# What is Allergy?
# Frequently Asked Questions

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For patient or carer support contact Allergy & Anaphylaxis Australia or Allergy New Zealand.

Allergies are increasing in Australia and New Zealand and affect around one in five people. There are many causes of allergy, and symptoms vary from mild to severe. Allergy can also be associated with asthma.

## Q 1: What is allergy?

Allergy occurs when a person's immune system reacts to substances in the environment that are harmless to most people. These substances are known as allergens and are found in dust mites, pets, pollen, insects, ticks, moulds, foods, and drugs (medications).

Atopy is the genetic tendency to develop allergic diseases. When atopic people are exposed to allergens, they can develop an immune reaction that leads to allergic inflammation (redness and swelling). This can cause symptoms in the:

- Nose and/or eyes, resulting in allergic rhinitis (hay fever) and/or conjunctivitis.
- Skin resulting in eczema, or hives (urticaria).
- Lungs resulting in asthma.

## Q 2: What happens when you have an allergic reaction?

When a person who is allergic to a particular allergen comes into contact with it, an allergic reaction occurs:

- When the allergen (such as pollen) enters the body, it triggers an antibody response.
- The antibodies attach themselves to mast cells, which respond by releasing histamine.
- When the release of histamine is due to an allergen, the resulting inflammation is irritating and uncomfortable.

Similar reactions can occur to some chemicals and food additives. However, if they do not involve the immune system, they are known as adverse reactions, not allergy.

## Q 3: Which areas of the body may be affected?

People experience different symptoms, depending on the allergen and where it enters the body. Allergic reactions can involve many parts of the body at the same time.

### Nose, eyes, sinuses and throat

When allergens are breathed in, the release of histamine causes the lining of the nose to produce more mucus and become swollen and inflamed. It causes the nose to run and itch, and sneezing may occur. Eyes may start to water, and people may get a sore throat.

### Lungs and chest

Asthma can be triggered during an allergic reaction. When an allergen is breathed in, the airways become swollen which makes breathing difficult.

**Stomach and bowel**
Foods that commonly cause allergy include peanuts, seafood, dairy products, and eggs. Cow's milk allergy in infants (babies) may occur and can cause eczema, asthma, colic, and stomach upset.

Some people cannot digest lactose (milk sugar) which can cause stomach upsets. This is known as lactose intolerance and should not be confused with allergy.

**Skin**
Skin problems that can triggered by allergy include atopic dermatitis (eczema) and urticaria (hives).

## Q 4: How is a severe allergic reaction (anaphylaxis) treated?

Most allergic reactions are mild to moderate, and do not cause major problems. However, a small number of people may experience a severe allergic reaction called anaphylaxis, which requires immediate treatment with adrenaline (epinephrine) which is a life-saving medication. Allergens which may cause anaphylaxis include foods, insects, and drugs. People with a severe allergy should have an ASCIA Action Plan for Anaphylaxis.

## Q 5: What effective prevention and treatment options are available?

Allergen avoidance or minimisation relies on identifying the cause of the allergy and taking steps to reduce exposure to the allergen. For example, reducing dust mite in the home may help reduce symptoms in people who are allergic to mites.

Treatments for allergies include:

- **Antihistamine tablets, syrups, intranasal sprays, and eye drops (non-sedating)** help to reduce symptoms (sneezing, itchy and irritated eyes), however, are not as effective for reducing nasal symptoms such as a blocked or runny nose. Antihistamine eye drops can be helpful in controlling watery eyes due to allergies. One benefit of antihistamines is that they can be used to treat symptoms when they are present and do not need to be taken when symptoms are not present.
- **Intranasal corticosteroid sprays (INCS)** are effective for treatment of moderate to severe allergic rhinitis when used regularly. How INCS are used is also very important so make sure to read the label and ask your pharmacist or doctor for advice.
- **Intranasal corticosteroid spray (INCS) containing antihistamine** are available and offer the combined advantages of both medications.
- **Medicated eye drops** can be helpful in some cases, ask your pharmacist or doctor for advice.
- **Adrenaline** is used for the immediate treatment of anaphylaxis. Adrenaline is usually given using an adrenaline injector that can be given without medical training.
- **Saline (salt water) treatments** such as nasal sprays or rinses are safe and effective, helping to clear allergens from the nose and relieve symptoms.
- **Allergen immunotherapy** (also known as desensitisation) is a long-term treatment which changes the immune system's response to allergens. It involves the administration of regular, gradually increasing amounts of allergen extracts, by injections or by sublingual tablets, sprays or drops.

If you have an allergy, see your pharmacist or doctor. You may be referred to a clinical immunology/allergy specialist for further assessment and advice.



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