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## Allergies explained

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### Summary

- An allergy occurs when the body overreacts to an allergen or 'trigger' that is typically harmless to most people.
  - Examples of allergies include allergic rhinitis (hay fever), asthma, eczema, hives and food allergy.
  - The symptoms and signs of allergies are common to other medical conditions, so always see your doctor for professional diagnosis and treatment.
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An allergy occurs when the body overreacts to an allergen or 'trigger' that is typically harmless to most people. Examples of allergies include hay fever, asthma, eczema, hives and food allergy. Estimates suggest that about one person in four is allergic to something and roughly half of all allergy sufferers are children. The symptoms of an allergy range from mild to severe. The most severe type of allergic reaction is anaphylaxis, which may cause death without prompt medical attention. In most cases, effective treatments are available to manage or treat allergy symptoms.

### Symptoms of allergies

Symptoms depend on the allergy, but may include:

- swelling of lips, face, eyes
- sneezing
- runny nose
- red, watery and itchy eyes
- wheeze or persistent cough
- breathing problems
- swelling tongue and tightness of throat
- headache
- skin rash
- stomach pains
- vomiting and diarrhoea

Do not self-diagnose. The symptoms and signs of allergies are common to many other medical conditions. It is important to see your doctor for professional diagnosis and treatment.

### Common allergens

A substance in the environment that can cause an allergic reaction in susceptible people is called an 'allergen'. There are many different allergens, but they all share one thing in common – protein. Some allergens don't contain protein to begin with, but bind with protein once inside the body to provoke the allergic reaction.

Common allergens include:

- food – such as crustaceans, eggs, fish, milk, peanuts, tree nuts (for example, almonds, cashews, pecans and walnuts), sesame and soy products
  - plants – pollen from grasses and plants
  - medicines – including prescription medications (such as penicillin), over-the-counter medicines (such as aspirin) and herbal preparations
  - insects – such as dust mites and the venom from bees, ticks, ants and wasps
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- moulds – such as mushroom and mould spores
- animal dander – such as the fur and skin flakes from domestic pets such as cats and dogs
- chemicals – including industrial and household chemicals and chemical products such as latex rubber.

### The immune system reaction

Allergy is the result of mistaken identity. An allergen enters the body and is wrongly identified by the immune system as a dangerous substance. In response, the immune system makes antibodies to attack the allergen. These are specific antibodies of the IgE (immunoglobulin E) class.

When an allergen is found, IgE antibodies trigger a cascade of immune system reactions, including the release of chemicals known as mast cell chemicals. These are substances that the body normally uses to destroy micro-organisms. The most common of these is histamine. In small amounts, histamine causes itching and reddening of the local area. In large amounts, the nearby blood vessels become dilated and the area swells with accumulated fluid.

The immune system's tendency to overreact to a harmless substance is thought to be genetic. The term 'atopy' describes this genetic tendency. Doctors describe a person who has an allergy as being 'atopic' – such people usually have raised levels of IgE in their blood.

### Where to get help

- Your doctor
- **NURSE-ON-CALL** Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- **Clinical immunology/allergy specialist**
- **Allergy & Anaphylaxis Australia**. Tel. 1300 728 000
- Dermatologist
- **Nutrition Australia (Victorian Division)** Tel. (03) 8341 5800
- **Dietitians Association of Australia**. Tel. 1800 812 942
- **The Asthma Foundation of Victoria (Asthma Australia)**. Tel. 1800 645 130 or (03) 9326 7088

**This page has been produced in consultation with and approved by:**

Australasian Society of Clinical Immunology and Allergy (ASCIA)

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