

Nutrition Challenge: Eating Right for You!

Written By Dr. Justin Lafreniere, June 2010

While there is plenty of nutritional advice suggesting that certain foods are better than others, promising more antioxidants, more micronutrients, less saturated fat, and so on, this may not explain all that is necessary when deciding how to eat best for you. I certainly will not deny the importance of choosing nutritionally 'dense' foods and establishing dietary routines that include optimal macro and micronutrient content. That said, I do feel that one aspect of food is commonly overlooked. Food sensitivities and allergies and how they are mediated have been studied extensively over that past decades. It is now understood that allergy and sensitivity are products of immune system (antibody) reaction to specific food proteins. While the human immune system is extremely complex, food allergies and sensitivities can be placed into two categories based on the type of antibodies involved: 'immediate' and 'delayed-type'.

Immediate-type hypersensitivity (or 'true allergy' as it is sometimes called) is often mediated by IgE antibodies. The symptoms of this type of reaction are due to a substance called 'histamine' being released from specialized cells known as 'mast cells' when IgE antibodies react with certain foods. This type of reaction (and it's consequences) occur very rapidly after exposure to certain foods (hence the name 'immediate-type'). The symptoms associated with immediate-type hypersensitivity range from skin hives, stomach cramps, nausea and vomiting, shortness of breath, tongue swelling, and anaphylaxis. This type of reaction is often severe and can be life-threatening; fortunately it is far less common than the other type of food hypersensitivity.

Delayed-type hypersensitivity does not involve IgE antibodies and the release of histamine, which cause very obvious symptoms soon after the ingestion of a food. Instead they are the result of IgG antibodies reacting to certain foods. IgG antibodies don't cause the release of histamine but they do release other immune chemicals designed to inactivate or destroy invaders in the body. These chemicals can cause damage and resulting inflammation to your own body tissues in the process. As a result, they too can cause symptoms, especially if you develop sensitivities to a number of different foods. Symptoms from food sensitivities may appear up to 3 days after the offending food was ingested and last for weeks afterwards. The symptoms of delayed-type hypersensitivities are varied:

- Respiratory - rhinitis, sinusitis, asthma, recurrent sore throat.
- Musculoskeletal - arthritis, aching, weakness, myalgia and cramping, decreased stamina and athletic performance
- Gastrointestinal – nausea and vomiting, bloating, cramping, diarrhea and constipation, acid reflux.
- Nervous System - migraine, headache, impaired concentration, altered alertness, mood and behavioral changes, depression and hyperactivity.
- Dermal - urticaria, atopic dermatitis, eczema and other rashes.

Due to the fact that these symptoms may not appear for a few days after the triggering food was eaten, they are often referred to as 'hidden allergies'. It is therefore difficult to pin down what is causing your symptoms. Another complication is that IgG allergies are not permanent, they are 'cyclic'. This means that if you don't eat a food you are sensitive to for a while, it will no longer cause symptoms the next time you eat it. Inversely, it also means that eating the same foods frequently will tend to create hypersensitivity to that food.

How do you know if you have food allergy or sensitivity? There are a few ways to determine this. While immediate-type hypersensitivity will be obvious symptomatically, it is often useful to use 'skin scratch' testing diagnostically to determine specifically which foods you are reactive to. In these cases, it is often necessary to carry Benadryl and epinephrine to prevent serious anaphylaxis.

For delayed-type hypersensitivity, it becomes a little more complicated. A skin-scratch test is not appropriate because of the delayed nature of the reactions. There are some medical professionals that have advocated for the use of elimination diets, which can be very useful but are also very complicated due to complications of withdrawal, cyclical nature of food allergies, and placebo effects. Clinically, I have found that using a laboratory test called ELISA is very effective at measuring food hypersensitivities. This test requires a simple blood sample, which measures with reasonable accuracy, the IgG reactions of a person's own blood to a wide range of foods.

While food hypersensitivity testing does not answer all of the questions about the 'perfect diet' it can be a very useful tool to help you choose foods that a right for you!

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