The myths of IgG Testing

The conventional way of testing immediate reactions include skin prick, measurement of IgE levels in serum and etc. The way to test for delayed reactions is to measure the IgG or IgA levels in serum. Delayed sensitivity is an evolving aspect in medical world and many people are unfamiliar with IgG blood testing. Some people are even sceptical about such new test.

IgG=IgE? Do they have the same meaning?

These two immunoglobulins are leading to two different immune responses. The reaction mediated by IgE antibodies usually show up within minutes after exposure to allergens. Common symptoms include shortness of breath, rash, mouth swollen and even shock. This type of reaction tends to relate to inheritance. Even a trace of allergens can provoke these reactions.

Another reaction, mediated by IgG antibodies, usually takes hours or days to appear when the antibody level hits the threshold. It could affect the body systemically, causing chronic and recurrent symptoms. The longer the response time, the more difficult for to trace and pinpoint the culprits.

Special attention should be paid to the potential misunderstanding between IgG and IgE. IgG and IgE works differently and it is not sensible to assume the same reaction apply to one and another. Patients should respect their test result and perform food avoidance accordingly.

Our food antibodies tests cover IgE, IgG and IgA to meet your clinical needs. If you have any questions regarding the tests, or the interpretation of test results, you are always welcome to contact us.

Does IgG antibody only reflect the food I eat? And the more I eat, the more reactive I am towards that food?

In most cases, body reacts to food by producing antibodies, but it does not mean IgG is the only antibody that reflects our food consumption. In fact, any blood tests (neither IgG nor IgE) require the test clients expose to foods that present in the list, as no exposure means no reactions would take place for antibodies to show up for measurement. Common offending foods of IgG antibody test are egg, dairy and gluten. Since these are the common foods in our daily consumption, people may



perceive a concept of the more I eat, the more reactive I am towards that food, while the results only reflect what food are included in my diet. However, it is so rare that people are reactive to rice, pork and other common foods in Asian diet. We can tell that, eating frequency is not the only factor in causing food sensitivity.

Is IgG antibody useless?

IgE antibody is a classic medical indicator in diagnosing food allergies. In recent decades, many healthcare professionals have begun to aware of the chronic reactions that triggered by food, which has a potential to develop into common chronic symptoms gradually. In America, a lot of functional medicine doctors have been researching, working on health articles and medical literatures to point out that IgG antibodies are closely related to many chronic conditions such as Irritable Bowel Syndrome (IBS) ^{1, 2, 3, 4}, Migraine ^{5, 6}, and even Autism⁷. Researches indicated that after the removal of food with high IgG antibodies results from diet, patients' conditions have been greatly improved.

A number of paediatricians in Taiwan, China and Hong Kong adopt the result of IgG test as a reference to set patients' elimination diet, dozens of children patients with eczema found satisfactory improvements in their symptoms^{8,9}. A higher awareness and concerns of food sensitivity (delayed reaction) is observed in the healthcare world, its impact on the attention to chronic conditions. Meanwhile, it appears to many doctors that traditional IgE test may not always be satisfied with chronic symptoms, non-IgE test may be taken into consideration and this explains the reason why these tests are becoming more and more popular.

How to avoid allergens and eat smartly?

Some parents are aware of the avoidance of certain food may lead to serious malnutrition. In fact, if you do not avoid food smartly, even for IgE testing, you might get malnutrition. Therefore, the argument does not lie on the testing method, but the way of food avoidance.

Confusion may occur when healthcare professionals just point out foods that needed to be avoided, and without providing substantial nutritional advices. This includes alternative food choices for macronutrients, minerals (esp. calcium) and other vitamins when having an elimination diet. According to an academic paper published by the Chinese University of Hong Kong in 2013, children who eliminate common allergens (like eggs, dairy and wheat) and adopt whole grain and plant-



based diet are having similar nutrients intake as ordinary children in Hong Kong⁸. Other researches and studies also found children in Hong Kong with an epidemic of overnutrition¹⁰.

Our test report is accompanied by extensive supplementary information to facilitate the test clients in the understanding of test results and food allergens, as well as possible sources to avoid in their diet. We also held seminars to educate the public to eat smartly. If you need any nutritional support, we are always here to help.

Reference:

- 1. Bentz, S., Hausmann, M., Piberger, H., Kellermeier, S., Paul, S., Held, L., Falk, W., Obermeier, F., Fried, M., Schölmerich, J. and Rogler, G. (2010). Clinical Relevance of IgG Antibodies against Food Antigens in Crohn's Disease: A Double-Blind Cross-Over Diet Intervention Study. *Digestion*, 81(4), pp.252-264.
- 2. Atkinson, W. (2004). Food elimination based on IgG antibodies in irritable bowel syndrome: a randomised controlled trial. *Gut*, 53(10), pp.1459-1464.
- 3. Zar, S., Mincher, L., Benson, M. and Kumar, D. (2005). Food-specific IgG4 antibody-guided exclusion diet improves symptoms and rectal compliance in irritable bowel syndrome. *Scandinavian Journal of Gastroenterology*, 40(7), pp.800-807.
- 4. Guo, H., Jiang T., Wang, J., Chang, Y., Guo, H., Zhang, W. (2012). The Value of Eliminating Foods According to Food-specific Immunoglobulin G Antibodies in Irritable Bowel Syndrome with Diarrhoea. *The Journal of International Medical Research*, 40(1), pp. 204-210.
- 5. Alpay, K., Ertaş, M., Orhan, E., Üstay, D., Lieners, C. and Baykan, B. (2010). Diet restriction in migraine, based on IgG against foods: A clinical double-blind, randomised, cross-over trial. *Cephalalgia*, 30(7), pp.829-837.
- 6. Hernández, C. M., Pinto, M. E., Montiel, H. L. H. (2007). Food allergy mediated by IgG antibodies associated with migraine in adults. Revista Alergia México, 54(5), pp. 162-168.
- 7. Trajkovski, V., Ajdinski, L., Spiroski, M, (2004). Plasma Concentration of Immunoglobulin Classes and Subclasses in Children with Autism in the Republic of Macedonia: Retrospective Study. *Clinical Sciences*, 45(6), pp. 746-749.
- 8. Cheung G. C. L., Leung, S. S. F., Hon, E. K. L. (2013). *Nutrient Intake of Children with Eczema of Elimination Diet A cluster of Cases.* Presented in Can Food Change Your Health? Symposium 2013 on 6th July 2013.
- 9. Leung, S. S. F., Wong, K., Hon, E. K. L. (2013). Role of Cow Milk, Egg and Wheat Allergens in Eczema. Presented in Can Food Change Your Health? Symposium 2013 on 6th July 2013.
- 10. 梁淑芳, 何巧嬋。(1993)。兒童的生長與營養。香港:中大出版社。

