

Allergy & Immunology

ClinicalEdge provides succinct summaries of the latest “must-read” news and research. Here are several updates on food allergy and anaphylaxis.

DOES PEANUT EXPOSURE INCREASE ALLERGY RISK?

Du Toit G, Roberts G, Sayre PH, et al; LEAP Study Team. Randomized trial of peanut consumption in infants at risk for peanut allergy. *N Engl J Med*. 2015; 372(9):803-813. doi: 10.1056/NEJMoa1414850.

Among children at high risk for peanut allergy, early introduction of peanuts significantly reduced the risk for allergy, according to a randomized controlled trial of 640 infants with severe eczema, egg allergy, or both.

Participants ages 4 to 11 months who were high risk—based on severe atopy or allergy to eggs—were tested for sensitivity to peanut extract at baseline and then assigned to either avoid or consume peanuts.

At 60 months of age, skin allergy testing was repeated; the resulting prevalence of peanut allergy was as follows

Skin-prick test results	Sample size	Avoidance	Consumption
Baseline negative	530	14%	2%
Baseline positive	98	35%	11%

A greater percentage of the consumption group showed an increase in levels of peanut-specific IgG4 antibody; the avoidance group, elevated titers of peanut-specific IgE antibody.

COMMENTARY

The prevalence of peanut allergy in the United States has increased from 0.4% in 1997 to more than 2% in 2010.¹ In 2000, the American Academy of Pediatrics recommended peanut avoidance until age 3 in children at high risk for atopic disease; then in 2008, based on emerging evidence that early introduction

of allergenic foods, including peanuts, may decrease the development of allergy, the recommendations were retracted.^{2,3} The present study, using a randomized trial design, confirms the paradigm-changing hypothesis that early introduction of allergenic foods decreases the subsequent development of food allergies. The authors of the accompanying editorial state that these data are incontrovertible and that children at high risk for peanut allergy should, under supervision of an allergist, be tested and if skin-prick-negative for peanut allergy, be started on a peanut protein-containing diet.¹ —NS

1. Gruchalla RS, Sampson HA. Preventing peanut allergy through early consumption ready for prime time? *N Engl J Med*. 2015;372:875-876.
2. Du Toit G, Katz Y, Sasieni P, et al. Early consumption of peanuts in infancy is associated with a low prevalence of peanut allergy. *J Allergy Clin Immunol*. 2008;122:984-991.
3. Katz Y, Rajuan N, Goldberg MR, et al. Early exposure to cow’s milk protein is protective against IgE-mediated cow’s milk protein allergy. *J Allergy Clin Immunol*. 2010;126:77-82.

ANAPHYLAXIS GUIDELINE FROM AAAAI/ACAAI

Campbell RL, Li JT, Nicklas RA, Sadosty AT. Emergency department diagnosis and treatment of anaphylaxis: a practice parameter. *Ann Allergy Asthma Immunol*. 2014;113(6):599-608. doi: 10.1016/j.anai.2014.10.007.

The American Academy of Allergy, Asthma & Immunology and the American College of Allergy, Asthma, and Immunology guideline for emergency department diagnosis and treatment of anaphylaxis includes the following recommendations

- Carefully and immediately triage and monitor patients who have signs and symptoms of anaphylaxis in preparation for epinephrine administration.
- First-line treatment for patients experiencing anaphylaxis is epinephrine. It should be administered intramuscularly in the anterolateral thigh immediately after the diagnosis is made. Epinephrine can be administered every 5 to 15

Commentary provided by **Neil Skolnik, MD**, Associate Director of the Family Medicine Residency Program at Abington Memorial Hospital in Pennsylvania and Professor of Family and Community Medicine at Temple University in Philadelphia. These articles were originally published as part of ClinicalEdge (www.clinicianreviews.com/clinicaledge).

minutes as needed to control symptoms.

- Do not substitute for epinephrine in the treatment of anaphylaxis. Antihistamines and corticosteroids can be administered in conjunction with epinephrine, not in place of it.
- Determine whether the patient has risk factors for severe and potentially fatal anaphylaxis, such as delayed administration of epinephrine, asthma, a history of biphasic reactions, or cardiovascular disease.
- For anaphylaxis patients with bronchospasms, administer a β -agonist.
- Patients should be observed for 4 to 8 hours (longer for those with a history of risk factors for severe anaphylaxis).
- Refer patients to an allergist-immunologist upon discharge.

COMMENTARY

Identification of anaphylaxis requires judgment. Abbreviated criteria for anaphylaxis include essentially two organ systems of involvement: skin manifestations of pruritus, flushing, hives, or angioedema; respiratory manifestations of wheezing or stridor; decreased blood pressure; and GI symptoms of vomiting, cramping abdominal pain, or diarrhea. Quick identification and treatment of anaphylaxis is important, as the median time to respiratory or cardiac arrest in food-induced anaphylaxis is only 30 minutes. All offices should stock epinephrine in an obvious place; you may consider use of a prefilled pen, so it is easy to find and to give the correct dose. —NS

UPDATED PRACTICE PARAMETER: DIAGNOSING AND TREATING FOOD ALLERGIES

Sampson HA, Aceves S, Bock SA, et al. Food allergy: a practice parameter update—2014. *J Allergy Clin Immunol*. 2014. pii: S0091-6749(14)00672-1. doi: 10.1016/j.jaci.2014.05.013. [Epub ahead of print]

Over the past decade, health care providers have been confronted with a growing number of patients with suspected food allergies, but data supporting an increase in confirmed allergy cases is limited.

The 2014 practice parameter update on food allergies from the American Academy of Allergy, Asthma & Immunology advises clinicians to keep in mind

that self-reported food allergy is more common than proven food allergy; that allergy is more common in children and in patients with other atopic conditions; and that the majority of allergic reactions are from peanuts, tree nuts, fish, shellfish, milk, eggs, wheat, soy, and seeds.

The update of the 2006 guidelines includes 64 new summary statements. Highlights include

- Clinicians should advise patients about the risk for cross-reactions from foods similar to their allergens, such as other tree nuts, vertebrate fish, crustaceans, or milk from cows, goats, or other mammals.
- Patients with a seafood allergy should be advised that they are not at increased risk for a reaction to radiocontrast media.
- Patients with food allergies do not need to be concerned about eating genetically modified foods (GMO), due to current FDA screening requirements to rule out allergenicity.
- Patients with chronic idiopathic urticaria or hyperactivity/attention-deficit disorder should not routinely be advised to avoid food additives.
- Patients with asthma should not routinely be advised to avoid sulfates, unless they have had a previous reaction to them.

The guidelines also include a new section on diagnosing and treating non-IgE-mediated food allergies, such as food-protein-induced enterocolitis syndrome, allergic proctocolitis, enteropathy, eosinophilic esophagitis, and gastroenteritis.

COMMENTARY

Food allergies are a commonly encountered and difficult area of practice for those of us in primary care. They can be life threatening; yet many patients who are concerned about the possibility of food allergy do not actually have a food allergy, so making an accurate diagnosis is important. Allergic evaluation starts with a careful history, and then laboratory testing can begin with specific IgE testing to foods suspected to have caused the clinical reaction of concern. The IgE results need to be carefully interpreted in light of the clinical context in which they were ordered. Oral food challenge can be helpful in addition to IgE testing. Consultation with an allergy-immunology specialist is often helpful as well. —NS

CR