Food Allergies: What Patients Want to Know

Dr. Pulcini, a clinician-researcher with a special interest in food allergy, is board certified in pediatrics and in allergy/immunology. Here, he answers questions that patients frequently pose about food allergies.

What are food allergies?
Food allergies are an important health concern affecting children and adults. A food allergy is an adverse health effect arising from an immune response that involves a specific IgE antibody. This immune response should recur on exposure to a certain food. An example is a child who, when exposed to milk protein, develops hives.

What are common symptoms patients suffer with food allergies?
Common symptoms are dermatologic (rash, swelling), respiratory (coughing, wheezing, throat tightness, change in voice quality), gastrointestinal (abdominal pain, vomiting, diarrhea) or circulatory (hypotension, syncope). The most concerning problem is anaphylaxis, a serious allergic reaction that is rapid in onset and may cause death. Anaphylaxis most often involves at least two body systems – but any reaction that involves a body system beyond the skin is concerning.

Are there other disorders that involve food allergies - besides anaphylaxis?
Yes. A third of patients who have moderate to severe atopic dermatitis (eczema) have a food allergy trigger. Patients who suffer from eosinophilic gastrointestinal disorders (such as eosinophilic esophagitis) frequently have a food allergy component. Also, contact urticaria, contact dermatitis and food protein-induced enterocolitis all involve food allergies.

Within minutes, a dermatologic reaction was recorded to item #4 of the skin prick test.
How do food intolerances differ from food allergies?

Much confusion surrounds food intolerances versus food allergies. As noted earlier, food allergies are an immunologic reaction that involves specific IgE – usually to a food protein. For instance, an individual who is allergic to cow’s milk because of a reaction to milk protein has a true food allergy.

On the other hand, food intolerances are defined as non-immunologic adverse food reactions. An example is a person who may have intolerance to cow’s milk because of an inability to digest the sugar lactose. Although lactose deficiency can lead to gastrointestinal symptoms from an inability to digest lactose, the response would not be classified as a food allergy since it is not immune based.

How are food allergies diagnosed?

As with any disease, the first step in diagnosing food allergies starts with a detailed medical history and physical exam. If the history is convincing for what appears to be an allergic reaction, two main methods can help identify the causative food – skin testing or blood testing.

A skin prick test (usually performed in an allergist’s office) or an allergen-specific serum IgE (performed in some primary care offices) is crucial in evaluating food allergies. Sometimes these tests are entirely negative and further evaluation with food elimination diets or even an oral food challenge is necessary for an accurate diagnosis. In addition, non-standardized testing is sometimes performed by complementary medicine providers. However, these tests – including IgG4 blood testing, applied kinesiology, hair analysis and cytotoxicity assays – are neither validated nor recommended in the routine evaluation of food allergies.

How common are food allergies?

Food allergies affect about 6% of children and 3.5% of adults. Recent U.S. studies indicate that the prevalence of food allergies is increasing. For children, the most significant food allergies are milk, egg and peanuts with prevalence rates of 2.5%, 1.3% and 0.8%, respectively. Rates of food intolerances are much higher than true IgE-mediated food allergies.

How are food allergies managed?

The key issue with food allergies, particularly in children, is prevention and education. Any patient with an identified food allergy – whether it causes a flare of eczema or full-blown anaphylaxis – should avoid that food.

The first line of treatment for any food allergy reaction that involves anaphylaxis is prompt administration of intramuscular epinephrine. For non-severe food allergic reactions, antihistamine use is the first therapy. In addition, all patients with a history of anaphylaxis should have rescue epinephrine (such as an Epi-Pen®) with them at all times. In about 20% of cases of anaphylaxis, a second injection is needed after approximately 10 minutes if symptoms do not improve – one pen (such as Twinject®) with two separate doses is available as well.

Top Pediatric & Adult Food Allergies

- Milk
- Eggs
- Peanuts
- Soy
- Wheat
- Tree Nuts
- Fish
The above listed patient should have access to injectable epinephrine at all times due to a life-threatening allergy. The prescribed Epipen, Twinject or Adrenaclick should be kept in a cool, dark place and should be refilled annually. Patients should carry a small amount of antihistamine with the injector in the event of an accidental ingestion. Patients under 45-50 lbs. should have available a 0.15 mg (“Jr.”) dose; patients over 45-50 lbs. should have the 0.30 mg dose.

Should an allergenic ingestion or bee sting occur, follow these steps:

1. Locate your Epipen®/Twinject®/Adrenaclick®.

2. Take an antihistamine immediately. Preferably, this should be Zyrtec® or Benadryl®, which have the quickest onset of action.

   Suggested dose of Benadryl: ____________________ Zyrtec: ____________________

3. Get around other people, who can assist you if your reaction progresses.

AT THE FIRST SIGN of any symptoms of severe hives and swelling, difficulty swallowing, speaking or talking, throat swelling, severe wheezing, cough, shortness of breath, or if collapse occurs, immediately inject Epipen, Twinject or Adrenaclick into the upper outer thigh of the patient and hold for 10 seconds. Epinephrine must be given in the muscle for quickest absorption. If the reaction is worsening after 10 minutes or so, administer a second dose if available. The patient should then be taken to the ER for further evaluation. A follow-up appointment with a pediatric allergist should be scheduled soon thereafter to review what happened. Remember, it is only necessary to give the rescue epinephrine (Epipen/Twinject/Adrenaclick) if the reaction is progressing in a serious manner as described above; for simple itchiness or mild hives, no further action is necessary. Often, only an antihistamine will be needed.

Remember, stings and accidental ingestions happen when you least expect them, so be prepared. Have your Epipen, Twinject or Adrenaclick close by at all times.
Finally, Food Allergy Action Plans often are provided for parents to distribute to other adult caregivers (such as in schools, day care centers and church nurseries) to guide potential food allergy reactions. This management plan is a vital component of comprehensive care for all patients with food allergies – particularly school-age children who spend a considerable amount of time without their parents and rely on other adults for supervision.

Please refer to the Emergency Action Plan (left) developed by Dr. Pulcini and colleague Charles Greene Jr., M.D.

How persistent are food allergies, and when can you reintroduce an allergic food? Studies show that most children outgrow their food allergies – but it depends on the type of food in question, age of the child and intervening medical history. About 85% of children who are allergic to milk and eggs usually tolerate those foods somewhere between ages 5-10. However, peanut and tree nuts are much more persistent, with only 20% of children developing tolerance to peanuts. In adults, shellfish is a very persistent food allergy. Most allergists perform annual follow-up testing for patients with food allergies and then decide on the course of action – usually a food challenge in the office if the patient’s testing is negative.

What about preventing food allergies: Are there any recommendations on when parents should introduce potentially allergic foods in a child’s diet? American Academy of Pediatrics (AAP) guidelines on that subject have changed of late. The AAP now recommends that all infants be exclusively breastfed until 4-6 months old. The AAP does not recommend restricting foods from the maternal diet during pregnancy or lactation as a strategy to prevent the development of food allergies.

Guidelines do recommend hydrolyzed infant formulas, as opposed to cow’s milk formulas, as
a strategy for preventing development of food allergies in at-risk infants who are not breastfed. (At-risk children include those with pre-existing severe allergic disease and/or a family history of food allergy). Finally – and this is a significant change from previous guidelines – the introduction of solid foods should not be delayed beyond 4-6 months of age, including the introduction of potentially allergic foods.

Will there be a cure for food allergies?
A few research centers throughout the country have children and adults enrolled in trials involving oral and sublingual immunotherapy. This therapy, in which patients with allergies are given small but increasing amounts of the food they are allergic to, shows promise. Right now, significant debate exists as to whether this therapy might lead to a permanent change in the patient’s immune system or just a temporary state of tolerance.

What support is out there for patients, families and primary care physicians regarding food allergies?
The Food Allergy and Anaphylaxis Network (FAAN) is a lay organization that provides educational materials to assist families and physicians on all aspects of food allergies. Two national allergy associations – the American Academy of Asthma, Allergy and Immunology (AAAAI) and the American College of Allergy, Asthma and Immunology (ACAAI) – have great websites for patients and physicians concerning food allergies. Finally, the local chapter of FAAN holds meetings the last Monday of each month to help parents tackle food allergies, particularly when it comes to school-age children.

Resources
• American Academy of Allergy, Asthma and Immunology: www.aaaai.org
• American College of Allergy, Asthma and Immunology: www.acaai.org
• Food Allergy and Anaphylaxis Network: www.foodallergy.org
• Food Allergy and Asthma Support Group: meets 7-8 p.m. the last Monday of the month at Five Forks Plantation Clubhouse in Simpsonville. For more information, contact dlfrank71@yahoo.com.

Readings


Meet Dr. Pulcini
John Pulcini, M.D., hails from Evansville, Ind., and went to medical school at the Indiana University School of Medicine. He completed his pediatric residency at GHS in 2008 followed by an Allergy-Immunology fellowship in Jackson, Miss. In addition to food allergies, Dr. Pulcini has special interests in eosinophilic esophagitis, general allergic rhinitis and atopic dermatitis.

Dr. Pulcini returned to Greenville in 2010 to join Charles (Chuck) Greene Jr., M.D., who also treats pediatric patients, in forming Acadia Allergy & Immunology (formerly UMG Allergy/Immunology).

Dr. Pulcini can be reached at (864) 675-5000; his fax number is (864) 675-5005.