

Children with Food Allergies

Special considerations for kids

Note: This issue of *HealthHints* is an accompanying issue to *HealthHints* vol. 10 no. 6, which addresses food allergy in the overall population.

“My mouth and tummy hurt,” moans your child. Immediately, as a parent or care provider, your mind races through the possibilities... “stomach bug, sore in the mouth, toothache, something he ate, ...?” The list could go on and on. We often think that when a child has such symptoms, it may have been something he/she ate. This assumption leads to two possibilities: 1) food-borne illness associated with what we often refer to as food poisoning or 2) food allergy. If no one else who ate the food got sick, then we lean toward food allergy. But, just how common are food allergies? Should this really be a consideration, and how would we know?

Approximately 6 percent of children are affected by food allergies.¹ The eight most common food allergies are **milk, egg, peanut, tree nut** (walnut, cashew, etc.), **fish, shellfish** (shrimp, crab, etc.), **soy, and wheat**. Of particular interest and concern among children is peanut allergy. Recent research found peanut allergy “to have doubled in American children less than 5 years of age in the past 5 years” (that was in 2004).²

So, how do you know if your child has food allergies? What signs should you look for? If your child does have food allergies, how can you keep him/her away from exposure to that food if you are not with your child all of the time? This issue of *HealthHints* will address these questions and discuss how children describe and handle food allergies differently than adults. For more information about food allergy diagnosis and treatment, you will want to see the accompanying volume of *HealthHints* at http://fcs.tamu.edu/health/Health_Education_Rural_Outreach/Health_Hints/2006/july06/food-allergies.pdf.

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Food Allergies & Their Symptoms

A child's description

Let's familiarize ourselves with what a food allergy is and some of the signs and symptoms that commonly occur. An allergic response to food occurs when the immune system thinks a certain food is harmful and creates disease-fighting antibodies (called Immunoglobulin E or IgE) to try to protect the body. When you eat the allergy-causing food, the immune system sends out chemicals (including histamines) into your bloodstream in an effort to remove the food protein from the body. It's these chemicals that cause the unpleasant allergic symptoms that are experienced.^{3, 4, 5}

Even a tiny amount of an offending food may cause a severe reaction in a person with food allergy. This should not be confused with a food intolerance (such as lactose intolerance). Food intolerance occurs when a person's body is unable to metabolize an ingredient, such as milk sugar. With intolerance, a person may be able to eat small amounts of the offending food without symptoms, while larger amounts may result in an adverse reaction, such as gastrointestinal symptoms.

Like adults, children may experience a myriad of symptoms with food allergy. Common, milder symptoms can sometimes rapidly progress to more severe, even life-threatening symptoms because foods affect so many parts of the body, including the mouth, throat, skin, gut, lungs, and eyes.⁶

Common, milder symptoms usually affect the skin, gastrointestinal system, and respiratory system. More severe symptoms usually affect the respiratory system and circulatory (cardiovascular) system. The following is a review of these symptoms.



Common Symptoms

Skin

- hives
- swelling
- itchy, red rash
- eczema
- itching or swelling of lips

Gastrointestinal

- cramps
- nausea
- vomiting
- diarrhea

Respiratory

- itchy, watery eyes
- runny nose
- stuffy nose
- sneezing
- coughing
- wheezing

More Severe, Life-Threatening Symptoms

Respiratory

- shortness of breath
- difficulty swallowing
- tightness of chest
- itching or swelling of tongue, throat
- change in voice

Circulatory/Cardiovascular

- drop in blood pressure
- fainting
- shock⁷

The most severe allergic reaction is known as anaphylaxis or anaphylactic shock. Anaphylaxis can be fatal, either through swelling that shuts off the airway or through a dramatic drop in blood pressure. It is often characterized by the following symptoms:

- hives;
- swelling of the lips, tongue, throat, or around the eyes;
- difficulty breathing or swallowing; and/or
- low blood pressure.^{4, 8}

As you can see, food allergies can be very serious. That's why it is important to know if your child has a food allergy and to have a plan in place for dealing with it. Time can be critical in handling a food allergy emergency. Knowing how a young child might describe a food allergy reaction can be helpful. "Children have unique ways of describing their experiences and perceptions, including allergic reactions. Precious time is lost when adults do not immediately recognize that a reaction is occurring or don't understand what the child might be telling them."⁹ The following text from The Food Allergy & Anaphylaxis Network gives examples of the words a child might use to describe a reaction:

- This food's too spicy.
- My tongue is hot (or burning).
- It feels like something is poking my tongue.
- My tongue (or mouth) is tingling (or burning).
- My tongue (or mouth) itches.
- It (my tongue) feels like there is hair on it.
- My mouth feels funny.
- There's a frog in my throat.
- There's something stuck in my throat.
- My tongue feels full (or heavy).
- My lips feel tight.
- It feels like there are bugs in there (to describe itchy ears).
- It (my throat) feels thick.
- It feels like a bump is on the back of my tongue (throat).⁹



"In addition, know that sometimes children—especially very young ones—will put their hands in their mouths, or pull or scratch at their tongues, in response to a reaction. Also, children's voices may change (i.e., become hoarse or squeaky), and they may slur their words."⁹ If you suspect your child is having an allergic reaction, you need to seek immediate medical attention or follow your doctor's plan if a plan is already in place.

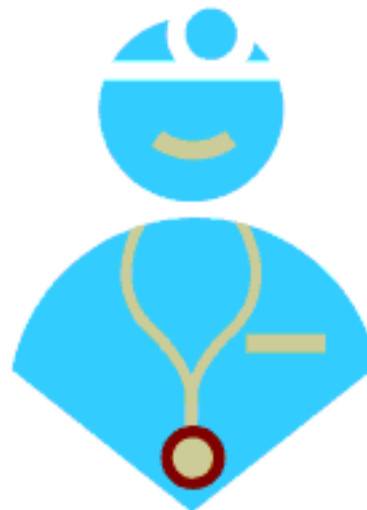
Get a Food Allergy Diagnosed

Cautions on restricting a child's diet

If you suspect your child has a food allergy, it is important to get an accurate diagnosis. Eliminating foods based on "perceived" allergies can eliminate important nutrients from your child's diet, which can affect his/her mental and physical development. On the other hand, ignoring mild, food-allergic reactions can also be harmful, as a more severe reaction can result at another introduction of the offending food.

See your child's doctor if you suspect food allergy. Your doctor can help diagnose your child's specific allergy or refer you to a specialist (allergist or immunologist). (See *HealthHints* vol. 10 no. 6 at http://fcs.tamu.edu/health/Health_Education_Rural_Outreach/Health_Hints/2006/july06/food-allergies.pdf for more information on how food allergies are diagnosed.)

Unfortunately, there is no cure for food allergies, so strict avoidance of the offending food is the only way to manage food allergy. It is very important to have a plan for handling a child's food allergy at home and, particularly, away from home where the parent or guardian has less control over the environment.



Taking Action

Making plans for your child's well-being

If you know that your child has a food allergy, follow these guidelines from the Mayo Clinic.¹⁰

- Know what your child is eating. Be sure to read food labels carefully.
- Notify key people that your child has a food allergy. Talk with child care providers, school personnel, parents of your child's friends, and other adults who regularly interact with your child. Emphasize that an allergic reaction can be life-threatening and requires immediate action. Make sure that your child also knows to ask for help right away if he or she reacts to food.
- Discourage your child from sharing foods. It's common for kids to share snacks and treats. However, during times of fun, your child may forget about food allergies or sensitivities. If your child is allergic, encourage him or her to refrain from eating food from others.¹¹
- Explain food allergy symptoms. Teach the adults who spend time with your child how to recognize signs and symptoms of an allergic reaction.
- Write an action plan (see the Food Allergy Action Plan at <http://www.foodallergy.org/actionplan.pdf>). Your plan should describe how to care for your child when he or she has an allergic reaction to food. Provide a copy of the plan to your child's school nurse and others who care for and supervise your child. Your doctor can work with you to design and sign off on an action plan for your child.
- Have your child wear a medical alert bracelet or necklace. This alert lists your child's allergy symptoms and explains how others can provide first aid in an emergency.
- Talk with your doctor about having your child carry emergency medications (see more on medications in the accompanying issue of *HealthHints* at http://fcs.tamu.edu/health/Health_Education_Rural_Outreach/Health_Hints/2006/july06/food-allergies.pdf).



School Guidelines

Managing students with food allergies

Note: The following section is excerpted from *School Guidelines for Managing Students with Food Allergies* developed by the American School Food Service Association, National Association of Elementary School Principals, National Association of School Nurses, National School Boards Association, and The Food Allergy & Anaphylaxis Network.¹²

“Food allergies can be life threatening. The risk of accidental exposure to foods can be reduced in the school setting if schools work with students, parents, and physicians to minimize risks and provide a safe educational environment for food-allergic students.

Family's Responsibility

- Notify the school of the child's allergies.
- Work with the school team to develop a plan (including a Food Allergy Action Plan) that accommodates the child's needs throughout the school including in the classroom, in the cafeteria, in after-care programs, during school-sponsored activities, and on the school bus.
- Provide written medical documentation, instructions, and medications as directed by a physician, using the Food Allergy Action Plan as a guide. Include a photo of the child on the written form.
- Provide properly labeled medications, and replace medications after use or upon expiration.
- Educate the child in the self-management of their food allergy including:
 - safe and unsafe foods
 - strategies for avoiding exposure to unsafe foods
 - symptoms of allergic reactions
 - how and when to tell an adult they may be having an allergy-related problem
 - how to read food labels (age appropriate).
- Review policies/procedures with the school staff, the child's physician, and the child (if age appropriate) after a reaction has occurred.
- Provide emergency contact information.

School's Responsibility

- Be knowledgeable about and follow applicable federal laws including ADA, IDEA, Section 504, and FERPA and any state laws or district policies that apply.
- Review the health records submitted by parents and physicians.
- Include food-allergic students in school activities. Students should not be excluded from school activities solely based on their food allergy.
- Identify a core team of, but not limited to, school nurse, teacher, principal, school food service and nutrition manager/director, and counselor (if available) to work with parents and the student (age appropriate) to establish a prevention plan. Changes to the prevention plan to promote food allergy management should be made with core team participation.
- Assure that all staff who interact with the student on a regular basis understands food allergy, can recognize symptoms, knows what to do in an emergency, and works with other school staff to eliminate the use of food allergens in the allergic student's meals, educational tools, arts and crafts projects, or incentives.
- Practice the Food Allergy Action Plan (see the Food Allergy Action Plan at <http://www.foodallergy.org/actionplan.pdf>) before an allergic reaction occurs to assure the efficiency/effectiveness of the plan.
- Coordinate with the school nurse to be sure medications are appropriately stored, and be sure that an emergency kit is available that contains a physician's standing order for epinephrine. In states where regulations permit, medications are kept in an easily accessible secure location central to designated school personnel—not in locked cupboards or drawers. Students should be allowed to carry their own epinephrine, if age appropriate, after approval from the student's physician/clinic, parent and school nurse, and allowed by state or local regulations.
- Designate school personnel who are properly trained to administer medications in accordance with the State Nursing and Good Samaritan Laws governing the administration of emergency medications.

- Be prepared to handle a reaction, and ensure that there is a staff member available who is properly trained to administer medications during the school day regardless of time or location.
- Review policies/prevention plan with the core team members, parents/guardians, student (age appropriate), and physician after a reaction has occurred.
- Work with the district transportation administrator to assure that school bus driver training includes symptom awareness and what to do if a reaction occurs.
- Recommend that all buses have communication devices in case of an emergency.
- Enforce a "no eating" policy on school buses with exceptions made only to accommodate special needs under federal or similar laws, or school district policy. Discuss appropriate management of food allergy with the family.
- Discuss field trips with the family of the food-allergic child to decide appropriate strategies for managing the food allergy.
- Follow federal/state/district laws and regulations regarding sharing medical information about the student.
- Take threats or harassment against an allergic child seriously.

Student's Responsibility

- Should not trade food with others.
- Should not eat anything with unknown ingredients or known to contain any allergen.
- Should be proactive in the care and management of their food allergies and reactions based on their developmental level.
- Should notify an adult immediately if they eat something they believe may contain the food to which they are allergic."¹²



Resources that Provide Special Guidelines

The following guidelines can help you plan for specific events that may arise:

- Guidelines for Managing Allergies at Camp
<http://www.foodallergy.org/downloads/CampGuidelines.pdf>
- Managing Students with Food Allergy during a Shelter-in-Place Emergency
<http://www.foodallergy.org/school/EmergencyLockdownGuidelin.pdf>
- College & University Guidelines for Managing Students with Food Allergies
<http://www.foodallergy.org/school/collegguidelines.pdf>
- Guidelines for Developing an “Anaphylaxis Action Plan”
http://www.aanma.org/farmersmarket/fm_anaphylaxis.htm
- Guidelines for Halloween activities - “Spooky Allergies”
http://www.aanma.org/farmersmarket/fm_spooky.htm

question, most reported fear of their child dying from a food allergy reaction.¹³

Here are some things you can do to help ease these concerns:

- Talk to your teen about risk-taking behavior and potential outcomes; work toward appropriate solutions.
- Ask your teen how they will handle a reaction away from home.
- Brainstorm easy ways to carry medicine. Many teens don’t want to carry their medicine because there is no easy way to carry it around with them. (Buy a hard cover case if your child is worried about accidental puncture with an EpiPen or a special purse or bag to carry it in for discretion.)
- Outline your child’s specific responsibilities concerning his/her food allergy management and the consequences for not following them (e.g., “you must show that you have your medication with you or you cannot have the car keys”).
- Always emphasize your confidence in your teen’s ability to manage their allergy and handle challenges as they arise. Give them your best “you can do it” attitude.¹³

It is important for family, friends, and anyone in contact with a person who has food allergy to understand what it is like to manage food allergy on a daily basis.

Teens & Food Allergy

Dealing with risk-taking behavior

As children with food allergy get older and are away from home more, it is important to keep the lines of communication open to help manage their food allergy. “Risk taking, such as trying a new food without knowing the ingredients or not carrying medicine, may occur because of temptation, peer pressure, or simply acting on impulse.”¹³

“Adolescents participating in a survey were asked to identify the most difficult part of living with food allergies—most claimed social isolation. When their parents were asked the same



The following excerpt, by a 13-year-old girl from an award-winning essay on the topic, can help us understand a little better:¹⁴

“Peanut butter sandwiches... a staple of many kids’ diet! A major worry for me! At school lunch, the food servers would place a peanut butter sandwich on my tray... Little did they know that just placing it on my tray was enough to cause me a reaction. I would bravely tell them, “I’m allergic to peanut butter.” We educated the school lunch staff on the danger of cross contamination. But it’s hard to educate the entire school. Just sitting at a lunch table, where someone has rubbed their peanut butter hands all over, can be a problem. Some kids think it’s a joke. I even had a kid throw a peanut butter sandwich at me once. It landed on my food. I left lunch hungry that day.”

“I am one of the 7 million Americans with food allergies. I am also one of the 3 million Americans with peanut allergies. In addition, I have seafood allergies. People sometimes tell me “don’t eat the peanuts” or “scrape them off.” It’s a little more complicated than that, because just a trace of peanuts touching my food can cause a major allergic reaction.”

“Imagine yourself on a plane; one of the things you always look forward to is when the stewardess passes out the snacks. The stewardess comes, she hands you snack mix. You look at the ingredients. You see it, PEANUTS! You throw away the snack. But this time it doesn’t matter. You start an allergic reaction even though you didn’t eat the snack. It is probably from touching the armrest, possibly from the previous passenger, maybe from the air. You don’t know; you’ll never know for sure! It’s something you have to live with. Luckily, Mom brought Benadryl®. Luckily, you don’t have to use the EpiPen®.”¹⁴

Be a PAL (Protect A Life)

Schoolmates can help keep their friend safe from severe allergic reaction. The Food Allergy & Anaphylaxis Network has information and certificates for kids who want to be a PAL by following five steps:

1. Never take food allergies lightly.
2. Don’t share food.
3. Wash hands after eating.
4. Ask a friend what they are allergic to, and help the friend avoid it.
5. Get help immediately if a schoolmate has a reaction.¹⁵

For PALs downloads, including fact sheets and certificates, see <http://www.foodallergy.org/downloads.html>.

Outgrowing Food Allergy

Is it possible?

Will my child ever be able to eat these foods again? Will his/her allergies go away? Will he/she outgrow the allergy? Children do outgrow some food allergies, while often adults do not.¹⁶

“In some cases, particularly in children, strict adherence to an elimination diet appears to promote the process of outgrowing a food allergy. For example, the vast majority of patients with documented allergic reactions to eggs, cow’s milk, and soy eventually become tolerant to these foods. Allergies to peanuts, tree nuts, fish, and shellfish, however, typically last a lifetime and are not outgrown. Overall, approximately one-third of children and adults will eventually be free of their allergic reactions to foods after rigorously following appropriate diets free of the offending food allergens.

After you have eliminated foods responsible for allergic reactions for a period of at least six months, your allergist may recommend that you undergo an oral food challenge under observation to reassess your symptoms. If you have no reaction and can ingest a normally prepared

portion of the food, you will be able to safely reintroduce this food into your diet. If any symptoms of an allergic reaction do occur, the dietary restriction will need to be continued.

If you have had a severe immediate-type allergic reaction to a certain food, such as an anaphylactic reaction to peanut, your allergist-immunologist may recommend that you never again eat this food; rarely would a food challenge be needed to confirm the history. Remember, in some very allergic persons, a very small quantity of an allergenic food can produce a life-threatening reaction."¹⁷

Regardless, "children typically outgrow their allergies to milk, egg, soy, and wheat, while allergies to peanuts, tree nuts, fish and shrimp usually are not outgrown."¹⁸

The Growing Problem of Food Allergy

Why is this happening? What can we do?

No one knows for sure why food allergy prevalence is increasing in the U.S. and other developed countries. However, "the prevalence of food allergy is growing and probably will continue to grow along with allergic diseases."¹⁸

The prevalence of food allergy is not growing in underdeveloped countries, however, and it is believed that "the fewer germs in terms of infection and the environment [like in developed countries], the more time the immune system has to worry about things like allergens."¹⁸

So, what does all this mean, and how can we work to decrease the prevalence of food allergy? Can we prevent food allergy or delay it's onset? Let's see what the research tells us.



"Research studies indicate that growing up in a large family or daycare center actually decreases the likelihood of developing allergy."¹⁸

Some recent research suggests that "being exposed to peanut during infancy may sensitize a child to food, and may protect some children from developing allergy,"¹⁹ with no indication that mothers who ate peanuts while breast-feeding increased the risk of their children developing allergy.¹⁹ This information, however, contradicts what many major providers of health information, including the American Academy of Allergy, Asthma, and Immunology; the La Leche League; and the Mayo Clinic support. These organizations support delaying introduction of the top eight food allergy offenders with these guidelines:

- Watch your diet during pregnancy; consider cutting peanuts out of your diet, especially if there is a history of peanut allergy.
- Breast-feed your baby exclusively for at least 4-6 months, and do not eat foods that the mother or father are sensitive to while breast-feeding. (According to these sources, breast milk can help prevent food allergies because breast-feeding lessens the chance that the baby will become sensitized to the allergen.)
- Do not introduce solid foods too early. Try to wait until your baby is 6 months old before introducing solid foods. Introduce only one new food a week so you can quickly identify any food that disagrees with your baby.
- Do not introduce cow's milk into your child's diet until he/she is 1 year old.
- Do not introduce eggs until age 2.
- Do not introduce peanuts, nuts, or fish until age 3.^{10, 20, 21, 22}

If your child does develop food allergies, learn to protect them and help them protect themselves. Follow the advice of your doctor, read labels, talk to restaurant staff or hostesses, make an action plan for yourself and your school, and educate others in close contact with your child. Although there is no cure currently, scientists are working to discover possible immuno-therapy and other ways to desensitize individuals with food allergies. For now, the best defense is strict avoidance of the food offender.

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http://fcs.tamu.edu/health/Health_Education_Rural_Outreach/index.php



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