The Year in Food Allergy Research

By Scott H. Sicherer, M.D.

In the February 2014 issue of the top-ranked allergy journal, the *Journal of Allergy and Clinical Immunology* (JACI), a review article looks back at 2013 and summarizes important advances in food allergy research as reported in more than 80 research studies in JACI and its sister journal, JACI: In Practice. FARE funded a number of these studies. Here, Dr. Sicherer, an author of that review, distills some of the major observations and accomplishments reported in the journals in 2013.

Risk factors and prevention

U.S. national health surveys suggest that 7.6 percent of the U.S. population report a potential food allergy, with several studies documenting a particularly high and increasing rate among non-Hispanic black children. It remains uncertain why this group appears to be at higher risk, whether it is diet, genetics, environment or healthcare disparities, but these possibilities are an important issue for future research.

With regard to risk factors for food allergy, one theory is that young children with eczema may become “sensitized” by exposure through the skin. For example, studies showed that children with genetic defects in skin barrier may be more prone to a food allergy. Along these lines, some theories suggest that for otherwise healthy children who are allergy-prone, delaying their ingestion of allergens for extended periods, months or years, may be counter-productive. As a result of such delays, these children’s gut immune system may not learn to accept the food (tolerance), while exposure by the skin might increase an allergic response. In fact, experts have reversed the old recommendations, which advised significant delays in introducing allergens to healthy infants.

One randomized study attempted to address these issues by feeding egg early to allergy-prone infants. Unfortunately, many of the children had allergic reactions to early egg ingestion, compromising the interpretation of the study. In general, however, the earlier egg exposure did not appear to increase allergy risks, though it is important to note that the study did not show that early ingestion protected infants from developing the allergy.

In another study looking at early diet and protection against food allergy, infants receiving a “healthier” diet of fruits, vegetables and home-prepared foods were less likely to have food allergy, arguing that good nutrition is a key issue. Similarly, studies support the idea that vitamin D sufficiency is important to reduce allergy risks.

Finally, there are interesting studies about the “microbiome,” the world of bacteria living inside of everyone. In mouse studies, the types of bacteria in the mouse gut strongly influence the ability of the researchers to trigger food allergy. Studies of the microbiome in human food allergy are underway to potentially identify those at risk and perhaps allow a means to alter the person’s susceptibility to developing an allergy through use of specific “healthy bacteria,” probiotics.

Diagnosis and prognosis

A major point of confusion in allergy diagnosis is the fact that people may have a positive allergy test but are nonetheless able to ingest the food with no problems. This is why a medically supervised feeding (also known as oral food challenge) is often needed for diagnosis.

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As I write this, a lively debate is unfolding online concerning cupcakes (and other foods) and whether they have a place in classroom celebrations. Various blogs have dedicated long posts to this topic, with parents again having to explain the life-threatening nature of food allergies.

FARE is committed to keeping children with food allergies safe and included. Keeping known food allergens out of the classroom during celebrations is now recommended by the Centers for Disease Control & Prevention in its national school guidelines. FARE strongly supports this.

But we know that even though we have made progress in educating the public about the severe and potentially life-threatening nature of food allergy and anaphylaxis, there is still much work to be done.

Our commitment to finding a cure, educating families and those who interact with them, advocating for all of you and raising awareness of food allergy as a serious public health concern never wavers.

There are 15 million people in the U.S. living with food allergies—that’s 15 million reasons to find a cure, to educate, to advocate, to walk, to raise funds for critical programs, to take action and to raise awareness.

We are dedicated to pursuing advances in every area of our mission so that one day, children and adults across our country and around the world will no longer need to worry about accidental exposure or one mistaken bite. We do this for every person living with food allergy and those who work tirelessly to keep them safe—from the youngest members of our community who depend on their parents and caregivers to help them navigate life with food allergy, to the seasoned veterans who have food allergy management down to a science.

FARE and the food allergy community had a fantastic 2013, and I am excited about the powerful programs FARE is developing in 2014 to help further advance the interests of the food allergy community.

In this issue, you’ll learn more about promising research, our plans for a comprehensive College Food Allergy Program, our first national Food Allergy Conference, tips for safe and nutritious foods from a registered dietitian, a guest column from one of the members of FARE’s Teen Advisory Group, and much more. Together, we can make the world better for everyone with food allergies.

We have 15 million reasons to make it happen.

John L. Lehr
CEO
Food Allergy Research & Education
FARE’s First National Conference Will Offer Comprehensive Program, Innovative Sessions

For the last 20 years, our Food Allergy Conferences have provided an opportunity for families, adults with food allergies, school staff and healthcare professionals to get the facts about food allergies and bond with other attendees who get it.

This year, our first national FARE Food Allergy Conference will offer all this, and so much more. The excitement is building here at FARE for the first multi-day Food Allergy Conference on June 21-22 at the Hyatt Regency O’Hare just outside of Chicago, which will bring together leading experts for a weekend of sessions and workshops that will leave an impact for years to come. This year’s presenting sponsor for the conference is Mylan Specialty L.P.

In addition to the “Food Allergy 101” presentations for newly diagnosed and research updates that have been a hallmark of past conferences, we are bringing you new topics presented by leading experts in the field, and hosting experiential and interactive sessions.

Here are just a few of the confirmed experts who will be leading the conversation at our conference this summer:

- **Pete Wright**, an attorney who represents children with special education needs and founder of Wrightslaw, a website specializing in education law and special education advocacy, will be speaking and leading a 4.5-hour workshop for parents that he has custom-designed for food allergies.
- **Jim Long**, attorney, former Senior Attorney with the Department of Education’s Office of Civil Rights
- **Scott H. Sicherer**, M.D., professor of pediatrics, allergy and immunology and Mount Sinai School of Medicine and member of FARE’s Medical Advisory Board
- **John Lee**, M.D., director of the Food Allergy Program and co-director of the Eosinophilic Gastrointestinal Program at Boston Children’s Hospital
- **Ruchi Gupta**, M.D., M.P.H., associate professor of pediatrics at Northwestern University Feinberg School of Medicine and physician at Ann & Robert H. Lurie Children’s Hospital of Chicago
- **Chefs Joel and Mary Schaefer**, owners of Allergy Chefs, Inc.

As in years past, FARE is convening support group leaders, FARE Walk for Food Allergy chairs and members of FARE’s Advocacy Leadership Council for our annual Leaders’ Summit on the day before the conference.

We look forward to seeing familiar faces and meeting new families this summer in Chicago at this exciting national event.

For those arriving early, pre-conference activities on June 20 will include free tours of the Enjoy Life factory, support groups and much more!

Stay tuned to our website (www.foodallergy.org/conference) for information on the program! Registration will open in early March!

Save the Date for FARE’s Teen Summit!

Last year, we were thrilled to have hosted more than 300 people from 26 states for our annual Teen Summit—our biggest attendance ever. We’re aiming to top that number in 2014 at our Ninth Annual Teen Summit at the beautiful Grand Hyatt in Washington, D.C. on Nov. 7–9.

The FARE Teen Summit is a 3-day event that gives teens living with food allergies a chance to meet with other teens from across the country. Pre-teens, teens and young adults ages 11-22 are invited to attend, and we will cover topics that are relevant and important to them:

- social experiences and peer pressure
- dining out and traveling
- knowing how to be your own advocate
- friendships and dating
- navigating high school
- preparing for college
- and more!

Teen Summit participants get to spend time with others in their own age group through special breakout sessions for middle school and high school, plus evening social activities that are food allergy friendly and fun! We also will have a sibling and parent track for family members to share their experiences and learn from some of our great speakers.

We had a blast last November, and the teens did too. Mark your calendars: Nov. 7–9! •
Numerous studies reported refinements in diagnosis by using “component” testing, looking at the immune response against specific proteins within foods rather than a mixture of food proteins. The reason this approach is helpful is that some proteins in a food may be more relevant than others with regard to causing illness. For example, immune responses against proteins that are digested easily are less important than allergy against proteins in the same food that pass digestion and enter the bloodstream.

Although advances in diagnosis are reported based on component testing, this method still has limitations. For example, a peanut is made up of many small proteins with names such as Ara h 1, Ara h 2, and so on. Some of these proteins, especially Ara h 2, are associated with severe reactions, while others are not. A component test can determine if a person is sensitized to one or more of these protein fragments. However, the inability to measure the degree of sensitization to a particular protein can limit the diagnostic accuracy of the test: Some patients are able to tolerate peanuts, even though they have detectable levels of Ara h2.

In addition, the component test remains a poor predictor of severity, likely because many factors play a role in severity beyond what the test is measuring. These factors include how much is eaten, the individual’s state of health at the time, having asthma, and other factors.

Importantly, studies are looking at diagnosis and prognosis by evaluating more than just single test results. In a study of infants with cow milk allergy who were followed for about five years, a little more than half of the infants outgrew their allergy. Predictors of which infants would outgrow the allergy included the infant’s milk skin test size, blood test allergy level and the severity of their skin rashes, and looking at all three together could help predict how long it will take for them to outgrow the allergy.

Finally, studies are defining an unusual form of delayed anaphylaxis caused by mammalian meats such as beef, pork and lamb. Having anaphylaxis hours following a meal usually excludes food as a trigger, but studies have now defined an allergy to a substance in meat called alpha-gal, a type of sugar, that is a cause of delayed anaphylaxis. The allergy has been diagnosed particularly in mid-Atlantic states, and other areas of the U.S. and worldwide where ticks are common. It seems that an immune response to a similar substance in the tick saliva is the initial trigger for the allergy. A blood test is now available to help diagnose this unusual form of food anaphylaxis.

**EoE and FPIES**

Eosinophilic esophagitis (EoE) is a food-induced illness where there is allergic inflammation of the esophagus, the tube connecting the mouth and stomach. The “rash” in the esophagus makes eating uncomfortable and the inflammation could lead to scarring. Studies this year in adults added to ones in children showed that, for many of those affected, the symptoms can be controlled by a restricted diet. These studies identified milk and wheat as the most common problem foods. Another study suggested that many with milk-induced EoE may tolerate milk in baked goods, like muffins or cookies.

Food protein-induced enterocolitis syndrome (FPIES) is a food allergy where allergy tests are usually negative but the child experiences severe vomiting and ill appearance, possibly with low blood pressure, about two hours after the food is eaten. In a small series of patients, researchers reported using the anti-nausea/vomiting drug ondansetron, used for example for people receiving chemotherapy, appeared to halt the vomiting, but the study is preliminary.

**Advances in treatment**

There is a lot of excitement about food immunotherapy, where the person is exposed to the trigger food gradually and increasingly to a point of a final “treatment dose” intended to reduce the allergy threshold during continued treatment or, hopefully, eliminate the allergy entirely so that the individual is able to eat the food in full amounts without needing a daily treatment dose.

Several studies addressed sublingual immunotherapy (very small doses under the tongue) and oral immunotherapy (swallowing the dose of food, usually aiming for larger doses). The studies generally concluded that oral immunotherapy was more effective, but carried more side effects than sublingual immunotherapy. Anaphylaxis is possible from these approaches, so NEVER try this on your own.

An approach to potentially reduce side effects and speed treatment during oral immunotherapy is to pre-treat with “anti-IgE,” an injected medication used for severe asthma. This pre-treatment/co-treatment could reduce immediate allergic reactions from the food by temporarily inactivating the immune response. A randomized trial is nearing completion, but preliminary studies of open treatment already show promise for...
this approach because immunotherapy dosing could be undertaken quickly with fewer allergic reactions than expected when immunotherapy is used alone.

The big question is whether such therapies can do more than temporarily change a threshold, and actually cure an allergy. One study this year disappointingly found that a majority of participants from two previous milk oral immunotherapy studies who initially showed benefit were no longer able to ingest full servings of milk with minimal or no symptoms. However, longer term treatment trials are underway, as are studies of alternative approaches in people, such as immunotherapy applied to the skin using a patch. Additional novel approaches that alter immune responses are being investigated in mice.

Summary
This review of research advances is just a brief overview from selected studies published in two journals. Promising advances are underway that are sure to improve prevention, diagnosis and treatment of food allergy in the near future.


Meet Your (Research) Match
Are you thinking of participating in a clinical trial? FARE has teamed up with ResearchMatch, a national online patient registry, to connect patients with food allergies to new clinical trials. FARE and members of its Medical Advisory Board were involved in developing a special sub-registry for patients with food allergies, which will help researchers at institutions nationwide to identify candidates for participation in their studies. ResearchMatch is maintained by Vanderbilt University and funded by the National Center for Advancing Translational Sciences, part of the National Institutes of Health.

Signing up as a volunteer on ResearchMatch is an excellent way to find out which studies may be a good fit for you or your child. Registering is simple and free, and does not place you under any obligation to participate. To learn more and sign up, please visit www.researchmatch.org/fare. •

FARE Attends AAAAI Annual Meeting
For anyone in the field of allergy/immunology, San Diego was the place to be from February 28-March 3. Thousands of researchers, clinicians, allied health professionals and patient advocates—including FARE CEO John Lehr and other representatives—converged on the city for the 2014 annual meeting of the American Academy of Allergy, Asthma & Immunology (AAAAI).

Many FARE-funded researchers and medical advisors gave presentations or chaired sessions on the latest advances in the field of food allergy. FARE’s Medical and Research Advisory Boards met, and we invited young investigators to a special meeting to bring them up to speed on our research strategic plan and funding opportunities. Finally, FARE staff offered information about our programs at our booth in the exhibit hall. Look for an overview of AAAAI research highlights in the next issue of Food Allergy News. •
The Latest on Oral Immunotherapy

As Dr. Scott Sicherer notes in our cover story, “there is a lot of excitement about food immunotherapy.” One of the most widely studied treatments in this category is oral immunotherapy (OIT), which requires patients to swallow small but steadily increasing doses of an allergen until they reach a daily maintenance dose.

Previous studies suggest that about 75-80 percent of patients on OIT can be desensitized. This means that patients can consume a significant amount of a problem food without having a reaction, as long as they keep taking their daily treatment dose. The ideal treatment, however, would result in tolerance—long-lasting changes in the immune system that would allow patients to eat allergenic foods even after they stop treatment. In February 2014, the Journal of Allergy and Clinical Immunology (JACI) published the results of the first clinical trial to show that some patients can safely eat peanuts after stopping OIT.

Researchers at Duke University and Arkansas University for Medical Sciences recruited 39 patients with peanut allergy, ages 1–16, who received OIT for up to five years. Over time, 14 participants withdrew, either because of allergic side effects or for personal or other reasons. All 24 patients who completed the treatment were desensitized to peanut, and 12 were able to pass a food challenge and safely add peanut to their diet after therapy was stopped. The latter group had smaller skin test results, as well as lower levels of peanut IgE, the antibody responsible for allergic reactions, than when they began the study. Additional clinical trials in larger numbers of patients are needed to confirm the results of this pilot study.

Since OIT is time-consuming and can trigger adverse reactions, investigators are seeking ways to make the treatment faster and safer. In the December 2013 issue of JACI, researchers at Boston Children’s Hospital/Harvard Medical School reported on a pilot study to determine whether combining OIT with omalizumab (Xolair®), an “anti-IgE” medication prescribed for asthma, might speed up the desensitization process and reduce the number and severity of allergic reactions to peanut during treatment. FARE funded this study, which achieved encouraging results: 12 of 13 children who were at high risk for reactions were able to tolerate the equivalent of 20 peanuts. Most had no reactions, or only mild ones.

To further explore this combination therapy, FARE and Genentech are funding a new study, known as PRROTECT (“Peanut Reactivity Reduced by Oral Tolerance in an anti-IgE Clinical Trial”). Four sites are participating in this trial of 36 patients: Boston Children’s Hospital/Harvard Medical School; Children’s Hospital of Philadelphia/University of Pennsylvania; Stanford University School of Medicine, and Lurie Children’s Hospital/Northwestern University (Chicago).

For the 30 percent of children with food allergy who are allergic to more than one food, treating one allergy at a time is a slow process. In the January 2014 issue of Allergy, Asthma & Clinical Immunology, researchers at Stanford University reported on their FARE-funded phase I clinical trial, which evaluated the safety of simultaneous OIT for multiple foods. Fifteen of the 40 children and adults who participated were allergic to only one food—peanut—and received OIT for that allergen. The other 25 received multi-allergen OIT for up to five foods at the same time. The study showed that multiple allergen OIT was safe when performed in a hospital setting with trained personnel. Larger, randomized studies are needed to further test safety and to demonstrate effectiveness.

With FARE funding, a Stanford team found that OIT changes the DNA of patients’ immune cells. The researchers studied 20 peanut-allergic children and adults who completed two years of OIT and were able to safely eat one four-gram serving of peanuts every day. The patients were asked to stop eating peanuts for three months, after which they were given an oral food challenge. Seven patients were still able to eat peanuts, but 13 had regained their allergy. The researchers took blood samples from both groups and compared their immune cells. They found changes in the DNA of the seven patients who remained desensitized. In the February 2014 issue of JACI, the authors noted that the DNA change could become the basis for a test that would be used to monitor the effectiveness of OIT. However, further studies and FDA approval would be needed before such a test could be used in physicians’ offices.
Introducing the FARE College Food Allergy Program

Transitioning to college life can be both exciting and somewhat daunting. And for those with food allergies, there are important factors to consider. Campus dining, dorm living, and even classroom activities pose a unique safety concern for students with food allergies, and as the number of food allergies continues to dramatically increase among children and teens, these concerns will impact more and more college-bound students.

In January, FARE launched the FARE College Food Allergy Program, which is designed to provide students with food allergies a safer college experience by helping colleges and universities develop uniform policies to effectively manage food allergies.

"Ultimately, we want college-bound students with food allergies to attend their first-choice college because of their area of study, and to be reassured that the institution is well-equipped to manage their food allergies," said Mike Spigler, FARE's vice president of education. "We're excited to be working with a group of individuals who share our commitment to making the college experience safe for students with food allergies."

"Two-thirds of food allergy fatalities are kids ages 13-21. This fact, combined with college kids’ natural risk-taking behavior, is a recipe for disaster if we fail to address food allergy risk, preparedness and emergency procedures," Thompson said.

After the large group presentations, participants were provided with a buffet lunch of foods free of the top eight food allergens. The goal of this lunch was to show the dining services directors examples of how food can be tailored to meet the needs of those with special dietary requirements. The attendees then gathered in smaller groups for more in-depth discussions of allergen control in a campus dining setting. Throughout the group discussions, and the presentations and wrap-up discussions the following day, the excitement of the college representatives for the FARE College Food Allergy Program was palpable. They are passionate about food service and keeping their students safe, but they are also passionate about providing their students with food allergies a variety of high-quality and safe food options.

"I was thrilled to be a part of this terrific experience and explain what it is like for the food-allergic student to live in and navigate an environment that is full of potential hazards," Thompson said. "It was great to watch the colleges become more and more engaged in the process and see their desire to help. I am especially proud some universities actually went back to their campus from this very first meeting with a mission of changing policy so their food service employees can administer epinephrine in case of a reaction."

Many of the college representatives also noted that they were taking information back that would help them make immediate changes to improve their own campuses. Since the summit, the response to the College Food Allergy Program has continued to be very positive. Dozens of colleges, parents and students have reached out to FARE to ask how to get involved or lend their own voice to the program.

A second summit will be held April 11-13 at the University of Arizona. That summit will bring together additional experts, parents, students, and representatives from various college departments including dining services, health services, resident services and student disabilities offices. For more information, please visit www.foodallergy.org/collegeprogram.
The FARE Walk for Food Allergy—One Family’s Experience

By Alison Johansen

For my family, FARE’s walk to “say FAREwell” to food allergies last fall was a huge milestone. When we signed up to participate in FARE’s event, I had two “C’s” on my mind: community and charity. But I walked away with more.

With back-to-school planning, play dates, holiday parties, and so many fall events that require ensuring awareness about food allergies, I’d forgotten to focus on the awareness of the most important person: my son. Sharing food allergy awareness is so important, but it is just as important—if not more so—for our children who have the food allergies.

After learning an invaluable lesson at the FARE walk, I started thinking about food allergy awareness in terms of A-E-I-O-U: Awareness, Education, Inclusion, Outreach and Understanding.

Awareness

My family and I registered to participate in FARE’s walk in large part because FARE supports the research of Dr. Robert A. Wood from Johns Hopkins Children’s Center. So I really wanted to give back and continue to support them.

What we came back with was more than I expected. You could say it was life-changing—for my son.

It was a hot walk but a gorgeous day. Families were on the move. A sense of purpose and excitement was in the air.

We lingered a bit behind everyone, making sure my son didn’t get too tired. One mom in particular introduced herself to us, asking what our allergies are. Her son and my son exchanged hellos. The heat finally got to us, so we made our way back to the car. As I was buckling up my son in his car seat, I told him how proud I was of him that he walked with us. I asked him how he was feeling. This time his answer was different.

“Good. There were a lot of people!”

I told him the kids there had food allergies, just like him. Looking at me resignedly, he said, “Well, not like me.”

I quickly responded that they did have food allergies, just like him.

“But not the same ones,” he replied.

“Yes,” I said. “Some even have more, unfortunately.”

“What? Really?” His eyes looked up at me, wide and questioning. I could see his curiosity, as well as a sense of comfort, inclusion, and a heightened awareness spreading across his little face.

As we pulled away from the park, I could feel myself tearing up a bit, realizing I’ve been so concerned lately with ensuring parents, friends, and teachers without food allergies are educated and aware that I didn’t realize I need to make sure my son’s level of awareness is such that he realizes he is certainly not alone.

For days after the walk, he talked about all of the other kids he saw at the walk, and that they all have allergies too.

Education

Education is perhaps the most important part of awareness. Without it, you can unknowingly expose a child to a food allergen. You cross the line from safe into unsafe. After my son was diagnosed with his food allergies at 10 months old, we set out on our journey by researching as much as we could.

As with awareness, educating ourselves is just as important as educating others. We are all living with or near a child or an adult with food allergies. We never know when we may be called upon to act.

Inclusion

As we prepare for kindergarten, I’m realizing the importance of one word: inclusion. Just knowing he wasn’t alone really changed my son’s outlook. I know that unfortunately his sense of inclusion will be tested again and again as he enters elementary school, middle school, and beyond. I hope his sense of inclusion only grows.

Every time one of us advocates for change, it helps everyone. Step by step, we are making sure our children are safe—and included!

Outreach and Understanding

A huge part of spreading awareness is outreach. I’ve learned over the past five years that reaching out to others and sharing what I’ve learned is sometimes the only way they will know and understand what my son’s allergies are and what we are going through.

As time passes, I hope these five pillars of “A-E-I-O-U” will continue to increase so keeping events allergy-friendly will be second nature to everyone. Until then, in our own way from our own corner of the world, we work to increase awareness, education, inclusion, outreach, and understanding every single day.

Adapted and reprinted with permission by Alison Johansen. Alison lives in Northern Virginia with her husband and two children, one of whom has multiple food allergies. Visit her blog at www.mothernova.com.
15 Million Reasons to Walk in 2014
FARE Walk for Food Allergy Registration Now Open for Upcoming Walks

Please join us at one of the 66 walks scheduled this year across the country. Visit www.foodallergywalk.org to find a walk near you! Upcoming walks include:

**APRIL 26**
Morgantown, WV

**MAY 3**
Santa Barbara, CA

**MAY 18**
Boise, ID

**MAY 31**
Columbia, SC

**JUNE 7**
Orlando, FL

**JUNE 8**
Wheeling, WV

**JUNE 8**
Milwaukee, WI

**JUNE 14**
Fresno, CA

**JUNE 29**
San Diego, CA

**JUNE 7**
Orlando, FL

**JUNE 8**
Wheeling, WV

**JUNE 14**
Fresno, CA

**JUNE 29**
San Diego, CA

**JULY 19**
Omaha, NE

**JULY 20**
St. Louis, MO

Registration opening soon for all of our walks!

Facts About Our Walk for Food Allergy in 2013

65 walks held across the US

$3.6M raised

3,640,000 miles walked equivalent to circling the Earth 145x

40,000 walkers 3,435 WALK teams 1,700 volunteers
Get Ready for Food Allergy Awareness Week!

Preparations are underway for the 17th Annual Food Allergy Awareness Week, May 11-17, when the food allergy community bands together in a special effort to raise awareness about food allergies and life-threatening anaphylaxis in their communities and throughout the nation.

We will be sharing more details about all of the exciting plans we have in store for May in upcoming editions of our bimonthly update and in our next newsletter. In the meantime, here are some just some of the ways FARE is gearing up for this momentous occasion:

- **Proclamations**—FARE is contacting the governor of every state to request the recognition of Food Allergy Awareness Week via a state proclamation or resolution. You can help! Visit the FARE Action Center (www.foodallergyadvocacy.org) to submit your own request using our form and template.

- **T-shirts**—FARE is teaming up with MASS Canvas again this year to create one-of-a-kind food allergy awareness T-shirts. Be sure to check out our website and social media for updates about voting for your favorite designs.

- **Awareness materials**—We will have free downloads for you to share with your schools, coworkers and others.

- **Webinar**—Our monthly educational webinar on May 14 will be dedicated to the topic of food allergy awareness—how far we’ve come and how we can continue to spread the word.

Stay tuned for more details and great surprises! We hope you’ll join us this May to take action and raise awareness!

Have You Seen Our New Food Allergy Field Guide?

Learning that you or your child has a food allergy—a life-altering and potentially life-threatening disease—can be overwhelming. FARE’s new resource, “Your Food Allergy Field Guide,” can help.

This comprehensive guide is designed to help individuals and families who are new to food allergies stay safe, avoid reactions, shop smartly and live well with food allergies. FARE is in the process of distributing more than 100,000 printed copies of the Field Guide through allergists’ offices across the United States, with plans to distribute more in the coming months. We also have released a free online version of the Field Guide, which is available for download at www.foodallergy.org/field-guide. Download yours today, or send it to a friend who could benefit from the resources.

FARE Welcomes New Member to Board of Directors

FARE is proud to welcome Joseph Ianniello to its Board of Directors.

Ianniello is the chief operating officer for CBS Corporation, overseeing all financial operations of CBS Corporation, a mass media company that owns the most-watched television network in the U.S. and one of the world’s largest libraries of entertainment content. He previously served as the company’s chief financial officer, senior vice president, chief development officer and treasurer.

Ianniello, the father of two children with food allergies, joins FARE’s 20-member Board of Directors. For a full list of FARE’s board of directors, nearly all of whom are parents or grandparents to children with food allergies, visit www.foodallergy.org/about/leadership/board-of-directors.
The Top 5 Must-Haves for Every Teen with Allergies

By Sarah G., age 15

I was diagnosed with allergies at the age of one and today am allergic to milk, eggs, peanuts, tree nuts, seeds, mustard and green peas. Throughout the years I’ve seen lots of cool allergy-related stuff, and I have come up with what I consider to be the top five allergy essentials for every teen:

1. A MedicAlert Bracelet
MediAlert bracelets* are definitely a must-have! I started wearing a nylon zoo animal bracelet when I was younger and would go play at friends’ houses. Today, I still wear one although I’ve now opted for a plain silver chain that I wear 24/7. They’re incredibly durable and come in lots of different styles (not just bracelets!) and finishes. It gives me and my family peace of mind to know that any medical professional can easily access my allergy info, should anything happen.

2. A Versatile Bag for Your Epinephrine Auto-injector
If your parents are anything like mine, they’re constantly telling you to remember your epinephrine. You want a bag that holds a lot of stuff but isn’t too big or bulky. I prefer cross-body bags that sling across your shoulder—just put it on and then you can forget about it. If the cross-body isn’t for you, you can try knapsacks, drawstring bags, other styles of purses, fanny packs, or more creative options, such as a holder that straps to your ankle. Whatever you choose, make sure the people you hang out with know where you keep your allergy meds.

3. Insulated Lunch Box
These things come in so handy! I don’t eat out a lot and usually bring my food to restaurants. Insulated lunch boxes give you flexibility; you can prepare food hours in advance and have it still be fresh! I love my insulated lunch box—it looks like a tote bag, and it has tons of room! If the tote bag isn’t your thing, there are some really cool (pun intended) insulated knapsacks available at online retailers.

4. Go-To Recipes and/or Menu Items
As I mentioned before, I don’t get to eat out a lot, so having a few go-to recipes is important to me. You want to pick a few core recipes that you know you’ll like and that are relatively easy to make and store. That way if you’re in a rush, you can prepare or heat something up and throw it in your insulated lunch bag! If you find yourself out to eat with friends, it helps to know of a few menu items you know you can order—even if it’s just a bottle of water. Remember to always check the ingredients before chowing down!

5. FARE Programs for Teens
Lastly, I would highly suggest taking a look at FARE’s teen programs. Resources such as the Teen Summit and the Facebook group (FARE Teen Allergy Support Group for anyone who wants to join) have really helped me over the years! I’ve made great, supportive friends (which you should have even if you don’t have allergies) while learning more about ways to handle my allergies. I would highly recommend checking their programs out!

*Editor’s note—you can get a discount on MediAlert identification jewelry by visiting www.medicalert.org/groups/FARE.

Sarah is a sophomore in high school and member of FARE’s Teen Advisory Group. Links to FARE’s teen programs can be found at www.foodallergy.org/resources/teens.

2014 Teen Advisory Group Selections Under Way

We are in the process of reviewing a record-breaking number of applications for our 2014 Teen Advisory Group (TAG). We’ve been very inspired to see nearly 200 submissions from so many bright, innovative, and thoughtful young leaders, and are excited to announce our TAG members in early March. Our Teen Advisors will be working with our regional offices and national education team to better meet the needs of teens and young adults in our community. Teen Advisors will be available for peer-to-peer mentoring, leading virtual teen support groups, writing content for our website and Teen Blog, and supporting teen-targeted programming for our 2014 conferences and walks. Thank you to everyone who has applied!

Teens—Find Us Online!

Teens with food allergies are encouraged to join FARE’s teen community by visiting www.facebook.com/groups/FARETeenFoodAllergySupportGroup/.

And don’t forget to check out the teen blog, featuring posts from members of FARE’s Teen Advisory Group! Visit www.foodallergyteens.tumblr.com.
Finding safe food substitutes for some food allergens may be a difficult task, and many commonly used substitutes are not nutritionally equivalent to their allergenic counterparts. This article will guide you through food substitutes for some of the most common food allergens, helping you find safe food substitutes that are nutritious and delicious.

When first using food substitutes in cooking or in baking, start by finding recipes that are already allergen-free. Try recipes from the FARE newsletter, allergen-free cookbooks or reputable allergy friendly websites.

Always remember to read labels of all ingredients used in a recipe to make sure it is allergen-free.

Once you become more comfortable cooking allergen-free, you can try adapting your family recipes. To begin easing into the process, try finding recipes that only require one substitution. This will allow you to see how each substitute changes the final product.

Substitutes for Common Allergens:

Milk
There are many milk substitutes available such as soy, rice and almond milk. Always choose “enriched” or “fortified” versions. This indicates that calcium and vitamin D have been added. These milks are not created equal. Soy milk is the most nutritious option as it provides almost as much protein, vitamin D and calcium as regular milk. Rice and almond milk are low in protein and fat, but provide comparable amounts of calcium and vitamin D.

These milk substitutes often work well for cooking and baking. Choose the safe milk substitute with the highest content of protein and fat to help make a finished product that is closer to the original. Avoid using formulas for cooking and baking because heating them to high temperature can destroy the nutritional quality and may have a negative effect on flavor. Replace butter with milk-free margarine.

There are several yogurt substitutes that are comparable to the milk-based versions. Read the label to ensure that the yogurt has calcium added. These yogurt substitutes vary in protein content. Soy yogurt provides a good source of protein and overall is most similar to milk-based yogurt.

More cheese substitutes are now available in the marketplace. Be cautious, as they are typically not nutritionally equivalent to milk-based cheeses. For example, most soy cheese is lower in fat than milk-based cheese. Veggie cheeses are usually low in calories, protein, fat and calcium. Although the nutrition is not comparable, the taste and texture help make delicious meals. With both milk-free yogurts and cheese, read the ingredient label very carefully to ensure there is no milk cross-contact.

Wheat
For everyday cooking, create a meal with wheat-free sides and entrées. Try loaded baked potatoes, stir-fry over rice, or quinoa stuffed peppers. There are many wheat-free grains available, such as rice, corn, millet, potato, tapioca and quinoa. Many of these grains are also made into wheat-free flours.

Wheat-free flour blends typically produce a better texture in baked products than replacing wheat with a single grain flour. Wheat-free flour blends are available in your grocery store or health food store, or you may make your own flour mixture using the following recipe:

- ½ cup millet
- ⅛ cup potato starch
- ⅛ cup oat flour

Many wheat-free recipes rely on refined flours like white rice flour instead of whole grains. These flours are usually less nutritious than regular versions. They may be lower in iron, folic acid, other B vitamins, and fiber. Try using more nutritious flours like brown rice flour, quinoa flour or chick pea flour. Eat more fruits and vegetables for a boost of vitamins and fiber. Take a complete multivitamin/mineral supplement if you are avoiding wheat to meet all your vitamin and mineral needs.

Eggs
Try a commercial egg replacement, or use one of the following substitutes for one egg for baked goods:

• ½ tablespoon water, ½ tablespoon oil, and 1 teaspoon baking powder
• 1 teaspoon baking powder, 1 tablespoon water, and 1 tablespoon vinegar
• 1 teaspoon yeast dissolved in ¼ cup warm water.

Try using tofu to replace the egg in meatloaf. Use milk or a milk substitute as a binder to help the crumbs stick to chicken tenders.

Peanuts and Tree Nuts
Mix seeds with raisins or other dried fruits. Add dry cereal or allergen-free chocolate chips to create your own trail mix. You can also use sunflower or soy nut butter as peanut butter substitutes. These products are versatile and great for making allergen-free sandwiches or incorporating in all kinds of recipes from snacks to cookies and allergen-free shakes. Check out the manufacturers’ websites for recipes using their products.

Focus on Taste and Nutrition:

When choosing safe food substitutes, focus on both taste and nutrition. Read the food label to find food products that are nutritionally similar to the foods they are replacing. It is also important to eat a variety of foods from all food groups. Talk to your doctor or dietitian if an entire food group is eliminated because of your food allergies.

Cassandra Sova, MS, RD, CD, CNSC, is a clinical dietitian specialist in the Allergy and GI Department at Children’s Hospital of Wisconsin.
Momentum for the Food Allergy Agenda Builds

The start of the new year means new legislative sessions in Washington, D.C., and in state capitals across the country. For food allergy advocates, it also means the opportunity to push legislators on policies that will improve research, access and safety.

In Washington, D.C.

After several years of prodding by the food allergy community, Congress passed the School Access to Emergency Epinephrine Act last November, providing an incentive for states to require the availability of stock epinephrine in their schools. That success raised the sensitivity of lawmakers to the needs of families struggling with food allergies and improves the environment for progress on other fronts.

Building on that success, FARE is focusing on improved funding for food allergy research at the National Institutes of Health and other federal facilities, as well as funding to support the purchase of epinephrine and training programs in the nation’s schools. That success raised the sensitivity of lawmakers to the needs of families struggling with food allergies and improves the environment for progress on other fronts.

The precedent established in the K-12 system is now being seen in higher education as well, with New Jersey becoming the first state in the nation to require its colleges and universities to establish policies to stock and train in the administration of epinephrine on their campuses. Similar legislation is now pending in Indiana, and FARE is staging campaigns in additional states.

The Massachussets restaurant food allergy awareness law has long been admired by members of the food allergy community and this year FARE is pursuing similar legislation in several states. Taking as its foundation the restaurant training program developed jointly by the National Restaurant Association and FARE, the initiative would require that restaurant staff with food allergy training be available during all hours of operation. Menus would have to advise customers to communicate their allergy and posters in the restaurant would educate staff about the severity of food allergies. Bills are currently pending in Maryland, New York and Michigan, and FARE is providing support to advocates pursuing the legislation in other states.

The safety of those with food allergies has increasingly become a public health concern at the state level as well. Bills are being introduced around the country that would make epinephrine, and the training in its administration, widely available in public places, including day care centers, restaurants, theaters, health clubs, and sports arenas, among others. The most important component of these bills is broad liability protection for establishments and “Good Samaritans” using epinephrine on someone they believe is suffering from anaphylaxis.

In States

Last year 18 states passed legislation addressing stock epinephrine in schools, and that momentum has continued in 2014 with South Dakota joining the ranks, bringing the number of states that now provide for stock epinephrine in schools to 32. That number is likely to grow this year, with bills moving in eight more states.

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Your Role

The success of these and other efforts is directly dependent on the involvement of food allergy advocates. In 2014, FARE will continue to speak out for the community and offer opportunities for advocates to make their voices heard. If you haven’t already, please join the FARE Advocates Network by visiting www.foodallergyadvocacy.org! •

Every new member makes a difference. Help us turn up the volume on critical food allergy issues. Join on our secure website at www.foodallergy.org/membership. •

Every Member Counts—Join FARE Today!

Imagine 15 million voices in the U.S. telling every elected official in our nation, “We cannot lose another life to food allergies.”

Help us make this a reality and join our Every Member Counts Campaign!

FARE’s 2014 advocacy agenda covers some of the most significant and challenging public policy issues facing the food allergy community:

• Increased federal funding for food allergy research
• Guaranteed access to epinephrine in schools nationwide
• Allergen awareness and safety training for all restaurant workers
• Access to epinephrine on all emergency vehicles and universal ability to administer epinephrine for emergency medical personnel
• Ongoing regulatory improvements to safety and labeling in food manufacturing

Every new member makes a difference. Help us turn up the volume on critical food allergy issues. Join on our secure website at www.foodallergy.org/membership. •
Melted Snowmen Cookies
Milk-free, Egg-free, Peanut-free, Tree nut-free

COOKIES

INGREDIENTS
1 cup (2 sticks) milk-free margarine
½ cup plus 1 ½ tbsp sugar
1 ¾ cup flour
1 tbsp vanilla
sugar for rolling

DIRECTIONS
Heat oven to 300 degrees. Cream margarine and sugar. Add flour and vanilla. Stir until blended. Roll dough into balls a little smaller than a golf ball, then roll balls in sugar. Flatten with bottom of a glass and bake on ungreased cookie sheet 17-20 minutes. Cool completely.

GLAZE

INGREDIENTS
1 cup powdered sugar
3 tbsp water (continue to add until desired consistency is obtained)

DIRECTIONS
Combine sugar and water and stir until smooth. Spread over cookies. Allow to harden.

SNOWMEN

INGREDIENTS
Marshmallows*
Sprinkles*
Decorating icing and gel*

DIRECTIONS
Place marshmallows on lightly-greased microwave-safe plate. Microwave 30 seconds. Carefully place slightly-melted marshmallows onto cookies. Let cool. Add sprinkles for eyes and nose. Add arms, buttons, scarves, etc. using decorating icing and gel.

My mom adapted this recipe from a photo we saw on Pinterest. We now serve them at an annual holiday get together, and they are always a big hit! - Melissa E., TAG member
*Be sure to check the label.
In Case You Missed It...

Advocating for You

In recent weeks, FARE leaders have shared their expertise with a variety of audiences.

John Lehr, CEO of FARE, presented at the Food Allergy Research & Resource Program Board of Directors meeting on Feb. 11–12 in Delray Beach, Fla. Lehr told the audience of about 60 representatives from the nation’s leading food manufacturing companies about the findings of FARE’s 2013 survey on allergen thresholds and consumer behaviors and participated in a panel discussion with other food allergy experts.

Mike Spigler, vice president of education at FARE, attended the Jan. 30-31 meeting of the Food Allergy Management & Education board in St. Louis, Mo., where he participated with other advocates in the field in reviewing a school food allergy toolkit that will improve safety and inclusion of children in schools.

Also in January, Gina Clowes, FARE’s director of education, was the guest speaker for the Office for Civil Rights (OCR) Disability Network. Clowes, one of the featured speakers alongside an attorney from the Department of Justice who helped facilitate the agreement between the DOJ and Lesley University, presented to approximately 50 representatives from the OCR Headquarters and regional offices across the U.S. about the kindergarten through college experience for students with food allergies and anaphylaxis. Clowes shared information and examples of the lack of accommodations for safety and inclusion, talked about the important of Section 504 plans and the dangers and discrimination that these students often experience at public and private schools and universities across the U.S.

George Dahlman, vice president of advocacy and government relations at FARE, had the opportunity to present about the consumer perspective on flying with food allergies at a Jan. 28 meeting of Airlines for America, the trade organization representing the country’s major airlines. Dahlman presented alongside Amy Wicker of Allergy Safe Travel and other food allergy advocates. FARE urged airline representatives from approximately 35 airlines to implement clear and consistent accommodation policies for travelers with food allergies. We are encouraged by the dialogue with the airline industry and will keep you posted on updates in this realm.

Ingredient Notice

Nature Valley Breakfast Biscuits have had a change in the Allergen Statement due to the addition of a new manufacturing facility.

The new product launched January 1, 2014; the cartons with the updated allergen statement will be on store shelves around March 1, 2014.

Products impacted:

• 16000-48287: Nature Valley Breakfast biscuits - Blueberry

• 16000-48288: Nature Valley Breakfast biscuits - Honey

The original statement was: CONTAINS MILK AND WHEAT INGREDIENTS

The new statement is: CONTAINS MILK, WHEAT INGREDIENTS; MAY CONTAIN PEANUT, ALMOND AND SOY INGREDIENTS.

Next Webinar: Your Right to be Safe—Food Allergies and the Law

Federal disability laws provide protection for individuals with life-threatening food allergies, but they can be tough to navigate and are often difficult to understand. FARE’s next webinar, led by attorney Tess O’Brien-Heinzen, will be held Wednesday, March 12 at 1 p.m. O’Brien-Heinzen, who specializes in school and disability law, will set forth the basic framework of the laws and will provide guidance on seeking accommodations for food allergies in schools and the workplace.

Visit www.foodallergy.org/webinars for more information, and to access an archive of past webinars.