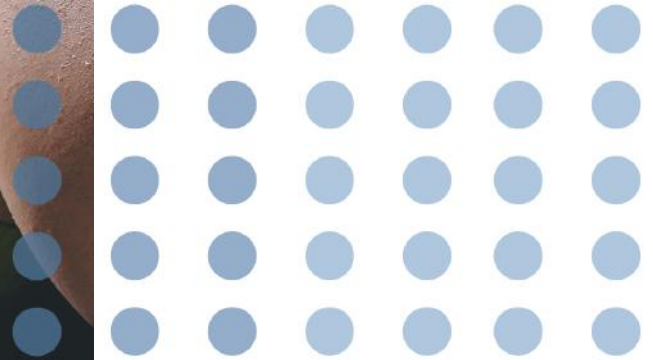




CNSLab



White Paper

Clinical Utility of Food Specific IgG Antibody Measurements
Dr Nigel Abraham | Scientific Director



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IRRITABLE BOWEL SYNDROME | IBS



Irritable bowel syndrome (IBS) is a common functional gastrointestinal disorder characterised by abdominal pain, bloating, altered bowel habits, flatulence, urgency or straining to stool, and feeling of incomplete evacuation which may differ from patient to patient.

Symptom severity also varies in patients, in a way from tolerable to severe which is markedly impairing patients' quality of life.

Irritable bowel syndrome is a multifactorial disease, the pathophysiological mechanisms are complex and have not been completely understood. Visceral hypersensitivity, intestinal dysmotility, impaired gut barrier function, altered intestinal fluid secretion, braingut axis dysregulation, mucosal immune alterations, bacterial dysbiosis and genetic, dietary, psychological factors have been suggested.^{1,2}

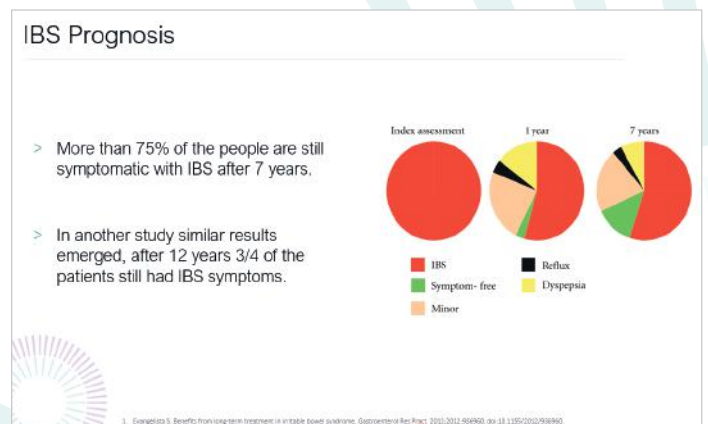
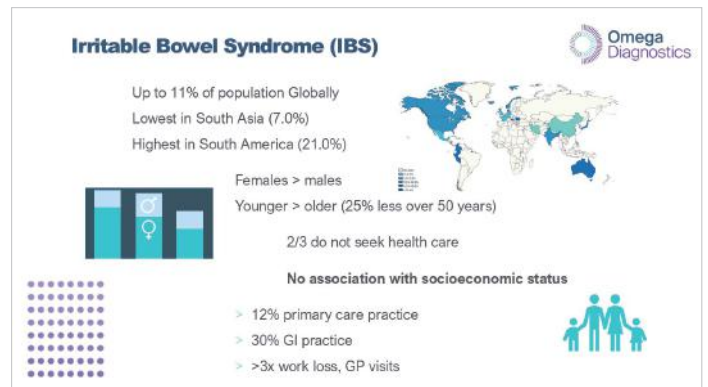
Many patients with IBS have histories of adverse food reactions.³ Some of them modify their diet by excluding self-identified foods, which can lead in some cases to extremely limited and unhealthy diets. Although food related symptoms in IBS are well-known, the underlying mechanisms have not been fully understood.

Unfortunately, there is neither a unifying theory for IBS origin and nature nor specific diagnostic markers. In addition, the lack of therapeutic options providing satisfactory long-standing clinical remission accounts for the notable impairment in the quality of life of those affected.

Since 2004, some studies have reported symptomatic improvements with the elimination of foods having increased IgG antibody levels (IgG positive foods) in patients with IBS.⁴⁻⁸

Although the concept of food sensitivity remains controversial, the evidence strongly suggests that the identification and avoidance of IgG mediated food reactions can relieve a number of common and difficult to treat chronic symptoms. These types of reactions are often referred to as **'food intolerance', hypersensitivity, Type III Allergy** or **'food sensitivity'**.

To help distinguish them from both an IgE food allergy and a standard food intolerance e.g., lactose intolerance, in this document we will refer to them as IgG mediated food reactions and food sensitivity, the latter being the preferred internationally accepted nomenclature.



It is often widely reported that food specific IgG antibody testing, characterised by a delayed immune response, 'lack sufficient validation or are not backed by research and therefore that these tests do not fall into evidence based medicine'.

A review of the literature highlights that these statements are largely outdated, as there is in fact a body of medical literature including recent data that indicates that IgG mediated reactions to food are a frequent cause of a wide range of symptoms. Take for example a recent published work looking at the role of IgG guided diet verses the currently recommended low FODMAP diet for alleviating symptoms of IBS.⁹ The aim of the study was to compare the effectiveness of three different diet plans in treating patients with mixed IBS:

- G1-FM-low-FODMAP diet
- G2-IP-IgG-based elimination-rotation-diet
- G3-K - Control group, classic diet recommended by an attending gastroenterologist.

Significant differences in reduction of IBS symptoms were found between groups. All IBS symptoms as well as comorbid symptoms like

- > headache
- > skin conditions
- > lethargy

significantly improved or disappeared completely in the G2IP group ($p < 0.008$). While in G1FM group only some IBS symptoms like bloating, gastric fullness significantly improved. In group G3K no significant improvement was seen.

The authors concluded

'that the most effective diet in the treatment of patients with mixed IBS was the elimination-rotation diet based on IgG dependent food hypersensitivity test.'

Equally a recent review of all published work related to the role of food sensitivity in migraine². The conclusion of this review stated that 'IgG food sensitivity testing may prove to be a beneficial tool for healthcare practitioners, especially for patients experiencing migraine headache symptoms. Utilising IgG food sensitivity testing to create customisable dietary recommendations for patients may allow healthcare providers to treat migraine headaches without the use of medications.'

The prevalence for chronic conditions like migraine, as well as irritable bowel syndrome (IBS) and inflammatory bowel diseases (IBD) has been continuously increasing. Etiological studies suggest that these diseases may be related to adverse food reactions. Published studies have found that the levels of food-specific IgG antibodies were significantly higher in individuals with these conditions.¹¹

Conditions in which food specific IgG antibody reactions have been associated.

- > Delayed food allergy
- > Irritable Bowel Syndrome
- > Inflammation, hypertension and arthritis
- > Obesity
- > Migraine
- > Asthma / respiratory diseases
- > Inflammatory bowel diseases

Clinical studies to date have largely been supportive of a role for food sensitivity in certain illnesses, notably for symptoms of IBS and migraine, providing a body of evidence to support the hypothesis that IgG mediated immunological responses play an important role in the pathogenesis of these types of food reactions.

In a review of all published literature from 1966 to 2015 relating to IBS, a report in the **World Journal of Gastroenterology** in 2015¹² concluded that hypersensitivity (IgG mediated reactions) reactions may play a role in causing IBS symptoms in a subset of patients. Furthermore, the increase of food-specific IgG titres could be a specific reaction, rather than a non-specific response to increased gut mucosal permeability.

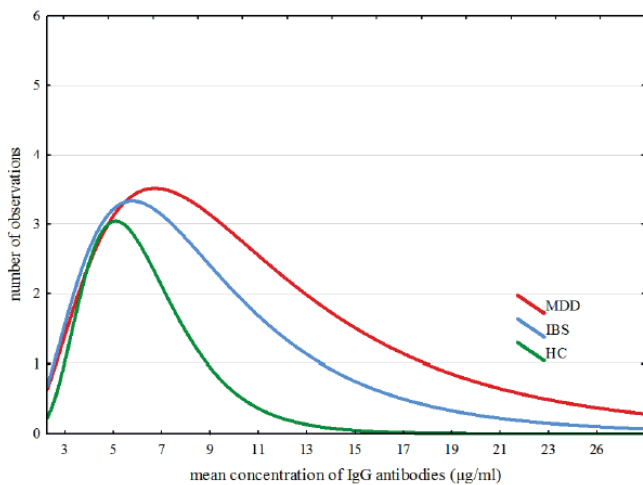


Figure shows specific IgG levels for disease groups versus healthy controls three groups.

- > Green - Healthy Controls
- > Blue - Irritable Bowel Syndrome
- > Red - Major Depressive Disorder

Detailed analysis of the distribution of total IgG values suggests a dissimilarity in immune responses between participants from the examined groups.

The authors concluded that

‘Pending further scientific evidence, the concept of food allergy (adverse food reactions) should be included as a possible cause of IBS, and a dietary approach may have a place in the routine clinical management of IBS’.

It’s important to note here that food allergy is referring to an IgG mediated food reaction.

The efficacy of a diet based on the measurement of IgG mediated food reactions, however, has been demonstrated for a number of disease entities. Positive results have been obtained in patients with migraine, respiratory disease, IBS, obesity and IBD.¹²⁻¹⁶ In addition a diet based on food IgG sensitivity test results has been shown to be an alternative and safe treatment for patients with chronic conditions⁸.

From the literature we can see that food sensitivity testing can be an important tool in a healthcare professionals tool kit, and its routine use in clinical practice may help to greatly increase the response rate in many challenging medical conditions.

The identification of food sensitivities opens up new diagnostic and therapeutic pathways for healthcare professionals to use with their patients.

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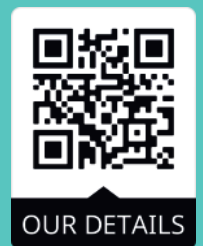
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