

About Food Allergies

While an estimated 40 to 50 million Americans have allergies, only one to two percent of all adults are allergic to foods or food additives. Eight percent of children under age six have adverse reactions to ingested foods; only two to five percent have confirmed food allergies. The following information addresses commonly asked questions regarding food allergy.

What are symptoms of food allergy?

Allergic reactions to foods typically begin within minutes to a few hours after eating the offending food. The frequency and severity of symptoms vary widely from one person to another. Mildly allergic persons may only suffer a runny nose with sneezing, while highly allergic persons may experience severe and life-threatening reactions, such as asthma or swelling of the tongue, lips or throat.

The most common symptoms of food allergy involve the skin and intestines. Skin rashes include hives and eczema. Intestinal symptoms typically include vomiting, nausea, stomach cramps, indigestion and diarrhea. Other symptoms can be asthma, with cough or wheezing; rhinitis, often including itchy, stuffy, runny nose and sneezing; and rarely, anaphylaxis, a severe allergic reaction that may be life threatening.

Because these symptoms can be caused by a number of different diseases other than food allergy, your allergist-immunologist may want to examine you to rule them out as the source of your problem.

What causes my symptoms?

A food allergy is the result of your body's immune system over-reacting to food proteins called allergens. Normally, your immune system and defense mechanisms keep you healthy by fighting off infections and inactivating proteins such as food allergens, which could potentially, cause allergic reactions. Therefore, the majority of people develop a tolerance to a wide variety of different foods in their diet.

In the individual with food allergy, the immune system produces increased amounts of immunoglobulin E antibody, or IgE. When these antibodies battle with food allergens, histamine and other chemicals are released as part of the body's immune reaction to these substances. These chemicals can cause blood vessels to widen, smooth muscles to contract and affected skin areas to become red, itchy and swollen. These IgE antibodies can be found in different body tissues – skin, intestines, and lungs – where specific allergy symptoms such as hives, vomiting, diarrhea and wheezing are observed.

Not all adverse reactions to food are due to allergy. Some reactions to cow's milk, for example, are related to a deficiency of an enzyme (lactase) that normally breaks down a sugar in milk (lactose). When individuals with lactase deficiency drink cow's milk or eat other dairy products, they may experience intestinal symptoms including stomach cramping, gas and diarrhea. This is sometimes misinterpreted as a food allergy.

Why me? Why have I developed food allergy?

Heredity seems to be the prime reason some people have allergies and others don't. If both your parents have allergies, you have approximately a 75 percent chance of being allergic. If one parent is allergic, or you have relatives on one side with allergies, you have a 30 to 40 percent chance of developing some form of allergy. If neither parent has an apparent allergy, the chance is 10 to 15 percent.

Although food allergy occurs most often in infants and children, it can appear at any age and can be caused by foods that had been previously eaten without any problems. Finally, excessive exposure to a particular food may affect the overall rate of allergy to that food, as testified to by the high prevalence of fish allergy among Scandinavians and of rice allergy among the Japanese.

Which foods are most likely to cause allergy?

Eggs, cow's milk, peanuts, soy, wheat, tree nuts, fish and shellfish are the most common foods causing allergic reactions, but almost any food has the potential to trigger an allergy. Foods most likely to cause anaphylaxis are peanuts, tree nuts and shellfish.

Keep in mind that, if you are allergic to a particular food, you might be allergic to related foods. For example, a person allergic to walnuts may also be allergic to pecans and persons allergic to shrimp may not tolerate crab and lobster. Likewise, a person allergic to peanuts may not tolerate one or two other members of the legume family such as soy, peas or certain beans. Clinical research of individuals with food allergy, however, has demonstrated that the overwhelming majority of patients with food allergy are only allergic to one or two different foods. Complete restriction of all foods in one botanical family based on an allergy to one of its members is rarely necessary. Discuss these issues with your allergist.

How do allergists determine which foods make me sick?

Some people know exactly what food causes their allergic symptoms. They eat peanuts or a peanut-containing product and immediately break out with hives. Other individuals need their allergist's help in determining the "culprit", especially when the specific food cannot be identified or when the symptoms show up many hours after ingesting an offending food.

Your allergist-immunologist will typically begin by taking a comprehensive medical history. Specifically, you'll be asked about the symptoms you experience following the food ingestion, how long after the food ingestion they occurred, how much of the offending food was ingested, how often the reaction has occurred and what type of medical treatment, if any, was required. Moreover, you will be asked about your overall diet, your family's medical history and your home environment.

These questions are necessary because your allergist wants to eliminate the possibility that another problem or allergic condition may be causing or adding to your symptoms. For example, a patient's allergy to inhalant pollen such as ragweed may be related to allergic symptoms in the mouth and throat following the ingestion of certain melons, such as watermelon, cantaloupe or honeydew.

What is allergy testing?

You may be asked to undergo some allergy testing. Your allergist-immunologist may employ skin testing, in which a diluted amount of the appropriate food extract is placed on the skin and the skin is then lightly punctured. This procedure is safe and generally not painful. Within 15 to 20 minutes, a positive reaction typically appears as a raised bump surrounded by redness, similar to a mosquito bite, and indicates the presence of allergic, or IgE, antibodies to the particular food. In some cases, an allergy (IgE) blood test can be used to provide similar information to that obtained by the skin test. The IgE blood test is generally more expensive than skin testing and the results are usually not available for one to two weeks.

If properly performed and interpreted, skin tests or IgE blood tests to foods are reliable and good screening tests for food allergy. However, it's entirely possible to test "allergic" to a food (by skin testing or IgE blood testing) and yet have no symptoms when that food is eaten. Thus, confirmation requires appropriately designed oral challenge testing with each suspected food.

How do special diets help pinpoint the problem?

With the information gained from your history, physical exam and testing, your allergist may further narrow down the suspected foods by placing you on a special diet. If your symptoms occur only occasionally, the culprit is likely a food that is eaten infrequently. Your allergist-immunologist may ask you to keep a daily food diary listing all food and medication ingested, along with your symptoms for the day. By reviewing and comparing "good days" with "bad days", you and your allergist may be able to determine which food is causing your reaction.

If only one or two foods seem to be causing allergic reactions, it may be necessary for the patient to go on a food elimination diet. The suspect food must be completely eliminated in any form for a short time – one to two weeks.

If the allergic symptoms subside during abstinence and flare up when the food is ingested again, the likelihood of identifying the problem food can be increased.

If several foods appear to cause problems and/or the diagnosis of food allergy is equivocal, your allergist may want to confirm the role of each suspected food by oral food challenge testing. Not all positive skin tests and/or IgE blood tests equal a definite food allergy. With this in mind, food challenges are the best way to determine whether or not a food allergy really exists.

During an oral food challenge test, the patient will eat or drink small portions of a suspected food in gradually increasing portions over a given period of time, usually under a physician's supervision, to see if an allergic reaction occurs.

Once my allergy is identified, how is it treated?

Once the diagnosis of food allergy is confirmed, the most effective treatment is not eating the offending food in any form. Therefore, the patient must be vigilant in checking ingredient labels of food products and learning other names of identification of the responsible food or food additive to make sure it is not present. When you eat in a restaurant, you must be particularly vigilant and you should take emergency medicines with you if you have a history of severe reactions. Waiters (and sometimes the kitchen chef) are not always aware of the exact ingredients of each item on the restaurant's menu.

All patients with food allergies must make some changes in the foods they eat. Special food-allergy cookbooks, patient support groups and registered dietitians can provide valuable assistance regarding your diet. Your allergist can direct you to these resources.

What if I accidentally eat a food I'm allergic to?

Individuals with food allergy should have a clearly defined plan of action for handling situations in which they accidentally ingest a food allergen. Have a list of symptoms and your doctor's instructions for treatment posted in a prominent place in your kitchen. Oral antihistamines can be very useful in treating many of the early symptoms of a mild allergic reaction to a food.

Persons with histories of severe reactions need to be instructed in when and how to give themselves a shot of epinephrine (adrenaline) in the event of a severe allergic reaction. This medication is available in easy-to-use injectable devices and should be carried by persons with histories of severe allergic reactions. You should be taken to the hospital or call 911 and arrange for follow-up medical care for a severe reaction. Bracelets or necklaces may be worn to quickly alert medical personnel or other caretakers about food allergies.

Will I ever be able to eat these foods again?

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 food 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 and 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.

Patients who use caution and carefully follow an allergist's advice can bring food allergy under control. Please contact your allergist-immunologist with further questions and concerns about food allergy.

For more medical information, please contact an [allergist in your area](#).

American College of Allergy, Asthma & Immunology
85 West Algonquin Road, Suite 550
Arlington Heights, IL 60005

Flu Vaccine and Egg Allergy

People with egg allergy could have a reaction when given the flu vaccine because the vaccine may contain some amount of egg protein. Fortunately, even in individuals with confirmed egg allergy, flu vaccines may be administered under certain conditions by experienced physicians. Most reactions to flu vaccines are not due to egg-allergy.

How common is egg allergy?

Food allergies are more common in children than in adults. The prevalence of egg allergy depends on age and history of allergic disease. It is estimated that egg allergy exists in 1.6 percent of children in the general population, but it is more common in children with other allergies.

Is there any way to administer the flu vaccine in a very high-risk patient who is allergic to egg?

When egg allergy is suspected, patients should be skin tested to the flu vaccine. If the test is positive, the severity of the reaction and the risk/benefits of administering the vaccine should be evaluated. If the flu vaccine is warranted, it can be administered in the office of an allergy specialist who can administer emergency treatment if necessary.

Is there an alternative flu prevention for high-risk people with egg allergy who are unable to take the flu vaccine?

Yes. A high-risk person with suspected egg allergy can use other flu medications within 24 hours of developing flu symptoms. The medication alleviates or prevents the progression of the flu.

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American College of Allergy, Asthma & Immunology
85 West Algonquin Road, Suite 550
Arlington Heights, IL 60005

Food Allergen Labeling and Consumer Protection Act (FALCPA) Of 2004

Quick Facts about the New Law

Important points regarding FALCPA are as follows:

FALCPA requires major food allergens to be listed in plain, common language in one of two ways: the word “Contains” followed by the name of the major allergen e.g. “Contains milk”, or a parenthetical statement following a scientific term e.g. “albumin (egg)”.

The law defines “major food allergens” as milk, eggs, fish, crustacean shellfish, peanuts, tree nuts, wheat, and soy.

In the case of tree nuts, fish, and shellfish, FALCPA requires the disclosure of the specific type of nut or seafood e.g. almond, walnut, cashew, tuna, salmon, shrimp, lobster.

The new law applies to major food allergens that are part of collective ingredients such as colors, flavorings, and spices.

FALCPA applies to all packaged food products labeled on or after January 1, 2006 including imported foods.

Depending on a product’s shelf life, it may take up to 18 months before all food products have easy to read allergen information. Therefore, it will not be uncommon to see the same product with different ingredient information – one may be “old stock” with pre-FALCPA ingredient information and the other may have simply language terms for scientific ingredients.

What is not covered:

FALCPA does not establish standards for the use of advisory labeling statements such as “May Contain” or “Processed in a Facility that also Processes”.

The law does not apply to highly refined oils, alcoholic beverages or food products regulated by the USDA (meat, poultry, and certain egg products).

How to Read a Label for a Milk-Free Diet

All FDA-regulated manufactured food products that contain milk as an ingredient are required by U.S. law to list the word "milk" on the product label.

Avoid foods that contain milk or any of these ingredients:

butter, butter fat, butter oil, butter acid, butter ester(s)	milk (<i>in all forms, including condensed, derivative, dry, evaporated, goat's milk and milk from other animals, low fat, malted, milkfat, nonfat, powder, protein, skimmed, solids, whole</i>)
buttermilk	milk protein hydrolysate
casein	pudding
casein hydrolysate	Recaldent [®]
caseinates (<i>in all forms</i>)	rennet casein
cheese	sour cream, sour cream solids
cottage cheese	sour milk solids
cream	tagatose
curds	whey (<i>in all forms</i>)
custard	whey protein hydrolysate
diacetyl	yogurt
ghee	
half-and-half	
lactalbumin, lactalbumin phosphate	
lactoferrin	
lactose	
lactulose	

Milk is sometimes found in the following:

artificial butter flavor	luncheon meat, hot dogs, sausages
baked goods	margarine
caramel candies	nisin
chocolate	nondairy products
lactic acid starter culture and other bacterial cultures	nougat



11781 Lee Jackson Hwy.
Suite 160
Fairfax, VA 22033-3309
Phone: 703-691-3179
Fax: 703-691-2713
www.foodallergy.org
faan@foodallergy.org

How to Read a Label for a Soy-Free Diet

All FDA-regulated manufactured food products that contain soy as an ingredient are required by U.S. law to list the word "soy" on the product label.

Avoid foods that contain soy or any of these ingredients:

edamame	soya
miso	soybean (<i>curd, granules</i>)
natto	soy protein (<i>concentrate, hydrolyzed, isolate</i>)
shoyu	soy sauce
soy (<i>soy albumin, soy cheese, soy fiber, soy flour, soy grits, soy ice cream, soy milk, soy nuts, soy sprouts, soy yogurt</i>)	tamari
	tempeh
	textured vegetable protein (TVP)
	tofu

Soy is sometimes found in the following:

Asian cuisine	vegetable gum
vegetable broth	vegetable starch

Keep the following in mind:

- The FDA exempts highly refined soybean oil from being labeled as an allergen. Studies show most allergic individuals can safely eat soy oil that has been highly refined (*not* cold pressed, expeller pressed, or extruded soybean oil).
- Most individuals allergic to soy can safely eat soy lecithin.
- Follow your doctor's advice regarding these ingredients.

How to Read a Label for a Peanut-Free Diet

All FDA-regulated manufactured food products that contain peanut as an ingredient are required by U.S. law to list the word "peanut" on the product label.

Avoid foods that contain peanuts or any of these ingredients:

artificial nuts	monkey nuts
beer nuts	nut meat
cold pressed, expeller pressed, or extruded peanut oil	nut pieces
goobers	peanut butter
ground nuts	peanut flour
mixed nuts	peanut protein hydrolysate

Peanut is sometimes found in the following:

African, Asian (<i>especially Chinese, Indian, Indonesian, Thai, and Vietnamese</i>), and Mexican dishes	egg rolls
baked goods (<i>e.g., pastries, cookies</i>)	enchilada sauce
candy (<i>including chocolate candy</i>)	marzipan
chili	mole sauce
	nougat

Keep the following in mind:

- Mandelonas are peanuts soaked in almond flavoring.
- The FDA exempts highly refined peanut oil from being labeled as an allergen. Studies show that most allergic individuals can safely eat peanut oil that has been highly refined (*not* cold pressed, expeller pressed, or extruded peanut oil). Follow your doctor's advice.
- A study showed that unlike other legumes, there is a strong possibility of cross-reaction between peanuts and lupine.
- Arachis oil is peanut oil.
- Many experts advise patients allergic to peanuts to avoid tree nuts as well.
- Sunflower seeds are often produced on equipment shared with peanuts.

How to Read a Label for a Wheat-Free Diet

All FDA-regulated manufactured food products that contain wheat as an ingredient are required by U.S. law to list the word "wheat" on the product label. The law defines any species in the genus *Triticum* as wheat.

Avoid foods that contain wheat or any of these ingredients:

bread crumbs	<i>protein, instant,</i>	spelt
bulgur	<i>pastry, self-rising, soft</i>	sprouted wheat
cereal extract	<i>wheat, steel ground,</i>	triticale
club wheat	<i>stone ground, whole</i>	vital wheat gluten
couscous	<i>wheat)</i>	wheat (<i>bran, durum,</i>
cracker meal	hydrolyzed wheat	<i>germ, gluten, grass,</i>
durum	protein	<i>malt, sprouts, starch)</i>
einkorn	Kamut®	wheat bran hydrolysate
emmer	matzoh, matzoh meal	wheat germ oil
farina	<i>(also spelled as matzo,</i>	wheat grass
flour (<i>all purpose,</i>	<i>matzah, or matza)</i>	wheat protein isolate
<i>bread, cake, durum,</i>	pasta	whole wheat berries
<i>enriched, graham,</i>	seitan	
<i>high gluten, high</i>	semolina	

Wheat is sometimes found in the following:

glucose syrup	starch (<i>gelatinized</i>	starch, <i>vegetable</i>
soy sauce	starch, <i>modified</i>	starch)
	starch, <i>modified food</i>	surimi

How to Read a Label for an Egg-Free Diet

All FDA-regulated manufactured food products that contain egg as an ingredient are required by U.S. law to list the word "egg" on the product label.

Avoid foods that contain eggs or any of these ingredients:

albumin (<i>also spelled albumen</i>)	mayonnaise
egg (<i>dried, powdered, solids,</i>	meringue (<i>meringue powder</i>)
<i>white, yolk</i>)	ovalbumin
eggnog	surimi
lysozyme	

Egg is sometimes found in the following:

baked goods	marzipan
egg substitutes	marshmallows
lecithin	nougat
macaroni	pasta

Keep the following in mind:

- Individuals with egg allergy should also avoid eggs from duck, turkey, goose, quail, etc., as these are known to be cross-reactive with chicken egg.

How to Read a Label for a Shellfish-Free Diet

All FDA-regulated manufactured food products that contain a crustacean shellfish as an ingredient are required by U.S. law to list the specific crustacean shellfish on the product label.

Avoid foods that contain shellfish or any of these ingredients:

barnacle	lobster (<i>langouste,</i>
crab	<i>langoustine, Moreton</i>
crawfish (<i>crawdad,</i>	<i>bay bugs, scampi,</i>
<i>crayfish, ecrevisse)</i>	<i>tomalley)</i>
krill	prawns
	shrimp (<i>crevette, scampi)</i>

Mollusks are not considered major allergens under food labeling laws and may not be fully disclosed on a product label.

Your doctor may advise you to avoid mollusks or these ingredients:

abalone	oysters
clams (<i>cherrystone,</i>	periwinkle
<i>geoduck, littleneck,</i>	scallops
<i>pismo, quahog)</i>	sea cucumber
cockle	sea urchin
cuttlefish	snails (<i>escargot</i>)
limpet (<i>lapas, opihi</i>)	squid (<i>calamari</i>)
mussels	whelk (<i>Turban shell</i>)
octopus	

Shellfish are sometimes found in the following:

bouillabaisse	seafood flavoring (<i>e.g.,</i>
cuttlefish ink	<i>crab or clam extract)</i>
fish stock	surimi
glucosamine	

Keep the following in mind:

- Any food served in a seafood restaurant may contain shellfish protein due to cross-contact.
- For some individuals, a reaction may occur from inhaling cooking vapors or from handling fish or shellfish.

How to Read a Label for a Tree Nut-Free Diet

All FDA-regulated manufactured food products that contain a tree nut as an ingredient are required by U.S. law to list the specific tree nut on the product label.

Avoid foods that contain nuts or any of these ingredients:

almond	natural nut extract (<i>e.g., almond,</i>
artificial nuts	<i>walnut)</i>
beechnut	nut butters (<i>e.g., cashew butter)</i>
Brazil nut	nut meal
butternut	nut meat
cashew	nut paste (<i>e.g., almond paste)</i>
chestnut	nut pieces
chinquapin	pecan
coconut	pesto
filbert/hazelnut	pili nut
gianduja (<i>a chocolate-nut</i>	pine nut (<i>also referred to as</i>
<i>mixture)</i>	<i>Indian, pignoli, pignolia,</i>
ginkgo nut	<i>pignon, piñon, and pinyon nut)</i>
hickory nut	pistachio
litchi/lichec/lychee nut	praline
macadamia nut	shea nut
marzipan/almond paste	walnut
Nangai nut	

Tree nuts are sometimes found in the following:

black walnut hull extract	nut oils (<i>e.g., walnut oil,</i>
<i>(flavoring)</i>	<i>almond oil)</i>
natural nut extract	walnut hull extract (<i>flavoring)</i>
nut distillates/alcoholic extracts	

Keep the following in mind:

- Mortadella may contain pistachios.
- There is no evidence that coconut oil and shea nut oil/butter are allergenic.
- Many experts advise patients allergic to tree nuts to avoid peanuts as well.
- Coconut, the seed of a drupaceous fruit, has typically not been restricted in the diets of people with tree nut allergy. However, in October of 2006, the FDA began identifying coconut as a tree nut. Medical literature documents a small number of allergic reactions to coconut; most occurred in people who were not allergic to other tree nuts. Ask your doctor if you need to avoid coconut.
- Talk to your doctor if you find other nuts not listed here.