

What is Allergy?

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 potentially life threatening. Allergy is one of the major factors associated with the cause and persistence of asthma.

The definition of 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 some 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. 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.

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.
- When the pollen comes into contact with the antibodies, the mast cells respond by releasing histamine.
- When the release of histamine is due to an allergen, the resulting inflammation (redness and swelling) 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.

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 violent 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 lining of the passages in the lungs swells and makes breathing difficult.

Stomach and bowel

Foods that commonly cause allergy include peanuts, seafood, dairy products and eggs. Cow's milk allergy in infants may occur and can cause eczema, asthma, colic and stomach upset. Some people cannot digest lactose (milk sugar). Lactose intolerance causes stomach upsets, but should not be confused with allergy.

Skin

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

Life threatening allergic reactions require immediate treatment

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 life-saving medication. Allergens which may cause anaphylaxis include foods, insects and medications. People with a severe allergy should have an ASCIA Action Plan for Anaphylaxis.

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.

Medications used to treat allergies include:

- **Antihistamines** block histamine release from mast cells, reducing symptoms. Non-sedating antihistamine tablets are available from pharmacies without a prescription. Antihistamine nasal and eye sprays can also be used.
- **Intranasal corticosteroid nasal sprays (INCS)** are effective for treatment of moderate to severe allergic rhinitis when used correctly. A prescription may be required for stronger dose INCS. Ask your pharmacist or doctor for advice.
- **Combination therapies** (INCS and antihistamine) are used for treatment of moderate to severe allergic rhinitis, and offer the advantages of both medications.
- **Medicated eye drops** can be helpful in some cases, ask your doctor or pharmacist for advice.
- **Adrenaline** (epinephrine) is used for first aid emergency treatment of life threatening severe allergic reactions (anaphylaxis). Adrenaline is usually given using an adrenaline autoinjector that can be given without medical training.

Non-medicated treatments such as saline sprays are used for treating allergic rhinitis and sinusitis.

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. In some cases you will be referred to a clinical immunology/allergy specialist for further assessment and advice.

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