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## Food Allergens

*Brian A. Nummer, Ph.D., Extension Food Safety Specialist*

Allergies affect the lives of millions of people. Fresh spring flowers, a friend's cat or dog, even the presence of dust can make people itch, sneeze, and scratch uncontrollably. Besides these common allergens, a growing number of Americans have allergies to food. Some of these allergies can be life threatening. According to recent studies, approximately 11 million Americans, or 2% of adults and 6% to 8% of children under the age of 3, have a true food allergy.



Seafood is one of eight common food allergens.  
(Photo source: USDA)

Food allergy is a reaction of the body's immune system to something in a food or an ingredient in a food—usually a protein. It can be a serious condition and its symptoms can take many forms.

### The “Big Eight” Food Allergens

The eight most common food allergens are:

- milk
- eggs
- peanuts
- tree nuts
- soy
- wheat
- fish and
- shellfish

These eight cause most food allergic reactions. Other foods may be identified as allergens for some people, but these are less common.

### Food Allergy Symptoms

Symptoms of food allergy differ greatly among individuals. They can also differ in the same person during different exposures. Allergic reactions to food can vary in severity, time of onset, and may be affected by when the food was eaten. Common symptoms of food allergy include skin irritations such as rashes, hives, and eczema, and gastrointestinal symptoms such as nausea, diarrhea, and vomiting. Sneezing, runny nose, and shortness of breath might be seen in more severe cases, in addition to the previous symptoms. Some individuals may experience a more severe reaction called anaphylaxis. Anaphylaxis is a life threatening allergic reaction.

## Anaphylaxis Reactions

**skin:** flushing, itching, or hives

**airway:** throat swelling or difficulty breathing

**intestines:** nausea, vomiting, or diarrhea

**heart:** low blood pressure or unconsciousness

Anaphylaxis symptoms usually appear rapidly, sometimes within minutes of exposure to the allergen. Immediate medical attention is necessary when anaphylaxis occurs. Standard emergency treatment often includes an injection of epinephrine (adrenaline) to open up the airway and help reverse the reaction.

### Do these foods contain a food allergen?

Worcestershire Sauce	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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Soybean Oil	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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French Toast	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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Medicine Tablets	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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Chinese Takeout Food	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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*Answers found on page 3*

## Allergy, Intolerance and Sensitivity

Of all the individuals who have any type of food sensitivity, most have food intolerances. Unlike true food allergy, food intolerance does not involve the bodies' immune system. Most food intolerances are caused by chemicals consumed at high enough doses. For one reason or another, the body cannot process or digest the chemical, leading to symptoms. An example is lactose intolerance. This occurs when a person lacks an enzyme needed to digest milk sugar. If a person who is lactose-intolerant eats too much of a milk product, he or she may experience symptoms such as gas, bloating, or abdominal pain.

Food sensitivity occurs when someone has a reaction to a food and the mechanism is not understood. An example of this is monosodium glutamate (MSG). This additive produces mild headaches in some people. Sulfite sensitivity or sulfite-induced asthma is another example. It affects about 6% of people with asthma.

## Am I allergic or sensitive to food additives?

Probably not. Misconceptions abound regarding allergy or sensitivity to food additives and preservatives. Suspected adverse reactions such as fatigue, behavior problems, and many other symptoms are attributed to foods such as preservatives, high fructose corn syrup, aspartame, and plain sugar. However, in extensive studies neither allergies nor sensitivities have been attributed to these food ingredients.



Peanuts are also one of the eight common allergens.  
(Photo source: USDA)

**Allergens management for food producers.** Food producers must make special precautions to (a) label foods accurately for allergens and (b) exclude allergens or allergen contamination from non-allergen foods. All food producers must list each big eight allergen on their food label if that allergen is in the food product. They should always check ingredient labels for allergens to be sure their food product label is accurate. Secondly, food producers must keep allergen materials from contaminating other foods. For example, do not make barbecue sauce in the same equipment that was used to make peanut sauce without completely cleaning and sanitizing to remove peanut residue.

## Allergens Management in Foodservice

Restaurants must use the same precautions when preparing foods containing allergens as producers. In addition, the food code prohibits the use of sulfites in foods. Restaurant food safety managers should train their staff to understand allergic reactions and to call "911" during emergencies. Staff should also be trained to carefully answer questions about allergen ingredients in menu items. Menu items should be assumed to contain allergens

unless there is credible knowledge the food does not contain them. Better safe than sorry.



Dairy foods are another of the eight most common allergens. They can include milk, butter, sour cream, yogurt, and many others. (Photo source: USDA)

### References

US FDA. 2004. Food Allergen Labeling and Consumer Protection Act of 2004. Available online at <http://www.cfsan.fda.gov/~dms/algact.html>. Accessed 31 Dec 2006.

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RESOURCE: The Food Allergy & Anaphylaxis Network. Available online at <http://foodallergy.org>.

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### Answers:

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Soybean Oil	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
French Toast	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Medicine Tablets	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Chinese Takeout Food	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

Worcestershire sauce usually contains wheat and soy. Commercial processed soybean oil contains no soy protein and is NOT allergenic. French toast is dipped in egg and milk. Some medicine tablets use wheat starch fillers. Chinese takeout foods frequently contain peanuts or are contaminated with peanut proteins from cross contamination in the restaurant.