CONDITION

Food allergy

Food allergy is an immune reaction to a specific food that can cause symptoms ranging from hives to anaphylaxis.

WHAT IT IS
Immune reaction to proteins in specific foods

BODY SYSTEM
Immune system, often affecting skin, breathing, and digestion

MAIN SYMPTOMS
Hives, swelling, vomiting, breathing difficulty

WHAT CAUSES IT
Immune response to normally harmless food proteins

HOW IT IS DIAGNOSED
Clinical history, targeted tests, supervised oral food challenge

MAIN TREATMENT
Trigger avoidance and emergency allergy medication

CAN IT BE CURED?
Sometimes - some childhood food allergies resolve

IS IT AN EMERGENCY?
Sometimes - when breathing or circulation is affected

LONG-TERM OUTLOOK
Often manageable; persistence depends on the food and person

Overview

A food allergy happens when the immune system mistakes a food protein for a threat. Even a small amount may cause symptoms affecting the skin, digestion, breathing, or blood circulation.

Food allergy differs from food intolerance, which does not involve the same immune response. For example, lactose intolerance causes difficulty digesting milk sugar and may lead to bloating or diarrhea, but not anaphylaxis.

Common food allergens include milk, egg, peanut, tree nuts, wheat, soy, sesame, fish, and shellfish. A person may be allergic to one or several foods.

Most reactions are mild or moderate, but some develop into anaphylaxis, which can affect

breathing or blood pressure. Knowing your triggers, carrying prescribed emergency medication, and following an allergy action plan can reduce risk.

Symptoms

Symptoms often begin within minutes of eating a food but may take a few hours. This is typical of immunoglobulin E, or IgE-mediated, allergy.

Possible symptoms include:

Anaphylaxis may involve several body systems, such as hives with breathing difficulty or repeated vomiting. It can occur without a rash.

Other immune reactions cause delayed symptoms. Food protein-induced enterocolitis syndrome, or FPIES, can cause repeated vomiting and marked tiredness several hours after a trigger. Persistent digestive symptoms or worsening eczema may also be delayed.

Symptoms alone cannot confirm food allergy. Infections, intolerance, reflux, medicines, and other conditions can cause similar problems.

- Itching, hives, flushing, or worsening eczema
- Swelling of the lips, face, tongue, or eyelids
- Tingling or itching in the mouth
- Nausea, stomach pain, vomiting, or diarrhea
- Coughing, wheezing, noisy breathing, or shortness of breath
- Throat tightness, difficulty swallowing, or a hoarse voice
- Dizziness, confusion, faintness, or collapse

Causes and risk factors

Food allergy develops when the immune system becomes sensitised to a food protein. Why this occurs is not always clear.

Risk is higher in people with eczema, particularly early or severe eczema. Asthma, hay fever, and a family history of allergic conditions are also associated with food allergy, although a specific allergy is not directly inherited.

Exercise, alcohol, illness, or certain medicines may make a reaction more severe or lower the amount needed to cause symptoms. These factors do not usually create the underlying allergy.

Food allergy can begin in childhood or adulthood, including after a food has previously been eaten without difficulty.

Diagnosis

Diagnosis begins with a detailed history, including the food, amount, timing, symptoms, treatment, and whether the reaction has happened more than once.

For suspected IgE-mediated allergy, a clinician may use a skin-prick test or blood test for food-specific IgE antibodies. These tests show sensitisation but do not prove that eating the food causes symptoms. Broad testing without a clear reason can produce misleading results and unnecessary restrictions.

A supervised oral food challenge may be used when the diagnosis is uncertain or to check whether an allergy has resolved. Increasing amounts of food are given in a medical setting where reactions can be treated. Do not attempt a food challenge at home unless an allergy specialist has specifically advised it.

Delayed allergy may be assessed through a planned period of avoidance followed by reintroduction. This requires supervision if there is a risk of serious reactions or nutritional problems.

Commercial IgG tests, hair analysis, and similar alternative tests do not reliably diagnose food allergy.

Treatment and management

Treatment centres on avoiding the trigger while keeping the diet broad and nutritious. Check ingredient labels, ask how food was prepared, and reduce cross-contact through shared utensils, surfaces, fryers, or equipment.

Labelling rules vary, and recipes can change, so check every label even if the product was previously safe. Statements such as "may contain" indicate possible cross-contact but do not measure the level of risk.

An allergy action plan explains how to recognise and treat a reaction. Family members, caregivers, schools, and workplaces may need copies and training.

Adrenaline, also called epinephrine, is the first-line treatment for anaphylaxis. If prescribed auto-injectors, keep them accessible and follow the instructions for your device and action plan. Do not leave them somewhere difficult to reach, such as in a car.

Antihistamines like cetirizine or loratadine may help itching or hives, but they do not treat breathing problems or low blood pressure and must not delay adrenaline for suspected anaphylaxis.

Allergen immunotherapy, usually oral immunotherapy, may be offered to selected people. Controlled doses are given under specialist care to increase the amount needed to trigger a reaction. It can cause reactions, is not suitable for everyone, and is not a cure. Avoidance and emergency medication may still be required.

An allergy dietitian can help replace nutrients when important foods such as milk, egg, or wheat are removed.

Complications

Anaphylaxis is the most serious complication. Previous mild reactions do not guarantee that future reactions will be mild.

Avoiding several foods without appropriate replacements can cause poor nutrition, slow growth in children, or unwanted weight loss. Anxiety about exposure may also affect eating, travel, education, work, and social life.

Poorly controlled asthma can make allergic breathing reactions harder to manage, so regular asthma care is important.

Prevention

Food allergy cannot always be prevented. Once it exists, avoiding the trigger, limiting cross-contact, reading labels, and carrying prescribed emergency medication reduce risk.

Delaying common allergenic foods in babies does not appear to prevent allergy. Introducing age-appropriate forms during the first year, once a baby is ready for solid food, may reduce the likelihood of some allergies, particularly peanut and egg allergy.

Babies with severe eczema or an existing food allergy may need an individual introduction plan. Whole nuts and thick spoonfuls of nut butter are choking hazards for young children, regardless of allergy risk.

No supplement, restrictive pregnancy diet, or home test is proven to prevent food allergy.

Living with it and what to expect

Many children eventually tolerate milk, egg, wheat, or soy, although this may take years. Peanut, tree nut, fish, and shellfish allergies are more likely to continue into adulthood but can sometimes resolve.

Repeat assessment can show whether an allergy is changing. A specialist may recommend an oral food challenge before a previously avoided food is reintroduced. Continuing unnecessary avoidance can restrict nutrition and daily life.

Practical steps include carrying emergency medication, checking restaurant procedures, packing safe food for travel, and giving schools or workplaces a current action plan. Medical identification jewellery may help if you cannot communicate during an emergency.

Food allergy can cause significant anxiety, especially after a severe reaction. An allergy team, dietitian, school, or counsellor may help if fear is limiting activities or causing avoidance of safe foods.

When to get medical help

Call emergency services immediately if a possible food reaction causes:

If you have been prescribed adrenaline for these symptoms, use it promptly according to your action plan, then call emergency services. Do not rely on an antihistamine for anaphylaxis. Medical monitoring is needed because symptoms can continue or return.

Arrange a medical assessment for repeated symptoms after a food, an increasingly restricted diet, poor growth, or persistent digestive symptoms. Seek review after any suspected allergic reaction, even if it settled without emergency treatment.

- Difficulty breathing, wheezing, persistent coughing, or noisy breathing
- Throat tightness, tongue swelling, or difficulty speaking or swallowing
- Faintness, confusion, collapse, or signs of poor circulation
- A rapid combination of symptoms affecting different body systems

Common questions

Is a food allergy the same as a food intolerance?

No. Food allergy involves the immune system and can cause hives, swelling, breathing problems, or anaphylaxis. Intolerance usually causes digestive symptoms and does not cause anaphylaxis.

Can I outgrow a food allergy?

Sometimes. Milk, egg, wheat, and soy allergies often resolve during childhood, while peanut, tree nut, fish, and shellfish allergies more often persist. Testing and a supervised food challenge may be needed before reintroduction.

Can a tiny amount cause a reaction?

Yes. The amount needed varies by person and food, so cross-contact can matter. Do not test your threshold without medical supervision.

Can I diagnose food allergy with a home test?

No. Food-specific IgG tests commonly reflect exposure rather than allergy. Diagnosis requires a clinical history and, when appropriate, targeted testing or a supervised food challenge.

Does cooking destroy food allergens?

Not always. Some people with milk or egg allergy tolerate extensively baked forms, while others do not. Peanuts, nuts, fish, and shellfish can remain allergenic after cooking. Only try a form of food considered unsafe if your specialist advises it.

Can I react by smelling or touching the food?

Most serious reactions occur after food protein is eaten, and smell alone usually does not contain protein. Touching food may cause a local skin reaction, while airborne proteins released during some cooking processes can affect sensitive people.

Sources

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