WINTER/SPRING, 2014

Asthma & Allergy Bulletin

Asthma and Allergy Foundation of America • New England Chapter

Innovation Award for School Food Allergy Advocacy

AAFA New England has received an award from the Asthma and Allergy Foundation of America (AAFA) for our work with the Massachusetts Departments of Education and Public Health, the Massachusetts School Nurses Association and the Massachusetts Committee of School Physicians to develop state guidelines that were published as "Managing Life Threatening Food Allergies in Schools."

In announcing the award, AAFA President William McLin stated that "these guidelines were recognized as the first in the nation to address the safety of children with food allergies in schools and are still widely used today. As a result of these efforts, many states have produced a similar document; the MA Department of Public Health now tracks allergic reactions in schools via the school nurses; and AAFA New England has produced supplemental educational materials to help schools and families manage food allergies in their children and students."

"We're very proud to have been recognized for our efforts in working with the state of Massachusetts on addressing the issue of food allergies in schools," says Debra Saryan, Executive Director of AAFA New England. "We will continue to collaborate with people in all of the New England states to ensure that students with life-threatening food allergies have a safe school environment."

RESEARCH UPDATE

Allergens in Foods: How Much is Too Much?

By Frank J. Twarog, MD, PhD

As physicians and individuals, patients or parents of food allergic children, we are frequently faced with the question of whether to restrict food labeled as "may contain," "made on shared equipment," or "produced in a shared facility." *What do these labels mean? Do these foods need to be avoided?* An article in the journal Annals of Allergy, Asthma and Immunology addresses this complex and perplexing issue.

The Food Allergen Labeling and Consumer Protection Act (FALCPA) requires labeling of the major food allergens, which includes only what is known as "the big eight": milk, egg, wheat, soy, peanut, tree nuts, fish, and shellfish. But *how much* food allergen is needed to cause an allergic reaction? What is the threshold? Does it significantly differ between people who have had severe reactions and higher level positive skin and/or RAST testing, versus others who may tolerate more?

Currently, most allergy support organizations and physicians advise strict and total avoidance. But is this necessary for everyone? Does it cause unnecessary anxiety or unnecessarily affect quality of life?

(Continued on page 4)

Food Allergies, Traditional Chinese Medicine, Western Science, and the Search for a Cure

Author Henry Ehrlich will be speaking about his new book and the groundbreaking research by allergist Xiu-Min Li, MD, on the potential of Chinese herbal medicines for treating immune diseases such as eczema, asthma, food allergies and autoimmune disorders.

May 12 at 6:45 p.m.
Beth Israel & Children's Hospital Medical Center, 482 Bedford St., Lexington, MA

May 13 at 7:00 p.m.
Newton-Wellesley Hospital, 2014 Washington St., Newton, MA

Free - Open to the Public
Pre-registration is not required.

Autographed copies of the new book will be available at a special discounted price.

Preventing Food Allergy in Children:
What We Have Learned

by Michael C. Young, MD

The dramatic increase in food allergic children, together with the frightening cases of fatal anaphylaxis to peanuts, began in the late 1980s and early 1990's. Naturally, much attention was subsequently focused on what could be done to prevent the development of food allergies in children.

Although there were no studies that explained the origins of the food allergy epidemic, dietary intervention seemed to be a logical and reasonable approach as a preventive strategy. As the numbers of food allergic children continued to increase through the 1990's, it became a widespread practice to recommend restricting the diet of infants and young children from the foods children most commonly developed allergies to (milk and egg) and foods most commonly associated with anaphylaxis (peanuts, tree nuts and seafood).

These recommendations were formalized in guidelines issued by the American Academy of Pediatrics (AAP) in 2000, stating that children with genetic risk of being allergic (such as having a parent or sibling, with allergic conditions such as asthma, eczema, environmental or food allergies) should avoid milk until age one, eggs until age two, and peanuts, seafood until age three or older. Similar recommendations were issued in the UK.

It was also thought that pregnant women with "genetic risk" should not eat peanuts and tree nuts, and that new mothers should also avoid milk, egg, nuts and seafood while they were breastfeeding, but these were not issued as formal recommendations. The rationale for these guidelines was based on the assumption that the gut immune system of a fetus, newborn and infant is "immature" and susceptible to early sensitization, especially to highly allergenic proteins such as peanut, tree nuts, and shellfish.

For children with food allergies in the 1980's to recently, it was generally recommended they avoid the food allergen in all forms including extensively heated/baked forms, e.g. avoiding cake and cookies for milk and egg allergy, even if the child was previously able to eat baked goods containing these foods. The thinking was that complete avoidance would result in faster resolution of the allergy. Another common recommendation was to avoid all foods in the "food family" that the food allergen belonged to, for example having peanut allergic children avoid all legumes even if there was no previous problem eating legumes such as peas and beans.

It was also common practice to test patients with a single food allergy (e.g. milk) for all foods, especially highly allergenic foods such as peanuts, nuts and seafood. If these additional tests were positive, the patient was advised to avoid all those foods as well, regardless of previous history of tolerance – that is, not having had a reaction after eating them.

The Epidemic Continued & Grew

With all these recommendations, there was the expectation that the epidemic of food allergy would be halted or at least slowed down. The opposite occurred. Peanut allergy tripled in the US from 1997 to 2008.

(continued on next page)

Moms: Eating Nuts Lowers the Risk of Nut Allergies

A study led by Dr. Michael C. Young, published December 23, 2013 in JAMA Pediatrics, examined the effect of mothers eating nuts during the peripregnancy period (the time period of pregnancy, and one year before and after) on the risk of having nut allergic children.

It found that the children of mothers who consumed peanuts /tree nuts 5 or more times a week during the peripregnancy period had a 70% reduced risk of developing allergies to nuts compared to children of mothers who consumed nuts less than once a month.

The study involved data collected from 8,205 children born between 1990 and 1994, of which there were 140 cases of peanut/tree nut allergy diagnosed.

"Because the study was observational and not designed to prove cause and effect, we don't recommend that pregnant mothers intentionally eat more nuts to prevent nut allergies," said Dr. Young.

"Future studies with an interventional design are needed before evidence-based recommendation can be made. However, the results do indicate that eating peanuts and tree nuts during pregnancy do not cause allergies to peanuts and nuts. So, a pregnant woman who wishes to eat nuts may do so."

What We Have Learned (continued from page 2)

All food allergies increased in the US by 18% from 1997 to 2007. Similar increases in peanut and food allergies were observed in the UK and Australia.

Recognizing that the dietary policies issued in 1999-2000 had no effect on the food allergy epidemic, and acknowledging the lack of good scientific evidence for making those recommendations, the AAP rescinded those recommendations in 2008. Similar retractions were subsequently issued by UK and European organizations.

While the peanut allergy epidemic had begun in the years prior to the dietary policies issued in 1999-2000, the incidence of peanut allergic children greatly increased after these recommendations were issued. Could the recommended dietary avoidance policies have contributed to the increase in peanut and food allergies?

A number of studies published in the past five years seem to support the somewhat surprising concept that avoidance is associated with increased risk of allergy, and early introduction reduces the risk of allergy.

The landmark study that first demonstrated this concept for peanut allergy was published in 2008 by British allergist George DuToit and colleagues who studied 5,171, children in the UK and 5,615 Israeli children, and found 1.85% of the British children had peanut allergy while only 0.17% of the Israeli children had peanut allergy.

There were no significant genetic or ethnic differences between the two groups as both were of Jewish ancestry. The major difference was dietary: the British children consumed no peanuts while the Israeli children consumed 7 grams of peanut per month starting at 4 to 6 months of age.

Research published in 2011 showed that introduction of cow's milk and complementary solid foods at age 4 months of age or younger, was associated with lower rates of peanut and possibly egg allergy in children with parental history of allergies or asthma. Other studies show that early introduction of milk, egg, and wheat lower the risk of allergic sensitization to these foods. The evidence seems to indicate that for tolerance to develop, early exposure is important; delayed exposure seems to increase the risk of allergy.

New Approaches Needed

The current guidelines recommend nursing or hypoallergenic formula for the first 4-6 months and since there is no evidence to the contrary, introduction of solids by age 6 months without delaying or restrictions of "allergenic foods." However, important evidence is coming.

There are presently two ongoing studies in the UK evaluating dietary interventions at age 4-6 months and clinical outcomes at age 5 years. The LEAP Study (Learning Early About Peanut allergy) is following children with egg allergy or eczema, who are at high risk for developing peanut allergy. They were randomly assigned at age 4 months to a group that would eat peanut or one that followed the old recommendation to avoid peanut until age 3, to see which group has more peanut allergy by age 5. The results of this study will be published later this year.

The EAT Study (Enquiring About Tolerance) is following 1,302 infants from the general population, randomly selected to either exclusive breast feeding for 6 months, or breast feeding plus eating milk, egg, wheat, peanut, sesame and fish, to see which group has more food allergies by age 5. With the completion of these two interventional studies, there will finally be an evidence base for sound dietary recommendations for children at risk for food allergies.

References to the studies mentioned in this article are available on request.

Michael C. Young, M.D., is Associate Clinical Professor of Pediatrics, Harvard Medical School, and practices at Boston Children's Hospital and South Shore Allergy & Asthma Specialists in South Weymouth, MA.

RESEARCH UPDATE (continued from page 1)

Unfortunately, there are no scientific studies establishing the level of food allergen that is likely to provoke an allergic reaction in all individuals. In the absence of these data and given the litigious nature of our society, food producers and physicians may take a too-restrictive stance.

It is scientifically possible to establish threshold risk levels for foods. It would, however, require a large, multi-center, well-designed study to do so. These thresholds could be determined for individual patients (lowest observed adverse effect level [LOAEL]) or for the general allergic population (referred to as the "eliciting dose" [ED]).

There are no scientific studies establishing the level of food allergen that is likely to provoke a reaction in all individuals.

Proposals to establish ED levels at which no individual would have a reaction seem to be impractical and difficult to identify. Alternatively a LOAEL could be set where only a small number of people may experience symptoms.

Arguments against such a study vary from cost to the possibility that, regardless of the data, many patients and physicians may still feel reluctant to accept this information. Interestingly, some studies suggest that in the case of foods such as milk or egg, exposure to small amounts may actually result in tolerance or loss of sensitivity.

Although the recent journal article does not help answer these important questions, it is clearly thought-provoking and should spur the scientific community to begin addressing these issues. Individuals with food allergy or their parents are faced every day with making choices which may not necessarily be required. Alternatively, if threshold levels are established and properly labelled it will be easier for each of us to answer the question. . . Yes, these foods need to be avoided!

Source: Greenhawt, M. and Weiss, C., Importance of establishing threshold levels for food allergens. Annals of Allergy, Asthma and Immunology, 111:151, 2013.

Possible New Options for Relieving Persistent Hives

For people who suffer with chronic idiopathic or spontaneous urticaria (hives which persist for more than six weeks), these outbreaks may be severe and distressing. Although patients with chronic hives frequently look to allergists and dermatologists hoping to determine a cause, in the vast majority none is identified. However, it is worthwhile to be evaluated by a physician because occasionally significant underlying associated conditions may be uncovered.

The mainstays of treatment for hives continue to be antihistamines. Fortunately, we currently have several newer antihistamines which do not cause drowsiness. However, standard doses often are not effective, and physicians recommend either combining several or increasing the doses beyond the usual recommended level.

Some of the more sedating antihistamines, such as doxepin or hydroxyzine, have been proven more effective but raise the risk of drowsiness, causing impairment at work, school, or while operating machines, such as driving. For some, systemic steroids may be the answer, but when used over prolonged periods of time there is a risk of significant adverse effects.

Recently, it has been suggested that the anti-IgE medication omalizumab (Xolair®) may be an alternative treatment. An article in the New England Journal of Medicine is especially encouraging. This article reported that, in a study group of 323 patients 12-75 years of age with chronic urticaria evaluating three different doses of omalizumab, response to treatment was "dose-related," or dependent on the amount of medication received.

Participants in the study were treated over a period of three months, followed by a four-month observation period. Hives began to improve within a week at the highest dose and within two weeks with the middle dose. At the end of the three-month treatment period with the highest dose, two-thirds of the patients achieved good control and nearly half were virtually symptom-free.

The treatment, however, did not "cure" the chronic hives, as symptoms recurred within 2-3 months after the treatment was discontinued. But for those with persistent, severe hives this therapy may be another choice for treating this often frustrating and uncomfortable condition.

At the present time, however, the use of omalizumab/Xolair® is limited to therapy of moderate to severe, persistent asthma. Hopefully it will be approved for treating chronic hives, providing an option when routine antihistamine treatment has failed.

Source: Maurer, M., et al, Omalizumab for the treatment of chronic idiopathic or spontaneous urticaria. New England Journal of Medicine, 368:924, 2013.

Frank J. Twarog, M.D., Ph.D., is an allergist in Brookline and Concord, MA, and serves as President of the Asthma and Allergy Foundation of America, New England Chapter. He is a Clinical Professor at Harvard Medical School.

AAFA New England

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The Wellapets team previewed the game at our Northwest Suburban Boston Area Support Group last year. They are based in Boston, and welcome your feedback or comments at info@lifeguardgames.com. Your input will inform future updates to the app.

SHARE YOUR STORY

Latex Allergy: Stay Safe, Spread Awareness, Have a Blast!

by Serena Haver

Almost as long as I can remember I have been allergic to latex. Like most kids that grow up with severe allergies, I missed out on a few birthday parties, left class early, and carried around a med-kit filled with everything that I needed in case of an emergency. Avoidance is one of the best ways to keep oneself safe and prevent an allergic reaction. However, with an allergy like latex coupled with the fact that I was quite shy, it was a difficult task.

Latex can be hidden and disguised in various shapes and forms, including common items such as balloons or latex gloves. I also had to avoid some surprising ones. For example, some types of chewing gum contain rubber tree sap, a form of latex-containing natural rubber. Kiwi fruit contains a protein similar to latex and therefore has to be avoided.

In addition to latex's multifaceted identity, I also struggled to explain to others how I could be allergic to some rubber but not all. I am only allergic to non-treated natural rubber. Once processed by heating and molding, like that of a rubber tire or flip-flops, the item would not elicit an allergic response. Therefore, I could wear flip-flops, but not chew gum.

During my entire school career, spreading awareness was extremely important to my avoidance of latex. My parents helped me understand and communicate my allergy both to myself, and to others. They repeatedly explained the concept of the aerosolization of particles and what I needed to do to manage my allergy.

Throughout elementary, middle, and high school, my parents played a crucial role in helping me avoid or at least reduce my exposure to latex. They met yearly with all of my teachers and school nurses. They would explain my allergy and put medical kits together. They would carefully place my EpiPen®, Benadryl®, latex-free gloves, non-rubber tourniquet, and succinct directions for what to do in case of an emergency, in a clear zippered plastic bag with my name written on it. They showed the kit to my nurses and teachers and explained what would need to be done if I had an allergic reaction.

A few times, when I felt like I had to leave class early because some kids snuck balloons into the classroom, they called the school explaining why I had to miss class. They also helped greatly, especially when I was younger, calling other parents to see if they were going to have balloons at their kids' birthday parties or other school events.

Occasionally, growing up, people would complain or begin to dislike me because I was the person responsible for them not being allowed to bring balloons into school on their birthday or for making my summer camp ban water balloons, even when it was extremely hot outside. But with my parents help I was able to do all of the things a "regular" kid could do and hardly had to miss out on anything.

When I entered college, I knew my parents would not always be there to explain my allergy to others or spread awareness to make my school a safe place for me. Using what I learned from them, I was able to explain my allergy and how to deal with it to several college faculty members before fall semester started. My biggest fear, however, was explaining my allergy to my new roommate, a girl I knew nothing about, from a town I had never heard of. Although I was nervous, after an introduction, the second message I sent her was about my allergy. I feared that she would want a new roommate, think I was demanding, or judge me before we even had a face-to-face conversation. Making sure she did not bring any latex into the room was a lot to ask of a stranger.

Luckily, my roommate and almost everyone I have met so far at college have been extremely understanding of my allergy. Many of my friends even serve as an extra set of eyes on campus, texting me when to avoid certain areas of campus when they spot balloons or other triggers.

One of the best ways to avoid an allergic reaction is to reach out and have other people help you avoid the allergen. Let everyone that you come in contact with, parents, teachers, extended family, friends, nurses, coworkers, etc. know about your allergy. Talk to organizers or event managers beforehand. Most people are eager to help and are willing to help ensure that your allergy will not prevent you from living your life, going to parties, concerts, or games.

There will always be the few that do not understand, but the more people you contact, the more awareness you spread, the more likely it is that you can prevent people from bringing the allergen to events, and you can better protect yourself and others with similar allergies while simultaneously having a blast!

Please share YOUR story.
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Breath of Spring 2014

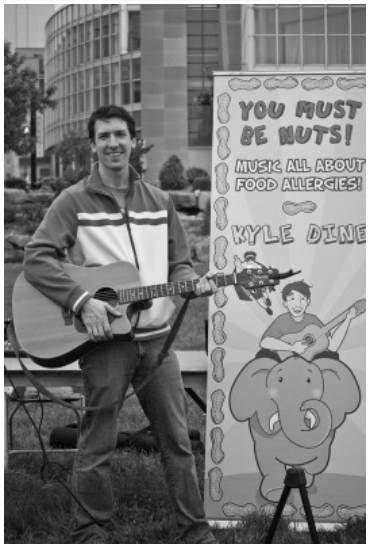
Laughter is the Best Medicine

with Jimmy Tingle–April 25

See page 7 for details!

Did you pick up this newsletter in your doctor's office?
To receive future issues at home, become a member of AAFA New England. (See page 7)

Songs about food allergies? You must be nuts!



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