



Rocky Mountain Analytical®
Changing lives, one test at a time

Food Sensitivity

Information for Patients

Delayed Food Reactions

Food Allergy or Food Sensitivity?

In a food reaction, the immune system reacts by releasing cells called antibodies. Foods that cause antibodies to be released are called antigens or allergens. Two types of antibodies commonly produced in response to foods are IgE (immunoglobulin E) and IgG (immunoglobulin G). Food allergies and food sensitivities differ by the type of antibody produced and the speed of the reaction. Food allergy is an immediate reaction caused by the production of IgE antibodies, while food sensitivity is a delayed reaction caused by the production of IgG antibodies to specific foods.

Food Allergy IgE Reactions - Immediate

IgE reactions generally occur within minutes of eating a reactive food and can, on rare occasions, be life-threatening (e.g. peanut allergies). Skin eruptions (hives, eczema), breathing and digestive problems are also common IgE reactions. After first time exposure to an allergen, the body remembers what the allergen "looks like" and keeps a supply of IgE ready for immediate release if it "sees" that allergen again. Referral to a specialist is recommended in the case of serious food allergies (i.e. difficulty breathing, anaphylaxis).

Food Sensitivity IgG Reactions - Delayed

IgG reactions take hours or days to develop, making it difficult to determine the food cause without testing. In an IgG reaction, the IgG antibodies attach themselves to the antigen and create an antibody-antigen complex. These complexes are normally removed by special cells called macrophages. However, if they are present in large numbers and the food antigen is still being consumed, the macrophages are unable to remove all the complexes. The antigen-antibody complexes accumulate and are deposited in body tissues. Once in tissue, these complexes cause inflammation, which can contribute to a variety of diseases and health conditions.

Delayed food reactions are IgG antibody reactions (food sensitivities) that occur hours to days after a food is consumed. The inflammatory chemicals released with antibody-antigen complexes may have the following effects:

Systemic

Fever, fatigue, chills, sweating and feeling weak, puffiness.

Skin

Itching, redness, swelling, and rashes (including eczema, psoriasis).

Brain

Mood and memory disturbances and behavioural problems.

Lungs

Bronchitis and asthma symptoms.

Musculoskeletal

Joint pain, muscle stiffness and swelling.

Digestive tract

Nausea & vomiting, diarrhea, abdominal pain, gas, and bloating.

Conditions Associated with Food Sensitivities

Digestive disorders: Conditions like irritable bowel syndrome (IBS) and Crohn's disease have been linked to IgG food reactions. Research has shown that elimination of IgG reactive foods can alleviate IBS symptoms.

Migraines: A 2007 research study found that 43/65 patients with migraine headaches had complete remission of headaches after one month of eliminating reactive foods. Another study in 2010 found a significant reduction in the number of headache days and migraine attacks with elimination of reactive foods.

Mood/attention deficit disorders: Deposition of antibody-antigen complexes in nervous system tissues may contribute to hyperactivity, depression, anxiety, inability to concentrate and other mood disorders. There is some evidence that eliminating IgG food antigens improves attentiveness in children.

Weight gain: Antibody-antigen complexes in tissue cause inflammation, which leads to fluid retention and weight gain. To fight inflammation, the body releases a chemical called ghrelin, which also happens to be an appetite stimulant. Thus, IgG food reactions may contribute to weight gain in two ways: fluid retention and increased appetite.

Why Test Food Sensitivities?

- Because hours or days can pass between the time a reactive food is consumed and the occurrence of a reaction occurs, testing is virtually the only way to determine which foods are responsible for the reaction.
- IgG reactions frequently occur to commonly consumed foods such as dairy, wheat, eggs, yeast, pork and soy.
- Elimination diets (remove suspect foods for a period of time and then reintroduce and check for reactions) are difficult to follow and can take months to complete.

Information is for educational purposes only. It is not meant as medical advice and any treatment decisions should be made with the knowledge or consent of your healthcare professional.

Test Results

A sample **RMA FST™** report appears at right. Foods with green boxes next to them are considered normal, or non-reactive, while foods with orange boxes are borderline, or close to being reactive. The red shaded box food results are considered reactive. Thus, it is easy to see at a glance which foods are problematic for you. The **RMA FST™** also lists results by reactivity, so that all your reactive foods are grouped together. Knowing which foods you react to is an important first step to achieving better health. Your healthcare professional is best qualified to help you interpret the meaning of your results.

Food Group	Normal (G)	Borderline (O)	Reactive (R)
Dairy (Egg)			
Cheddar/Cheese	✓		
Egg White			✗
Milk (Cow)			✗
Grains			
Baker	✓		
Wheat			✗
Wheat (Gut)			✗
Grains (Gluten-Free)			
Almond	✓		
Maize	✓		
Rice	✓		
Fruit			
Apple	✓		
Banana	✓		
Berry	✓		
Cherry	✓		
Coconut	✓		
Orange	✓		
Pineapple	✓		
Strawberry	✓		
Watermelon	✓		
Vegetables			
Asparagus	✓		
Broccoli	✓		
Carrot	✓		
Spinach	✓		
Tomato	✓		
Other			
Alcohol	✓		
Coffee	✓		
Chocolate	✓		
Herbs	✓		
Legumes	✓		
Nuts	✓		
Seeds	✓		
Spices	✓		
Tea	✓		
Yeast	✓		

Eliminating Reactive Foods

Once you receive your results, your healthcare professional will help you formulate a plan to eliminate the problem foods from your diet. Most people see improvement of symptoms within a few weeks of eliminating the reactive foods. However, it is important to understand that symptom improvement may take some time, and results vary from individual to individual. Removing reactive foods from the diet can sometimes result in withdrawal symptoms like headaches, tiredness, irritability and hunger.

How “Leaky Gut” Contributes to Food Reactions

Leaky gut syndrome is caused by inflammation in the gut lining. Inflammation can be caused by food allergies or sensitivities, abnormal gut flora, stress, certain drugs, and alcohol. An inflamed gut lining causes more food particles to leak into the bloodstream where they may come in contact with food-specific immunoglobulins. Therefore, a test report that shows multiple food reactions to foods regularly eaten may be an indication of *leaky gut*. If so, your healthcare professional may suggest treatments for your digestive system in addition to dietary changes.

Unexpected Results

- If you have not eaten a particular food for many months, you are less likely to have antibodies to that food still. In that case, a lack of reaction is most probably due to lack of exposure and does not necessarily mean the food is non-reactive.
- Sometimes reactions appear for foods seldom or never eaten. For example: a child reacting to coffee. This may be due to cross-sensitivity with a related food, or may result from inadvertent exposure to that food (hidden ingredient in packaged food item or sauce). Elevated IgG may also have a role in protecting against more serious IgE reactions. It's important to understand that having elevated IgG antibodies is not a concern if the reactive food is rarely eaten.
- Non-immune food reactions: Food reactions can also arise from a lack of digestive enzymes or stomach acid, chemicals naturally present in food and artificial additives. For example: lactose intolerance is due to lactase enzyme deficiency; histamine is found in wine, cheese, spinach and tomatoes; and MSG is an additive that can produce symptoms in some people. These are not immune reactions, and therefore will not result in antibody production.
- Food reactions can also arise from previous negative experiences with a specific food (e.g. food poisoning), in that physical reactions to subsequent exposures are possible.

Good health has a lot to do with maintaining balance; the right balance of work and play, the right balance of nutrients in the diet, and the right kinds of foods.

Undiagnosed food sensitivities may contribute to symptoms and biochemical changes that result in illness.

Rocky Mountain Analytical is committed to offering tests that identify food reactions and other imbalances - so they can be corrected before disease develops!

Why Test?

Rocky Mountain Analytical was founded in 2002 with a mission to offer tests that focus on early identification and prevention of disease.

Rocky Mountain Analytical is an accredited medical laboratory located in Calgary, Alberta. Accreditation means tests performed by Rocky Mountain Analytical are regularly reviewed for quality, accuracy and reproducibility by the College of Physicians & Surgeons of Alberta.

Ask your healthcare professional whether a test is right for you.

About Us



Rocky Mountain Analytical®
 Changing lives, one test at a time
 an accredited medical laboratory