

ASTHMA & ALLERGY ALERT

A Publication of Asthma & Allergy Affiliates of the North Shore

James A MacLean MD
Jeanne E. Gose MD, PhD
Andrew I. Ober, MD
Cristina Palumbo MD
Eyal Oren, MD

Highland Medical Park
114R Highland Ave.
Salem, MA 01970
(978) 745-3711

Hunt Medical Building
80 Lindall Street
Danvers, MA 01923
(978) 777-0970

Willow Professional Park
865 Turnpike ST.
N. Andover, MA 01845
(978) 683-6256

Food Allergies

At today's appointment, you or your child were found to be allergic to the following:

Up to 2 million, or 8%, of children, and 2% of adults in the United States are estimated to have food allergies.

With food allergy, an individual's immune system will overreact to an ordinarily harmless food. This is caused by an allergic antibody called *IgE*



(*Immunoglobulin E*), which is found in people with allergies. This antibody may develop after eating the food repeatedly in the past but without having problems.

Food allergy may appear more often in someone who has family members with allergies, and symptoms may occur after that allergic individual consumes even a tiny amount of the food.

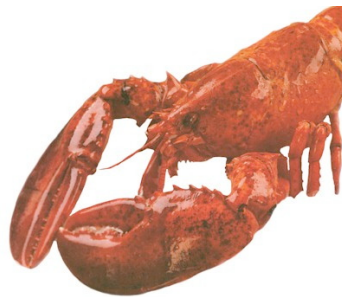
Food *intolerance* is sometimes confused with food allergy. Food intolerance refers to an abnormal response to a food or food additive that is not an allergic reaction. It differs from an allergy in that it does not involve the immune system. For instance, an individual may have uncomfortable abdominal symptoms after consuming milk. This reaction is most likely caused by a milk sugar (lactose) intolerance, in which the individual lacks the

enzymes to break down milk sugar for proper digestion.

Food *allergens* -those parts of foods that cause allergic reactions-are usually proteins. Most of these allergens can still cause reactions even after they are cooked or have undergone digestion in the intestines. Numerous food proteins have been studied to establish allergen content. Some allergens (most often from fruit and vegetables) cause allergic reactions only if eaten before being cooked. Most such reactions are limited to the mouth and throat.

The most common food allergens are the proteins in cow's milk, eggs, peanuts, wheat, soy, fish, shellfish and tree nuts.

All foods come from either a plant or an animal source, and foods are grouped into families according to their origin. In some food groups,



especially tree nuts and seafood, an allergy to one member of a food family may result in the person being allergic to all the members of the same group. This is known as *cross-reactivity*.

However, some people may be allergic to both peanuts and walnuts, which

are from different food families; these allergies are called *coincidental allergies*, because they are not related.

Within animal groups of foods, cross-reactivity is not as common. For example, people allergic to cow's milk can usually eat beef, and those allergic to eggs can usually eat chicken.

With shellfish, crustaceans (shrimp, crab and lobster) are most likely to cause an allergic reaction. Molluscan shellfish (clam, oysters, abalone, etc.) can be allergenic, but reactions to these shellfish are less common. Occasionally, people are allergic to both types of shellfish.

Symptoms of allergic reactions to foods

The most common allergic skin reaction to a food is *hives*. Hives are red, very itchy, swollen areas of the skin that may arise suddenly and leave quickly. They often appear in clusters, with new clusters appearing as other areas clear. Hives may occur alone or with other symptoms.

Atopic dermatitis, or *eczema*, a skin condition characterized by itchy, scaly, red skin, is commonly triggered by food allergy. This reaction is often chronic, occurring in individuals with personal or family histories of allergies or asthma.

Asthma symptoms such as coughing, wheezing, or difficulty breathing due to narrowed airways, may be triggered by food allergy, especially in infants and children.

Gastrointestinal symptoms of food allergy include vomiting, diarrhea and abdominal cramping, and sometimes a red rash around the mouth, itching and swelling of the mouth and throat, abdominal pain, swelling of the stomach and gas.

In infants, non-allergic, temporary reactions to certain foods, especially fruits, are common. For example, a rash around the mouth, due to natural acids in foods like tomatoes and oranges, or diarrhea due to excess

sugar in fruit juice or other beverages, occur with some frequency. However, other reactions are allergic and may be caused by traces of the offending food when eaten again. As they grow older, some children may tolerate foods that previously caused allergic reactions.

Most children with egg, milk, wheat and soy allergies will outgrow these with time. Approximately 10-20% of children with peanut and tree nut allergies will outgrow this one however. Periodic food allergy check-ups with appropriate food challenges should be carried out under the supervision of an allergist.

Severe allergic reactions

In severe cases, consuming a food to which one is allergic can cause a life-threatening reaction called *anaphylaxis*- a systemic allergic reaction that can be severe and sometimes fatal. The first signs of anaphylaxis may be a feeling of warmth, flushing, tingling in the mouth or a red, itchy rash. Other symptoms may include feelings of light-headedness, shortness of breath, severe sneezing, anxiety, stomach cramps and/or vomiting and diarrhea. In severe cases, some people may experience a drop in blood pressure that results in a loss of consciousness and shock. Without immediate treatment, anaphylaxis may cause death.

Symptoms of anaphylaxis are reversed by treatment with injectable epinephrine (EpiPen or TwinJect) and other emergency measures. **It is essential that anyone with symptoms suggesting possible anaphylaxis get emergency treatment immediately.**

Diagnosis

Diagnosis of food allergy requires a carefully organized and detailed assessment of the problem. *Allergy skin tests* may be helpful to determine which foods, if any, are triggering your or your child's allergic symptoms. In skin testing, a small amount of liquid extract made from the food is placed on the back or arm. In a test called a *prick test*, a needle is then passed through the liquid on the top layer of the

skin. In some cases fresh foods may be needed for skin testing.

If you or your child develops a wheal-a raised bump or small hive-within 20 minutes, this positive response indicates a possible allergy. If a wheal does not develop, the test is negative. It is uncommon for someone with a negative skin test to have an IgE-mediated food allergy. Skin tests are not helpful when sensitivity to chemical food additives is suspected.

Your doctor may also use blood tests for IgE to specific foods, called *RAST testing* or *CAP-RAST*, to diagnose food allergies. In certain cases, such as severe eczema all over the body, an allergy skin test cannot be done. Your doctor may recommend a food RAST blood test to obtain similar information to that found with a skin test. For diagnosis of milk, egg, peanut or fish allergy, the level of the CAP-RAST test may help predict future food allergy reactions to these foods. False positive results may occur with both food allergy skin testing and blood testing.

If the diagnosis of food allergy remains in doubt, your allergist may recommend a food challenge test. These tests are conducted in the doctor's office.

An excellent resource and support group for those with food allergy is the Food Allergy and Anaphylaxis Network (FAAN): 1-800-929-4040 or www.foodallergy.org. There are also some well-written books about the subject of food allergy including:

On the Nature of Food Allergy by Paul Hannaway, MD
The Peanut Allergy Answer Book by Michael Young, MD

Treatment

1. **Avoid the food.** The best way to treat food allergy is to avoid the specific foods that trigger the allergy.

2. Ask about ingredients.

- To avoid eating a "hidden" food allergen away from home, food-allergic individuals must always inquire about ingredients when eating at restaurants or others' homes and make the seriousness of their allergy known.
- Although it has been shown that just smelling peanut butter will not cause a reaction, sometimes food allergens can be airborne, especially in steam, and can cause reactions. Boiling or simmering seafoods have been particularly implicated.

3. Read food labels.

It is important for food-allergic people to carefully read food labels. Some foods may be listed by the name of their proteins. For example:

- Milk: casein, lactalbumin, lactoglobulin
- Egg: albumin
- Peanut: cold-pressed oil contains peanut protein; 'highly-refined' does not
- Tree nuts: almond, brazil nut, cashew, hazelnut, filbert, pecan, pinon, pistachio, walnut
- Soy: tofu; NOT soy lecithin (okay to eat)

4. Be prepared for emergencies.

Anaphylactic reactions caused by food allergies can be potentially life-threatening. Those who have experienced an anaphylactic reaction to a food must strictly avoid that food. They need to carry and know how to use injectable epinephrine and antihistamines to treat reactions due to accidental ingestion.

- You should always carry at least two dose of epinephrine and make sure that the EpiPen or TwinJect is kept with you and not in the car or other location. People who are commonly around you or your child, such as spouses, parents, co-workers, school nurses, teachers or daycare workers, should also know how to use the injectable epinephrine.
- Those with food allergies should also wear an identification bracelet that describes the allergy.
- If you have an anaphylactic reaction after eating a food, it is essential that you have someone take you to the emergency room, even if symptoms subside. For proper diagnosis and treatment, make sure to get follow-up care from your allergist.