
Anaphylaxis

Summary

- Anaphylaxis is the most severe allergic reaction and is a medical emergency.
 - An injection of adrenaline is needed to treat the allergic reaction.
 - The most important management strategy for anaphylaxis is to avoid all known triggers and to always carry your adrenaline auto-injector (AAI).
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Anaphylaxis, or anaphylactic shock, is the most serious allergic reaction and can cause death without prompt medical attention. Within minutes of exposure to the allergen, or 'trigger', the person can have potentially life-threatening symptoms such as breathing difficulties.

Treatment includes first aid, an injection of adrenaline and ongoing management. Always dial triple zero (000) to call an ambulance in a medical emergency.

The best way to avoid anaphylaxis is to follow an anaphylaxis management plan and carry an adrenaline auto-injector device (AAI). Your doctor will refer you to an allergy specialist, who will draw up a management plan that is particular to your needs and circumstances.

Anaphylaxis is a severe allergic reaction

Allergy occurs when the immune system overreacts to a substance or 'trigger' in the person's environment that is typically harmless. This is called an allergen. The immune system responds by making an antibody to attack the allergen and this starts off a range of immune system reactions.

Allergies can be mild, moderate or severe. Anaphylaxis is the most severe allergic reaction and affects about one person in 200.

Symptoms of anaphylaxis

Anaphylaxis can occur within minutes – the average is around 20 minutes after exposure to the allergen. Symptoms may be mild at first, but tend to get worse rapidly.

Typical symptoms and signs may include:

- Facial swelling, including swelling of the lips and eyelids
- Swollen tongue
- Swollen throat
- Reddening of skin across the body
- Hives (red welts) appearing across the skin
- Abdominal discomfort or pain
- Vomiting
- Strained or noisy breathing
- Inability to talk or hoarseness
- Wheezing or coughing

- Drop in blood pressure
- Unconsciousness
- Young children may get floppy and pale.

Triggers for anaphylaxis

Some of the more common triggers (allergens) that can lead to anaphylaxis include:

- **Food** – any food can be a trigger. However, the most common trigger foods that account for about 90 per cent of allergic reactions include crustaceans (such as lobsters, prawns and crabs), eggs, fish, milk, peanuts, tree nuts (such as almonds, cashews, pecans and walnuts) and sesame or soy products
- **Insect venom** – including bees, jumper ants, ticks, fire ants and wasps
- **Medicines** – from some prescription drugs (such as penicillin), over-the-counter medicines (such as aspirin) and herbal preparations
- **Uncommon triggers** – include exercise, anaesthesia or latex
- **Unknown triggers** – sometimes, despite exhaustive investigations, a person's trigger or triggers cannot be identified.

Risk factors for anaphylaxis

Certain people appear to be at increased risk of anaphylaxis for reasons that are not yet clear. Known risk factors include a medical history of certain allergies such as:

- **Asthma** – a narrowing of the small air passages (bronchi) of the lungs that causes wheezing, coughing and breathing problems
- **Eczema** – a type of inflammatory skin condition.

Diagnosis of anaphylaxis

Tests used in the diagnosis of anaphylaxis may include:

- Medical history
- Physical examination of symptoms and signs
- Detailed questioning about what led up to the event
- Blood tests to check for the presence of particular antibodies
- Skin prick tests to confirm or rule out suspected triggers
- Tests to exclude other medical conditions that can mimic certain symptoms of anaphylaxis – for example, unconsciousness is also a symptom of epilepsy.

Some 'allergy tests' are not proven

Some 'tests' that claim to diagnose allergies are not scientifically or medically proven. The test may have no value and is not proven to provide accurate information on your anaphylaxis trigger or triggers. This can be dangerous if it means you don't get the medical attention you require.

Some alternative testing methods that may lead to inappropriate or inadequate treatment include:

- Alcat testing
- Allergen elimination techniques
- Cytotoxic food testing
- Kinesiology
- Hair analysis
- IgG food antibody testing
- Iridology

- Pulse testing
- Reflexology
- Rinkel's intradermal testing
- Vega testing.

Always seek advice from your doctor before consulting a complementary or alternative therapist about your allergies.

Treatment for anaphylaxis

There is no cure for anaphylaxis. Treatment options include:

- **First aid** – always dial triple zero (000) to call an ambulance in a medical emergency.
- **Adrenaline injection** – an intramuscular injection of adrenaline (usually given into the muscle of the outer thigh) is used to treat the allergic reaction.
- **Adrenaline auto-injector (AAI)** – once you are diagnosed, it is important to always carry a dose of injectable adrenaline. In Australia, the two brands of adrenaline auto-injector devices are EpiPen and AnaPen. They are available on prescription from your doctor, and are designed to deliver a measured dose of adrenaline. Injectable adrenaline comes in two dose sizes: one for larger children and adults, and one for children who weigh between 10kg and 20kg. You will be given detailed instructions on how to use your AAI. It is important to understand that the administration is very different for adults or children.
- **Referral** – your doctor will refer you to an allergy specialist, who will draw up an anaphylaxis management plan that suits your needs and circumstances. You will need regular follow-up visits with an allergy specialist for the rest of your life.

Prevention of anaphylaxis

The best way to avoid anaphylaxis is to follow your anaphylaxis management plan. Common suggestions include:

- **Avoid triggers** – the most important management strategy is to keep away from all known triggers.
- **Learn about and identify hidden triggers** – trigger education with an accredited dietitian can help you to identify allergens that may be hidden inside processed and packaged foods.
- **Tell your friends and workmates** – it is important that the first aiders at your workplace (or other organisations where you regularly visit, as a volunteer or club member for example) know where your AAI is stored and how to use it in case you need help.
- **Wear a medical alert bracelet** – if you lose consciousness, your medical alert bracelet will advise ambulance officers or hospital staff of your condition.
- **Support groups** – you may find it helpful to meet up with others who are dealing with the same medical issues. Contact Anaphylaxis Australia for more information.

If your child has anaphylaxis

Suggestions for parents include:

- Educate your child to the best of your ability, taking their age and level of understanding into account. If your child has food triggers, stress the importance of never sharing food with their friends.
- Advise the childcare service, kindergarten, school and other carers of your child's condition.
- Give each organisation a current copy of your child's anaphylaxis management plan and a recent photograph of your child.
- Make sure you provide each organisation with a current AAI.
- Work with each organisation to implement a plan to manage anaphylaxis and an anaphylactic episode. This includes working to increase awareness in the school and the broader community. For example, request that the childcare service, kindergarten or school contact other parents to advise them of your child's needs – for example, ask them not to provide packed lunches that include your child's trigger foods.

- Take an anaphylaxis first aid course. Contact Red Cross Australia or St John Ambulance for more information.

Long-term outlook for anaphylaxis

Most children grow out of allergies. However, Australian research suggests that, in any given year, about one person in 12 who has had anaphylaxis will have it again, with about one in 50 needing hospital treatment.

Accidentally swallowing nuts or nut products is a significant cause of recurring anaphylaxis in Australia, so food education is vital. It is very important to carry an AAI and to use it when required.

First aid for anaphylaxis

First aid courses are available through non-profit organisations such as St John Ambulance and the Australian Red Cross. You can also download first aid treatment for anaphylaxis to your mobile phone, for a small cost. Contact the Australian Red Cross for more information.

Where to get help

- Your doctor
- In an emergency, always call triple zero (000)
- The emergency department of your nearest hospital
- National Relay Emergency Call Service Tel. 106 – for text-based information over the phone
- St John Ambulance Australia (Victoria) Tel. 1300 360 455
- Australian Red Cross Tel. 1300 367 428
- Anaphylaxis Australia Tel. 1300 728 000
- Dietitians Association of Australia Tel. 1800 812 942
- Nutrition Australia (Victorian Division) Tel. (03) 8341 5800

Things to remember

- Anaphylaxis is the most severe allergic reaction and is a medical emergency.
- An injection of adrenaline is needed to treat the allergic reaction.
- The most important management strategy for anaphylaxis is to avoid all known triggers and to always carry your adrenaline auto-injector (AAI).

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St John Ambulance

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