Landmark study offers new insight into the onset of peanut allergy

By Frank J. Twarog, MD, PhD

Since peanut allergy continues to grow in frequency and is one of the major causes of life-threatening food reactions, any significant insight into preventative strategies is important. The LEAP study (Learning Early About Peanut Allergy), which received extensive media coverage when it was released in February, is a hallmark investigation into how peanut sensitization develops and possible prevention of this allergy. Sensitization is the process of being exposed to a substance or allergen that results in the development of hypersensitivity or allergy.

This study is a monumental investigation that began with 640 infants 4-7 months of age who had eczema, egg allergy, or both. This allergic background placed them at high risk for emerging food and respiratory allergy. Previous observations from the same group of researchers that undertook the LEAP study suggested that high peanut allergen exposure in environmental dust in the home may be responsible for peanut sensitization, especially in children with eczema.

The LEAP study was performed in England, which, along with the United States as well as Africa and Asia, has experienced an increase in the prevalence of peanut allergy. The initial concept for this focus on sensitization at a very early age emerged from the observation that peanut allergy was 10 times as common in Jewish children residing in England, where introducing peanuts into the diet of young children was avoided, as compared to Israel, where a common snack food named Bamba introduced peanut to babies at an early age.

(continued on page 2)
An editorial that was published at the same time as the LEAP study also noted that peanut allergy in the United States increased from 0.4% in 1997 to 1.4% in 2008 and to greater than 2% in 2010. This was in spite of the American Academy of Pediatrics recommendation to withhold peanut products from children until 3 years of age. In fact, because of this observation, the American Academy of Pediatrics withdrew their recommendation in 2008.

In the LEAP study, infants 4-11 months of age were skin tested with peanut when they entered the study. Of this group, 530 had negative skin tests and 98 had a skin test of 1-4 mm. At inclusion into the study, all children were challenged with peanut. Most were given the Bamba snack food, which contains peanut butter and puffed corn. Those who would not consume Bamba were given smooth peanut butter. Any who reacted at this stage, indicating they were already sensitized to peanut, were placed in a separate category and not included in the main study population.

Both skin test-negative and skin test-positive infants were further subdivided. Approximately half in each group was fed peanut products for a total of 6 grams of peanut during approximately three meals per week, whereas the second group practiced complete avoidance.

Throughout the study, careful follow-up was undertaken, initially by phone calls, until 12 months of age. From 12 to 30 months, visits were scheduled every two weeks, and from 30 to 60 months until the study concluded, once-monthly visits. At each visit, the children were skin tested with peanut and laboratory studies were obtained.

At 60 months, 130 children in the skin test-negative group had completed all the criteria for inclusion in the follow-up challenge. In the avoidance group, 13.7% of children and in the peanut ingestion group 1.9% were found to be allergic. These results, which caused this study to make the headlines, show an 86.1% reduction in the prevalence of peanut allergy in the group consuming peanut.

Each of the 98 children with positive skin tests at the onset was able to be evaluated at the 60-month time interval. Once again, the frequency of allergy in the avoidance vs. consumption group was striking. A total of 35.3% in the avoidance group reacted to the peanut challenge, compared with 10.6% in the consumption group. This showed a 70% reduction in sensitization in those children who ate peanut.

Skin tests mirrored the challenge results. They were significantly larger in the avoidance group but remained similar in the consumption group. Similarly, peanut sensitivity by RAST testing increased in both groups, but more significantly so in the peanut-avoidance children.

The “Bottom Line”:
What the LEAP study means for you

If you or a family member has a food allergy:
Keep careful avoidance measures in place (such as label reading) to prevent a reaction.
Don’t feel guilty; you did not cause your child to have a food allergy by following the best available advice at that time.

If you have a child with food allergy and plan to have other children: discuss with your allergist and pediatrician their recommendations for what to eat or avoid during pregnancy, breastfeeding and infancy in light of your family history.

If you have a baby or young child with high risk for developing peanut allergy (i.e., infants with eczema, egg or other food allergy) talk with your allergist or pediatrician about getting that child evaluated to determine whether and how to introduce possibly allergenic foods.
The Food Allergy Centers at Boston Children’s Hospital (617-355-6117) and Mass. General Hospital (617-643-6834) are two places in this region where such testing is now available.

If you do not have food allergy in your family there’s no need to avoid introducing specific foods to infants starting at 4-6 months.
AAFA New England

EDUCATIONAL SUPPORT PROGRAMS provide you with opportunities to

▪ Learn from experts   ▪ Get your questions answered
▪ Meet others who share your concerns   ▪ Find resources and gain confidence

For upcoming meeting dates and topics:
visit our website (www.asthmaandallergies.org) or call 781-444-7778.

To receive support group program announcements, send your e-mail address and your
location to aafane@aafane.org.

METRO-BOSTON ALLERGY & ASTHMA SUPPORT GROUP
Newton, MA
Meets at Newton-Wellesley Hospital, 2014 Washington St. (Rt. 16)

NORTHWEST SUBURBAN BOSTON AREA SUPPORT GROUP - Lexington, MA
Meets at Beth Israel and Children’s Hospital Medical Care Center, 482 Bedford St.

FOOD ALLERGY GROUP OF THE NORTH SHORE
Salem, MA
Meets at Salem Hospital, 81 Highland Ave. (Davenport Conference Area)

METRO-WEST ALLERGY & ASTHMA SUPPORT GROUP
Framingham, MA
Meets at Allergy & Asthma Treatment Specialists, 475 Franklin St., Suite 206

MERRIMACK VALLEY ASTHMA & ALLERGY SUPPORT GROUP
Meets at St. Michael’s School, Main St., Andover, MA

PIONEER VALLEY FOOD ALLERGY SUPPORT
Ludlow, MA
Meets at St. John the Baptist Pastoral Center, 201 Hubbard St.

SHORESIDE ASTHMA & ALLERGY EDUCATIONAL SUPPORT GROUP
New location to be confirmed

CAPE COD ASTHMA & ALLERGY GROUP
Yarmouth Port, MA
Meets at Allergy & Asthma Center for Cape Cod, 244 Willow St.

RESEARCH UPDATE: Landmark study on the onset of peanut allergy (continued)

These data are certainly compelling. Although the parents of children who are already sensitized to peanut may express concerns regarding their own feeding practices, the answers clearly are not all in at this time.

Furthermore, there is considerable interest in trying to find some therapeutic intervention for individuals already sensitized to peanut. A variety of approaches, including oral or peanut patch desensitization procedures, new forms of injection immunotherapy as well as a modified version of traditional Chinese herbal remedies are all being investigated in current clinical trials.

For those with a positive family history of allergy who are expecting children, it is best to discuss possible preventive strategies to deal with an at-risk infant. There are still some controversies in this area and some of the studies have not been reproduced, including the exciting information in the LEAP report, so you should expect that advice may not always be consistent.

References:

Frank J. Twarog, M.D., Ph.D., is an allergist in Brookline and Concord, MA, and Clinical Professor at Harvard Medical School.
The humor of Loretta LaRoche added to a the fun of a wonderful evening at AAFA New England’s annual spring fundraiser. There was great food, a fabulous silent auction, and the satisfaction of supporting programs and services that help people with asthma and allergies live full and healthy lives. We honored Dr. Frank J. Twarog for his years of dedicated service as President of AAFA New England.

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**Breath of Spring**

**Laughter is the Best Medicine**

with Loretta LaRoche—May 1

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*Donations of $500 or more.*  (See our website for a complete list.)

Our sincere thanks to the many others who purchased tickets to attend, or contributed donations or auction items.
Take Control of Asthma - Don’t Let It Control You!

Do you use your inhaler correctly?  
Most people DON'T!  (continued from page 1)

Not all inhalers are used the same way, but for most it’s important to use a spacer or valved “holding chamber,” the tube-shaped attachment that helps more of the medication get into the lungs with less of it landing on the outside of your mouth or on your tongue or throat.

Even people who hear audible warning sounds from their spacers often inhale too quickly, so the medication doesn’t get deep down into the tiny airways where it is needed.

Can Your Smartphone Help You Manage Asthma Better?

Many apps are now available for mobile devices that claim to teach about asthma and provide tools for managing it. They can be very helpful, but it’s important to choose carefully.

A 2012 assessment of over 100 apps found that 1 out of 3 gave advice that was not supported by current scientific evidence or standards. When the same researchers took another look about two years later they found many new ones in “a landscape dominated by low quality generic information apps and tools that do not adhere to accepted medical practice.”

Many new apps continue to reach the marketplace, some directed at children and some that allow you to automatically share information with your physician.

The U.S. Food and Drug Administration regulates only those that meet the strict definition of medical devices. Examples of apps that the FDA announced in February that it does not intend to regulate include “mobile apps that help asthmatics track inhaler usage, asthma episodes experienced, location of user at the time of an attack, or environmental triggers of asthma attacks” and “mobile apps that use GPS location information to alert asthmatics of environmental conditions that may cause asthma symptoms.” Others on the market include medication reminders and a digital (rather than paper-based) asthma action plan.

If you are considering downloading an app for asthma make sure you are clear on what it will do, whether it comes from a trusted source, who funded it and why, and whether it protects your private information. Talk to your doctor for suggestions for an app that contains reliable information and has been successful for others.

At every office visit ask your doctor or nurse to watch you or your child and help you improve how you use them. This will help you do a better job of keeping your asthma symptoms under good control.

Is your asthma related to your job?

“Work-related asthma is under-diagnosed and under-recognized,” said Dr. Jacek Mazurek of the U.S. National Institute for Occupational Safety and Health. He is one of the authors of a study published this February which revealed that doctors often don’t ask patients how their work situations may be affecting their breathing.

People don’t bring it up themselves because they may be concerned about how it might affect their job or their income.

You can be exposed to many things that can cause or aggravate asthma, including chemicals, dust, fumes, insects and animals. These triggers are found in many different kinds of workplaces including offices and schools as well as in factories, farms, and settings for various trades and service occupations.

Be sure to speak to your doctor about whether airborne exposures at work can be at the root of your asthma symptoms and what you can do about them.
Learning to Bake Allergen-Free

A Crash Course for Busy Parents on Baking without Wheat, Gluten, Dairy, Eggs, Soy or Nuts

By Colette Martin

$19.95

Available from on-line retailers or wherever books are sold

Baked goods are among the most challenging kinds of foods for families with food allergies to find and enjoy.

From daily breakfast items to sweet treats, it’s hard to trust that “store-bought” products will be completely safe. And it can be very tricky to get a satisfactory outcome when trying to use a typical recipe while avoiding such key ingredients as eggs, milk or wheat.

Colette Martin comes to the rescue with a fabulous volume that is part text book and part cookbook. Learning to Bake Allergen-Free does a great job with the essentials of any good cookbook: gorgeous photos, engaging comments and descriptions to get you motivated, clear and detailed instructions, and delicious-sounding recipes that you can’t wait to try. Brownies. Scones. Muffins. Breads and rolls. Pizza. Cupcakes. Bars. Cookies. Tarts. Pies. Hungry yet? There are even recipes for bagels and croissants, all with complete explanations of how to replace the most common food allergens used in traditional baking.

For anyone who is new to food allergies, or is ready to ramp up their baking skills, the section called “Baking Lessons” alone is worth the price of the book. There are dozens of mouth-watering “from scratch” recipes, and even a chapter for those who want to use commercially-available gluten-free baking mixes as a time-saving starting point but need guidance to modify the instructions to avoid specific allergens such as eggs or dairy.

Sprinkled throughout the book are short sections called “Crash Courses” with informative and practical explanations and tips. The appendices will serve as a handy reference for how to adapt recipes from other sources. This is a book that belongs on the shelf of every family with food allergies. As one of our members said, “This is the best food allergy cookbook I ever bought!”

Pre-School Food Allergy Handbook

By Gina Mennett Lee and Laurel Francoeur

$34.95

Available from Amazon

Two national leaders in the food allergy community – one with a background in education and the other an attorney – have joined forces to produce an outstanding resource for the field of early education. Both of the authors have children with food allergies, and considerable experience developing and evaluating safe and inclusive food allergy management strategies for a variety of educational levels.

The handbook they have written is a comprehensive guide to best practice that should be in the hands of every pre-school professional. Explanations are clear and thorough, with detailed and thoughtful narrative background information as to what is unique about the pre-school setting, why specific policies are important, and exactly what they should contain.

Recommendations for an overall Food Allergy Management and Prevention Plan deftly summarize the voluntary guidelines published by the U.S. Centers for Disease Control, with helpful suggestions for how to implement them to create a safe and healthy environment.

The book is filled with many tidbits of useful information, such as lists of how a child might describe a reaction, items in which allergens may be found and how to read food labels, that may seem commonplace to someone who has been dealing with food allergies for a long time, but eye-opening to a pre-school teacher who needs lots of prompts for how to be vigilant in order to keep a young child safe and prevent exposure to allergens.

There are helpful checklists for both parents and pre-school administrators, a review of relevant laws, and much more. The price of this publication may seem a bit high, but the advice and tools that it provides are truly priceless.
Monique Marshall and Mary Victor, student nurses at Regis College, made good use of a supply of asthma education materials and asthma management tools donated by AAFA New England. They have been using them to work on asthma management skills with homeless families living in a local shelter, and with many women who are cared for at the Wellness Center at Rosie’s Place, a sanctuary for poor and homeless women in Boston. Providing spacers and teaching people how to use them has made a difference, say Monique and Mary.

“Asthma and Allergy Essentials for Child Care Providers”
That’s the title of the workshop we offer to help keep children safe and healthy when they are cared for outside of their homes. A limited amount of grant funding is available to offer the workshops free. Contact Sharon Schumack, AAFA New England’s Director of Education & Programs, to schedule a program in your area.

School nurses: Donations Available for Your Needy Students
AAFA New England can provide you with spacers and peak flow meters for teaching purposes and for use by students with asthma. We also have teaching materials and activity books.
Ethos, the organization for students of African descent at Wellesley College, celebrated the life and memory of alumna Kathleen Daly ‘80, who died from an asthma attack during her senior year. Funds raised in her honor were donated to AAFA New England, and will be used to support asthma education programs.

Wellesley College President Kim Bottomly celebrated with Tanekwah Hinds, the Kathleen Daly Chair of Ethos, at the college’s Second Annual Black Excellence Gala.

Would you like to organize a community fundraiser to raise awareness as well as raise funds for the life-saving work of AAFA New England? Let us know how we can help, and send us a photo for our next newsletter!