/> Egg white 0 <input type="checkbox"/> Egg yolk VL <input type="checkbox"/> Lamb 0 <input type="checkbox"/> Pork 0 <input type="checkbox"/> Turkey 0 <input type="checkbox"/>	Nuts and Grains Almond VL <input type="checkbox"/> Buckwheat 0 <input type="checkbox"/> Corn 3+ <input type="checkbox"/> Corn gluten 1+ <input type="checkbox"/> Gluten 0 <input type="checkbox"/> Kidney bean 0 <input type="checkbox"/> Lentil 0 <input type="checkbox"/> Lima bean 0 <input type="checkbox"/> Oat 1+ <input type="checkbox"/> Peanut 0 <input type="checkbox"/> Pecan 3+ <input type="checkbox"/> Pinto bean 0 <input type="checkbox"/> Rice VL <input type="checkbox"/> Rye 0 <input type="checkbox"/> Sesame 1+ <input type="checkbox"/> Soy 0 <input type="checkbox"/> Sunflower seed 0 <input type="checkbox"/> Walnut VL <input type="checkbox"/> Wheat 1+ <input type="checkbox"/> Miscellaneous Yeast 1+ <input type="checkbox"/> Cane sugar 1+ <input type="checkbox"/> Chocolate VL <input type="checkbox"/> Coffee VL <input type="checkbox"/> Honey 0 <input type="checkbox"/>
Total IgE			
Total IgE ♦		Inside <input type="checkbox"/>	Outside <input type="checkbox"/> 298.0
		Reference Range	<=87.0 IU/mL
0 <input type="checkbox"/> None Detected VL <input type="checkbox"/> Very Low 1+ <input type="checkbox"/> Low 2+ <input type="checkbox"/> Moderate 3+ <input type="checkbox"/> High			



IgE Food Antibody Assessment

IgE Food Antibody Results							
	RESULT kU/L	CLASS	INDICATOR		RESULT kU/L	CLASS	INDICATOR
Grains				Nuts			
Buckwheat	0.89	II		Almond	0.24	0/1	
Corn	16.31	V		Brazil Nut	<0.24	0/1	
Oat	<0.24	0/1		Coconut	0.4	II	
Rice	<0.24	0/1		Hazelnut	<0.24	0/1	
Sesame	<0.24	0/1		Peanut	98.36	VI	
Soybean	<0.24	0/1		Seafood			
Wheat	1.3	III		Blue Mussel	26.12	VI	
Dairy				Codfish	3.89	III	
Egg White	0.26	I		Salmon	<0.24	0/1	
Cow's Milk	<0.24	0/1		Shrimp	3.9	III	
				Tuna	<0.24	0/1	



Celiac Assessment

<i>Immunologic Markers</i>			
Biomarker	Result		Reference Range
Total IgA	139.8	Sufficient	62.0-343.0 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	2.1	Negative	<=4 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	17.2	Negative	<=19 U/mL
Anti-Endomysial IgA (EMA IgA)	Not Detected		Not Detected
Anti-Gliadin IgA (AGA IgA)	21	Weak Positive	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	32	Strong Positive	<20 U/mL



Food Allergy Antibody Profiles

- An invaluable starting point for dietary interventions
- IgE mediated reactions
- Skin scratch testing
- IgG mediated reactions
- Assessment of relative IgG Ab levels to food via ELISA technology



IgE vs IgG Mediated Allergies/Sensitivities

IgE-Mediated Allergies

- Immediate onset, circulating t_{1/2} 1-2 days, permanent
- Stimulates histamine response, includes foods, inhalants and molds
- Can occur from relatively few exposures to a food, or can be generated due to increased exposure to the food

IgG-Mediated Immune Response

- Delayed onset, circulating t_{1/2} of 21 days, temporary
- Stimulates histamine release and activates complement, includes foods, herbs, and spices
- Dependent on the frequency of exposure to the food



Clinical Pearl

- Testing Food Ab, IgE and IgG, is a component of understanding the **total antigenic load** related to food and environmental sensitivities which are associated with a wide range of medical conditions affecting virtually every part of the body!
- IgE Ab assessment offers quantitative IgE levels to the most common types of dietary allergens as well as for regional inhalants and molds
- IgG Ab assessment provides IgG Ab levels to 87 foods, and additional vegetables and spices



Understanding the Food Ab Report

- The report provides information on 2 types of allergic/immune responses to specific foods via IgG/IgE measurements
- The degree of clinical symptoms may not directly correlate with the level of circulating antibodies; e.g. a low concentration of IgG Ab may be associated with strong reactions, while a high concentration of IgG Ab can be present despite the absence of symptoms



IgG-Mediated Delayed Sensitivities...Can Be Difficult to Recognize

- Reactions occur hours or days after the particular food is eaten
- IgG response to a particular food may come and go in cycles, depending on whether the food is eaten or avoided
- Results from eating too much of a particular food, too frequently
- Symptoms and conditions that may be profoundly influenced by IgG-Mediated Immune Response to food:
 - Acne, ADD/ADHD, Anxiety, Asthma, Arthritis, Bloating, Celiac DX, Colitis, Ear Infections, Fatigue, Headache, IBS, Insomnia, Joint pain
- Can take 3-9 months for the Ab level to a particular food to decrease significantly



IgE-Mediated Classic Allergies...Immediate Response

- Occurs within minutes of eating the food, thus the reaction can usually be traced to the food...peanuts, shellfish, strawberries
- Once a food has caused an IgE response, it is considered an allergy for life. These foods need to be avoided permanently, even if IgE Ab levels are not elevated
- If there is a known IgE food allergy from previous testing and the food has been completely eliminated from the diet, results will be negative
 - This means that the food has been successfully eliminated from the diet
- IgE Ab levels to a particular food will drop significantly, within weeks, when the particular food is avoided. As soon as the food is consumed again, IgE Abs appear again



Factors to Be Considered That Impact Symptom Development and Severity:

- An individual's "total load" of metabolic and inflammatory stressors on the immune system
- The ability of the immune system to prevent symptoms
- The ability of the intestinal wall to act as an effective barrier to food antigens



The Immune System

An Important Consideration....

- When there is an elevated IgG for a food, but no symptoms to that food...
 - your body may be able to neutralize the reaction before symptoms occur...
concept of Total Antigenic Load



The Immune System

- Consider hidden sources of the reactive food in medications
- Example: some calcium supplements are derived from oyster shell which causes a positive antigenic response even though you don't eat oysters
- It is important to check ingredient labels on foods to identify hidden sources of common food allergens...wheat, soybean, egg, milk



The Immune System

- IgG-mediated food responses can be delayed by hours to days, and thus it can be difficult to ascribe symptoms to a particular food
- Sometimes eating an allergenic food can even temporarily make the patient feel better before making him/her feel worse; this makes it even more challenging to identify the source



The Immune System

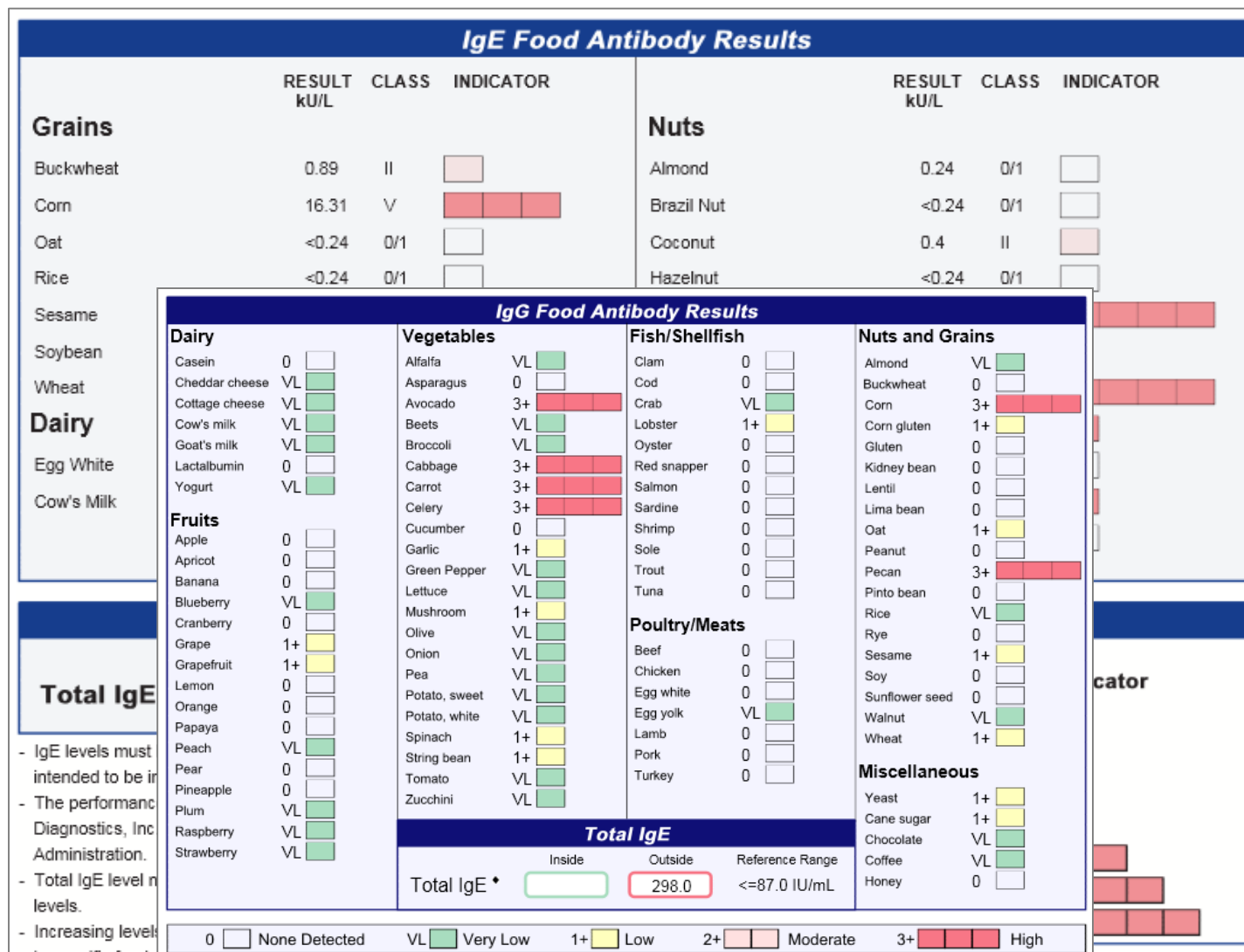
- What if...
 - ...the test shows LOW IgG Ab levels to a food which elicits a noticeable symptom?
- The immune system may be weak or suppressed and unable to produce AB
- The food may have been eliminated for a while
- The symptom may be to an additive (food coloring) or contaminant (mold), that accompany the food
- A food related symptom may not be mediated by IgE or IgG Ab but by a non-immune mediated reaction...e.g., lactase deficiency, MSG



Immune Panels: IgE and IgG Food Antibody Assessments

• IgE food allergies and IgG food sensitivities can cause a multitude of symptoms

• When offending foods are removed from the diet, symptoms may resolve





IgE and IgG Food Antibody Assessments -Treatment Options

- IgE- mediated food allergies:
 - Permanent removal of that food from the diet
- IgG- mediated food sensitivities:
 - Eliminate the food(s) for 3-6 months, then reintroduce
 - 4- Day rotation diet to minimize exposure to sensitivities
- Quercetin, vitamin C, fish oils decrease inflammation



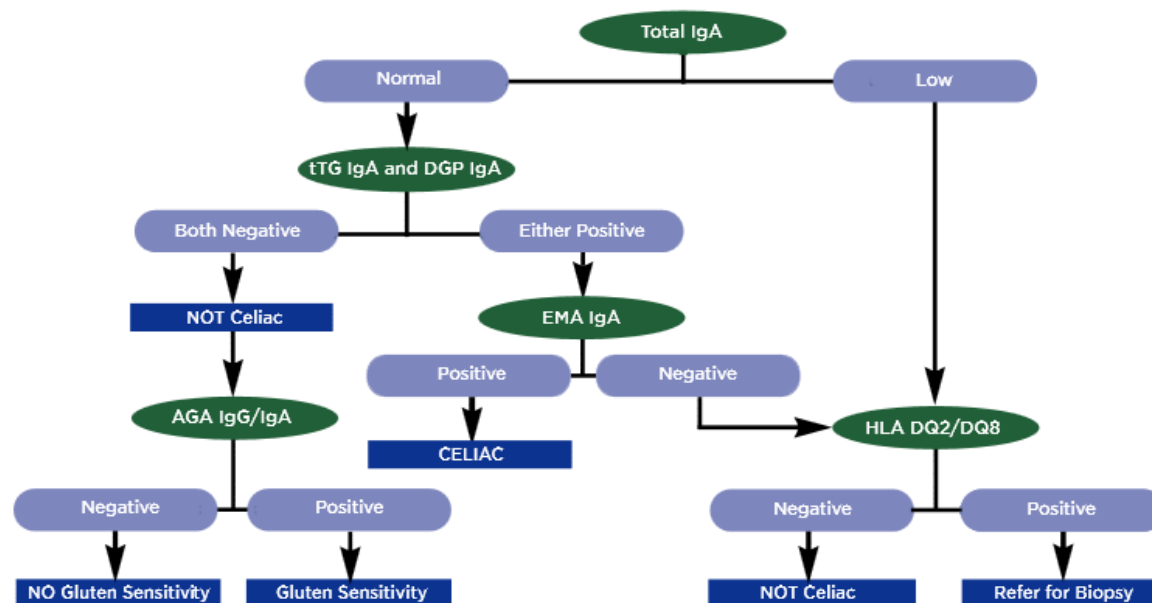
Immune Diagnostics: Celiac and Gluten Sensitivity

- Testing for Celiac Disease is usually part of the conventional workup for a patient with IBS symptoms

- Treatment may involve eliminating gluten from the diet

Immunologic Markers			
Biomarker	Result		Reference Range
Total IgA	139.8	Sufficient	62.0-343.0 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	2.1	Negative	<=4 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	17.2	Negative	<=19 U/mL
Anti-Endomysial IgA (EMA IgA)	Not Detected		Not Detected
Anti-Gliadin IgA (AGA IgA)	21	Weak Positive	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	32	Strong Positive	<20 U/mL

Interpretation
Patient results are consistent with Gluten Sensitivity.





Celiac and Gluten Sensitivity - Treatment Options

- **Celiac:** Permanent removal of gluten from diet
- **Gluten Sensitivity:** Eliminate gluten for 3-6 months, then reintroduce and monitor for symptoms





Case Studies





Case #1 19 yo Male: Sophomore in College

Chief Complaint

- Anxiety, fatigue, stomach aches only with food; if don't eat, no stomach ache, headaches and allergies (new this year)

Meds:

- Albuterol MDI prn
- Adderall ER prn when at school; N.B. Adderall IR increases anxiety
- Zyrtec 2-3x/wk
- Advil
- Marijuana most days (decreases anxiety)





IgG Food Antibody Results

Dairy	Vegetables	Fish/Shellfish	Nuts and Grains
Casein 1+	Alfalfa 0	Clam 0	Almond 0
Cheddar cheese 1+	Asparagus 0	Cod 0	Buckwheat 0
Cottage cheese 1+	Avocado 0	Crab 0	Corn 0
Cow's milk 1+	Beets 0	Lobster 0	Corn gluten 0
Goat's milk 1+	Broccoli 0	Oyster 0	Gluten 2+
Lactalbumin VL	Cabbage 0	Red snapper 0	Kidney bean 0
Yogurt 0	Carrot 0	Salmon 0	Lentil 0
Fruits	Celery 0	Sardine 0	Lima bean 0
Apple 0	Cucumber 0	Shrimp 0	Oat 0
Apricot 0	Garlic 0	Sole 0	Peanut 0
Banana 0	Green Pepper 0	Trout 0	Pecan 0
Blueberry 0	Lettuce 0	Tuna 0	Pinto bean 0
Cranberry 0	Mushroom 0	Poultry/Meats	Rice 0
Grape 0	Olive 0	Beef 0	Rye 0
Grapefruit 0	Onion 0	Chicken 0	Sesame 0
Lemon 0	Pea 0	Egg white VL	Soy 0
Orange 0	Potato, sweet 0	Egg yolk VL	Sunflower seed 0
Papaya 0	Potato, white 0	Lamb 0	Walnut 0
Peach 0	Spinach 0	Pork 0	Wheat 3+
Pear 0	String bean 0	Turkey 0	Miscellaneous
Pineapple 0	Tomato 0		Yeast VL
Plum 0	Zucchini 0		Cane sugar 0
Raspberry 0			Chocolate 0
Strawberry 0			Coffee 0
Total IgE			
Total IgE ◆ Inside 23.1 Outside Reference Range <=87.0 IU/mL			

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



<i>IgG Vegetable Food Results</i>					
Artichoke	0	<input type="checkbox"/>	Garbonzo	VL	<input checked="" type="checkbox"/>
Bean sprout	VL	<input checked="" type="checkbox"/>	Filbert	VL	<input checked="" type="checkbox"/>
Cantaloupe	0	<input type="checkbox"/>	Kamut	2+	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Cashew	VL	<input checked="" type="checkbox"/>	Millet	VL	<input checked="" type="checkbox"/>
Cherry	0	<input type="checkbox"/>	Mung bean	VL	<input checked="" type="checkbox"/>
Coconut	0	<input type="checkbox"/>	Navy bean	0	<input type="checkbox"/>
Flax seed	VL	<input checked="" type="checkbox"/>	Oat bran	1+	<input checked="" type="checkbox"/>
			Parmesan cheese	1+	<input checked="" type="checkbox"/>
			Pistachio	0	<input type="checkbox"/>
			Safflower	VL	<input checked="" type="checkbox"/>
			Triticale	VL	<input checked="" type="checkbox"/>
			Watermelon	VL	<input checked="" type="checkbox"/>
			Wheat bran	3+	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Wild rice	VL	<input checked="" type="checkbox"/>

<i>IgG Spice Antibody Results</i>					
Allspice	VL	<input checked="" type="checkbox"/>	Curry	0	<input type="checkbox"/>
Basil	VL	<input checked="" type="checkbox"/>	Dill	VL	<input checked="" type="checkbox"/>
Bayleaf	0	<input type="checkbox"/>	Fennel	0	<input type="checkbox"/>
Black Pepper	VL	<input checked="" type="checkbox"/>	Ginger	VL	<input checked="" type="checkbox"/>
Cayenne	VL	<input checked="" type="checkbox"/>	Horseradish	0	<input type="checkbox"/>
Cinnamon	VL	<input checked="" type="checkbox"/>	Marjoram	0	<input type="checkbox"/>
Cloves	0	<input type="checkbox"/>	Mustard	VL	<input checked="" type="checkbox"/>
Cumin	VL	<input checked="" type="checkbox"/>	Nutmeg	0	<input type="checkbox"/>
			Oregano	0	<input type="checkbox"/>
			Paprika	VL	<input checked="" type="checkbox"/>
			Parsley	VL	<input checked="" type="checkbox"/>
			Peppermint	VL	<input checked="" type="checkbox"/>
			Rosemary	0	<input type="checkbox"/>
			Sage	VL	<input checked="" type="checkbox"/>
			Thyme	VL	<input checked="" type="checkbox"/>
			Vanilla	0	<input type="checkbox"/>

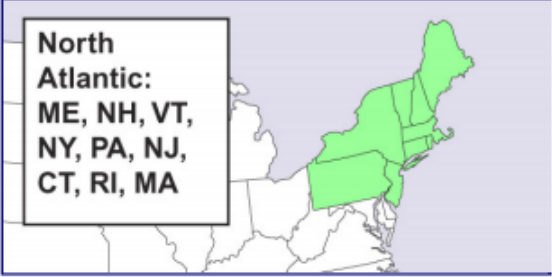


IgE Antibody Levels

INHALANT	RESULT	CLASS	INDICATOR
	kU/L		
Trees			
Elm	<0.24	0/1	<input type="checkbox"/>
Maple	<0.24	0/1	<input type="checkbox"/>
Oak	<0.24	0/1	<input type="checkbox"/>
Birch	<0.24	0/1	<input type="checkbox"/>
Grasses			
Bermuda Grass	<0.24	0/1	<input type="checkbox"/>
Johnson Grass	<0.24	0/1	<input type="checkbox"/>
Timothy Grass	<0.24	0/1	<input type="checkbox"/>
Weeds			
Lamb's quarters	<0.24	0/1	<input type="checkbox"/>
Common Ragweed	<0.24	0/1	<input type="checkbox"/>
Molds			
Mold Generic	<0.24	0/1	<input type="checkbox"/>
Misc.			
Cat dander	<0.24	0/1	<input type="checkbox"/>
Cockroach	<0.24	0/1	<input type="checkbox"/>
Dog dander	<0.24	0/1	<input type="checkbox"/>
Mite - D. farinae	17.9	V	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Mite - D. microceras	20.7	V	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Mite - D. pteronyssinus	11.9	IV	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Lab Comments

Inhalant Region



Total IgE			
	Inside	Outside	Reference Range
Total IgE	23.1		<=87.0 IU/mL

Key			
Class	kU/L	Levels of Specific IgE	Indicator
0/1	<=0.24	Undetectable or Equivocal	<input type="checkbox"/>
I	0.25 - 0.39	Low	<input type="checkbox"/>
II	0.4 - 1.29	Moderate	<input type="checkbox"/>
III	1.3 - 3.89	High	<input type="checkbox"/>
IV	3.9 - 14.99	Very High	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
V	15 - 24.99	Very High	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
VI	>=25	Very High	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>



Immunologic Markers

Biomarker	Result		Reference Range
Total IgA	121	Sufficient	68-514 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	<1.2	Negative	<4.0 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	3	Negative	<20 U/mL
Anti-Gliadin IgA (AGA IgA)	27	Weak Positive	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	81	Strong Positive	<20 U/mL



Case #1: 19 yo Male: Follow-up

Treatment:

- Lifestyle: Mite covers, remove dust collectors
- Eliminate wheat, gluten, and dairy x 3mo

Rx Protocol:

- Mito/ ATP cocktail, B5-B6, Omega's and D3

1 MONTH F/U:

- Improved fatigue 8/10—>6/10
- Improved stomach aches 10/10 -> 2/10
- Improved headaches—> resolved
- Anxiety continues when under stress





Case #2 19 yo Female: College Freshman

Chief Compliant:

- “Inconsistent energy/ wired and tired, afternoon fatigue, hives, crave sugar but it’s horrible for me, chronic acne—on antibiotics, and bloat around face.”

Meds:

- Antihistamine prn
- OCP
- Fish Oil
- Probiotic
- Vitamin D3
- B complex
- MTHF





IgG Food Antibody Results				
Dairy Casein VL Cheddar cheese VL Cottage cheese VL Cow's milk 1+ Goat's milk VL Lactalbumin VL Yogurt 0	Vegetables Alfalfa 0 Asparagus 0 Avocado 0 Beets 0 Broccoli 0 Cabbage 0 Carrot 0 Celery 0 Cucumber 0 Garlic 0 Green Pepper 0 Lettuce 0 Mushroom 0 Olive 0 Onion 0 Pea 0 Potato, sweet 0 Potato, white 0 Spinach 0 String bean 0 Tomato 0 Zucchini 0	Fish/Shellfish Clam VL Cod 1+ Crab 0 Lobster 0 Oyster 0 Red snapper VL Salmon 0 Sardine 0 Shrimp 0 Sole 1+ Trout 0 Tuna VL	Nuts and Grains Almond 3+ Buckwheat 0 Corn 0 Corn gluten 0 Gluten VL Kidney bean 0 Lentil 0 Lima bean 0 Oat 0 Peanut 3+ Pecan 0 Pinto bean 0 Rice 0 Rye 0 Sesame VL Soy 1+ Sunflower seed 0 Walnut VL Wheat 2+	
Fruits Apple 0 Apricot 0 Banana VL Blueberry 0 Cranberry 0 Grape 0 Grapefruit 0 Lemon 0 Orange 0 Papaya 0 Peach 0 Pear 0 Pineapple VL Plum 0 Raspberry 0 Strawberry 0	Total IgE Inside Outside Reference Range Total IgE ◆ 144.0 <=87.0 IU/mL			Miscellaneous Yeast VL Cane sugar 0 Chocolate 0 Coffee 0

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



IgE Food Antibody Results			
	RESULT kU/L	CLASS	INDICATOR
Grains			
Buckwheat	<0.24	0/1	<input type="checkbox"/>
Corn	<0.24	0/1	<input type="checkbox"/>
Oat	<0.24	0/1	<input type="checkbox"/>
Rice	<0.24	0/1	<input type="checkbox"/>
Sesame	<0.24	0/1	<input type="checkbox"/>
Soybean	<0.24	0/1	<input type="checkbox"/>
Wheat	<0.24	0/1	<input type="checkbox"/>
Dairy			
Egg white	<0.24	0/1	<input type="checkbox"/>
Cow's milk	<0.24	0/1	<input type="checkbox"/>
Nuts			
Almond	<0.24	0/1	<input type="checkbox"/>
Brazil nut	<0.24	0/1	<input type="checkbox"/>
Coconut	<0.24	0/1	<input type="checkbox"/>
Hazelnut	<0.24	0/1	<input type="checkbox"/>
Peanut	<0.24	0/1	<input type="checkbox"/>
Seafood			
Blue mussel	<0.24	0/1	<input type="checkbox"/>
Codfish	<0.24	0/1	<input type="checkbox"/>
Salmon	<0.24	0/1	<input type="checkbox"/>
Shrimp	<0.24	0/1	<input type="checkbox"/>
Tuna	<0.24	0/1	<input type="checkbox"/>

Total IgE			
	Inside	Outside	Reference Range
Total IgE	<input type="text" value=""/>	<input type="text" value="144.0"/>	<=87.0 IU/mL

- IgE levels must be used in conjunction with the clinical picture and are not intended to be independently diagnostic.
- The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. All assays are 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 clinical reactivity to specific foods.

Key			
Class	kU/L	Levels of Specific IgE	Indicator
0/1	<=0.24	Undetectable or Equivocal	<input type="checkbox"/>
I	0.25 - 0.39	Low	<input type="checkbox"/>
II	0.4 - 1.29	Moderate	<input type="checkbox"/>
III	1.3 - 3.89	High	<input type="checkbox"/>
IV	3.9 - 14.99	Very High	<input type="checkbox"/>
V	15 - 24.99	Very High	<input type="checkbox"/>
VI	>=25	Very High	<input type="checkbox"/>



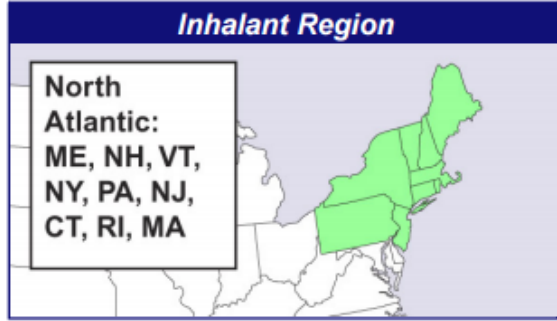
<i>IgG Vegetable Food Results</i>		
Artichoke	0	<input type="checkbox"/>
Bean sprout	0	<input type="checkbox"/>
Cantaloupe	0	<input type="checkbox"/>
Cashew	2+	<input type="checkbox"/> <input type="checkbox"/>
Cherry	0	<input type="checkbox"/>
Coconut	0	<input type="checkbox"/>
Flax seed	0	<input type="checkbox"/>
Garbonzo	1+	<input type="checkbox"/>
Filbert	0	<input type="checkbox"/>
Kamut	0	<input type="checkbox"/>
Millet	0	<input type="checkbox"/>
Mung bean	0	<input type="checkbox"/>
Navy bean	0	<input type="checkbox"/>
Oat bran	0	<input type="checkbox"/>
Parmesan cheese	VL	<input type="checkbox"/>
Pistachio	3+	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Safflower	0	<input type="checkbox"/>
Triticale	0	<input type="checkbox"/>
Watermelon	0	<input type="checkbox"/>
Wheat bran	VL	<input type="checkbox"/>
Wild rice	0	<input type="checkbox"/>

<i>IgG Spice Antibody Results</i>		
Allspice	0	<input type="checkbox"/>
Basil	VL	<input type="checkbox"/>
Bayleaf	0	<input type="checkbox"/>
Black Pepper	0	<input type="checkbox"/>
Cayenne	VL	<input type="checkbox"/>
Cinnamon	VL	<input type="checkbox"/>
Cloves	0	<input type="checkbox"/>
Cumin	0	<input type="checkbox"/>
Curry	0	<input type="checkbox"/>
Dill	VL	<input type="checkbox"/>
Fennel	1+	<input type="checkbox"/>
Ginger	VL	<input type="checkbox"/>
Horseradish	0	<input type="checkbox"/>
Marjoram	0	<input type="checkbox"/>
Mustard	VL	<input type="checkbox"/>
Nutmeg	0	<input type="checkbox"/>
Oregano	0	<input type="checkbox"/>
Paprika	0	<input type="checkbox"/>
Parsley	0	<input type="checkbox"/>
Peppermint	0	<input type="checkbox"/>
Rosemary	0	<input type="checkbox"/>
Sage	VL	<input type="checkbox"/>
Thyme	0	<input type="checkbox"/>
Vanilla	1+	<input type="checkbox"/>



IgE Antibody Levels

INHALANT	RESULT	CLASS	INDICATOR
	kU/L		
Trees			
Elm	<0.24	0/1	<input type="checkbox"/>
Maple	<0.24	0/1	<input type="checkbox"/>
Oak	<0.24	0/1	<input type="checkbox"/>
Birch	1.62	III	<input checked="" type="checkbox"/>
Grasses			
Bermuda Grass	<0.24	0/1	<input type="checkbox"/>
Johnson Grass	<0.24	0/1	<input type="checkbox"/>
Timothy Grass	2.54	III	<input checked="" type="checkbox"/>
Weeds			
Lamb's quarters	<0.24	0/1	<input type="checkbox"/>
Common Ragweed	<0.24	0/1	<input type="checkbox"/>
Molds			
Mold Generic	<0.24	0/1	<input type="checkbox"/>
Misc.			
Cat dander	<0.24	0/1	<input type="checkbox"/>
Cockroach	<0.24	0/1	<input type="checkbox"/>
Dog dander	<0.24	0/1	<input type="checkbox"/>
Mite - D. farinae	11.7	IV	<input checked="" type="checkbox"/>
Mite - D. microceras	17.0	V	<input checked="" type="checkbox"/>
Mite - D. pteronyssinus	12.3	IV	<input checked="" type="checkbox"/>



Total IgE

	Inside	Outside	Reference Range
Total IgE	<input type="checkbox"/>	<input checked="" type="checkbox"/> 144.0	<=87.0 IU/mL

Key

Class	kU/L	Levels of Specific IgE	Indicator
0/1	<=0.24	Undetectable or Equivocal	<input type="checkbox"/>
I	0.25 - 0.39	Low	<input type="checkbox"/>
II	0.4 - 1.29	Moderate	<input type="checkbox"/>
III	1.3 - 3.89	High	<input checked="" type="checkbox"/>
IV	3.9 - 14.99	Very High	<input checked="" type="checkbox"/>
V	15 - 24.99	Very High	<input checked="" type="checkbox"/>
VI	>=25	Very High	<input checked="" type="checkbox"/>

Lab Comments



Immunologic Markers

Biomarker	Result		Reference Range
Total IgA	202	Sufficient	69-446 mg/dL
Anti-Tissue Transglutaminase IgA (TTG IgA)	<1.2	Negative	<4.0 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	9	Negative	<20 U/mL
Anti-Gliadin IgA (AGA IgA)	15	Negative	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	23	Weak Positive	<20 U/mL

Interpretation

Patient results are consistent with Possible Gluten Sensitivity. Clinical correlation advised.



Case #2 19yo Female: Follow-up

Treatment

- Lifestyle:
- Mite precautions
- Elimination Diet : Peanuts, Almonds, Pistachio, Cashew, Wheat and Gluten

- Note: recent concussion during soccer with headaches and memory c/o .. goal to decrease total load to immune system

Rx Protocol: Continue

- Antihistamine prn
- OCP
- Fish Oil
- Probiotic
- D3
- B complex
- MTHF





Case #3 44 yo Female: Office Worker

Chief Complaint:

- “hard time being productive, staying focused, getting job done; poor sleep quality, bloating. My thyroid test results may be normal, but I still feel so tired; I wake up tired and I’m tired all day long; energy 1/10”

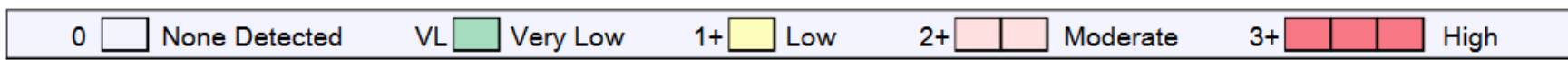
Meds:

- Synthroid





IgG Food Antibody Results							
Dairy		Vegetables		Fish/Shellfish		Nuts and Grains	
Casein	VL	Alfalfa	2+	Clam	VL	Almond	3+
Cheddar cheese	1+	Asparagus	3+	Cod	VL	Buckwheat	1+
Cottage cheese	1+	Avocado	VL	Crab	VL	Corn	VL
Cow's milk	VL	Beets	1+	Lobster	VL	Corn gluten	VL
Goat's milk	0	Broccoli	1+	Oyster	1+	Gluten	2+
Lactalbumin	1+	Cabbage	2+	Red snapper	VL	Kidney bean	3+
Yogurt	VL	Carrot	1+	Salmon	VL	Lentil	VL
Fruits		Celery	2+	Sardine	0	Lima bean	1+
Apple	VL	Cucumber	3+	Shrimp	VL	Oat	1+
Apricot	1+	Garlic	1+	Sole	1+	Peanut	1+
Banana	1+	Green Pepper	1+	Trout	VL	Pecan	2+
Blueberry	0	Lettuce	1+	Tuna	VL	Pinto bean	3+
Cranberry	2+	Mushroom	1+	Poultry/Meats			
Grape	1+	Olive	VL	Beef	VL	Rice	VL
Grapefruit	2+	Onion	1+	Chicken	2+	Rye	VL
Lemon	VL	Pea	VL	Egg white	1+	Sesame	VL
Orange	VL	Potato, sweet	1+	Egg yolk	2+	Soy	2+
Papaya	VL	Potato, white	2+	Lamb	VL	Sunflower seed	2+
Peach	VL	Spinach	1+	Pork	VL	Walnut	1+
Pear	VL	String bean	3+	Turkey	1+	Wheat	1+
Pineapple	1+	Tomato	VL	Miscellaneous			
Plum	VL	Zucchini	VL	Yeast	1+	Cane sugar	VL
Raspberry	VL	Total IgE					
Strawberry	VL	Inside <input type="text"/> Outside <input type="text"/> Reference Range <input type="text"/>					
		Total IgE ♦ <input type="text"/> 299.0 <input type="text"/> ≤87.0 IU/mL					





Celiac and Gluten Sensitivity

<i>Immunologic Markers</i>			
Biomarker	Result		Reference Range
Total IgA	118	Sufficient	69-446 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	<1.2	Negative	<4.0 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	5	Negative	<20 U/mL
Anti-Gliadin IgA (AGA IgA)	10	Negative	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	50	Strong Positive	<20 U/mL

Interpretation

Patient results are consistent with Possible Gluten Sensitivity. Clinical correlation advised.



Nutrition Evaluation

Malabsorption and Dysbiosis Markers

Malabsorption Markers	Reference Range
Indoleacetic Acid (IAA)	1.2 (Value) <= 4.2
Phenylacetic Acid (PAA)	0.13 (Value) <= 0.12

Bacterial Dysbiosis Markers

Dihydroxyphenylpropionic Acid (DHPPA)	7.9 (Value) <= 5.3
3-Hydroxyphenylacetic Acid	9.6 (Value) <= 8.1
4-Hydroxyphenylacetic Acid	13 (Value) <= 29
Benzoic Acid	0.10 (Value) <= 0.05
Hippuric Acid	<dl (Value) <= 603

Cellular Energy & Mitochondrial Metabolites

Carbohydrate Metabolism	Reference Range
Lactic Acid	13.4 (Value) 1.9-19.8
Pyruvic Acid	25 (Value) 7-32
β-OH-Butyric Acid (BHBA)	1.4 (Value) <= 2.8

Energy Metabolism

Citric Acid	114 (Value) 40-520
Cis-Aconitic Acid	9 (Value) 10-36
Isocitric Acid	22 (Value) 22-65
α-Ketoglutaric Acid (AKG)	22 (Value) 4-52
Succinic Acid	1.9 (Value) 0.4-4.6
Malic Acid	2.7 (Value) <= 3.0
β-OH-β-Methylglutaric Acid (HMG)	6 (Value) <= 15

Fatty Acid Metabolism

Adipic Acid	0.8 (Value) <= 2.8
Suberic Acid	0.8 (Value) <= 2.1

Vitamin D

Inside Range Outside Range Reference Range

25 - OH Vitamin D ♦	<input type="text" value=""/>	24	50-100 ng/mL
---------------------	-------------------------------	----	--------------



Case #3 44 yo Female: Treatment

Lifestyle:

- Elimination diet and Eliminate Gluten
- Meditation

Rx Protocol:

- TT: DHEA 1 mg/ Pregnenolone gtt; Multivit 3 caps /d
- Mito cocktail, D3, B12, Probiotic 50 billion cfu/day, w/ food



Case #3 44 yo Female: Follow-up

- **3 Wk F/U:** bloating improving, energy and sleep improving 5-6/10
- **6 Wk F/U:**” sleeping so much better; good consistent energy all day 8/10”
- **12 Wk and 12mo F/U:** “sick free; fatigue- a thing of past; abd not an issue.”





Case #4 67 yo Female: Artist, Avid Hiker

Chief Complaint:

- “Colitis exacerbation.. mucus, diarrhea
- Usually Asacol prn... now 6/day & VSL 4/day,
 - and it’s not getting better; “Arthritic syndrome feeling seized up’, exhausted, chronic headache and my sinus symptoms are bad”

Meds:

- Asacol, T4, BIHST, Crestor

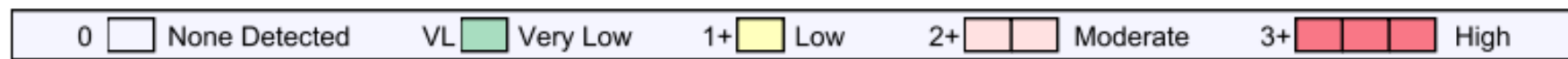
Supplements:

- too many to list





IgG Food Antibody Results				
<p>Dairy</p> <p>Casein 1+ </p> <p>Cheddar cheese 1+ </p> <p>Cottage cheese 2+ </p> <p>Cow's milk VL </p> <p>Goat's milk 2+ </p> <p>Lactalbumin 1+ </p> <p>Yogurt 1+ </p> <p>Fruits</p> <p>Apple 3+ </p> <p>Apricot VL </p> <p>Banana 3+ </p> <p>Blueberry 3+ </p> <p>Cranberry 3+ </p> <p>Grape 1+ </p> <p>Grapefruit 1+ </p> <p>Lemon 1+ </p> <p>Orange 1+ </p> <p>Papaya 1+ </p> <p>Peach 2+ </p> <p>Pear 1+ </p> <p>Pineapple 3+ </p> <p>Plum VL </p> <p>Raspberry 1+ </p> <p>Strawberry 1+ </p>	<p>Vegetables</p> <p>Alfalfa 2+ </p> <p>Asparagus 3+ </p> <p>Avocado VL </p> <p>Beets 1+ </p> <p>Broccoli 2+ </p> <p>Cabbage 1+ </p> <p>Carrot VL </p> <p>Celery 3+ </p> <p>Cucumber 3+ </p> <p>Garlic 1+ </p> <p>Green Pepper VL </p> <p>Lettuce 3+ </p> <p>Mushroom VL </p> <p>Olive VL </p> <p>Onion 3+ </p> <p>Pea 3+ </p> <p>Potato, sweet 2+ </p> <p>Potato, white 0 </p> <p>Spinach 3+ </p> <p>String bean 1+ </p> <p>Tomato 1+ </p> <p>Zucchini 2+ </p>	<p>Fish/Shellfish</p> <p>Clam 3+ </p> <p>Cod 1+ </p> <p>Crab VL </p> <p>Lobster 1+ </p> <p>Oyster 2+ </p> <p>Red snapper 1+ </p> <p>Salmon 1+ </p> <p>Sardine 1+ </p> <p>Shrimp 2+ </p> <p>Sole 1+ </p> <p>Trout 1+ </p> <p>Tuna 1+ </p> <p>Poultry/Meats</p> <p>Beef 1+ </p> <p>Chicken 1+ </p> <p>Egg white 0 </p> <p>Egg yolk 0 </p> <p>Lamb 0 </p> <p>Pork 1+ </p> <p>Turkey 1+ </p>	<p>Nuts and Grains</p> <p>Almond 0 </p> <p>Buckwheat 3+ </p> <p>Corn 3+ </p> <p>Corn gluten 2+ </p> <p>Gluten 0 </p> <p>Kidney bean 1+ </p> <p>Lentil 1+ </p> <p>Lima bean 1+ </p> <p>Oat 3+ </p> <p>Peanut 1+ </p> <p>Pecan 3+ </p> <p>Pinto bean 2+ </p> <p>Rice 1+ </p> <p>Rye 1+ </p> <p>Sesame VL </p> <p>Soy 1+ </p> <p>Sunflower seed VL </p> <p>Walnut 2+ </p> <p>Wheat 2+ </p> <p>Miscellaneous</p> <p>Yeast 1+ </p> <p>Cane sugar 3+ </p> <p>Chocolate 3+ </p> <p>Coffee 1+ </p>	
Total IgE				
		Inside	Outside	Reference Range
		Total IgE \blacklozenge 10.8		≤ 87.0 IU/mL





IgG Vegetable Food Results

Artichoke	1+		Garbonzo	3+		Parmesan cheese	1+	
Bean sprout	3+		Filbert	VL		Pistachio	3+	
Cantaloupe	1+		Kamut	VL		Safflower	VL	
Cashew	1+		Millet	VL		Triticale	2+	
Cherry	VL		Mung bean	1+		Watermelon	1+	
Coconut	3+		Navy bean	1+		Wheat bran	3+	
Flax seed	3+		Oat bran	3+		Wild rice	2+	

IgG Spice Antibody Results

Allspice	2+		Curry	3+		Oregano	1+	
Basil	VL		Dill	1+		Paprika	VL	
Bayleaf	1+		Fennel	2+		Parsley	VL	
Black Pepper	VL		Ginger	2+		Peppermint	1+	
Cayenne	1+		Horse radish	1+		Rosemary	1+	
Cinnamon	VL		Marjoram	1+		Sage	1+	
Cloves	VL		Mustard	VL		Thyme	1+	
Cumin	VL		Nutmeg	2+		Vanilla	2+	



Immunologic Markers		
Analyte	Result	Reference Range
Anti-Tissue Transglutaminase IgA	<1.23	<=3.99 U/mL
Anti-Tissue Transglutaminase IgG	2.51	<=5.99 U/mL
Total IgA	148.6 Sufficient	85.0-532.0 mg/dL
Anti-Gliadin Antibody IgA	<1.23	<=4.99 U/mL
Anti-Gliadin Antibody IgG	<1.23	<=9.99 U/mL



Case #4 67 yo Female: Treatment

Lifestyle:

- Elemental diet f/b GI repair program
- Adrenal Support
- Immune system support with peptides to stimulate T and B cell lines





Case #4 67 yo Female: Follow-up

1 month F/U:

Colitis improving → Asacol 6-2/d

Energy 1-2/10 → 6-7/10

2 month F/U:

Colitis → Asacol prn

Energy 8/10... "I cleaned my house from top to bottom!"

Not 'seized up' anymore, Haven't had any headaches



Case # 5 63 yo Male: Optometrist

Chief Complaint;

- “ED and fatigue”

PMH:

- UC s/p colectomy, Prostate Ca s/p prostatectomy, OSA, Afib, Rosacea

Meds:

- Metformin, T4, T3, ASA , B Blocker,
- Testosterone, Anastrozole, CPAP

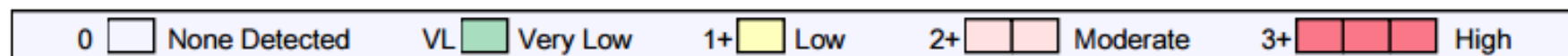
Supplements:

- too many to list (Life Extension)





IgG Food Antibody Results							
Dairy		Vegetables		Fish/Shellfish		Nuts and Grains	
Casein	1+	Alfalfa	3+	Clam	3+	Almond	1+
Cheddar cheese	VL	Asparagus	1+	Cod	3+	Buckwheat	3+
Cottage cheese	VL	Avocado	1+	Crab	3+	Corn	3+
Cow's milk	1+	Beets	3+	Lobster	3+	Corn gluten	2+
Goat's milk	2+	Broccoli	3+	Oyster	3+	Gluten	3+
Lactalbumin	1+	Cabbage	2+	Red snapper	3+	Kidney bean	2+
Yogurt	1+	Carrot	3+	Salmon	3+	Lentil	3+
Fruits		Celery	1+	Sardine	3+	Lima bean	3+
Apple	3+	Cucumber	3+	Shrimp	3+	Oat	3+
Apricot	2+	Garlic	3+	Sole	3+	Peanut	3+
Banana	1+	Green Pepper	2+	Trout	3+	Pecan	2+
Blueberry	3+	Lettuce	2+	Tuna	3+	Pinto bean	3+
Cranberry	3+	Mushroom	3+	Poultry/Meats		Rice	3+
Grape	2+	Olive	VL	Beef	3+	Rye	3+
Grapefruit	1+	Onion	3+	Chicken	3+	Sesame	1+
Lemon	3+	Pea	3+	Egg white	VL	Soy	3+
Orange	1+	Potato, sweet	3+	Egg yolk	1+	Sunflower seed	1+
Papaya	3+	Potato, white	2+	Lamb	3+	Walnut	3+
Peach	2+	Spinach	3+	Pork	3+	Wheat	3+
Pear	2+	String bean	2+	Turkey	3+	Miscellaneous	
Pineapple	1+	Tomato	3+			Yeast	2+
Plum	1+	Zucchini	3+			Cane sugar	1+
Raspberry	2+					Chocolate	3+
Strawberry	2+					Coffee	VL
				Total IgE			
				Inside	Outside	Reference Range	
				Total IgE ♦ 17.6		<=87.0 IU/mL	





<i>IgG Vegetable Food Results</i>		
Artichoke	2+	
Bean sprout	3+	
Cantaloupe	1+	
Cashew	3+	
Cherry	3+	
Coconut	3+	
Flax seed	3+	
Garbonzo	3+	
Filbert	1+	
Kamut	3+	
Millet	2+	
Mung bean	1+	
Navy bean	2+	
Oat bran	3+	
Parmesan cheese	VL	
Pistachio	2+	
Safflower	3+	
Triticale	3+	
Watermelon	3+	
Wheat bran	3+	
Wild rice	3+	

<i>IgG Spice Antibody Results</i>		
Allspice	1+	
Basil	1+	
Bayleaf	3+	
Black Pepper	1+	
Cayenne	1+	
Cinnamon	1+	
Cloves	3+	
Cumin	1+	
Curry	3+	
Dill	2+	
Fennel	3+	
Ginger	2+	
Horseradish	3+	
Marjoram	3+	
Mustard	VL	
Nutmeg	2+	
Oregano	3+	
Paprika	2+	
Parsley	3+	
Peppermint	2+	
Rosemary	3+	
Sage	1+	
Thyme	VL	
Vanilla	2+	



Immunologic Markers

Biomarker	Result		Reference Range
Total IgA	263	Sufficient	98-591 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	<1.2	Negative	<4.0 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	7	Negative	<20 U/mL
Anti-Gliadin IgA (AGA IgA)	5	Negative	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	1	Negative	<20 U/mL



Case # 5 63 yo Male: Treatment & Follow-up

- Very upset about results of Food Ab test
- Reports entirely asymptomatic
- Per MD (me😊) extensive skin rash, and c/o fatigue
- Decides to do the Metagenics 10 d Detox
- Post Detox he reintroduced foods, gradually based on likes/dislikes
- IgG- mediated food sensitivities:
 - 4- Day rotation diet to minimize exposure to sensitivities





Case #6 17 yo Female: Senior in High School

Chief Complaint:

- .. “s/p ER visit for anaphylaxis after eating steak meal”
- Referred to Allergy
- Chronic hives, urticaria, inconsistent energy, terrible sleep”

Meds:

- EpiPen prn

Supplements:

- none





IgG Food Antibody Results							
Dairy		Vegetables		Fish/Shellfish		Nuts and Grains	
Casein	3+	Alfalfa	0	Clam	0	Almond	1+
Cheddar cheese	3+	Asparagus	3+	Cod	1+	Buckwheat	VL
Cottage cheese	3+	Avocado	0	Crab	1+	Corn	VL
Cow's milk	3+	Beets	0	Lobster	0	Corn gluten	VL
Goat's milk	3+	Broccoli	VL	Oyster	VL	Gluten	3+
Lactalbumin	3+	Cabbage	0	Red snapper	0	Kidney bean	1+
Yogurt	3+	Carrot	1+	Salmon	VL	Lentil	VL
Fruits		Celery	1+	Sardine	VL	Lima bean	0
Apple	0	Cucumber	2+	Shrimp	VL	Oat	1+
Apricot	0	Garlic	1+	Sole	VL	Peanut	3+
Banana	1+	Green Pepper	0	Trout	1+	Pecan	3+
Blueberry	0	Lettuce	2+	Tuna	1+	Pinto bean	VL
Cranberry	0	Mushroom	3+	Poultry/Meats		Rice	1+
Grape	0	Olive	1+	Beef	3+	Rye	VL
Grapefruit	0	Onion	3+	Chicken	3+	Sesame	1+
Lemon	0	Pea	VL	Egg white	1+	Soy	3+
Orange	0	Potato, sweet	0	Egg yolk	3+	Sunflower seed	VL
Papaya	0	Potato, white	1+	Lamb	3+	Walnut	1+
Peach	0	Spinach	VL	Pork	0	Wheat	3+
Pear	0	String bean	1+	Turkey	0	Miscellaneous	
Pineapple	VL	Tomato	VL				
Plum	0	Zucchini	0				
Raspberry	0					Yeast	VL
Strawberry	0					Cane sugar	0
Total IgE							
		Inside	Outside	Reference Range			
		0	171.0	<=87.0 IU/mL			

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



IgE Food Antibody Results			
	RESULT kU/L	CLASS	INDICATOR
Grains			
Buckwheat	<0.24	0/1	<input type="checkbox"/>
Corn	<0.24	0/1	<input type="checkbox"/>
Oat	<0.24	0/1	<input type="checkbox"/>
Rice	<0.24	0/1	<input type="checkbox"/>
Sesame	<0.24	0/1	<input type="checkbox"/>
Soybean	<0.24	0/1	<input type="checkbox"/>
Wheat	<0.24	0/1	<input type="checkbox"/>
Dairy			
Egg white	<0.24	0/1	<input type="checkbox"/>
Cow's milk	<0.24	0/1	<input type="checkbox"/>
Nuts			
Almond	<0.24	0/1	<input type="checkbox"/>
Brazil nut	<0.24	0/1	<input type="checkbox"/>
Coconut	<0.24	0/1	<input type="checkbox"/>
Hazelnut	<0.24	0/1	<input type="checkbox"/>
Peanut	<0.24	0/1	<input type="checkbox"/>
Seafood			
Blue mussel	0.43	II	<input type="checkbox"/>
Codfish	<0.24	0/1	<input type="checkbox"/>
Salmon	<0.24	0/1	<input type="checkbox"/>
Shrimp	0.65	II	<input type="checkbox"/>
Tuna	<0.24	0/1	<input type="checkbox"/>

Total IgE			
	Inside	Outside	Reference Range
Total IgE	<input type="checkbox"/>	<input checked="" type="checkbox"/> 171.0	<=87.0 IU/mL

- IgE levels must be used in conjunction with the clinical picture and are not intended to be independently diagnostic.
- The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. All assays are 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 clinical reactivity to specific foods.

Key			
Class	kU/L	Levels of Specific IgE	Indicator
0/1	<=0.24	Undetectable or Equivocal	<input type="checkbox"/>
I	0.25 - 0.39	Low	<input type="checkbox"/>
II	0.4 - 1.29	Moderate	<input type="checkbox"/>
III	1.3 - 3.89	High	<input type="checkbox"/>
IV	3.9 - 14.99	Very High	<input type="checkbox"/>
V	15 - 24.99	Very High	<input type="checkbox"/>
VI	>=25	Very High	<input type="checkbox"/>



Immunologic Markers

Biomarker	Result		Reference Range
Total IgA	129	Sufficient	62-343 mg/dL
Anti-Tissue Transglutaminase IgA (tTG IgA)	<1.2	Negative	<4.0 U/mL
Anti-Deamidated Gliadin IgA (DGP IgA)	2	Negative	<20 U/mL
Anti-Gliadin IgA (AGA IgA)	8	Negative	<20 U/mL
Anti-Gliadin IgG (AGA IgG)	78	Strong Positive	<20 U/mL

Interpretation

Patient results are consistent with Possible Gluten Sensitivity. Clinical correlation advised.

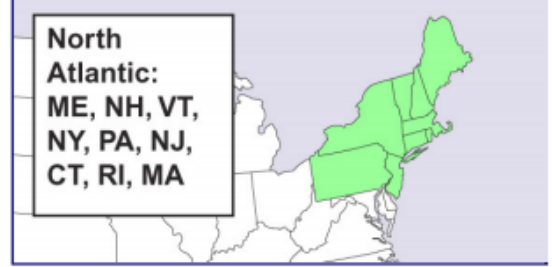


IgE Antibody Levels

INHALANT	RESULT	CLASS	INDICATOR
	kU/L		
Trees			
Elm	0.39	I	
Maple	0.29	I	
Oak	<0.24	0/1	
Birch	<0.24	0/1	
Grasses			
Bermuda Grass	<0.24	0/1	
Johnson Grass	<0.24	0/1	
Timothy Grass	<0.24	0/1	
Weeds			
Lamb's quarters	<0.24	0/1	
Common Ragweed	<0.24	0/1	
Molds			
Mold Generic	<0.24	0/1	
Misc.			
Cat dander	<0.24	0/1	
Cockroach	0.49	II	
Dog dander	<0.24	0/1	
Mite - D. farinae	36.0	VI	
Mite - D. microceras	48.3	VI	
Mite - D. pteronyssinus	46.5	VI	

Lab Comments

Inhalant Region



Total IgE

	Inside	Outside	Reference Range
Total IgE	 	171.0	<=87.0 IU/mL

Key

Class	kU/L	Levels of Specific IgE	Indicator
0/1	<=0.24	Undetectable or Equivocal	
I	0.25 - 0.39	Low	
II	0.4 - 1.29	Moderate	
III	1.3 - 3.89	High	
IV	3.9 - 14.99	Very High	
V	15 - 24.99	Very High	
VI	>=25	Very High	



Case #6 17 yo Female: Treatment

- Pt was unaware of IgE Allergy to shrimp and mussel; She had surf and turf (shrimp) when experienced anaphylaxis...
- IgE- mediated food allergies: permanent removal of that food from the diet
- IgG- mediated food sensitivities:
 - Eliminate the food(s) for 3-6 months, then reintroduce
 - 4- Day rotation diet to minimize exposure to sensitivities





Case #6 17 yo Female: : Follow Up

- **1 month:** Overall feeling better...
 - Less hives, better energy; sleep same
- **2 month:** Overall the same as at 1 month





Moderator:
Christine Stubbe, ND



Presenter:
Kathleen O'Neil Smith, MD., FAARM

Explore
WWW.GDX.NET

*for more information and
educational resources, including...*

LEARN GDX – Brief video modules

LIVE GDX – Previous webinar recordings

GI University – Focused learning modules

Conferences – Schedule of events we attend

Test Menu – Detailed test profile information

MY GDX – Order materials and get results

Questions?



Additional Education Materials:

WWW.GDX.NET

Sample Reports,
Support Guides,
Kit Instructions, FAQs,
Payment Options, and
much more!

The screenshot shows the Genova Diagnostics website homepage. At the top, the Genova Diagnostics logo is on the left, and navigation links for 'HOME', 'CLINICIANS', and 'PATIENTS' are on the right. The 'CLINICIANS' link is circled in red. Below the navigation is a banner for 'NutrEval® with Genomics' featuring a man and a woman in a kitchen. A 'LEARN MORE' button is present in the banner. Below the banner are three main content blocks: 'Getting Started' with a 'NEW USERS' button, 'Test Menu' with a 'SEARCH TESTS' button, and 'MYGDX Login' with a 'LOG IN' button. The 'LOG IN' button is circled in red. At the bottom, there is an 'Online Education' section with a 'LEARN NOW' button, which is also circled in red. The text in the 'Online Education' section reads: 'Visit our Medical Education section for access to LIVE GDX Webinars, Educational Modules, Conferences, and LEARN GDX – short learning modules that demonstrate the clinical utility and diagnostic significance of key biomarkers. The modules are absolutely free to view!' and 'Start Using These Free Resources Today!'.



Additional Questions?

US Client Services: 800-522-4762

UK Client Services: 020.8336.7750

Please schedule a complimentary appointment with one of our Medical Education Specialists for questions related to:

- Diagnostic profiles featured in this webinar
- How Genova's profiles might support patients in your clinical practice
- Review a profile that has already been completed on one of your patients

We look forward to hearing from you!



Upcoming ^{LIVE} GDX Webinar Topics

November 2016

- Sequential Stool Testing to Monitor Progress in Patients with Rheumatoid Arthritis
 - Susan Blum, MD

Register for upcoming ^{LIVE} GDX Webinars online at WWW.GDX.NET

The views and opinions expressed herein are solely those of the presenter and do not necessarily represent those of Genova Diagnostics. Thus, Genova Diagnostics does not accept liability for consequences of any actions taken on the basis of the information provided.





Using the Elimination Diet in Clinical Practice: Explanations and Case Studies

Kathleen O'Neil Smith, MD., FAARM



The views and opinions expressed herein are solely those of the presenter and do not necessarily represent those of Genova Diagnostics. Thus, Genova Diagnostics does not accept liability for consequences of any actions taken on the basis of the information provided.

