

[Home](#) → [Medical Encyclopedia](#) → Food allergy

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## Food allergy

A food allergy is a type of immune response triggered by eggs, peanuts, milk, shellfish or some other specific food.

### Causes

Many people have a food intolerance. This term usually refers to heartburn, cramps, belly pain, or diarrhea that can occur after they eat foods such as:

- Corn products
- Cow's milk and dairy products (usually due to lactose intolerance)
- Wheat and other grains that contain gluten (gluten intolerance or celiac disease)

A true food allergy is much less common.

The immune system normally protects the body against harmful substances, such as bacteria and viruses. It also reacts to foreign substances called allergens. These are usually harmless, and in most people, do not cause a problem.

Shellfish



Peanuts and nuts



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In a person with a food allergy, the immune response is oversensitive. When it recognizes an allergen, the immune system launches a response. Chemicals such as histamines are released. These chemicals cause allergy symptoms.

Any food can cause an allergic reaction. The most common food allergies are to:

- Eggs (mostly in children)
- Fish (older children and adults)
- Milk (people of all ages)
- Peanuts (people of all ages)
- Shellfish such as shrimp, crab, and lobster (people of all ages)
- Soy (mostly in children)
- Tree nuts (people of all ages)
- Wheat (people of all ages)

In rare cases, food additives, such as dyes, thickeners, or preservatives can cause a food allergy or intolerance reaction.

Some people have an oral allergy. This is an allergy type syndrome that affects the mouth and tongue after they eat certain fresh fruits and vegetables:

- Melons, apples, peaches, pineapple, and other foods contain proteins that are similar to certain pollen proteins.
- The reaction most often occurs when you eat the raw form of the foods. How severe the reaction is depends on how much of the food you eat. If the food is cooked, there is no reaction.
- Unlike true food allergies, people with the oral allergy syndrome rarely develop severe allergic reactions such as anaphylaxis.

## Symptoms

Symptoms usually begin within 2 hours after eating. Sometimes, the symptoms begin a longer time after eating the food.

Key symptoms of a food allergy include hives, a hoarse voice, and wheezing.

Other symptoms that may occur include:

- Swelling (angioedema), especially of the eyelids, face, lips, and tongue
- Trouble swallowing or breathing due to swelling in the throat
- Itching of the mouth, throat, eyes, skin, or any other area
- Dizziness, lightheadedness, fainting, or feelings of impending doom
- Nasal congestion, runny nose
- Stomach cramps, diarrhea, nausea, or vomiting



Symptoms of mouth (oral) allergy syndrome:

- Itchy lips, tongue, and throat
- Swollen lips (sometimes)

Severe allergic reactions can happen immediately or within two hours after eating. This is called anaphylaxis and can be life threatening. In addition to the above symptoms, you may have low blood pressure and shortness of breath due to narrowed airways.

## Exams and Tests

Blood or skin tests are sometimes used to confirm that you have an allergy. A double-blind food challenge is one way to diagnose true food allergies. During this test, you and your health care provider will not know what you are eating. This is not commonly done.

With elimination diets, you avoid the suspected food until your symptoms disappear. Then you start eating the foods again to see if you develop a reaction. This is only done for food sensitivities or mild reactions. If a food has caused severe symptoms in the past, this should not be attempted.

In provocation (challenge) testing, you eat a small amount of the suspected food under medical supervision. This type of test may cause severe allergic reactions. Challenge testing should only be done by a trained provider. Typically, this test is done when there is a question about whether there is a food allergy or not.

Never try to cause a reaction or reintroduce a food on your own. These tests should only be done under the guidance of a provider, especially if your first reaction was severe.

## Treatment

If you suspect that you or your child has a food allergy, see an allergy specialist (allergist).

Treatment may involve any of the following:

- Avoiding the food (this is the most effective treatment).
- Desensitization, during which you eat a small amount of the food each day. This must be done under an allergist's guidance.
- Omalizumab (Xolair), an injection every 2 or 4 weeks to decrease sensitivity to food allergies.

Other treatments, including allergy shots and probiotics, have not been proven to help with food allergies. However, some people find that their oral allergy symptoms improve after taking allergy shots.

If your child has a problem with cow's milk formula, your provider may suggest trying a soy-based formula or something called an elemental formula, if it is available.

If you have symptoms on only one area of your body, for example, a hive on your chin after eating the food, you may not need any treatment. The symptoms will likely go away in a brief time. Antihistamines may relieve the discomfort. Soothing skin creams may also provide some relief.

If you develop any type of serious or whole-body reaction (even hives) after eating a food, you should learn how to use injectable or intranasal epinephrine. You should have two epinephrine devices with you at all times.

- Use the epinephrine.
- Then go to the nearest hospital or emergency facility right away, preferably by ambulance.
- If you develop severe allergy symptoms or anaphylaxis, call 911 or the local emergency number.

## Support Groups

The following groups can provide more information about food allergies:

- American Academy of Allergy Asthma and Immunology -- [www.aaaai.org/Conditions-Treatments/Allergies/Food-Allergy](http://www.aaaai.org/Conditions-Treatments/Allergies/Food-Allergy) [<https://www.aaaai.org/Conditions-Treatments/Allergies/Food-Allergy>]
- Food Allergy Research and Education (FARE) -- [www.foodallergy.org/](http://www.foodallergy.org/) [<https://www.foodallergy.org/>]
- National Institute of Allergy and Infectious Diseases -- [www.niaid.nih.gov/diseases-conditions/food-allergy](http://www.niaid.nih.gov/diseases-conditions/food-allergy) [<https://www.niaid.nih.gov/diseases-conditions/food-allergy>]

## Outlook (Prognosis)

Allergies to peanuts, tree nuts, and shellfish tend to last a lifetime.

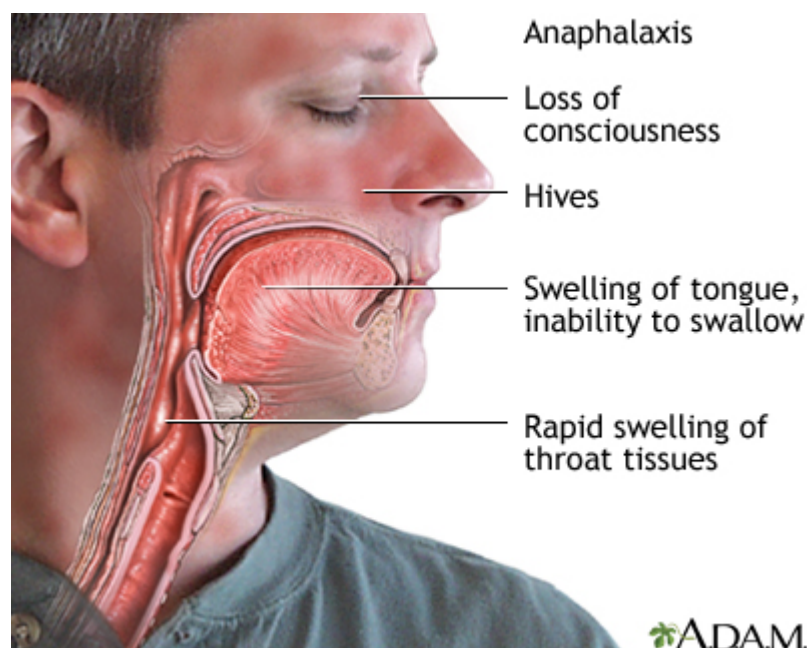
People can avoid most of the things they are sensitive to if they read food labels carefully



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Avoiding the problem foods may be easy if the food is uncommon or easy to identify. When eating away from home, ask detailed questions about the food you are served. When buying food, read package ingredients carefully.

## Possible Complications



Anaphylaxis is a severe, whole-body allergic reaction that is life threatening. People at risk for anaphylaxis should carry epinephrine with them at all times.

Although people with oral allergy syndrome may have an anaphylactic reaction in rare cases, they should ask their provider if they need to carry epinephrine.

Food allergies can trigger or worsen asthma, eczema, or other disorders.

## When to Contact a Medical Professional

Steps to take when a food allergy reaction occurs:

- Call 911 or the local emergency number if you have any serious or whole-body reactions, particularly wheezing or difficulty breathing, after eating any food.
- If your provider prescribed epinephrine for severe reactions, use it as soon as possible, even before calling 911. The sooner you use the epinephrine, the better.
- Anyone who has had an allergic reaction to a food, should be seen by an allergist.

## Prevention

There is no known way to prevent food allergies.

Avoiding peanuts in early childhood does not appear to prevent, and may even enhance, the development of peanut allergy. Providers now suggest introducing peanut-containing foods to infants, which may prevent peanut allergy. There is also evidence that introducing eggs by 12 months of age can prevent egg allergy.

Once an allergy has developed, carefully avoiding the offending food usually prevents further problems.

## Alternative Names

Allergy to food; Food allergy - peanuts; Food allergy - soy; Food allergy - fish; Food allergy - shellfish; Food allergy - eggs; Food allergy - milk

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