Food Allergies

What Is a Food Allergy?
A food allergy is an abnormal reaction to food, even a very small amount. The body's disease-fighting (immune) system mistakenly thinks the food is harmful and produces antibodies for protection. This triggers the release of a body chemical such as histamine. Within minutes (or in up to two hours) the person may begin to feel sick due to unpleasant reactions on the skin, in the digestive tract, the respiratory system or the cardiovascular system. Food protein, which causes the allergic reaction, is not broken down during digestion or by cooking.

Any food can trigger an allergic reaction, including fruits, vegetables and meats. However, these eight foods account for 90% of all food-allergic reactions:
- peanuts (Peanuts are legumes, not nuts.)
- tree nuts (e.g. walnuts, cashews, almonds, pecans, Brazil nuts, hazelnuts and others)
- fish
- shellfish (e.g. shrimp, crab, crawfish and lobster)
- milk
- eggs
- wheat
- soy (soybeans)

Anyone can develop new allergies at any time. Almost all food allergy reactions in adults are caused by these four foods: peanuts; tree nuts; fish and shellfish, especially shrimp.

The Body's Reaction to a Food Allergy
If a person is allergic to a certain food, typical symptoms may include nausea, hives, skin rash, nasal congestion and wheezing. The body also may respond in several of the following ways.

Skin: swelling of the lips, tongue and face; red or itchy skin; itchy, teary eyes; hives or rash (eczema).

Respiratory Tract: itching and/or tightness in the throat; dry or raspy cough; runny or stuffy nose, sneezing and wheezing (asthma); shortness of breath and difficulty breathing.

Digestive Tract: abdominal pain or cramps; gas; nausea; vomiting and diarrhea.

Cardiovascular System: rapid or irregular heart beat and a drop in blood pressure.

Some of these symptoms also may occur after drinking alcoholic beverages, such as wine or beer. The culprit is not the alcohol. It is the other ingredients (e.g. yeast, sulfur dioxide and additives).

Life Threatening Reactions: Most allergic reactions to food are just uncomfortable. However, a small percentage of people have severe reactions that can be life threatening. For example, anaphylaxis (an-a-fi-LAK-sis), a severe reaction, occurs quickly and may cause death. Food is the leading cause of anaphylaxis in children. For a severe reaction, self-injectable epinephrine (EpiPen® or Twinject®) will ease the reaction while the person is taken to the hospital or doctor.

Symptoms of anaphylaxis begin within several minutes to two hours after exposure to the allergen. The reaction may get worse and become life-threatening over the next several hours. It may begin with a tingling sensation in the hands, feet, lips or scalp, itching, and a metallic taste in the mouth.
Other Possible Symptoms May Include: hives; a sensation of warmth; hoarseness; difficulty talking; throat tightness, or the feeling of a lump in the throat; drooling; wheezing, chest tightness or other difficulty breathing; coughing; swelling of the lips, palate, tongue or throat; gastrointestinal symptoms (i.e., vomiting, diarrhea and cramping); a drop in blood pressure; changes in level of awareness and loss of consciousness.

Call 9-1-1 if any of these reactions occur after you eat something, because an anaphylactic reaction moves quickly. In about 20% of anaphylactic reactions, symptoms go away and return more severely in two to three hours, primarily in the respiratory tract. Although very rare, anaphylaxis can be triggered by eating certain foods and exercising within hours after eating.

Anyone with a previous history of anaphylactic reactions can have another severe reaction, but teens with food allergy and asthma appear to be at the highest risk. Teens dine away from home more, don't carry their medications as often, and may ignore or not recognize the symptoms.

How Common are Food Allergies?
Food allergies can not be taken lightly, although true food allergies occur very infrequently. According to the National Institutes of Health (NIH), only four percent of Americans, or about 11 million people, have true food allergies. This includes 6.5 million with seafood allergies and 3 million with peanut and tree nut allergies.

Food Allergies in Children: The number of food allergies, especially among children, is increasing. The NIH estimates that six to eight percent of children ages four and under have food allergies. Children who have allergic reactions to dust, mold or pollen are more apt to develop food allergies. About 35% of children with moderate to severe eczema also have food allergies.

About one out of 20 children is allergic to at least one food, and the most common allergies are peanuts, milk, eggs, tree nuts, soy and wheat. Children frequently outgrow an allergy to eggs, milk, soy and wheat by the time they reach adolescence. However, allergies to peanuts, tree nuts, fish and shellfish (e.g. shrimp) usually last a lifetime.

Treating Food Allergies
Food allergies can't be cured with medications. If you have a food allergy, the only way to prevent a reaction is to never taste, touch or even smell the problem food.

Here are some tips for managing a food allergy while eating healthfully.

Avoid the food, or food proteins, that cause allergic reactions. Don't eat, touch or smell the allergy-causing food or anything made from it.

Learn to create dishes made with substitute ingredients containing the same nutrients. Serve dishes the whole family can enjoy.

Be cautious about foods with mixed ingredients, because they could include foods that cause allergies. Food proteins can have several names and can hide in ingredients where you least expect them.

Every time you buy a packaged food, read the ingredient list on the food label to find out if it contains a problem ingredient. This includes your favorite brands, because periodically food manufacturers change the ingredients. Contact the manufacturer if a label contains unfamiliar terms.

Be aware that a food protein can have more than one name. If a food doesn't have a label, don't let an allergic family member eat it.

Tell all caregivers (e.g. grandparents, other relatives, babysitters and friends) about a child's allergy, and explain what foods the child must avoid and why. Provide the day care center with a note from the child's doctor or health care provider.

Before eating out, do your homework on Web sites of restaurants. Order carefully, asking about all ingredients used in preparing foods. Tell restaurant employees, friends and others who serve you food that you have a food allergy and must know what is in your food so you don't get sick. Don't be shy!

Pack food from home if you are not sure about the food that will be served at a restaurant, day care or someone's home.

Teach children with food allergies not to eat foods that friends and classmates give them. Role-play about what to do when someone unknowingly offers them food to which they are allergic.
Wear a medical alert identification (e.g. bracelet or necklace) at all times. To control reactions, always carry medications, such as antihistamines and epinephrine, and learn to self-administer them.

Avoid cross-contamination from foods that cause an allergic reaction. For example, if someone has a milk allergy, avoid deli meats, because meat and cheese may be cut with the same slicer. When preparing food for someone who has a peanut allergy, don't use the same utensils (e.g. knife, container, cutting board and serving utensil) that are used with peanuts or peanut butter. If someone has a seafood allergy, don't make French fries or other foods in the same oil or frying pan that was used to deep-fry shrimp.

**See Your Doctor for Diagnosis**

Never try to diagnose a food allergy yourself, because you can't be an instant expert. Guessing that you are allergic to a certain food (e.g. milk) and removing that food from the diet may cause you to miss out on some of the nutrients needed to grow and stay healthy.

Sometimes other serious health problems cause symptoms that seem like allergies. If you suspect that you or your child has a food allergy, see your doctor or health care provider.

Diagnosis of a food allergy includes: medical and dietary histories; physical exams; prick skin and blood testing; elimination diets and food challenges. Take your doctor a one to two-week food diary of every food eaten, the amount of each food eaten, and the symptoms felt. Write down how soon the symptoms began after eating and how long they lasted, even if they were mild and went away shortly after they began. Tell the doctor whether you've had similar reactions before. He will use this information, along with a physical examination and lab tests, to determine whether a particular food is causing your symptoms.

Once an allergy is diagnosed, the recommended treatment is to avoid the offending food. Anyone diagnosed with a food allergy should remain under a doctor's care. Although food allergy is a serious condition, you can stay healthy by working with your doctor and by avoiding foods that cause allergic reactions.

**Allergen Labeling on Foods**

In 2006 Congress passed the Food Allergen Labeling and Consumer Protection Act (FALCPA). It requires all U.S. FDA-regulated packaged foods sold in the United States to contain allergen labeling and to discourage labels with "may contain" statements. Food labels must state in plain common language that the ingredients contain the following eight major food allergens or their protein derivatives: milk, egg, fish (such as salmon and flounder), crustacean shellfish, tree nuts, wheat, peanuts, and soybeans. The specific types of tree nuts, fish and shellfish must be stated.

This labeling regulation also includes allergens used in flavorings, spices, colorings and additives. However, the law does not apply to restaurants.

Know all the terms for common allergens on the ingredients label, as well as other foods that may contain the allergen.

Although the list is not all inclusive, here are some foods and ingredients to avoid with certain allergies.

**Peanut Allergy:** peanuts; peanut butter; peanut flour; peanut oil; Arachis oil; mixed nuts; ground nuts; Monkey nuts; artificial nuts; beer nuts; tree nuts; goobers; Mandelonas; many African, Asian and Mexican dishes, and certain baked goods and candy.

Refined peanut oil can be safely eaten by most people with a peanut allergy, but cold-pressed, expelled, or extruded peanut oil should be avoided.

**Tree Nut Allergy:** almonds; artificial nuts; Brazil nuts; cashews; filbert/hazelnuts; hickory nuts, Macadamia nuts; mandelonas; marzipan (almond paste); nougat; nut butters; nutmeal; nut meat; nut oil; pecans; pesto; pine nuts; pistachios; pralines; walnuts; flavoring and mortadella.

**Shellfish Allergy:** abalone; clams; crab, crawfish; lobster; mollusks; mussels; octopus; oysters; prawns; scallops; shrimp; snails (escargot); squid (calamari); bouillabaisse; flavoring and surimi.

Note: In a seafood restaurant any food may be cross contaminated with fish or shellfish. Breathing cooking odors from fish and shellfish, as well as handling them, also may trigger a reaction.
**Wheat Allergy:** wheat (bran, germ, gluten, malt, sprouts); flour; pasta; bread crumbs; spelt; bulgur; couscous; cracker meal; durum; farina; kamut; matzoh; semolina; soy sauce; starch; surimi; hydrolyzed protein and flavoring.

**Soy Allergy:** edamame; hydrolyzed soy protein; miso; natto; shoyu sauce; soya; soybean; tamari; tempeh; tofu; TVP (textured vegetable protein); Asian foods; flavoring; vegetable broth, gum and starch.

**Egg Allergy:** albumin or albumen; mayonnaise; eggnog; macaroni; surimi; meringue or meringue powder; artificial flavors; lecithin; marshmallows; marzipan; nougat and pasta.

**Milk Allergy:** all forms of milk; yogurt; ice cream; cheese; cottage cheese; cream; curds; whey; custard; pudding; half & half; ghee; butter; artificial butter flavor; lactalbumin; lactulose; casein, caseinates; rennet casein and anything else made with milk.

**Is it a Food Allergy or a Food Sensitivity?**

Food allergy and food sensitivity are not the same condition. A person who develops hives, itchy mouth, throat closure, wheezing or shock from eating shellfish or peanuts has a food allergy. Someone who has gas from eating beans, diarrhea from lactose, a runny nose from spicy food, or a headache from wine has food sensitivity.

Both conditions are adverse reactions to food that cause discomfort and may be life-threatening. A food allergy involves the body's disease-fighting (immune) system and food sensitivity does not. Food sensitivity may be due to food intolerance, psychological reasons or other adverse reactions.

**Food Intolerance:** Faulty metabolism causes food intolerance, which does not involve the body's immune system. Two examples are lactose intolerance and gluten intolerance. The body may lack enough of a digestive enzyme to adequately digest a food, such as lactose in milk or gluten in wheat. This is sometimes mislabeled an "allergy," because it causes many of the same symptoms (e.g. nausea, diarrhea and abdominal cramps).

**Lactose Intolerance:** The most common intolerance is to lactose in milk. A person with lactose intolerance lacks enough of the enzyme needed to digest milk sugar and may develop symptoms such as bloating, gas and abdominal pain. However, they should not give up milk entirely. Milk and other dairy foods are important sources of several important nutrients, including calcium needed to grow and maintain strong bones.

Most people can consume small amounts of milk and milk products with little or no discomfort. To "dilute" the lactose, consume it as part of a meal or snack. Divide it into smaller, more frequent servings. Portion size can be gradually increased to find out individual tolerance level.

Some calcium-rich foods that are easier to digest are aged cheese, yogurt and buttermilk. Whole-milk dairy products also digest easier, because the rate of digestion is slowed by their higher fat content.

Other options for people with lactose intolerance include: lactose-reduced and lactose-treated milk and other dairy foods; lactase enzyme tablets or drops that can be added to fluid milk, and lactase supplements that can be chewed or swallowed before eating lactose-rich foods.

A milk allergy is very different from lactose intolerance. People who are allergic to milk usually must avoid all milk products, because the protein components (e.g. casein) cause an allergic reaction.

**Gluten Intolerance:** Celiac disease is another example of food intolerance in which a person is unable to digest gluten, a protein found in many grain products. Instead of a true food intolerance, celiac disease is an intestinal disorder that can occur at any age and often lasts a lifetime. People with this disorder must build a healthful eating plan with grain products other than wheat, rye, barley and possibly oats.

**Other Food Sensitivities:** Several foods and food additives (e.g. preservatives, colors and flavors) can cause a hypersensitive reaction. The most common ones include:
- sulfites
- monosodium glutamate (MSG)
- food colors (especially Yellow No. 5)
- red wine
- chocolate
Most food intolerances are less severe than food allergies, except for intolerances to sulfites. The term "sulfites" is a catchall for a variety of sulfur-containing additives used to preserve foods (e.g. dried fruits, wines and dehydrated potato products like mashed potato flakes.) They can prevent foods from browning and slow the growth of bacteria. Asthmatics usually react more often and more severely, occasionally having anaphylactic shock.

A small number of people may react to consuming large amounts of MSG at a single meal. When a menu says "No MSG," that means that no MSG is added to foods. However, MSG naturally occurs in high concentrations in some foods (e.g. tomatoes, Parmesan cheese and soy sauce). This makes it hard to isolate the compound as the cause of individual reactions.

The only food coloring known to cause adverse reactions is FD&C Yellow No. 5 (tartrazine), a dye used in foods, beverages and medications. Sensitive people may develop hives, itching and nasal congestion but not asthma attacks.

A headache is the most common symptom that some people may experience from drinking red wine or eating chocolate.

**Additional Adverse Reactions:** Causes of discomfort also may be caused by several other types of food sensitivities.

**Foodborne Illnesses:** These illnesses can be caused by infectious organisms, such as bacteria, parasites or viruses.

**Contaminants:** Chemicals present in water where seafood is harvested are examples of contaminants.

**Psychological Responses:** By associating a certain food with a very emotionally unpleasant experience, a person can have uncomfortable symptoms and become physically sick after eating.

**For More Information**
Reliable information about food allergies can be found on the internet at these sites.

Asthma and Allergy Foundation of America
http://www.aafa.org/ Click on "Food Allergies."

American Academy of Allergy, Asthma & Immunology
www.aaaai.org/patients/resources/fact_sheets/food_allergies.pdf

American College of Allergy, Asthma & Immunology
http://www.acaai.org/public/advice/foods.htm

The Food Allergy & Anaphylaxis Network.
www.foodallergy.org

Kids With Food Allergies
www.kidswithfoodallergies.org This is a nationwide nonprofit food allergy support group, which provides information, recipes, cooking help, and peer support.

A picky eater is very different from someone with a food allergy or intolerance, although preparing food for them can be very challenging, also. To learn more about dealing with children who are finicky eaters, refer to HGIC 4104, Picky Eaters.

**Sources:**
1. United States Department of Agriculture. Food and Nutrition Service. Nibbles for Health 27: Food Allergies, or Just Food Fussiness?
3. The Food Allergy & Anaphylaxis Network. Do You Have a Food Allergy? www.foodallergy.org
5. Clemson University Department of Food Science and Human Nutrition and EFNEP. Nutrition Information & Resource Center (NIRC). Idiosyncratic Reactions to Foods. Nourishing News (02/02).

This information has been reviewed and adapted for use in South Carolina by Janis G. Hunter, HGIC Nutrition Specialist, and Katherine L. Cason, Professor, State Program Leader for Food Safety and Nutrition, Clemson University. (New 04/08.)

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