The Allergist

A newsletter from the Oklahoma Allergy & Asthma Clinic Spring 2012

The Latest Findings on Food Allergies

In the February-March 2012 issue of *Food Allergy News*, the latest information and studies on food allergies was presented in a comprehensive article.

Research

In one study, researchers interviewed mothers about their feeding practices for their children and then the children's blood samples were collected to determine the level of allergic reaction to egg, milk and peanuts.

The introduction of complementary foods (*after weaning from breast milk*) to young children, ages 2 to 3, was not found to be significantly related to food sensitization. Parents who had a history of asthma or allergies, their children were introduced to complementary foods before they were four-months old. Researchers saw a reduced risk of egg sensitization.

Another international study investigated the association of the peanut allergy and the Filaggrin gene, (*found to be a factor in eczema and asthma*). Researchers found that some people with peanut allergy who did not have eczema, also had the Filaggrin defect. The study suggests that people with a Filaggrin mutation may have a significant risk of peanut allergy.

The diagnosis of food allergies is not straightforward. Clinical guidelines that were released in late 2010 indicated blood or skin tests alone can't be the sole basis for a food allergy diagnosis. An allergist should also take into account - clinical history and an oral food challenge may be needed.

The double-blind, placebo-controlled food challenge is the standard for food allergy diagnosis and is time-consuming and costly. Additionally, a concern when using this type of test is that the patient could experience a severe reaction during the challenge.

Researchers in the U.K. found in one study that the majority of children with sensitization to whole peanut are not clinical allergic to peanuts. These findings reinforced many scientists belief that the peanut allergen (Ara h 2) could be the most important predictor of allergy. A new diagnostic tool called "microarray technology" has not yet been approved for clinical use. Although all of the cells in the human body contain identical genetic material, the same genes are not active in every cell. Studying which genes are active and which are inactive in different cell types helps scientists to understand both how these cells function normally and how they are affected when various genes do not perform properly. In the past, scientists have only been able to conduct these genetic analyses on a few genes at once. With the development of DNA microarray technology, however, scientists can now examine how active thousands of genes are at any given time.

In another study from the University College Cork in Ireland, researchers developed and tested a model that would predict the outcome of a food challenge. This calculator devises an allergen-specific algorithm (*a step by step problem solving procedure*) for foods such as milk, egg and peanut. Researchers compared the outcomes of combinations of data based on clinical factors, such as skin prick test results, total IgE clinical history and age to the results of patient's food challenges and then developed a prediction model. Immunoglobulin (IgE) is a natural material found in blood and tissues within the body and plays a major role in the developing allergic asthma. The Cork-Southampton calculator gives a 96 percent rate of accuracy.

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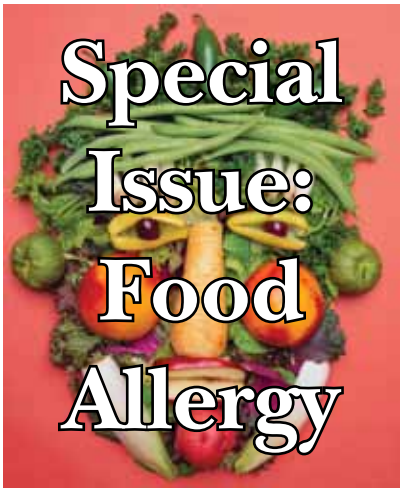

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Oklahoma Makes Top Allergy Capital Rankings Again

The annual report which identifies the 100 "most challenging" U.S. cities to live in with spring allergies named two Oklahoma cities to a repeat performance on the list. Oklahoma City was sixth and Tulsa was ranked 28th.

1. Knoxville, Tenn.
2. McAllen, Texas
3. Louisville, Ky.
4. Jackson, Miss.
5. Wichita, Kan.
6. **OKLAHOMA CITY**
7. Chattanooga, Tenn.
8. Memphis, Tenn.
9. San Antonio, Texas
10. Dayton, Ohio

www.allergycapitals.com

Food Allergy Findings Revealed...

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Treatments on the Horizon

In 2011, scientists published the results of several studies that are very encouraging and offering hope for treatment or therapy for food allergies in the near future. Researchers are still studying the safety and evaluating the effectiveness of therapies such as sublingual immunotherapy (SLIT) and oral immunotherapy (OIT) for peanut allergy.

At Duke University's Clinical Research Unit, a group of children with peanut allergy participated in a double-blind, placebo-controlled study. All of the children who received the peanut SLIT (others received a placebo) were able to safely ingest approximately six to seven peanuts after completing 12 months of dosing. The SLIT was found to have induced "significant desensitization" but researchers concluded that more studies were needed for long-term clinical tolerance.

Another study conducted by Duke University and Arkansas Children's Hospital is continuing to evaluate the safety and effectiveness of peanut oral immunotherapy. This trial involved 28 children with peanut allergy who were given peanut flour or placebo. They went through an initial day escalation phase, home dosing, build up visits and a maintenance phase.

About half of the children undergoing OIT experienced reactions that required treatment with antihistamines; two were administered epinephrine during the initial day of escalation. But those who were able to do the food challenge were able to ingest approximately 20 peanuts. It is important to note these are still experimental studies with potential significant risks involved and are not currently approved by the Federal Drug Administration.

Milk Allergy Studies

Researchers in the past found that the majority of children with milk allergy could tolerate baked milk products (example: muffins or waffles). Children with milk allergy usually fell into one of two groups – those who had a mild milk allergy that were tolerant of baked milk but not unheated milk and those with a severe allergy who were baked-milk reactive. A study by Mount Sinai School of Medicine's Jaffe Food Allergy Institute found that children who were baked-milk tolerant who achieved unheated milk tolerance did so at a significantly faster rate compared to those who strictly avoided milk. This finding is very noteworthy for children who pass a baked milk challenge because they may eventually outgrow their milk allergy more rapidly than children who do not.

What does it all mean?

Food allergies are not black and white nor do they have a cookie cutter treatment, no one size fits all. There is still much more research to be done in finding the best ways to diagnose food allergies and the good news is that cutting edge treatments are on the horizon. The allergists at the Oklahoma Allergy & Asthma Clinic are here to help you manage your allergies safely by using the most effective diagnosis tools and the latest treatments. If you suspect you or your child has a food allergy, please contact us at (405) 235-0040.

Groups Work Together to Develop Resources for Schools and School Nurses

The National Association of School Nurses has been working on a joint grant from the Centers for Disease Control and Prevention with the Food Allergy & Anaphylaxis Network, and the National School Boards Association to develop resources for food allergy and anaphylaxis management in the school setting. A free tool kit is available online at www.nasn.org/ToolsResources/FoodAllergyandAnaphylaxis. This free tool kit includes step by step procedures to enhance the school nurses approach to planning and care checklists, forms and resources.

Fast FACTS about Food Allergies

What is a food allergy?

A food allergy is a condition in which the immune system incorrectly identifies a food protein as a threat and attempts to protect the body against it by releasing chemicals into the blood. The release of these chemicals results in the symptoms of an allergic reaction.

What are the symptoms?

A food allergic reaction might begin with a tingling sensation, itching or a metallic taste in the mouth. Other symptoms can include hives, a sensation of warmth, wheezing or other difficulty breathing, coughing, swelling of the mouth and throat area, vomiting, diarrhea, cramping, a drop in blood pressure and loss of consciousness. The symptoms might begin anywhere from several minutes to two hours after eating an offending food but life-threatening reactions may get worse over a period of several hours.

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What is anaphylaxis?

Anaphylaxis is a serious allergic reaction that can come on fast and could be deadly. It can be caused by food, bee stings, drugs, latex, etc. In the U.S., food allergy is the leading cause of anaphylaxis outside of the hospital setting. The Centers for Disease Control (CDC) reported that food allergy reactions in children result in more than 300,000 ambulatory care visits a year. The symptoms of anaphylaxis can include any of those associated with an allergic reaction to food. Studies have shown that early administration of epinephrine (adrenaline) is crucial to successfully treating anaphylactic reactions. Epinephrine is available by prescription in a self-injectable device (EpiPen® or Twinject®).

Who is at especially high risk for severe allergic reactions to food?

Research suggests that having asthma in addition to a food allergy increases the risk of a severe reaction, and teens and young adults who have peanut or tree nut allergies in addition to asthma are at the highest risk.

How many Americans have food allergies?

The numbers are staggering – 15 million Americans have food allergies including 6 million children.

How common are food allergies in young children?

Food allergies are very common in children – one in 13. Fortunately, many of these children outgrow their food allergies.

Why are food allergies increasing?

Scientists don't know but they are trying to find out. One theory called the hygiene hypothesis suggests that children are being exposed to fewer germs than our bodies are used to dealing with via the immune system. Deprived of its customary full-term germ-fighting job, misidentifies certain foods as harmful.

How much of a food allergen does it take to cause a reaction?

Even trace amounts can cause a reaction for someone who is allergic. The allergen doesn't even have to be ingested to cause a reaction. Skin contact or inhalation of protein can sometimes trigger it.

Is there a cure for food allergy?

There is presently no known cure for food allergy. Strict avoidance of the food allergen is the only way to prevent a reaction. Although studies involving food immunotherapy are promising, national experts caution against its clinical use until more research is done to determine if it is safe and effective. Un-

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Food Allergies Fast Facts...

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til these questions are satisfactorily answered, we do not currently perform food immunotherapy at our office.

What are the most common food allergens?

The following eight foods are responsible for 90 percent of all food-allergic reactions in the U.S. – milk, eggs, wheat, soy, peanuts, tree nuts (cashews, almonds, pecans, pistachios, walnuts), shellfish (shrimp, crab, lobster) and fish (tuna, salmon, catfish).

Can the severity of a person's allergic reactions to food be predicted from his or her previous reactions?

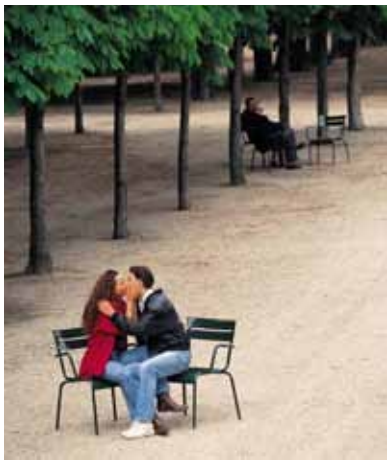
No. Someone whose reactions have been mild in the past may suddenly start reacting more severely. For example, a FAAN review of food allergy fatalities found that most of the people had never had a severe allergic reaction until the one that caused their death. Thus, all food allergies must be taken seriously.

How does a child's food allergy affect the family or caretakers?

Food allergies are often life-altering. In most cases, the entire family will avoid the same foods that the person with an allergy must avoid. The allergy's impact therefore extends well beyond the number of patients, affecting three to four times as many people.

What is FALCPA?

FALCPA is the Food Allergen Labeling and Consumer Protection Act, which went into effect in January 2006. It mandates that food manufacturers declare food allergens in plain language on their ingredient lists. For example, today the term "milk" must be listed whereas before FALCPA was passed, milk could be listed on a label as "ammonium caseinate."



Can someone who is allergic to a food have an allergic reaction after merely kissing someone who has eaten that food?

There is evidence that individuals with food allergies are at high risk of having a reaction just from kissing someone who has recently eaten a food allergen. According to research conducted at Mount Sinai Hospital in New York, one should wait at least four hours after consuming a food allergen before kissing someone who is allergic to that food.

Source: www.foodallergy.com

Important Legislation For Students, Schools and Staffs Regarding Epinephrine Auto-Injectors

LEGISLATIVE ALERT

The Food Allergy & Anaphylaxis Network (FAAN™) is working on federal legislation that would encourage states to adopt laws allowing schools to have on hand "stock" epinephrine auto-injectors – meaning epinephrine that is not prescribed specifically to a single student but can be used for any student and staff member in an anaphylactic emergency.

On Nov. 17, 2011 this bill (S. 1884), the School Access to Emergency Epinephrine Act, was introduced in the Senate by U.S. Senators Dick Durbin (D-IL) and Mark Kirk (R-IL). On Dec. 8, the bill (HR. 3627) was introduced in the House by Rep. Phil Roe (R-TN) and Democratic Whip Steny Hoyer (D-MD).

In addition to protecting those whose epinephrine auto-injector isn't immediately accessible during a reaction, this legislation will help save the lives of those who experience an anaphylactic reaction and don't have a prescribed epinephrine auto-injector. Data shows that up to 25 percent of all epinephrine administrations that occur in the school setting involve students and adult staffers whose allergy was unknown at the time of the event.

Only a handful of states have laws related to stock epinephrine. S. 1884/H.R. 3627, however, will provide an incentive for states to enact their own laws allowing school personnel to keep and administer a non-student specific epinephrine auto-injector in case of an emergency. (The state laws would be similar to the ones enacted in Illinois and Georgia in 2011.)

The legislation is also supported by the Food Allergy Initiative, the National Association of School Nurses, the American Academy of Allergy, Asthma & Immunology; the American College of Allergy, Asthma & Immunology; and the American Academy of Pediatrics.

Currently both bills have been referred to committees. If you would like to support this important legislation, a form letter that you can personalize, visit the Advocacy section of FAAN's website – www.foodallergy.org