

FOOD ALLERGENS

Food Allergies

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What are food allergies?

Food allergies are the result of the immune system's reaction to certain parts of food. A *food allergen* is the part of the food, usually a protein, which is responsible for the allergic reaction. Food allergies affect almost 6% of adults and children in the United States and can be life threatening.



Food allergies are not the same as food intolerances. A *food intolerance* is when your body cannot properly digest a food. It does not involve the immune system. Symptoms typically involve the gastrointestinal tract and include bloating, gas, nausea, and diarrhea. The result is unpleasant, but not life-threatening. A common example of food intolerance is lactase deficiency. In this case, the person lacks the enzyme to digest the lactose in milk. It is called lactose intolerance. This leads to discomfort and unfavorable symptoms when they ingest lactose.

A *food sensitivity* occurs when you have a reaction to a food, but it is not an allergy or intolerance. Not much is known about why or how this occurs. The symptoms can include gastrointestinal discomfort, skin rash, joint pain, and more. Neither a sensitivity nor intolerance is life-threatening, but they can impact the quality of life.

Problem foods

More than 170 foods have been identified to cause allergic reactions in people.

However, there are nine major food allergens that the Food and Drug Administration (FDA) recognizes that account for 90% of all known food allergies in people. They are:

- Milk,
- Tree nuts,
- Peanuts,
- Fish,
- Eggs,

- Wheat,
- Crustacean shellfish,
- Soybeans, and
- Sesame.

If an individual has a reaction to a certain food, similar foods may also trigger a negative response. This is known as *cross-reactivity*. For example, an individual with a history of an allergy to shrimp may also show an allergic reaction to crab, lobster, and crayfish.

Diagnosis

A person who suspects an adverse reaction to food should consult with their health-care provider for diagnosis. When scheduling an appointment, ask what information the provider needs before or during the appointment. This may include a written log of foods eaten, symptoms experienced, and family history of allergies. Be prepared to share details of your symptoms including the severity, how often they occur, and what has helped to improve them. More in-depth testing may include a skin prick test, a blood test, and an elimination diet.

An elimination diet can help connect symptoms to specific foods but cannot determine if your reaction is an allergy or a sensitivity. An elimination diet may not be safe if you have had severe reactions in the past and should be done with a health-care professional.

Your health-care professional may also give you a *double-blind* test. In this test, the individual does not know what type of food he or she may be eating or drinking, so they cannot influence the results. This is the gold standard and must be done under provider supervision.

Symptoms

Food allergies cause a wide range of symptoms from mild skin reactions to severe and life-threatening shock. The most common symptoms of allergic

reactions to food include hives, tingling or itching of the mouth, and swelling of the lips, face, tongue, throat, and other parts of the body. Hives, one of the milder symptoms, are red, very itchy, swollen areas of the skin. They arise suddenly and leave quickly, often appearing in clusters. Tingling, itching, and swelling of the nose, lips, tongue, throat, and more can make breathing difficult.

The gastrointestinal tract may also react to food. Allergic reactions can cause vomiting, abdominal pain, and diarrhea. As the immune response to food affects other tissues of the body, an individual may develop symptoms including hives, swelling, sneezing, and a runny nose, and/or difficulty breathing.

The most severe food allergy reaction is anaphylaxis, which is a life-threatening shock throughout the body. It can occur within minutes of eating a food to which the person is allergic. Anaphylactic shock can lead to trouble breathing, a drop in blood pressure, loss of consciousness, and death, if not treated immediately.

Managing food allergies

Avoidance of specific foods that include the allergen is the best treatment method for a food allergy. Reading product labels becomes extremely important to those with food allergies. The FDA requires manufacturers to list the presence of the nine major allergens on packaged food items. They can list the major allergen in two different ways. It can appear in parentheses following the name of the ingredient, for example “flour (wheat).” Or it must be listed immediately after or next to the ingredients list in a “contains” statement, for example, “Contains: wheat, milk, peanuts.”

Individuals with food allergies should be cautious when ordering at a restaurant. Combination foods such as soups, quiches, or casseroles may contain an allergen not directly listed on the menu. Do not hesitate to ask to speak with the chef or manager to

inform them of your allergy. Ask questions about the dish and how it was prepared. Alert staff about your food allergy at the beginning. This will allow them to take the necessary precautions when serving the food.

Small amounts of the allergen in a dish can trigger a sensitive allergy. Cross-contact between utensils, surfaces, and even gloves during preparation may cause a reaction in someone.

An antihistamine can decrease the discomforts of a minor allergic reaction. You must treat more serious reactions immediately. Health-care providers might advise individuals to carry medication such as injectable epinephrine. Follow instructions provided to treat a reaction. Allergic reactions that begin with minor symptoms can progress to more serious symptoms, even hours later. Any allergic reaction has the potential to become a serious reaction. Monitor symptoms closely and treat immediately.

Food allergies are different person to person and reactions that are mild one time may be severe the next. Working with a health-care provider can help identify safe foods to maintain a varied and nutritious diet.

Revised by: Anna Cason, RDN

References

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- Mayo Clinic. (2021, December 31). Food allergy - Symptoms and causes. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/food-allergy/symptoms-causes/syc-20355095>
- Cleveland Clinic. (2023). Food Allergy vs. Intolerance: What's the Difference? Retrieved from <https://health.clevelandclinic.org/allergy-or-intolerance-how-to-tell-the-difference>

Additional Resources

American Academy of Allergy, Asthma & Immunology
555 East Wells Street, Suite 1100
Milwaukee, WI 53202
<http://www.aaaai.org>

Asthma and Allergy Foundation of America
1233 20th Street, NW, Suite 402
Washington, DC 20036
<http://www.aafa.org>

Food Allergy Research & Education
7901 Jones Branch Drive, Suite 240
McLean, VA 22102
<http://www.foodallergy.org>

U. S. Food and Drug Administration
5600 Fishers Lane
Rockville MD 20857-0001
<http://www.fda.gov>

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