

Severe allergic reaction (anaphylaxis) in children

Children's Allergy Service

Information for Patients

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What is anaphylaxis?

Anaphylaxis (pronounced "ana-fil-ax-is") is a severe and often sudden allergic reaction. It can happen when someone with allergies is exposed to something they are allergic to (known as an allergen). Reactions usually begin within minutes and progress quickly, but occasionally can happen up to 2 to 3 hours later.

It is potentially life-threatening and always needs an immediate emergency response.

An allergic reaction happens because the body's immune system reacts to a substance that it wrongly thinks is a threat. In the skin this causes an itchy rash, swelling and redness. In the stomach and gut it can cause cramping pains and feeling or being sick (nausea or vomiting).

Anaphylaxis happens when this allergic reaction spills over into the bloodstream, causing more widespread symptoms that affect the whole body, including the airway and breathing.

Most allergic reactions do not result in anaphylaxis, even in someone who has had anaphylaxis before. Very severe, life-threatening allergic reactions are very rare, but are also unpredictable. **This is why all anaphylaxis reactions must be taken seriously and receive immediate treatment.**

What causes anaphylaxis?

Food is the most common cause of anaphylaxis in children. In the UK most severe reactions are caused by cow's milk, peanut, tree nuts and fish/seafood. Sometimes anaphylaxis can have other triggers such as medicines, latex and insect (bee, wasp) stings.

It is unusual for someone with food allergies to have anaphylaxis without actually eating the food. Contact with an allergen may trigger a local skin reaction, but is very unlikely to trigger anaphylaxis. If the allergen gets on to some food, which the allergic person eats, this can trigger an allergic reaction.

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What are the symptoms of anaphylaxis?

Any one or more of the following symptoms may be present:

Airway:

- Persistent cough
- Vocal changes (hoarse voice)
- Difficulty in swallowing
- Swollen tongue

Breathing:

- Difficult or noisy breathing
- Wheezing (like an asthma attack)

Consciousness:

- Feeling lightheaded or faint
- Clammy skin
- Confusion
- Unresponsive/ unconscious (due to a drop in blood pressure)

Other less severe symptoms (such as an itchy, raised rash (hives), feeling or being sick, swelling of the lip/ face, or stomach pain) may be present (see page 1). Sometimes this does not happen and only severe symptoms (above) are seen.

In children, even those without asthma, the most common symptoms of anaphylaxis involves the airway/ breathing, similar to an asthma attack. The throat can tighten, causing swallowing difficulties and a high-pitched noise (stridor) on breathing in.

How is anaphylaxis treated?

The first line treatment for anaphylaxis is adrenaline (epinephrine), given by an injection into the outer muscle of the mid-thigh (upper leg).

Adrenaline given this way is safe and starts to work within minutes, reducing swelling, relieving wheeze and improving blood pressure. Other “allergy” medicines (such as antihistamines) can help with mild symptoms, but are **not** effective for severe reactions (anaphylaxis).

Outside hospital, adrenaline can be safely given by anyone into the mid-thigh muscle using an adrenaline auto-injector (AAI). Current brands available in the UK are EpiPen®, Emerade®, Jext®.

If in doubt, give adrenaline. Giving adrenaline can be lifesaving, and should be administered at the first signs of anaphylaxis.

Always dial 999 and request an ambulance whenever anaphylaxis has occurred, even if there has been a good response to an adrenaline injection.

If you have been prescribed an AAI, then please carry it around at all times.

What is a biphasic reaction?

If you have an anaphylactic reaction, you will need an observation period in hospital after you have recovered. This is because a secondary reaction could possibly happen (known as biphasic anaphylaxis). Most biphasic reactions happen within hours but can be more delayed.

Contact details

Children's Allergy Service: 0116 258 6694

Further information

- www.sparepensinschools.uk
- www.allergyuk.org
- www.anaphylaxis.org.uk
- www.jext.co.uk
- www.epipen.co.uk
- www.emerade-bausch.co.uk

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