



Food allergy

Overview

Food allergy is an immune system reaction that occurs soon after eating a certain food. Even a tiny amount of the allergy-causing food can trigger signs and symptoms such as digestive problems, hives or swollen airways. In some people, a food allergy can cause severe symptoms or even a life-threatening reaction known as anaphylaxis.

Food allergy affects an estimated 6 to 8 percent of children under age 3 and up to 3 percent of adults. While there's no cure, some children outgrow their food allergy as they get older.

It's easy to confuse a food allergy with a much more common reaction known as food intolerance. While bothersome, food intolerance is a less serious condition that does not involve the immune system.

Symptoms

For some people, an allergic reaction to a particular food may be uncomfortable but not severe. For other people, an allergic food reaction can be frightening and even life-threatening. Food allergy symptoms usually develop within a few minutes to two hours after eating the offending food.

The most common food allergy signs and symptoms include:

- Tingling or itching in the mouth
- Hives, itching or eczema
- Swelling of the lips, face, tongue and throat or other parts of the body
- Wheezing, nasal congestion or trouble breathing
- Abdominal pain, diarrhea, nausea or vomiting
- Dizziness, lightheadedness or fainting

Anaphylaxis

In some people, a food allergy can trigger a severe allergic reaction called anaphylaxis. This can cause life-threatening signs and symptoms, including:

- Constriction and tightening of the airways

- A swollen throat or the sensation of a lump in your throat that makes it difficult to breathe
- Shock with a severe drop in blood pressure
- Rapid pulse
- Dizziness, lightheadedness or loss of consciousness

Emergency treatment is critical for anaphylaxis. Untreated, anaphylaxis can cause a coma or even death.

When to see a doctor

See a doctor or allergist if you have food allergy symptoms shortly after eating. If possible, see your doctor when the allergic reaction is occurring. This will help your doctor make a diagnosis.

Seek emergency treatment if you develop any signs or symptoms of anaphylaxis, such as:

- Constriction of airways that makes it difficult to breathe
- Shock with a severe drop in blood pressure
- Rapid pulse
- Dizziness or lightheadedness

Causes

When you have a food allergy, your immune system mistakenly identifies a specific food or a substance in food as something harmful. In response, your immune system triggers cells to release an antibody known as immunoglobulin E (IgE) to neutralize the allergy-causing food or food substance (the allergen).

The next time you eat even the smallest amount of that food, IgE antibodies sense it and signal your immune system to release a chemical called histamine, as well as other chemicals, into your bloodstream. These chemicals cause allergy symptoms.

In adults, the majority of food allergies are triggered by certain proteins in:

- Shellfish, such as shrimp, lobster and crab
- Peanuts
- Tree nuts, such as walnuts and pecans
- Fish

In children, food allergies are commonly triggered by proteins in:

- Peanuts
- Tree nuts
- Eggs

- Cow's milk
- Wheat
- Soy

Pollen-food allergy syndrome

Also known as oral allergy syndrome, pollen-food allergy syndrome affects many people who have hay fever. In this condition, certain fresh fruits and vegetables or nuts and spices can trigger an allergic reaction that causes the mouth to tingle or itch. In serious cases, the reaction results in swelling of the throat or even anaphylaxis.

Proteins in certain fruits, vegetables, nuts and spices cause the reaction because they're similar to allergy-causing proteins found in certain pollens. This is an example of cross-reactivity.

When you cook foods that trigger pollen-food allergy syndrome, your symptoms may be less severe.

This following table shows the specific fruits, vegetables, nuts and spices that can cause pollen-food allergy syndrome in people who are allergic to different pollens.

If you are allergic to:	Birch pollen	Ragweed pollen	Grasses
You may also have a reaction to:	Almond Apple Apricot Carrot Celery Cherry Hazelnut Peach Peanut Pear Plum Raw potatoes Soybean Some herbs and spices (anise, caraway, coriander, fennel, parsley)	Bananas Cucumber Melons (cantaloupe, honeydew and watermelon) Zucchini	Cucumber Kiwi Melons (cantaloupe, honeydew and watermelon) Orange Peanut Tomatoes White potato Zucchini

Exercise-induced food allergy

Eating certain foods may cause some people to feel itchy and lightheaded soon after starting to exercise. Serious cases may even involve hives or anaphylaxis. Not eating for a couple of hours before exercising and avoiding certain foods may help prevent this problem.

Food intolerance and other reactions

A food intolerance or a reaction to another substance you ate may cause the same signs and symptoms as a food allergy does — such as nausea, vomiting, cramping and diarrhea.

Depending on the type of food intolerance you have, you may be able to eat small amounts of problem foods without a reaction. By contrast, if you have a true food allergy, even a tiny amount of food may trigger an allergic reaction.

One of the tricky aspects of diagnosing food intolerance is that some people are sensitive not to the food itself but to a substance or ingredient used in the preparation of the food.

Common conditions that can cause symptoms mistaken for a food allergy include:

- **Absence of an enzyme needed to fully digest a food.** You may not have adequate amounts of some enzymes needed to digest certain foods. Insufficient quantities of the enzyme lactase, for example, reduce your ability to digest lactose, the main sugar in milk products. Lactose intolerance can cause bloating, cramping, diarrhea and excess gas.
- **Food poisoning.** Sometimes food poisoning can mimic an allergic reaction. Bacteria in spoiled tuna and other fish also can make a toxin that triggers harmful reactions.
- **Sensitivity to food additives.** Some people have digestive reactions and other symptoms after eating certain food additives. For example, sulfites used to preserve dried fruit, canned goods and wine can trigger asthma attacks in sensitive people.
- **Histamine toxicity.** Certain fish, such as tuna or mackerel, that are not refrigerated properly and that contain high amounts of bacteria may also contain high levels of histamine that trigger symptoms similar to those of food allergy. Rather than an allergic reaction, this is known as histamine toxicity or scombroid poisoning.
- **Celiac disease.** While celiac disease is sometimes referred to as a gluten allergy, it does not result in anaphylaxis. Like a food allergy, it does involve an immune system response, but it's a unique reaction that's more complex than a simple food allergy.

This chronic digestive condition is triggered by eating gluten, a protein found in bread, pasta, cookies, and many other foods containing wheat, barley or rye.

If you have celiac disease and eat foods containing gluten, an immune reaction occurs that causes damage to the surface of your small intestine, leading to an inability to absorb certain nutrients.

Risk factors

Food allergy risk factors include:

- **Family history.** You're at increased risk of food allergies if asthma, eczema, hives or allergies such as hay fever are common in your family.
- **Other allergies.** If you're already allergic to one food, you may be at increased risk of becoming allergic to another. Similarly, if you have other types of allergic reactions, such as hay fever or eczema, your risk of having a food allergy is greater.
- **Age.** Food allergies are more common in children, especially toddlers and infants. As you grow older, your digestive system matures and your body is less likely to absorb food or food components that trigger allergies.

Fortunately, children typically outgrow allergies to milk, soy, wheat and eggs. Severe allergies and allergies to nuts and shellfish are more likely to be lifelong.

- **Asthma.** Asthma and food allergy commonly occur together. When they do, both food allergy and asthma symptoms are more likely to be severe.

Factors that may increase your risk of developing an anaphylactic reaction include:

- Having a history of asthma
- Being a teenager or younger
- Delaying use of epinephrine to treat your food allergy symptoms
- Not having hives or other skin symptoms

Complications

Complications of food allergy can include:

- **Anaphylaxis.** This is a life-threatening allergic reaction.
- **Atopic dermatitis (eczema).** Food allergy may cause a skin reaction, such as eczema.

Prevention

Early introduction of peanut products has been associated with a lower risk of peanut allergy. Before introducing allergenic foods, talk with your child's doctor about the best time to offer them.

However, once food allergy has already developed, the best way to prevent an allergic reaction is to know and avoid foods that cause signs and symptoms. For some people, this is a mere inconvenience, but others find it a greater hardship. Also, some foods — when used as ingredients in certain dishes — may be well-hidden. This is especially true in restaurants and in other social settings.

If you know you have a food allergy, follow these steps:

- **Know what you're eating and drinking.** Be sure to read food labels carefully.
- **If you have already had a severe reaction,** wear a medical alert bracelet or necklace that lets others know that you have a food allergy in case you have a reaction and you're unable to communicate.
- **Talk with your doctor about prescribing emergency epinephrine.** You may need to carry an epinephrine autoinjector (Adrenaclick, EpiPen) if you're at risk of a severe allergic reaction.
- **Be careful at restaurants.** Be certain your server or chef is aware that you absolutely can't eat the food you're allergic to, and you need to be completely certain that the meal you order doesn't contain it. Also, make sure food isn't prepared on surfaces or in pans that contained any of the food you're allergic to.

Don't be reluctant to make your needs known. Restaurant staff members are usually more than happy to help when they clearly understand your request.

- **Plan meals and snacks before leaving home.** If necessary, take a cooler packed with allergen-free foods when you travel or go to an event. If you or your child can't have the cake or dessert at a party, bring an approved special treat so no one feels left out of the celebration.

If your child has a food allergy, take these precautions to ensure his or her safety:

- **Notify key people that your child has a food allergy.** Talk with child care providers, school personnel, parents of your child's friends and other adults who regularly interact with your child. Emphasize that an allergic reaction can be life-threatening and requires immediate action. Make sure that your child also knows to ask for help right away if he or she reacts to food.
- **Explain food allergy symptoms.** Teach the adults who spend time with your child how to recognize signs and symptoms of an allergic reaction.
- **Write an action plan.** Your plan should describe how to care for your child when he or she has an allergic reaction to food. Provide a copy of the plan to your child's school nurse and others who care for and supervise your child.
- **Have your child wear a medical alert bracelet or necklace.** This alert lists your child's allergy symptoms and explains how others can provide first aid in an emergency.

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