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# ASSESSMENT OF FOOD ALLERGY AND FOOD SENSITIVITY

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By now you have seen it just about everywhere: the lowly peanut in the news, its impact on schools and businesses needing to create peanut-clean environments. Newer restaurants, catering to patrons with specialized menus that are gluten-free or casein-free, are opening all around the country. Is food allergy linked to other disorders like autism or obesity? Does egg allergy in pediatrics lead to asthma? What novel treatments are emerging and what's going on with the debate in the medical community about the standard of care and best practices?

The answers may surprise you, but one thing is certain: the incidence of food allergy, and many other immune disorders, is occurring earlier in life, with more severe consequence and with greater frequency than ever before.

What's behind this trend? Some experts propose the "hygiene theory" that the clean and sterile environment of modern life does not train our immune system at a young age to achieve the proper balance, leaving many susceptible to hyper-reactivity. Others say it's the chemicals and toxins; maybe vaccines or just that global warming is bringing longer and more severe allergy seasons. Perhaps it's the more widespread use of genetically modified foods. No one knows for sure.

But the facts that are emerging show that as many as 25-30% of households consider at least one family member to have a food allergy or sensitivity. Food allergy is a complicated and often misunderstood disease. Adverse reactions to foods can be broadly classified into two categories. The categories include immunological response and non-immunological response. Overall, foods can have a positive or negative impact on your overall health and well being.

"Food allergy" is defined as an abnormal response to a food triggered by your body's immune system. The immunological response is mediated by the antibody IgE. (Type I) The response is immediate and involves mast cells that release histamine and other inflammatory chemicals resulting in symptoms from mild to life threatening. Blocking the effects of this mediator with specific antihistamines is useful in emergency management of allergic symptoms. Food allergy accounts for a small fraction of overall food reactions. The actual prevalence of food allergies is estimated to be approximately 6% in infants and children and 3.7% in adults.<sup>1</sup> There are eight foods that appear to be responsible for 90% of all food allergic reactions. Milk, eggs, peanuts, wheat, soy, and tree nuts are the foods most often implicated in food allergic children. In adults, peanuts, tree nuts (walnuts and pecans), fish and shellfish are the most common culprits. Food allergens are typically water-soluble glycoproteins resistant to heating and proteolysis. These characteristics facilitate the absorption of these allergens across mucosal surfaces.

"Food sensitivity" is a delayed immunological response and can occur up to 72 hours after ingestion. Food sensitivity is commonly associated with the antibody IgG. Symptoms of delayed food sensitivity are diverse and may affect any system in the body such as gastrointestinal, respiratory, neurological and musculo-skeletal. Delayed food sensitivities seem to be more common than the more easily recognized IgE-mediated reactions. Conditions associated with food sensitivity may include but are not limited to ADD/ADHD, autism, fatigue, eczema, asthma, and acne, migraine headaches, obesity, arthritis, IBS and depression. When the immune system starts tagging foods the way it does with bacteria and viruses it can cause constant inflammation. Therefore it is important to recognize the difference between food allergy and food sensitivity.

Each individual's immune system has its own threshold or tipping point. This is the moment when the immune system recognizes a harmless substance such as food as an allergen and is worthy of an immune response.

Normally, the process of digestion involves digestive juices breaking down food proteins into amino acids. These amino acids will be taken up into circulation and sent throughout the body. They are reassembled into other beneficial proteins. If however these proteins are not properly digested, they can permeate through the intestinal wall and leak into the bloodstream. When this

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