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 of a food-allergic reaction?
An allergic reaction to food may 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.

These symptoms may begin anywhere from several minutes to two hours after exposure to the allergen, but life-threatening reactions may get worse over a period of several hours.

Which food allergies are the most common?
A food allergy can develop from any food. However, milk, eggs, wheat, peanut, soy, tree nuts (walnuts, pecans, almonds, hazelnuts, etc.), fish, and shellfish cause nearly 90 percent of all allergic reactions to food in the U.S.

How many people are affected by food allergy?
An estimated 12 million Americans (4%) suffer from food allergies, including more than 3 million children. About 3.6 million Americans are allergic to peanuts and/or tree nuts, and about 7.2 million are allergic to seafood. Most people outgrow their food allergies, although allergies to peanuts, tree nuts, fish, and shellfish are often lifelong.

What medications can I take to prevent or cure my food allergies?
Currently, there is no medication that cures food allergies. Strict avoidance of the food allergen is the only way to prevent a reaction.

How is a food allergy reaction treated?
Mild reactions may require only an antihistamine to treat symptoms. Epinephrine, which is available by prescription, is the medication of choice for controlling severe allergic reactions. Epinephrine is administered via an autoinjector, such as the EpiPen® or Twinject®.

Should I stop eating the foods I think I’m allergic to?
Your diet can become nutritionally unbalanced if you eliminate foods at random. You may also become frustrated if you reach a point where you believe that everything you eat is causing a reaction. Talk with your doctor before making significant changes to your diet.

What information should I provide to my doctor?
Keep a food diary for one to two weeks, noting what you eat, which symptoms you experience, and how long after eating they occur. This information, combined with lab tests and a physical examination, will help your doctor determine which food, if any, is causing your symptoms.
About the Food Allergy & Anaphylaxis Network

The Food Allergy and Anaphylaxis Network (FAAN) is pleased to bring you this sample issue of our award-winning newsletter Food Allergy News.

FAAN is a nonprofit organization whose mission is to raise public awareness, to provide advocacy and education, and to advance research on behalf of all those affected by food allergies and anaphylaxis. Funding is provided by grants, donations, membership dues, and the sale of materials.

Established in 1991, FAAN has nearly 30,000 members including individuals and families, health care professionals, school staff, government personnel, and representatives of the food service, manufacturing, and pharmaceutical industries.

FAAN’s 14-member Medical Advisory Board, comprising some of the world’s leading experts in the field of food allergy, reviews our materials to ensure that the information is accurate.

Following is a brief summary of how we work to fulfill our mission.

Public Awareness
To keep food allergy in the public eye, FAAN works proactively on media initiatives, public relations programs, and press releases. We also sponsor and participate in conferences for medical, educational, and food industry groups.

Advocacy
FAAN works with policymakers on issues such as food allergy management in schools and restaurants, availability of epinephrine in ambulances, and advancement of research in scientific institutions. We work with representatives of numerous groups – including the food industry and the government – to improve the accuracy of food allergen labeling.

Education
FAAN publishes books, videos, newsletters, posters, and brochures for patients and their families. We also publish newsletters and programs for hospitals, child care centers, schools, restaurants, and camps. Our website offers free information and downloads, including the latest advocacy and research updates.

FAAN’s Food Allergy Conferences enable attendees to learn about food allergies from leading experts and to network with other families.

Research
FAAN funds and participates in research studies designed to gain a better understanding of the cause, treatment, prevention, and cure of food allergy and anaphylaxis. Information about our research initiatives appears on our website.

We hope you enjoy this sample issue of Food Allergy News. Please call us if we can be of help.

Anne Muñoz-Furlong
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The material in Food Allergy News is not intended to take the place of your doctor. Food Allergy News or the Food Allergy & Anaphylaxis Network will not be held responsible for any action taken by readers as a result of their interpretation of an article from this newsletter. If you have any questions or concerns, ask your physician. Never change your child’s diet without the advice of a physician and registered dietitian. The material in Food Allergy News is not intended to take the place of your doctor. Food Allergy News or the Food Allergy & Anaphylaxis Network will not be held responsible for any action taken by readers as a result of their interpretation of an article from this newsletter. If you have any questions or concerns, ask your physician. Never change your child’s diet without the advice of a physician and registered dietitian. The material in Food Allergy News is not intended to take the place of your doctor. Food Allergy News or the Food Allergy & Anaphylaxis Network will not be held responsible for any action taken by readers as a result of their interpretation of an article from this newsletter. If you have any questions or concerns, ask your physician. Never change your child’s diet without the advice of a physician and registered dietitian.

The Food Allergy & Anaphylaxis Network is a nonprofit 501(c)(3) organization. All donations are tax-deductible and help us continue our work.
Food Allergy Testing

When determining whether someone is allergic to a food, the physician examines factors such as food history, prick skin test results, and blood test results. The doctor may also recommend an oral food challenge.

Allergy Tests
Antibodies are proteins found primarily in the bloodstream that help the body fight off bacteria and viruses. One of these antibodies, IgE, is made by the immune system to help protect us from infection, and people with food allergy have much higher concentrations of IgE than nonallergic individuals. There are two primary methods to assess the presence of allergen-specific IgE antibodies: skin testing and blood testing.

The prick skin test, or “scratch test,” is performed by placing a small drop of food extract on the skin, and then scratching the skin lightly through the drop with a specialized probe or needle. If antibodies are present, a wheal, similar to a mosquito bite, appears within 15 minutes.

For the blood test, usually called the CAP-RAST, a blood sample is tested to measure the amount of food-specific IgE antibody produced in response to each protein.

Interpreting Test Results
Negative test results (i.e., those indicating that antibodies are not present) are very reassuring that the food can be ingested safely, except in allergic disorders that are not due to IgE antibodies, such as those whose symptoms are limited to the gastrointestinal system. The challenge arises in interpreting positive results.

Although no diagnostic test in medicine is 100 percent accurate, nowhere does the discrepancy between a positive laboratory test and the absence of clinical symptoms seem more apparent than in the various tests used to diagnose food allergy. In large part, this stems from a misinterpretation of what the tests actually measure.

The size of the skin test reaction or the level of IgE antibodies in the blood does not correlate with the severity of a future reaction, nor does it confirm a food allergy. A positive test to egg or milk simply indicates that a person has IgE antibodies to milk or egg. Overall, fewer than half of individuals with a positive skin test to a food will develop allergic symptoms if they eat that food. The larger the skin test wheal, the more likely it is that someone will react to the food, but no wheal size is definitive. The blood test has been found to be more useful in predicting who will experience allergic reactions to egg, milk, peanut, and fish.

A food challenge is often needed to confirm positive test results. The patient ingests gradually increasing doses of the suspected food, under a doctor’s supervision, and symptoms are monitored. These tests should be performed only by trained personnel, with emergency treatment immediately available. The food challenge is used both to confirm a positive lab test and to determine if an allergy has been outgrown. In cases of non-IgE-mediated reactions (e.g., some gastrointestinal allergies), an oral challenge may be the only definitive way to diagnose a food allergy.

Conclusion
Although allergy tests are very accurate in detecting and quantifying IgE antibodies, they must be interpreted by someone who is highly skilled in the diagnosis of food allergy and who understands the clinical limitations of such tests. The detection of an IgE antibody to a food, combined with a food history and physical examination, provides an excellent means of diagnosing food allergy.

Adapted from articles by Hugh A. Sampson, M.D., Scott H. Sicherer, M.D., and James P. Rosen, M.D., in Food Allergy News, Vol. 5, No. 1; Vol. 7, No. 4; and Vol. 15, No. 3.

Hugh A. Sampson, M.D., is professor of pediatrics and director of the Jaffe Food Allergy Institute of Mount Sinai Medical Center in New York. He is also director of FAAN’s Medical Advisory Board.

Scott H. Sicherer, M.D., is associate professor of pediatrics at the Jaffe Food Allergy Institute of Mount Sinai Medical Center in New York. He is also a member of FAAN’s Medical Advisory Board.

James P. Rosen, M.D., is associate professor of pediatrics at the University of Connecticut School of Medicine and is in private practice in West Hartford, Conn. He is also a member of FAAN’s Medical Advisory Board.
Studies continue to report that food-allergic reactions are occurring in schools. Equally disturbing, the majority of the schools studied did not have a written plan in place for handling food allergies among their students.

As more and more school-age children are diagnosed with food allergy, it is imperative that schools have a written plan in place to ensure these students’ safety. Ensuring their safety means serving foods they can eat, being able to recognize a reaction, and reacting quickly if one occurs.

Whether you are an educator or a parent, be sure that the school’s food allergy management plan includes the following elements.

**Food Allergy Team**

A team of several staff members should be developed to implement a food allergy policy for the school. The team can be spearheaded by the school nurse, if one is available, and should include the students’ parents and teachers, the principal, and the food service director.

Before the school year begins, this team should meet to discuss the foods to be avoided, the symptoms of an allergic reaction, and what to do if a reaction occurs. The team should also develop management strategies for lunchtime, snacks, field trips, lesson plans that involve food, and class parties.

**Food Allergy Action Plan (FAAP)**

Parents of children with food allergy should provide the school with written documentation, signed by their child’s doctor, which outlines how to treat an allergic reaction. To download a free FAAP, go to www.foodallergy.org, and click on “Downloads.”

**Active Teacher Participation**

Studies investigating food-allergic reactions in schools show that the majority of reactions occur inside the classroom and not in the cafeteria, as one might expect. Teachers should review lesson plans and make changes if necessary; for example, marbles or beads can be used instead of candy when playing bingo. Parents can provide guidance in selecting safe substitutes as needed.

A plan should also be developed for alerting substitute teachers to the presence of students with food allergy. Some teachers keep the FAAPs of such students in their class roster.

**Food Service Staff Involvement**

Parents and food service staff should work together in reviewing menus and ingredients to determine what foods students can and cannot eat. A system will also be needed for rechecking labels carefully for every food served to students with food allergy.

Consider how food service staff will identify students with special dietary needs as they move through the lunch line. Some schools specially code lunch tickets to alert staff to a food allergy, while others require that students identify themselves.

Finally, a procedure for cleaning lunch tables and the surrounding areas should be established to remove any traces of food allergens. Common household cleaning agents, such as Formula 409®, Lysol®, sanitizing wipes, or Target™ brand cleaner with bleach, can be used to clean designated peanut- or milk-free tables. Hand-sanitizing products should not be used; these will remove bacteria but not food protein.

In summary, remember that food-allergic reactions can, and do, occur outside the cafeteria. Anticipate other situations that may arise, and be sure the school staff will be ready to quickly treat an allergic reaction.

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**Studies investigating food-allergic reactions in schools showed that the majority of reactions occurred inside the classroom, not in the cafeteria.**

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**Be a PAL: Protect A Life From Food Allergies™**

This educational awareness program is designed to help educators teach students what food allergies are and how they can help friends who have food allergies.

Visit www.foodallergy.org/pal.html for information about how to implement the PAL Program in schools and to download free material for students.
Traveling away from home may seem challenging for someone with food allergies. With careful planning, however, you can make the trip easy and enjoyable. Below, we provide some strategies to help.

Before Your Trip
Visit the doctor and discuss your travel plans. Ask whether you should take extra medications with you in case of an emergency. Get a letter from the doctor that explains the food allergy and provides instructions for treating a reaction. FAAN's Food Allergy Action Plan (FAAP) is a good template for presenting this information concisely. Keep all written information with you during your travels.

Pack medications in your carry-on luggage, and keep them with you at all times. The Transportation Security Administration (TSA) allows passengers to bring medication into an airplane cabin, provided that the medication features a professionally printed label identifying the medication or manufacturer's name. Additional documentation, such as a doctor's note, may be necessary.

Check with your health insurance company to find out what will be covered if a reaction occurs while out of town. If necessary, purchase a comprehensive travel insurance policy that covers pre-existing conditions, cancellations, and emergency air evacuations.

If you will be flying, alert the airline to the food allergy as soon as possible. If you have requested special accommodations, such as a peanut-restricted flight, reconfirm at every opportunity – at check-in, at the gate, and on the plane.

Pack food in your carry-on to eat on board the flight. According to the TSA, all food must go through an X-ray machine and must be wrapped or in a container. Liquid containers, including aluminum, glass, and plastic, must be sealed or in spill-proof plastic bags to go through the X-ray machine.

While Traveling
Make sure that everyone traveling in your party is aware of the food allergy, knows what foods should be avoided, can recognize the symptoms of a reaction, and understands what to do in case of a reaction.

If you choose to dine in a restaurant, alert the manager or your server immediately about the allergy. Many families use a "chef card" (see top right) to help communicate food allergy information to the kitchen staff.

Finally, refill or replace used medications immediately if a reaction occurs.

For more tips, order Dining Out and Traveling With Food Allergy online at www.foodallergy.org, keyword TGUI. Visit www.foodallergy.org and click on "Travel Tips" for more information about flying with food allergy.

What Is Cross-Contact?
Cross-contact occurs when one food comes into contact with another food and their proteins mix. As a result, each food then contains small amounts of the other food, often invisible to us. This small amount of food is potentially enough to cause an allergic reaction in an individual who is severely allergic to the food. Cross-contact can take place when

- different foods are processed on the same equipment by a manufacturer;
- cooking oil is reused for different foods (e.g., in a fryer);
- utensils, pots, pans, or other cooking equipment is used for multiple foods; or
- splatter or steam from a food that is cooking touches another food that is nearby.

These are just some examples of cross-contact. Be aware of food preparation and handling practices; if you aren't sure whether or not a food is safe to eat, avoid it.
Commonly Asked Questions About Anaphylaxis

By Robert Wood, M.D.

Is all anaphylaxis life-threatening?
Absolutely not! Anaphylaxis is a serious allergic reaction that is rapid in onset and may cause death. The problem is that it is impossible to predict the potential severity of a reaction ahead of time, or even at the start of the reaction. Therefore, we must approach each episode of anaphylaxis as potentially life-threatening.

Is all peanut allergy life-threatening?
Again, absolutely not. Some people with peanut allergy develop only eczema or a mild rash around the mouth after eating peanuts.

Still, peanut allergy is more likely to cause severe and potentially life-threatening reactions than most other foods.

To be safe, we assume that all patients with peanut allergy could have a life-threatening reaction if they were exposed to a sufficiently large dose.

Can we predict who is most likely to experience severe, life-threatening anaphylaxis?
Unfortunately, short of doing a food challenge, there is no test that allows us to make such a prediction.

Although skin tests and blood tests are helpful in diagnosing food allergy, they have little or no value in predicting who is more likely to experience a severe reaction. Even the specific level of IgE antibodies, as determined by a CAP-RAST blood test, has been shown to correlate poorly with the severity of the reaction in a food challenge.

Nevertheless, there are three specific pieces of a patient’s history that signify an increased risk for a severe reaction: a record of severe reactions in the past, an allergy to peanuts and/or tree nuts, and the presence of asthma.

We approach patients who have one or more of these attributes with greater caution. We must always be on guard, however, because there are many patients who do not have any of these risk factors, yet experience severe anaphylaxis.

Can airborne food exposures cause anaphylaxis?
This can be a very confusing issue. There is no doubt that severe anaphylactic reactions may occur due to airborne exposures, although the level of risk depends on the situation.

The greatest risk occurs during the food-cooking process, such as when fish or eggs are being fried or peanuts are being roasted. Also, the closer the person with food allergies is to the cooking area, the greater the level of risk.

The second largest risk of airborne reactions is when food is being manipulated or disturbed, such as when peanut shells are crushed on the floor of a restaurant or sporting arena.

The third level of risk relates to peanuts on airplanes and other similar exposures. While it is clear that small quantities of peanut protein become airborne when bags of peanuts are opened, this exposure does not often lead to serious reactions.

This is not to say that serious reactions will not occur, but rather that the risk is very low. For all the peanut-allergic patients on all the flights serving peanuts, reactions are extremely uncommon.

The fourth level of risk relates to the types of exposure that might occur in a restaurant or cafeteria, where foods are being eaten but not cooked. In the absence of direct contact, there is essentially no risk that a reaction will occur, even though someone may be eating a peanut butter sandwich or drinking milk across the table from a person with a food allergy.

Adapted from Food Allergy News, Vol. 8, No. 6.

Robert Wood, M.D., is professor of pediatrics and director, Pediatric Allergy Clinics, at the Johns Hopkins University Hospital in Baltimore, Md.

Food Allergy Research on the Web

See FAAN's website, www.foodallergy.org, for the latest published research, research studies in the news, and ways to participate in research activities.
Answers to Diet Dilemmas

Dear Shideh,

“I have been reading about the revised USDA Food Guide Pyramid. My child has multiple food allergies. How can I be sure she is getting proper nutrition?”

There is an incredible amount of information on www.mypyramid.gov, which focuses on meeting nutrient needs from a variety of food sources. The website promotes healthy living while emphasizing the importance of physical activity and advises people to moderate and limit dietary components that are too often consumed in excess.

The MyPyramid website focuses on increasing the consumption of healthy, unprocessed foods such as fruits, vegetables, whole grains, and fat-free or low-fat milk products and lowering the consumption of foods high in saturated or trans fat and those with added sugar, cholesterol, and salt.

The website allows you to create a personalized MyPyramid Plan based on your age, sex, and physical activity level; both adults and children can create a plan. You can use the MyPyramid Tracker to get an in-depth assessment of your diet quality and amount of physical activity.

There are six classes of foods: grains, vegetables, fruits, milk, meats and beans, and oils. Subgroups within each group classify foods with similar nutrient contents. The differing widths of the color bands that are used for each food group suggest how much food should be eaten from each group. See the table for the nutrient contents in different classes of MyPyramid.

When an individual has food allergies, some foods or even food groups might be off limits. If any foods in the fruits, vegetables, grains, or meats and beans categories have to be avoided, other foods in that group can be substituted to provide the same nutrients within the diet.

For example, if oranges are to be avoided, other orange fruits (e.g., cantaloupe, papaya) or orange vegetables (e.g., carrots, pumpkins, squash, sweet potatoes) can be used to provide the same nutrients.

When avoiding entire food groups instead of a single food, it becomes difficult to find alternatives that provide the necessary nutrients. A dietitian can analyze the diet and recommend changes to ensure that the diet is adequate for appropriate growth and development.

For example, if milk and milk products are eliminated from the diet, all nutrients listed for milk in the table will have to be provided from other sources. Allowed meats, quinoa (a grass grain that has a balanced set of amino acids), and complementing foods (legumes and grains) can be used to provide sufficient quantities of proteins.

Calcium-fortified products, such as orange juice, rice, milk, and soy milk, can be used to meet calcium needs. If sufficient quantities of any of the nutrients cannot be met, use of a complete formula may be necessary as a safety net.

If your child’s diet does not include a number of foods or food groups (because of either allergies or individual preferences), a nutritional assessment and a diet evaluation are advisable to be sure that the missing nutrients are being replaced from other sources.

From Food Allergy News, Vol. 15, No. 5.

Shideh Mofidi, M.S., R.D., C.S.P., GCRC Nutrition Manager, is a pediatric dietitian at the Mount Sinai School of Medicine and a research dietitian at the Jaffe Food Allergy Institute, Mount Sinai School of Medicine, New York.

<table>
<thead>
<tr>
<th>Protein</th>
<th>Fat</th>
<th>Carbohydrate</th>
<th>Fiber</th>
<th>Vitamins &amp; Minerals</th>
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<tbody>
<tr>
<td>Grains</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>Thiamin, riboflavin, niacin, iron, and folate, if fortified. (Whole grains have additional nutrients such as magnesium and selenium.)</td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>Many nutrients, including vitamin A, vitamin C, vitamin E, folate, and potassium</td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>Many nutrients, including vitamin A, vitamin C, folate, and potassium</td>
</tr>
<tr>
<td>Milk*</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Vitamin A, vitamin D, riboflavin, pyridoxine, cyanocobalamin, pantothenic acid, calcium, and phosphorus</td>
</tr>
<tr>
<td>Meats* and beans</td>
<td>✓</td>
<td>✓ (meats)</td>
<td>✓ (beans)</td>
<td>Thiamin, riboflavin, niacin, pyridoxine, cyanocobalamin, pantothenic acid, vitamin E, iron, phosphorus, magnesium, selenium, and zinc</td>
</tr>
<tr>
<td>Oils</td>
<td></td>
<td>✓</td>
<td></td>
<td>Essential fatty acids</td>
</tr>
</tbody>
</table>

*Use of low-fat and fat-free milk products and cuts of meats is recommended.
**Food Allergy News**

This sample of *Food Allergy News* provides a preview of the material we publish. Members of FAAN receive a 12-page issue every other month. Our annual back-to-school edition contains four extra pages chock full of the latest information, tips, and strategies for a successful school year.

Additionally, the newsletter contains the following content and regular features:

- Articles about food allergies written by health care professionals
- Strategies, tips, and lessons learned by families living with food allergy
- Allergy-free recipes
- Research Update
- Legislation and Advocacy Update
- Answers to Diet Dilemmas

Join today! Fill in the information below and send it to FAAN.

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**Join FAAN Today!**

**Individual Membership**

Individual membership is $30 per year. By joining FAAN, you will receive

- Food Allergy News
- Food Allergy News for Kids, a 4-page bimonthly newsletter mailed directly to children
- Discounts on Food Allergy Conferences, where members meet to learn from leading experts
- Special Allergy Alerts, which contain notices of mislabeled or recalled food or pharmaceutical products

In addition, you’ll add your voice to the food allergy community in pushing for legislation, advancing research, and promoting public awareness of food allergies.

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**Professional Membership**

FAAN is here to help health professionals help their patients. Professional membership is $100 per year and includes

- Bimonthly Food Allergy News newsletter
- Bulk price list
- Rolodex card
- Brochures and holder
- Special Allergy Alerts

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**Resources for Managing Food Allergies**

Looking for books about food allergies? Epinephrine carriers? Cookbooks? Gifts to promote food allergy awareness? FAAN’s got them all, and more.

To browse through our products and publications, click on “Shop for Books & Gifts” at www.foodallergy.org.

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**Contact FAAN at**

(800) 929-4040 • www.foodallergy.org

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켓 Yes! I want to become an **individual** member of the Food Allergy & Anaphylaxis Network (FAAN).

- Sign me up for 1 year for $30!
- Sign me up for 2 years for $55!
- Sign me up for 3 years for $78!

켓 Yes! I want to become a **professional** member of the Food Allergy & Anaphylaxis Network (FAAN) for $100.

Please complete the information below, and send it along with a check, money order, or credit card information to the FAAN office. You may also join with a credit card online at www.foodallergy.org, or by calling our office at (800) 929-4040.

Name: ____________________________________________________________

Address: ________________________________________________________________________________

City: __________________________________________ State: _________ Zip: __________________

E-mail address: __________________________________________________________________________

Credit card number: ___________________________ Expiration date: ________________

- Visa  - Mastercard  - American Express

Signature: ______________________________________________________________________________

Send *Food Allergy News for Kids* to (Child’s name): __________________________________________________________________________

Child’s gender: ❑ M  ❑ F  Birth date: ___________  Allergic to: __________________________

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