When food bites back: food allergies

We've all been in that situation where something we've eaten "doesn't agree with us," but for the approximately 12 million Americans who have food allergies, the simple act of ingesting a particular food can have consequences much more serious than a case of indigestion or sour stomach. For them, eating the wrong thing can cause an adverse physical reaction, ranging in severity from minor irritation in the mouth to a full-blown, potentially life-threatening anaphylactic response.

What is a food allergy?

A food allergy can be defined as a misplaced immune response. Essentially, the body's immune system mistakenly perceives a protein in a particular food as an invader and launches a counterattack, releasing chemicals, such as histamine, in an attempt to eliminate the "invader." As a result, the allergic individual can experience symptoms such as tingling in the mouth, swelling of the tongue and throat, hives, abdominal cramps, diarrhea, vomiting, breathing difficulty, drop in blood pressure, loss of consciousness, and even death.

Food allergy vs. food intolerance

According to Dr. David Hunter, food allergy and food intolerance are not one in the same. "With food allergies, you can demonstrate the presence of Immunoglobulin E, or IgE, which is an antibody involved in the body's immune response. A food intolerance, on the other hand, is the inability to properly digest a particular food. The classic example is lactose intolerance. People who are lactose intolerant don't produce IgE in response to milk proteins. Rather, they lack the particular enzyme needed to digest milk sugar, or lactose," he explains.

Common food allergens

Approximately 90 percent of all food-related allergic reactions can be attributed to eight particular foods—milk, eggs, peanuts, tree nuts, fish, shellfish, wheat, and soy. Of the "big eight" food allergens, the three most common are eggs, milk, and wheat. In terms of reaction severity, Dr. Hunter notes that peanuts top the list and are the most likely to trigger a severe anaphylactic response, potentially involving hives, wheezing, drop in blood pressure, loss of consciousness, and even death.

And it doesn't take a lot of peanuts to trigger a reaction. "The amount it takes to set someone off is very small—only about two grams. For the sake of comparison, that's the weight of a paper clip," Dr. Hunter observes.

Food allergen cross-reactivity

It's interesting to note that if someone is allergic to a particular food, there's a good chance that he or she will react to other foods containing similar antigens. This phenomenon is known as food allergen cross-reactivity. For example, someone who is allergic to shrimp would be advised to avoid eating crab and lobster, which contain similar antigens. Other examples of cross-reactive foods include cashews and pistachios; pecans and walnuts; and goat, sheep, and buffalo milk. Cross-reactivity has even been noted between latex and bananas.

How are food allergies diagnosed?

In most cases, food allergies are identified after the allergic individual ingests a particular food and experiences some type of reaction. However, allergists can perform certain tests to aid in diagnosis. These include the percutaneous scratch test and a blood test named ImmunoCAP (allergen-specific IgE). With the scratch test, a drop containing the antigen from the food being tested is placed on the patient's skin and the skin is pricked with a probe. A small bump, similar to a mosquito bite, will soon form at the site if the patient is potentially allergic to the food antigen. With the ImmunoCAP test, a blood

sample is taken from the patient and sent to a laboratory where it is tested for specific IgE antibodies to particular foods.

How are food allergies treated?

Unfortunately, there is no treatment that will cure food allergies. Nor is immunotherapy (allergy shots) effective in desensitizing people to their food triggers. “The only treatment is strict avoidance of the food that causes problems,” Dr. Hunter remarks. “The key to effective management in children is to educate the parents and to make the child’s teacher and school aware of the problem. In people with severe food allergies, a device for self-injecting epinephrine—known as the EpiPen®—is usually prescribed and kept on hand at all times to control a severe reaction if one should occur.”

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