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## Food allergy and intolerance

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### Summary

- A food allergy occurs when the immune system reacts to a harmless food.
  - Food intolerance occurs when the body has a chemical reaction to eating a particular food or drink.
  - The symptoms for mild to moderate food allergy or intolerance may sometimes be similar, but food intolerance does not involve the immune system and does not cause severe allergic reactions (anaphylaxis).
  - Learn to read food labels so you can avoid foods that cause allergic reactions.
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Food allergy and food intolerance are commonly confused, as symptoms of food intolerance occasionally resemble those of food allergy. However, food intolerance does not involve the immune system and does not cause severe allergic reactions (known as anaphylaxis). Food intolerance also does not show on allergy testing.

Food intolerance can be a difficult concept to understand and is poorly understood by doctors as well. Sometimes, substances within foods can increase the frequency and severity of migraine headaches, rashes (such as hives) or the stomach upset of irritable bowel.

Professional diagnosis and confirmation of allergens is important. In Australia, about one in 10 infants, one in 20 children up to five years of age, and two in 100 adults have food allergies.

### Food allergy is increasing

Allergies in general are on the increase worldwide and food allergies have also become more common, particularly peanut allergy in preschool children. About 60 per cent of allergies appear during the first year of life. Cow's milk allergy is one of the most common in early childhood. Most children grow out of it before they start school.

### Allergy can be inherited

Children who have one family member with allergic diseases (including asthma or eczema) have a 20 to 40 per cent higher risk of developing allergy. If there are two or more family members with allergic diseases, the risk increases to 50 to 80 per cent.

Most of the time, children with food allergy do not have parents with food allergy. However, if a family has one child with food allergy, their brothers and sisters are at a slightly higher risk of having food allergy themselves, although that risk is still relatively low.

### Allergy is an immune response

Allergies are an overreaction of the body's immune system to a protein. These proteins may be from foods, pollens, house dust, animal hair or moulds. They are called allergens. The word allergy means that the immune system has responded to a harmless substance as if it were toxic.

### Food intolerance is a chemical reaction

Food intolerance is a chemical reaction that some people have after eating or drinking some foods; it is not an immune response. Food intolerance has been associated with asthma, chronic fatigue syndrome and irritable bowel syndrome (IBS).

### Symptoms of food allergy and intolerance

It can be difficult to tell the difference between the symptoms of food allergy and food intolerance. Usually, symptoms caused by food allergy develop very soon after consuming the food. While symptoms caused by food intolerance can be immediate, they may also take 12 to 24 hours to develop.

Food intolerance reactions are usually related to the amount of the food consumed. They may not occur until a

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certain amount (threshold level) of the food is eaten, but this amount varies for each person.

The symptoms of food allergy and intolerance can also be caused by other conditions, so it is important to see your doctor for a medical diagnosis.

### **Symptoms of food intolerance**

Symptoms of food intolerance can include:

- nervousness
- tremor
- sweating
- palpitations
- rapid breathing
- headache, migraine
- diarrhoea
- burning sensations on the skin
- tightness across the face and chest
- breathing problems – asthma-like symptoms
- allergy-like reactions.

### **Symptoms of food allergy**

The symptoms of mild to moderate food allergy include:

- itching, burning and swelling around the mouth
- swelling of face or eyes
- runny nose
- skin rash (eczema)
- hives (urticaria – skin becomes red and raised)
- diarrhoea, abdominal cramps
- breathing difficulties, including wheezing and asthma
- vomiting, nausea.

### **Body parts affected by food allergy**

Various sites on the body can be affected by an allergic reaction to food, including:

- eyes – itching, watering
- nose – stuffiness, sneezing, running
- mouth – itching, swelling
- throat – swelling
- digestive system – stomach pains, vomiting, diarrhoea
- skin – rashes, such as hives (urticaria) or atopic dermatitis
- lungs – wheeze, cough, asthma, more common in children than adults
- central nervous system – headache, irritability, fatigue, convulsions.

### **Severe allergic reactions to foods can be life threatening**

Anaphylaxis is a severe allergic reaction that needs urgent medical attention. Foods (such as peanuts, tree nuts, seafood, wheat, milk and eggs), insect bites and stings and some medicines are the most common allergens that cause anaphylaxis.

Within minutes of exposure to the allergen, the person can have potentially life-threatening symptoms, which may include:

- difficult or noisy breathing
- swelling of the tongue
- swelling or tightness in the throat
- difficulty talking
- hoarse voice
- wheeze
- persistent cough
- persistent dizziness or collapse
- becoming pale and floppy (in young children).

Several factors can influence the severity of anaphylaxis, including exercise, heat, alcohol, the amount of food eaten, and how food is prepared and consumed.

To prevent severe injury or death, a person with anaphylaxis requires an injection of adrenaline (epinephrine).

People who are considered by their doctor to be at risk of anaphylaxis are prescribed an autoinjector (such as an EpiPen®) which contains a single fixed dose of adrenaline. They are designed to be used by non-medical people and should be administered into the outer mid-thigh muscle in the event of a severe allergic reaction.

Adrenaline autoinjectors are also available directly from a pharmacy.

### **Causes of food allergy**

Peanuts, tree nuts, eggs, milk, wheat, sesame, fish, shellfish and soy cause about 90 per cent of food allergic reactions. Peanut allergy is one of the most common allergies in older children as only approximately one in four children will outgrow peanut allergy.

### **Causes of food intolerance**

The foods that tend to cause intolerance reactions in sensitive people include:

- dairy products, including milk, cheese and yoghurt
- chocolate
- eggs, particularly egg white
- flavour enhancers such as MSG (monosodium glutamate)
- food additives
- strawberries, citrus fruits and tomatoes
- wine, particularly red wine
- histamine and other amines in some foods.

### **Finding the allergen**

When symptoms appear within a few minutes of eating the particular food, it makes pinpointing the allergen an easy task. However, if the cause is unknown, diagnostic tests may be needed, such as:

- keeping a food and symptoms diary to check for patterns
- removing all suspect foods for two weeks, then reintroducing them one at a time to test for reactions (except in cases of anaphylaxis). This must only be done under medical supervision
- skin prick tests using food extracts
- allergy blood tests.

### **Treating food allergy or intolerance**

The easiest way to treat a food allergy or intolerance is to eliminate the offending food/s from the diet. Sometimes, the body can tolerate the food if it is avoided for a time, then reintroduced in small doses, particularly for food intolerances.

Before you eliminate or reintroduce foods, seek advice from a specialist doctor and dietitian.

### **Preventing food allergy in children**

Allergy prevention in children is an active area of research. Findings to date indicate that:

- prenatal – there is no conclusive evidence that avoiding allergens in pregnancy will help prevent allergies in your child
- postnatal – exclusive breastfeeding during the first four to six months appears to protect against the development of allergies in early childhood.
- introducing solid foods (including those considered to be allergenic) around six months (but not before four months) is recommended, preferably while continuing to breastfeed
- breastfeeding – avoidance of a food (including foods considered to be highly allergenic) by a woman while breastfeeding is not recommended
- soymilk formula – studies have shown that using soymilk formula does not prevent the development of allergies in children
- partially hydrolysed cow's milk-based formula (commonly referred to as HA formula) is not recommended to prevent the development of food allergy.

### **Severe food allergy in children**

Allergic reactions, including anaphylaxis, are common, although deaths from anaphylaxis are rare. Most schools and childcare services across Australia are required to have an anaphylaxis management policy in place.

Banning particular foods is not recommended as it can create a sense of complacency and is difficult to monitor and enforce. A better approach is to educate staff, students and the community about the risks associated with anaphylaxis and put strategies in place to minimise exposure to known allergens.

### **Tips to avoid foods that may cause allergies**

To avoid foods to which you have an allergy, learn the terms used to describe these foods on food labels, for example:

- milk protein – milk, non-fat milk solids, cheese, yoghurt, caseinates, whey, lactose
- lactose – milk, lactose
- egg – eggs, egg albumen, egg yolk, egg lecithin
- gluten – wheat, barley, rye, triticale, wheat bran, malt, oats, cornflour, oat bran
- soy – soybeans, hydrolysed vegetable protein, soy protein isolate, soy lecithin
- **salicylates** – strawberries, tomatoes.

The Better Health Channel has produced a range of recipes for people with special dietary requirements.

### **Food laws and labels**

Since December 2002, the Australia New Zealand Food Standards Code requires food labels to declare certain foods and certain substances in foods, including:

- cereals that contain gluten and gluten products
- crustacea and their products
- eggs and egg products
- fish and fish products
- milk and milk products
- nuts and sesame seeds and their products
- peanuts and soybeans and their products
- added sulphites in concentrations of 10 mg/kg or more
- royal jelly (presented as food or present in food), bee pollen and propolis.

These foods must be declared if they are:

- used as an ingredient
- part of a compound ingredient
- a food additive or part of a food additive
- a processing aid or part of a processing aid.

### Where to get help

- Your doctor
- **Allergy & Anaphylaxis Australia**. Tel 1300 728 000
- **Dietitians Association of Australia**. Tel. 1800 812 942
- **Nutrition Australia**. Tel. (03) 9650 5165

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