



What you need to know about the new guidelines for the diagnosis and management of food allergy in the U.S.

Overview

- The Guidelines, sponsored by the NIH (NIAID), are based upon expert opinion and a comprehensive literature review. AAP had input on the document.^{1,2}

Definitions

- Food allergy was defined as an adverse health effect arising from a specific immune response.
- Food allergies result in IgE-mediated immediate reactions (e.g., anaphylaxis) and several chronic diseases (e.g., enterocolitis syndromes, eosinophilic esophagitis, etc), in which IgE may not play an important role.

Epidemiology and Natural History

- Food allergy is more common in children than adults, but many allergies eventually resolve.
- Among the most common food allergies in children, milk, egg, wheat and soy allergies often resolve in childhood; peanut, tree nut, fish and shellfish allergies can resolve, but are more likely to persist.
- Peanut allergy prevalence has increased during recent decades and now affects 1-2% of young children.

Risks

- Fatal food allergic reactions are usually caused by peanut, tree nuts and seafood, but have also occurred from milk, egg, seeds and other foods.
- Fatalities have been associated with: age (teenagers and young adults), delayed treatment with epinephrine, and co-morbid asthma.
- Severity of future allergic reactions is not accurately predicted by past history or allergy test results.

Diagnosis

- Food allergy should be suspected when typical symptoms (e.g., urticaria, edema, wheezing, mouth itch, cough, nausea/vomiting, anaphylaxis, etc) occur within minutes to hours of ingesting a food. Food allergy rarely causes isolated chronic respiratory symptoms, namely those of rhinitis and asthma.



- Tests for food-specific IgE are recommended to assist in diagnosis, but should not be relied upon as a sole means to diagnose food allergy. The medical history/exam are recommended to aid in diagnosis. A medically monitored feeding (food challenge) is considered the most definitive test for food allergy.
- Food-specific IgE testing has numerous limitations; positive tests are not intrinsically diagnostic and reactions sometimes occur with negative tests. These issues are also reviewed in an AAP Clinical Report.³ Testing “food panels” without considering history is often misleading. Tests selected to evaluate food allergy should be based on the patient’s medical history and not comprise large general panels of food allergens.
 - In the context of moderate to severe atopic dermatitis, children less than 5 years old should be considered for food allergy evaluation for milk, egg, peanut, wheat, and soy, if at least 1 of the following conditions is met:
 - 1) The child has persistent AD in spite of optimized management and topical therapy, or
 - 2) the child has a reliable history of an immediate reaction after ingestion of a specific food.
 Care should be taken to ensure these children are clinically allergic to a food prior to removing it completely from their diet because restrictive diets may be harmful.
 - Several tests are not recommended, including food-IgG/IgG4, applied kinesiology, provocation neutralization, hair analysis, and electrodermal testing.

Prevention

- The recommendations for infant diet are in agreement with the 2008 AAP Clinical Report on this topic.⁴ Breast-feeding is encouraged for all, if not exclusively breast-feeding, hydrolyzed infant formulas are suggested for infants “at risk” (at least 1 first-degree relative, parent or sibling with allergic disease). Complementary foods, including potential allergens, are not restricted after 4-6 months of age (not applicable for infants experiencing allergic reactions).

Management

- Education about food avoidance is key to prevent reactions. This includes information about label reading and cross-contact of allergens (unintended contamination during food preparation).
- Nutritional evaluation and growth monitoring of children with food allergy is recommended.
- It is acknowledged that having a food allergy disrupts quality of life.
- Advice about influenza vaccination for persons with egg allergy is reviewed, with more options for administration to those with egg allergy.
- Management of anaphylaxis emphasizes prompt administration of epinephrine, observation for 4–6 hours or longer after treatment, education of the family on avoidance, early recognition, treatment, medical identification jewelry, and follow up with a primary health care provider and consideration for consultation with an allergist-immunologist.
- Prescription of epinephrine autoinjectors and patient education advice substantially follows the 2007 AAP Clinical Report on this topic,⁵ including having 2 doses available, switching from 0.15 to 0.3 mg fixed-dose autoinjectors at approximately 25 kg (55 lbs) in context of patient-specific circumstances, having a written emergency plan, and providing supporting educational material.
- When multiple-food elimination diet is undertaken for suspected food-exacerbated atopic dermatitis, and eczema subsequently improves, it is essential to perform a systematic reintroduction of the eliminated foods. This will help to minimize avoidance of non-allergenic foods, and confirm which foods are clinically relevant.
- Suggests consideration for a referral to an allergist-immunologist for testing, diagnosis and ongoing management.
- The Guidelines do not provide specific advice for school management, but these issues were covered in a recent AAP Clinical Report.⁶

Further Information

This document is only a brief outline of the topics covered by the Guidelines, prepared as a joint effort of the Section on Allergy and Immunology of the AAP and the Adverse Reactions to Foods Committee of the American Academy of Allergy, Asthma and Immunology. The reader is encouraged to refer to the original sources for additional information. The Guidelines present a number of resources for additional information about food allergies. AAP and selected resources are listed here.

- AAP Section on Allergy and Immunology
www.aap.org/sections/allergy
- American Academy of Allergy, Asthma & Immunology (AAAAI) www.aaaai.org/
- American College of Allergy, Asthma and Immunology (ACAAI) www.acaai.org/
- Asthma and Allergy Foundation of America (AAFA) www.aafa.org/
- Consortium of Food allergy Research, Food Allergy Education Program <http://web.emmes.com/study/cofar/EducationProgram.htm>;
- Food Allergy & Anaphylaxis Network (FAAN) www.foodallergy.org/;
- Food Allergy Initiative (FAI) www.faiusa.org/
- Kids With Food Allergies (KFA) www.kidswithfoodallergies.org/;
- National Institute of Allergy and Infectious Diseases (NIAID) www.niaid.nih.gov/

REFERENCES:

1. Boyce JA, Assa'ad A, Burks AW, Jones SM, Sampson HA, Wood RA et al. Guidelines for the Diagnosis and Management of Food Allergy in the United States: Summary of the NIAID-Sponsored Expert Panel Report. *J Allergy Clin Immunol* 2010; 126(6):1105-18.
2. Burks AW, Jones SM, Boyce JA, Sicherer SH, Wood RA, Assa'ad A, et al. NIAID-Sponsored 2010 Guidelines for Managing Food Allergy: Applications in the Pediatric Population. *Pediatrics*. 2011;128(5).
3. Sicherer SH, Wood RA. Allergy Testing in Childhood: Using Allergen-Specific IgE Tests. *Pediatr*. In press.
4. Greer FR, Sicherer SH, Burks AW. Effects of early nutritional interventions on the development of atopic disease in infants and children: the role of maternal dietary restriction, breastfeeding, timing of introduction of complementary foods, and hydrolyzed formulas. *Pediatrics* 2008; 121(1):183-91.
5. Sicherer SH, Simons FE. Self-injectable epinephrine for first-aid management of anaphylaxis. *Pediatrics* 2007; 119(3):638-46.
6. Sicherer SH, Mahr TA; The Section on Allergy and Immunology. Management of Food Allergy in the School Setting. *Pediatrics* 2010; Dec; 126(6):1232-1239.

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