

## Anaphylaxis

Anaphylaxis is a severe allergic reaction – the extreme end of the allergic spectrum. The whole body is affected, often within minutes of exposure to the allergen but sometimes after hours of increasing allergic symptoms. Causes include food, insect stings, latex and drugs. However on rare occasions there may be no obvious cause.

### What symptoms suggest anaphylaxis?

- Generalised flushing of the skin
- Nettle rash (hives) anywhere on the body
- Sense of impending doom
- Swelling of throat and mouth
- Difficulty in swallowing or speaking
- Changes in heart rate
- Severe asthma / tightness of the chest
- Abdominal pain, nausea and vomiting
- Sudden feeling of weakness (drop in blood pressure)
- Collapse and unconsciousness
- Dizziness
- Poor coordination
- Diarrhoea
- Uterine contractions

Someone suffering an anaphylactic reaction would not necessarily experience all of these symptoms. Involvement of at least two different systems including the airways or fall in blood pressure are usually needed to make the diagnosis.

### Mild allergy symptoms?

Some people find that the allergy symptoms they experience are always mild. For example, there may be a tingling or itching in the mouth, or a rash over a small area. This is not serious in itself, and may be treated with oral antihistamines. The person should be watched carefully in case more serious symptoms are developing.

### Severe allergy symptoms

If there is marked difficulty in breathing or swallowing, and/or a sudden weakness or floppiness, regard these as serious symptoms requiring immediate treatment. If in doubt assume that it is a serious reaction.

### What are the most common causes of anaphylaxis?

Common causes include foods such as peanuts, tree nuts (e.g. almonds, walnuts, cashews, brazils), sesame, fish, shellfish, dairy products and eggs.

Non-food causes include wasp or bee stings, natural latex (rubber), penicillin or any other drug or injection. In some people, exercise can trigger a severe reaction – either on its own or in combination with other factors such as food or drugs (e.g. aspirin).

### What is the treatment for a severe reaction?

Pre-loaded injection kits containing adrenaline (also known as epinephrine) are available on prescription for those believed to be at risk. These are available in two strengths – adult and junior. The injection must be given, as directed, as soon as a serious reaction is suspected and an ambulance must be called. If a second injection is available, this can be given in 5–10 minutes, if there is no improvement or if symptoms are getting worse.

**\*If you are prescribed adrenaline, have it available at all times.**

### Why does anaphylaxis occur?

Any allergic reaction, including anaphylactic shock, occurs because the body's immune system reacts inappropriately to a substance that it wrongly thinks is a threat.

### What exactly is going on?

An allergic reaction is caused by the sudden release of chemical substances, including histamine, from cells in the blood and tissues where they are stored. The release is triggered by the reaction between the allergic antibody (IgE) and the substance (allergen) causing the reaction. This mechanism is so sensitive that tiny

quantities of the allergen can cause a reaction. The released chemicals act on blood vessels to cause leakage of fluid from the circulation leading to swelling in the mouth and anywhere on the skin. There may be a fall in blood pressure and, in people with asthma; an acute attack of coughing and wheezing may be provoked.

### **Why does adrenaline work?**

During anaphylaxis, blood vessels leak, bronchial tissues swell and blood pressure drops, causing choking and collapse. Adrenaline (epinephrine) acts quickly to constrict blood vessels, relax smooth muscles in the lungs to improve breathing, stimulate the heartbeat and help to stop swelling around the face and lips (angioedema).

Adrenaline is a well-understood drug and completely safe in the vast majority of cases. However, if you have heart difficulties, discuss these with your doctor.

### **What injectors are available?**

Two injectors are available. Both contain pre-measured doses, and the needles are concealed until used. They are only available on prescription. Both companies sell "trainer" pens for teaching purposes.

#### **Injectors currently available**

- Epipen

Meda Pharmaceuticals Ltd, Skyway House, Parsonage Road, Takeley, Bishop's Stortford, CM22 6PU  
Tel: 0845 460 0000. [www.epipen.co.uk](http://www.epipen.co.uk)

- Jext

ALK-Abelló Ltd, 1 Manor Park, Manor Farm Road, Reading, Berkshire, RG2 0NA  
Tel: 0118 903 7940 [www.jext.co.uk](http://www.jext.co.uk)

### **How do I know if I am at risk from anaphylaxis?**

If you have suffered a severe allergic reaction in the past – whatever the cause – then any future reaction may also be severe. Asthma is a risk factor for a severe reaction, if you have an allergy.

In 1994 the Department of Health advised that everyone with suspected peanut or nut allergy should be referred to a specialist, even when the symptoms are mild, because future symptoms may be more

severe. This advice might also be extended to seeds, shellfish, fish, latex, drugs and insect stings.

### **What will an allergy specialist do?**

There is no perfect way to measure a person's potential for a severe allergic reaction, but, in making a diagnosis, an allergy consultant can do several things that will provide clues. Most importantly, the specialist will take a detailed history of previous reactions and other allergic conditions you may have. Valuable information can also be provided by means of skin prick tests and blood test for specific IgE.

### **How can I avoid anaphylaxis?**

1. Become well-informed by getting hold of reliable information about allergies. The Anaphylaxis Campaign can provide this.

2. Minimise the risks by taking great care and being vigilant.

3. If you are food allergic:

- Look closely at ingredient lists. Remember that recipes sometimes change.
- Be assertive about asking for detailed information from manufacturers and supermarket staff.
- Be particularly careful in restaurants, where proprietors are under no obligation to list ingredients. Question staff very directly. It may be necessary to speak with a senior manager. You may wish to telephone the restaurant in advance to ensure your allergy is taken seriously.
- Be open about your allergy problem with your family, friends and colleagues. It's easy to avoid a Thai, Chinese or Indian restaurant if everyone knows you are allergic to peanuts.

### **What should I do if I think I am having a reaction?**

Follow a pre-written management plan. Have it written out for family and friends, and if a child is the person at risk, make sure teachers and friends' parents have a copy.

Be alert to symptoms and take them seriously. Reach for the adrenaline if you think you are beginning to show signs of a severe reaction. Do not wait until you are sure.

Even if adrenaline is administered, you will still need to get to hospital as soon as possible. Someone must call an ambulance.

**The Anaphylaxis Campaign is a national charity that can provide further information and support.**

**Contact:**

The Anaphylaxis Campaign  
PO Box 275  
Farnborough,  
Hampshire GU14 6SX  
Helpline: 01252 542029  
[www.anaphylaxis.org.uk](http://www.anaphylaxis.org.uk)

**Key points**

- Is there a marked difficulty in breathing and swallowing?
- Is there sudden weakness or floppiness?
- Is there a steady deterioration?
- Any of these are signs of a serious reaction.

Administer adrenaline (epinephrine) without delay if you believe the symptoms are serious, or becoming serious.

**Dial 999 or get someone else to do it.**