

Why Test for Food Allergies, Intolerances and Sensitivities in the Annual Exam?

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Food allergies and intolerances are rapidly becoming recognized as a significant trigger to initiating immune mediated response and inflammatory symptoms in individuals. Most chronic illnesses have a known inflammation component that drives its progression. This issue of underlying inflammation has become evident as a risk factor with the current pandemic.

Metaflammation (a new term used in the clinical literature) is a chronic state of hyperimmune issues that include increased production of inflammatory cytokine release. Current literature supports the fact that food allergies, intolerances and sensitivities are directly tied to meta-inflammatory sequelae and the release of GUT mucosal IgE and IgG type antibodies.

Screening for food allergies, sensitivities and intolerances helps determine where your patient “is” regarding underlying gut/immune responses. Identification of offending foods can provide valuable insight into dietary suggestions to help patients with their inability to overcome chronic inflammatory processes even with current accepted treatments.



Food intolerances/sensitivities should be assessed as a baseline to promote health and wellbeing. Chronic inflammatory conditions like autoimmunity, skin conditions, allergies, IBS, colitis type 2 diabetes and insulin resistance, thyroid issues, cardiovascular issues, cognitive decline and sex hormone imbalances are all areas where knowledge of food allergies and sensitivities could add tremendous insight to management of these conditions.¹ Food sensitivities and intolerances issues, which are IgG mediated, are much more common than true food allergies, with one study estimating a prevalence of 15-20% of the population.²



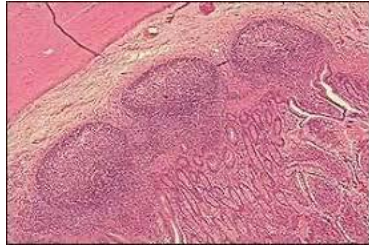
But how often should you test for food issues?

At a minimum testing for food allergies and sensitivities should be yearly so that the patient be more proactive in disease and symptom management. If they have significant health challenges or benefit from following the elimination guidelines, retest every 4-6 months in the first year.

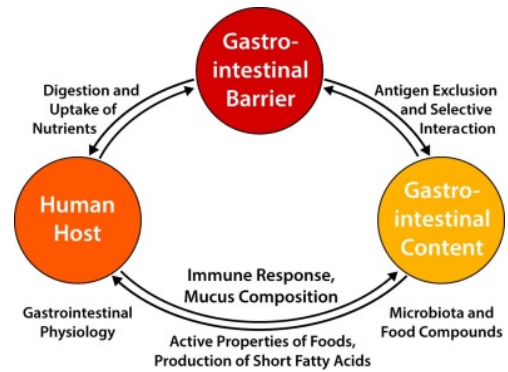
The Basics - Food and GUT Interactions

The human GUT microbiome is currently becoming a focal point of health research – the importance of GUT signaling to other organ systems has been greatly underappreciated as a major cause of illness/imbalance, allergic conditions, food and chemical intolerances/ sensitivities, Type 2 diabetes/insulin resistance, cardiovascular diseases, chronic inflammatory conditions, immune and autoimmune conditions, chronic kidney and liver diseases, GUT related issues and brain disorders (mood, cognition, inflammation).^{3,4,5}

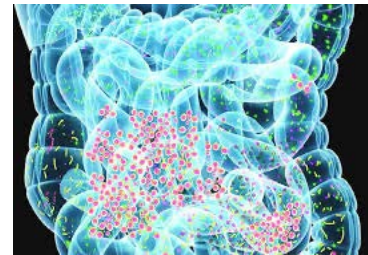
As we know, the GUT houses over 70% of immunity as GALT (gut associated lymphoid tissue) and MALT (mucosal associated lymphoid tissue).⁶ GALT interacts with GI functions in a dynamic manner – GALT increases intestinal permeability in response to particular stimulations like high stress, or orientating the immune response towards luminal content, allowing either tolerance or elimination/degradation of luminal antigens, which sometimes provokes damage to the intestinal mucosa.⁷ Involved in this complex process are the lymphocytes Th1 and T regulatory cells (T_{regs}). The results of their interactions depend upon different contexts in which contact with external



agents occurs and may change according to different foods you eat, stress levels, sleep patterns, and environmental toxin exposure (like pollution, heavy metals, pesticides, plastics, etc.). There is increasing evidence from human studies suggesting that GUT dysbiosis, which permits food substances to gain access to circulation (permeability changes), is associated with pathogenesis of IgG based food intolerances/sensitivities.^{8,9,10,11} Increased production of food specific IgG antibodies coupled with decreased production of anti-inflammatory cytokines such as IL-10 and TGF-beta1 have been implicated in irritable bowel syndrome (IBS).^{12,13} Similarly, a strong association between IgG-mediated food intolerances/sensitivities and neurological manifestations such as migraine, atherosclerosis, chronic fatigue, asthma and even hair loss.^{14,15,16}



Briefly, dysbiosis occurs when the GUT microbiome is disrupted by foods like high inflammatory, sugar and high saturated fat diets, environmental intoxication with heavy metals/pesticides/plastics and other noxious agents, leading to an overgrowth of yeast (*Candida*) and other “unfriendly” microorganisms along with the production of lipopolysaccharides – LPS. This increased production of LPS places stress on the signaling between the GUT-IMMUNE-BRAIN network axes.^{17,18} Eventually this will lead to disrupting other network signaling related to brain neurochemicals, thyroid hormone, sex hormones, insulin and cardiovascular/neurovascular dynamics. Enhanced GUT permeability is where proteins and other substances can pass through the gut mucosal defense and makes it through the lamina propria to the blood stream, activating the immune system – this can lead to allergic symptoms, fatigue, “foggy headedness”, immune and mood/cognitive problems, weight gain and a host of other conditions.¹⁹



Factors that can influence the health of the GUT and GUT microbiome, and thereby increase the risk of a food intolerance/sensitives include:^{20,21,22,23,24}

- Stress levels
- Environmental toxin exposure including from foods
- Drugs (Drug-Induced Microbiome Disruption DIMD) including
 - Antibiotics
 - Oral contraceptives/hormone replacement therapy
 - Chemotherapy
 - Corticosteroids – prednisone, others
 - Statins for cholesterol
 - Metformin (blood sugar regulation)
 - NSAIDs – non-steroidal anti-inflammatory including ibuprofen



- PPIs – ulcer medications proton pump inhibitors
- Antipsychotic and antidepressant medications
- Opioids
- Alcohol
- Most all drugs can affect microbiome – most drugs also contain chemical dyes and chemical “excipients” that aid in manufacturing
- Poor Diet – high sugar, inflammatory foods, acidic foods, artificial sweeteners and additives/dyes, antibiotics added to foods (i.e. most shredded cheses contain natamycin), contaminated foods (heavy metals, pesticides/herbicides/fungicides), water quality, high meat diet low in plants; low fiber diet
- Infections – LPS and leaky gut issues
- Sleep quality and quantity
- Intense exercise

Exercise is important to keep digestive processes regular. Exercise alters gut microflora, helping benefit the “good” bacteria. HOWEVER, if you have a strenuous exercise program, to the point of over exercising, you can damage your GUT microflora and cause metabolic imbalance. ²⁵

Testing Annually

Unless on a strict diet and stress-controlled life, your patients GUT integrity and microbiome will vary greatly during a year. So, in general, due to the intricate link between the GUT, metaflammation, and food issues, most individuals will need to test for food allergies, intolerances and sensitivities at least annually. Look not only at IgE, but for IgG, IgG4 and complement food interactions. IgG4 reactions have been tied to development of autoimmunity and C3 b/d dramatically increases the reaction of the immune system to food up to 10,000 fold.

Conclusion

Many people realize when they are having issues with food and can tell something in their diet is affecting them. Others may not connect their symptoms to the foods they eat. These issues can drive significant problems with a host of chronic health conditions in tow. Our body can be inflamed in different ways, not only from IgE, but total IgG, IgG4, and complement. Testing for these, at least annually, can help improve your patient’s health and well-being. Following a diet that minimizes foods that provoke these responses will decrease many types of inflammation and symptoms and is foundational to wellness.

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