Food Allergies
By Michael R. O’Leary, M.D., CEO

When people have an unpleasant reaction to something they eat, they often think that they have an allergy to the food. Actually however, only up to 3% of adults and 6%-8% of children have clinically proven true allergic reactions to food.

This difference between the prevalence of clinically proven food allergy and the public’s perception of the problem is due primarily to misinterpreting food intolerance or other adverse food reactions to food as a “food allergy.” A true food allergy is an abnormal response to food that is triggered by a specific reaction in the immune system and expressed by certain, often characteristic symptoms. Other kinds of reactions to foods that are not food allergies include food intolerances (such as lactose or milk intolerance), food poisoning and toxic reactions. Food intolerance also is an abnormal response to food, and its symptoms can resemble those of food allergy. Food intolerance however, is far more prevalent, occurs in a variety of diseases, and is triggered by several different mechanisms that are distinct from the immunological reaction responsible for food allergy.

The allergens in food are those components that are responsible for inciting an allergic reaction. They are proteins that usually resist the heat of cooking, the acid in the stomach, and the intestinal digestive enzymes. As a result, the allergens survive to cross the gastrointestinal lining, enter the bloodstream, and go to target organs, causing allergic reactions throughout the body. Food allergy is a hypersensitivity reaction, meaning that before an allergic reaction to an allergen in food can occur, a person needs to have been exposed previously, that is, sensitized to the food.

What are the most common food allergies?
In adults, the most common foods that cause allergic reactions are shellfish (shrimp, crayfish, lobster, and crab), nuts from trees (walnuts), fish, eggs, and peanuts.

In children, the pattern is somewhat different from adults, and the most common foods that cause allergic reactions are eggs, milk, peanuts and fruits, particularly tomatoes and strawberries. Children sometimes outgrow their allergies, but adults usually do not. Also, children are more likely to outgrow allergies to cow’s milk or soy formula than allergies to peanuts, fish or shrimp.

How is food allergy diagnosed?
To diagnose a food allergy, one first must determine if the patient is having an adverse reaction to specific foods. This assessment is made with the help of a detailed history from the patient, the patient’s dietary diary, or an elimination diet. The diagnosis is confirmed by the more objective skin tests, blood tests or food challenges.

The history usually is the most important diagnostic tool in diagnosing food allergy. The clinician interviews the patient to determine if the facts are consistent with a food allergy and may ask the following questions:
1. What was the timing of the reaction? Did the reaction come on quickly, usually within an hour after eating the food (food allergy likely) or 3-4 hours later (food intolerance likely)?
2. Is the reaction always associated with a certain food?
3. How much did the patient eat before experiencing a reaction?
The next step that some clinicians use is an elimination diet. If the patient does not eat a food suspected of causing the allergy and the symptoms go away, this is supportive of a diagnosis of food allergy. If the patient then resumes eating the food and the symptoms return, this sequence confirms the diagnosis. If the patient’s history or elimination diet suggests that a specific food allergy is likely, skin tests and/or blood tests are then recommended, which can more objectively confirm an allergic response to food.

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While it’s been known for some time that vitamin D deficiency contributes to the development of osteoporosis and weakened immunities, a new report this month says that vitamin D plays a role in the prevention of age-related macular degeneration, a disease associated with aging that gradually destroys vision.

“In women younger than 75 years, having 25(OH)D concentrations higher than 38 nmol/L was significantly associated with a 48% decreased odds of early age-related macular degeneration,” reported the study, performed at the University of Buffalo and detailed in the medical publication Arch Ophthalmol. 2011;129(4):481-489.

When we don’t replace vitamin D daily, our body will meet its needs by stealing calcium from our bones, weakening them over time — a process that can contribute to the development of osteoporosis and weaken our immunities. Vitamin D deficiency may also increase the risk of heart disease and colon and prostate cancer.

Testing provides important information.

A vitamin D deficiency is diagnosed by measuring the concentration of a specific form of vitamin D in blood. Unfortunately, many tests do not measure the supplemental form of vitamin D. It is imperative to request a total vitamin D test (25-OH vitamin D) in order to assess your true status — a total test that measures vitamin D2 and D3 levels in the blood.

Laboratory Alliance recommends that you ask your doctor if you should be tested.

To learn more, visit www.laboratoryalliance.com or call (315) 461-3008.

A Useful Online Resource - www.labtestsonline.org

We recommend this public, non-commercial, patient-centered website for laboratory testing information.

We have a link to it on the Links page of our website at www.laboratoryalliance.com.

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Skin tests: In a scratch-the-skin test, a dilute extract of the suspected food is placed on the skin of the forearm or back. This portion of the skin then is scratched with a needle and observed for swelling or redness, which would signify a local allergic reaction to the food. A positive scratch test indicates that the patient has the IgE antibody that is specific for the food being tested. Skin tests are rapid, simple, and relatively safe.

A person can have a positive skin test to a food allergen however, without experiencing allergic reactions to that food. A diagnosis of food allergy should only be made when the patient has a positive skin test to a specific allergen and a history of an allergic reaction to the same food. In highly allergic people however, particularly those who have had anaphylactic reactions, skin tests should not be done because they could provoke another dangerous reaction. Skin tests also cannot be done in patients with extensive eczema and may be difficult to perform on children.

Blood tests: In those situations where skin tests cannot be done, a blood test such as the allergen-specific serum IgE test is recommended. These tests measure the presence of food-specific IgE antibodies in the blood of patients. As with positive skin tests, positive blood tests make the diagnosis of a specific food allergy only when the clinical history is compatible.

How is food allergy treated? Avoiding the offending allergen in the diet is the primary treatment of food allergy. Once a food to which the patient is sensitive has been identified, the food must be removed from the diet. Affected people need to read detailed lists of ingredients on the label for each food they consider eating. The FDA requires that the ingredients in a food be listed on its label.

Summary

Food allergy is caused by immunological reactions to foods, sometimes in individuals or families predisposed to allergies. A number of foods, especially shellfish, milk, eggs, peanuts and fruit can cause allergic reactions (notably hives, asthma, and anaphylaxis) in adults or children. When a food allergy is suspected, a medical evaluation is key to proper management.

It is important to distinguish a true food allergy from other abnormal responses to food, such as food intolerances, which actually are far more common than food allergy. Once the diagnosis of food allergy is made (primarily by the medical history) and the allergen is identified (usually by skin or blood tests), the treatment is avoidance of the offending food.

The National Institute of Allergy and Infectious Diseases has recently (December 2010) released an excellent monograph titled Guidelines for the Diagnosis and Management of Food Allergy in the U.S., which is available online.
Important Information About
Medically Necessary Diagnosis Codes for Lab Tests

All of the current laboratory-related diagnosis codes that meet the medical necessity guidelines are posted on the Laboratory Alliance website under “Health Care Providers.”

This comprehensive list of codes is updated quarterly. We ask that you bookmark this page and refer to it when lab orders are generated.

Correctly coding laboratory tests before specimen submission will eliminate the need for many of our phone calls and faxes to your offices.

Did You Know That...

• Laboratory Alliance performed 9.4 million tests in 2010.
• 99.3% of all tests sent to us were performed by Laboratory Alliance.
• Only 0.7% of test requests were sent to reference labs.
• Our couriers drove 1 million miles.
• More than 200,000 patients were drawn by our phlebotomists in our Patient Service Centers or at our long term care client locations.
• Our Information Systems Department has established over 45 interfaces to 11 different electronic medical record (EMR) software. At least 8 to 10 more interfaces will be built in 2011.

Welcome to our New Clients

Northway Medical Associates
Fulton, N.Y.

Oswego County Home Care
Oswego, N.Y.

Growing the Local Economy
Addressed at Annual Meeting

The second Annual Meeting of the CenterState Corporation for Economic Opportunity (CenterState CEO) drew 1,100 people to the War Memorial in Syracuse on April 12, including a table of 10 from Laboratory Alliance.

The theme for the 2011 Annual Meeting was “Engaging Business for Regional Growth.” The keynote address was delivered by Scott Case, CEO of Startup America, who discussed the role of growing entrepreneurship in our economy.

Representing Laboratory Alliance were, from left, Michael R. O’Leary, Marilyn LeClair, George Popp, Ann Marie Derecola, Nancy Sniffen, Malinda Kuney, Jeff Coyne, Barb Guiffrida and Karen Carter. Anne Marie Mullin took the photo.
Utility of the Pneumococcal Urinary Antigen Test to Diagnosis Hospitalized Adult Patients with Community-Acquired Pneumococcal Pneumonia

By Paul A. Granato, Ph.D., Director of Microbiology

Streptococcus pneumoniae (the pneumococcus) is recognized as one of the leading cause of community-acquired pneumonia in adult patients. However, the diagnosis of pneumococcal pneumonia is problematic because of the difficulties associated with obtaining high-quality sputum specimens and the uncertainty of the value of its culture results, low sensitivity of blood cultures, and the possible administration of antibiotics prior to sputum and blood culture collection.

Recently, an article published by Sordé et al. (Arch. Intern. Med. 2011.171:166-173) validated the use of the pneumococcal urinary antigen test as a non-invasive, rapid, and inexpensive alternative for the diagnosis of community-acquired pneumococcal pneumonia in adult hospitalized patients. The urinary antigen test is a rapid 15 minute immunochromatographic assay that detects the C-polysaccharide antigen of S. pneumoniae that is excreted in the urine of patients with pneumococcal pneumonia.

In the study published by Sordé and his colleagues, the urinary antigen test diagnosed pneumococcal pneumonia in 75 (43.8%) of 171 patients who would have been undiagnosed by conventional sputum and blood culture methods. The authors also concluded that the pneumococcal urinary antigen test is useful in optimizing specific antimicrobial therapy directed at S. pneumonia with good clinical outcomes thereby avoiding the use of broad-spectrum antibiotics that could lead to decreased cost and the risk of developing increased antibiotic resistance.

The pneumococcal urinary antigen test has been offered by the Laboratory Alliance’s Microbiology Department for several years. Healthcare providers who suspect their adult patients may have community-acquired pneumonia caused by S. pneumonia may request this test by simply submitting a urine specimen for "pneumococcal urinary antigen assay." Final results are usually available within the same day of specimen receipt by the microbiology laboratory.
Sentinel Antibiotic Susceptibility Prevalence Studies for Groups A and B Streptococci

By Paul A. Granato, Ph.D., Director of Microbiology

Sentinel antibiotic susceptibility prevalence studies for groups A and B streptococci are performed biannually by the Laboratory Alliance Microbiology Department to monitor the emergence of resistance to select antimicrobial agents, namely penicillin, erythromycin, and clindamycin. Group A and group B streptococcal isolates were collected from patient specimens from various physician practices and/or area hospitals throughout Onondaga County so that the results would not be biased by geographic location or physician practice specialty. The following highlights the results of these studies.

Group A streptococcal study results

From March 1 to March 31, 2011, 50 isolates of group A streptococci (GAS) recovered from adult and pediatric pharyngeal specimens were randomly selected for testing against penicillin, erythromycin, and clindamycin. As expected, all 50 isolates (100%) were susceptible to penicillin but, notably, the 50 GAS were also 100% susceptible to erythromycin and clindamycin.

Table 1 shows the comparative results of the antibiotic sentinel studies that were performed in 2007, 2009, and 2011.

<table>
<thead>
<tr>
<th>Year</th>
<th>Penicillin</th>
<th>Erythromycin</th>
<th>Clindamycin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>100%</td>
<td>94%</td>
<td>98%</td>
</tr>
<tr>
<td>2009</td>
<td>100%</td>
<td>82%</td>
<td>84%</td>
</tr>
<tr>
<td>2011</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The 2011 susceptibility patterns for erythromycin and clindamycin represented a dramatic reversal in the previously observed increasing resistance trends that were detected for these antibiotics over the last two sentinel study periods of 2007 and 2009. Although the reasons for this reversal are unknown, one prominent area infectious disease physician has suggested that the decreased incidence in erythromycin and clindamycin resistance may be due to the discontinuation of certain antibiotic promotions through pharmaceutical companies or discount retail stores and supermarket pharmacies that offered free prescription antibiotics.

Because erythromycin (azithromycin) and clindamycin were not part of the free antibiotic promotional plans, there may have been decreased use of these antibiotics, especially azithromycin, resulting in reversion of the GAS to its normal “wild-type” state because of lowered antibiotic selective pressure on the GAS to develop resistance.

The results of this limited sentinel study indicates that penicillin continues to be effective therapy for the treatment of GAS pharyngitis in the non-penicillin allergic patient and that erythromycin and clindamycin may be effective alternative therapeutic choices in the penicillin-allergic patient. This antibiotic susceptibility trend will be monitored and tracked by performing periodic sentinel studies.

Group B streptococcal study results

A similar antibiotic susceptibility prevalence study was performed on 55 randomly selected group B streptococci (GBS) recovered from vaginal specimens over a similar time period. Table 2 shows the comparative results for the sentinel studies conducted in 2007, 2009, and 2011.

<table>
<thead>
<tr>
<th>Year</th>
<th>Penicillin</th>
<th>Erythromycin</th>
<th>Clindamycin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>100%</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>2009</td>
<td>100%</td>
<td>50%</td>
<td>64%</td>
</tr>
<tr>
<td>2011</td>
<td>100%</td>
<td>24%</td>
<td>38%</td>
</tr>
</tbody>
</table>

As expected, all GBS isolates were susceptible to penicillin. However, an alarming and dramatic increased resistance to erythromycin and clindamycin was noted with only 24% and 38% of the GBS isolates tested susceptible to these respective antibiotics. Although erythromycin and clindamycin are the recommended antibiotics of choice for the treatment of GBS colonizations or infections in the penicillin-allergic patient, this astounding increase in resistance to erythromycin and clindamycin compared to the previous sentinel study of 2009 may be due to the increased use of these antibiotics to treat GBS colonized or infected patients who are not penicillin allergic.

If treatment is indicated for GBS, penicillin remains the agent of choice for intrapartum antibiotic prophylaxis in the non-penicillin allergic patient. Ampicillin is an acceptable alternative but penicillin is preferred because it has a narrower spectrum of activity and is less likely to select for bacterial resistance. Importantly, physicians are reminded that confirmed GBS resistance to penicillin has not been reported to date and, as such, antimicrobial susceptibility testing against this agent is not performed.

For penicillin-allergic women at risk for anaphylaxis, cefazolin, clindamycin, and erythromycin are possible therapeutic options as recommended by the Centers for Disease Control. While there is no GBS reported resistance to cefazolin, the results of this sentinel study show that only 24% and 38% of the GBS isolates tested were susceptible to erythromycin and clindamycin respectively.

Since antimicrobial susceptibility testing is not routinely performed on GBS isolates, physicians may specifically request such testing when considering erythromycin or clindamycin as therapeutic options.
George Popp Participates on Health Panel

George Popp, our Chief Information Officer (CIO), participated in a panel discussion at the NYeC HealtheConnections Summit held on April 28 in Syracuse, N.Y. The discussion focused on how the Health Information Exchange will affect health care in the community as well as its impact on organizations. The panel also included Chuck Fennell, CIO at St. Joseph’s Hospital Health Center, and David T. Page, M.D., president elect of the Onondaga County Medical Society and president of Family Care Medical Group, P.C.

Laboratory Alliance Goes Red

The entire company participated in “Go Red for Women Day” on Friday, Feb. 4. The event raised funds for the American Heart Association. Many employees wore red and some women at the Corporate Offices posed for a photo to show their support.

Amy Hall is Recognized by United Way of CNY

On April 13, United Way of Central New York held its annual Achievement Celebration event at the Palace Theatre in Syracuse. The event is held both to celebrate the community’s generosity and to honor the outstanding achievements of corporations and individuals in the community. Marketing Assistant Amy Hall was one of 16 finalists for the Campaign Volunteer of the Year Award, recognizing her work as coordinator of Laboratory Alliance’s company campaign. Amy incorporated a Campaign Kickoff event at Laboratory Alliance for the first time. It included a cookout and raffles. More importantly, under Amy’s coordination, the 2010 Campaign raised $32,028 with 32% participation. The 2009 Campaign raised $25,559 and had 24% participation.

At the Celebration, United Way of Central New York announced the total pledge donations raised to date in its annual Community Campaign is $7,810,892. The total is about 95 percent of United Way’s 2010-2011 fundraising goal of $8.2 million and about equal to the amount raised last year at this time.
New Employees

Please welcome our new employees

At our Operations Center
Brenda Alkins – Technical Administrative Assistant
April Cynova – Medical Laboratory Technician
Shawna Hyde – Phlebotomist
Michael Johnson – Phlebotomist
Valerie Phillips – Phlebotomist
Brian Taylor – Phlebotomist

At our Rapid Response Laboratory
at St. Joseph’s Hospital
Scott Corbin – Laboratory Office Assistant
Robert Mead – Laboratory Office Assistant

Employee Anniversaries

April, 5 years:
Robert Fiesinger
Anthony Mastrobattisto

April, 10 years:
Marguerite Grosick

May, 5 years:
William Bartlett
Tanya Burnside

May, 10 years:
Rebecca Baker
Alex Dempster
Ronald Hart

March, 5 years:
Beth Conway
Kimberly Johnson
Kathleen Males
Samuel Martino Jr.
Andrew Paton
Dana Simpson
Susan Walker

Methylmalonic Acid Testing

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Methylmalonic Acid Testing

neurologic disorder. Moderately increased MMA is an early indicator of acquired cobalamin deficiency. A massive increase of serum MMA is indicative of methylmalonic acidemia, an inborn metabolic disorder.

Beginning May 23, 2011, Laboratory Alliance of Central New York will offer in-house testing for methylmalonic acid levels by LC/MS/MS using a published methodology approved by the New York State Department of Health Clinical Laboratory Evaluation Program. The new in-house assay represents state-of-the-art methodology utilized by major reference laboratories and offers comparable sensitivity and specificity.

Wearing the Blues for Francis House

During National Medical Laboratory Professionals Week April 24-30, Laboratory Alliance participated in a fundraiser for Francis House. For a $5 contribution, employees could wear jeans to work. In total $450 was raised by our staff!

Francis House provides a home and an extended family to people with terminal illnesses so they can die with dignity and experience the unconditional love of God. Their mission is carried out in two houses located on Michaels Avenue on the north side of Syracuse.

Congratulations

Michele Connor Places Second at National Bowling Tournament

Michele Connor, a medical technician at our St. Joseph’s Hospital Rapid Response Laboratory, recently placed second in the 32nd Post-Standard Women’s Masters Bowling Tournament.

She came within 12 pins of the winner and finished the tournament with an 11-2 record, which included winning 10 games in a row.

Her average was 233 for the tournament and 244.8 on the last day of the tournament. This is a great accomplishment for Michele.

Congratulations to Michele on her second place win!

This photo by Stephen D. Cannerelli and the caption ran in The Post-Standard on Sunday, March 6.

Michele Connor (facing camera) hugs Tina Fabrizio after they competed in the finals of the Post-Standard Women’s Masters bowling tournament held Sunday March 6, 2011, at Bowl Mor Lanes in East Syracuse. Tina Fabrizio defeated Michele Connor.
C A L E N D A R   O F   E V E N T S

Sunday, April 24 - National Medical Laboratory Professionals Week - Theme was "Laboratory Professionals Get Results"
Saturday, April 30

Tuesday, May 3 - Medical Group Management Association (MGMA) regional meeting at The Genesee Grande. Laboratory Alliance is a corporate sponsor

Thursday, May 5 - Blood Banks Association of New York Annual Meeting at Turning Stone. Laboratory Alliance is a corporate sponsor and exhibitor

Friday, May 6 - St. Joseph’s Hospital Health Center Foundation’s Green & Silver Gala at Turning Stone. Laboratory Alliance is a sponsor

Friday, June 3 - Laborator was a sponsor

Friday, June 17 - Community General Foundation Pro-Am Golf Tournament at Shenandoah Golf Club at Turning Stone. Laboratory Alliance is a sponsor

Tuesday, June 21 - JP Morgan Corporate Challenge at Onondaga Lake Park. Laboratory Alliance employees should register by Tuesday, May 24

Take the Corporate Challenge

Join us on Tuesday, June 21, for the Corporate Challenge, an evening of fitness and fun, followed by food.

Run, jog or walk the 3.5 mile course on the parkway. This is a fun, non-competitive event, with proceeds donated to local area not-for-profit organizations.

Registration is due by Tuesday, May 24.

To register go to www.jpmorganchasecc.com. Click on “Syracuse” under the Series Schedule. Then click on either “Registration” or “Companies” under About Syracuse.

On the form, fill in at least the bold fields and the T-shirt size. When it asks for payment information, click on the circle for pay later/my payment is being covered by the company captain. Laboratory Alliance will be paying the $30 entrance fee for each participant.

When done, you will receive a confirmation number in an e-mail from confirmation@jpmorganchasecc.com. Don’t forget to enter the T-shirt size, as we also need it for the company-issued T-shirt.

The website is very informative, but if you still have questions, please call Becky Reynolds, Microbiology Department at the Operations Center, at 410-7067 days.

Don’t forget to register by May 24. Hope to see you there!

LABlines

is a quarterly publication by LABORATORY ALLIANCE of CNY.

Comments, suggestions or inquiries should be directed to Anne Marie Mullin, Vice President of Business Development and Marketing, (315) 461-3036, or by email to annemariemullin@lacny.com.