



Western Health
and Social Care Trust

**Policy for the
Treatment of
Anaphylaxis in
Adults and
Children**

June 2008

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Table of Contents

Policy Statement.....	4
Introduction.....	4
Management.....	5
Following Reaction.....	6
Further Care.....	7
Bibliography.....	8
Appendix 1.....	9
Appendix 2.....	10
Appendix 3.....	11
What is the Treatment for a Severe Reaction.....	13

Policy Statement

This policy details Trust requirements in relation to the treatment of anaphylactic reactions.

The contents of the policy reflect guidance contained within Resuscitation Council (UK) document “[The Emergency Medical Treatment of Anaphylactic Reactions](#) – guidelines for healthcare providers. “ - www.resus.org.uk

It is the responsibility of relevant staff to familiarise themselves with, and adhere to, the contents of this policy.

Introduction

Anaphylactic reaction or anaphylaxis is the terms used to describe hypersensitivity reactions mediated typically by immunoglobulin E (IgE). An anaphylactic reaction can be defined as an **extreme allergic reaction**, which could result in death, however they can vary in severity, and progress may be slow or rapid. Anaphylactic reactions may [follow exposure to a variety of agents](#) to include medicines and x ray contrast media (administered via any route), blood products, food and via direct skin contact with eg. Latex or insect stings. Clinical signs of an anaphylactic reaction include tachycardia, angiodema, hypotension, stridor /wheeze, bronchospasm, dyspnoea, pallor or flushing, rhinitis/conjunctivitis, collapse, abdominal cramps/ vomiting or diarrhea and skin reactions erythema, flushing or urticaria. A diagnosis of anaphylactic reaction is likely if a patient is exposed to a trigger (allergen) develops a sudden illness (usually within minutes of exposure) with rapidly progressing skin changes and life threatening airway and/or breathing and/or circulation problems. The reaction is usually unexpected.

3.1 Anaphylaxis is likely when all of the following 3 criteria are met:

- Sudden onset and rapid progression of symptoms
- Life-threatening Airway and/or Breathing and/or Circulation problems
- Skin and/or mucosal changes (flushing, urticaria, angioedema)

The following supports the diagnosis:

- Exposure to a known allergen for the patient

Remember:

- Skin or mucosal changes alone are not a sign of an anaphylactic reaction
- Skin and mucosal changes can be subtle or absent in up to 20% of reactions (some patients can have only a decrease in blood pressure, i.e., a Circulation problem)
- There can also be gastrointestinal symptoms (e.g. vomiting, abdominal pain, incontinence)

UK Resuscitation Council 2008

Management

The management of an anaphylactic reaction should follow current UK Resuscitation council guidelines. (2008) In addition:

1. In the event of an anaphylactic reaction medical assistance/ ambulance – (as appropriate should be called immediately and the patient should not be left unattended if possible.
2. All clinical staff should be able to recognize an anaphylactic reaction and initiate treatment according to their expected duties and acquired skills.
3. The suspected causative agent should be stopped immediately or removed as appropriate if possible. Patients should not be encouraged to vomit.
4. Adrenaline 1: 1000 as recommended for anaphylaxis to be administered IM should be available on all cardiac arrest/ crash trolleys with appropriate 1 ml syringes, blue needles and the current anaphylaxis algorithm.

5. In the community staff who are administering medication must ensure that they have appropriate adrenaline, syringes and needles if required in an anaphylactic reaction. (whilst awaiting an emergency ambulance to take the patient to hospital). Clinical staff should be familiar with the equipment and drugs they have available , check them regularly and must attend anaphylaxis training regularly.
6. A rational ABCDE approach must be followed and life threatening problems treated as they are recognized.

Cardiopulmonary resuscitation should be commenced and the arrest team called if necessary.

Following Reaction

Obtain blood samples to assist with retrospective diagnosis (measurement of mast cell tryptase) - a 4ml clotted blood (yellow top) and 4ml EDTA (purple top) taken after 1, 6 and 24 hours post reaction. Serial urine samples should also be taken first void, 5 and 24 hours post.

The patient should be observed for at least 6 hours in a clinical area with facilities for treating life threatening ABC problems. A senior clinician should then review them and a decision made about the need for further treatment or a longer period of observation.

If the medicine or substance to which the patient developed an anaphylactic reaction can be identified, document the name of the medicine or substance, the date and nature of the reaction on the inpatient prescription chart (Kardex) and in the patient's notes. Adverse drug reactions that include an anaphylactic reaction should be reported to the Medicines and Healthcare Products Regulatory Agency. (MRHRA) using the yellow card scheme (www.mrha.gov.uk)

In addition, provide the patient with a written record of the date of the reaction and the name of the medication or substance causing the reaction. The patient's GP should be informed if they have experienced an anaphylactic reaction. GP letters and hospital notes must clearly document the suspected trigger agent.

Ideally the patient should be referred to an allergy specialist and have a treatment plan based on their individual risk.

Provide advice to patient about anaphylaxis. Inform the patient of the need to wear a medical alert bracelet. These can be purchased from community pharmacies or non-profit charity www.medicalert.org.uk.

Further Care

- Before discharge all patients must be reviewed by a senior clinician
- Patients should be given advice regarding avoidance of suspected trigger agent/s.
- Given clear instructions to return to hospital if symptoms return.
- Considered for antihistamines and oral steroids for up to 3 days.
- Considered for an adrenaline auto injector if they have increased risk of an idiopathic reaction or are at increased risk of reaction e.g. To triggers such as venom stings or food induced reactions.
- Patients given an adrenaline auto injector must be formally instructed in its use and told to keep it up to date and to get a prescription for further supplies from their GP.
- Patients should be advised to obtain a medic-alert bracelet (non-profit charity www.medicalert.org.uk).
- When a patient, who normally carries an adrenaline auto injector is admitted to hospital, where appropriate, they should be allowed to keep their auto injector with them.

Bibliography

Resuscitation Council (UK) 2008:

Association of Anaesthetists (2003): Guidelines for the Management of Anaphylaxis

BMA & RPSGB (March 2005): British National Formulary

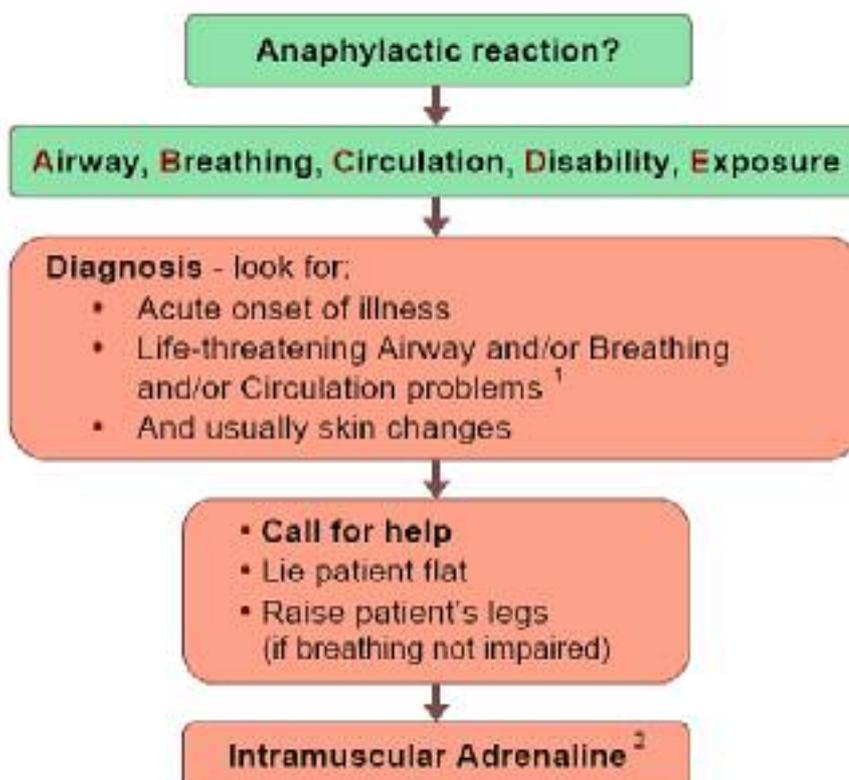
Resuscitation Council (UK) 2008:

Appendix 1



Resuscitation Council (UK)

Anaphylactic reactions – Initial treatment



¹ Life-threatening problems:

Airway: swelling, hoarseness, stridor

Breathing: rapid breathing, wheeze, fatigue, cyanosis, SpO₂ < 92%, confusion

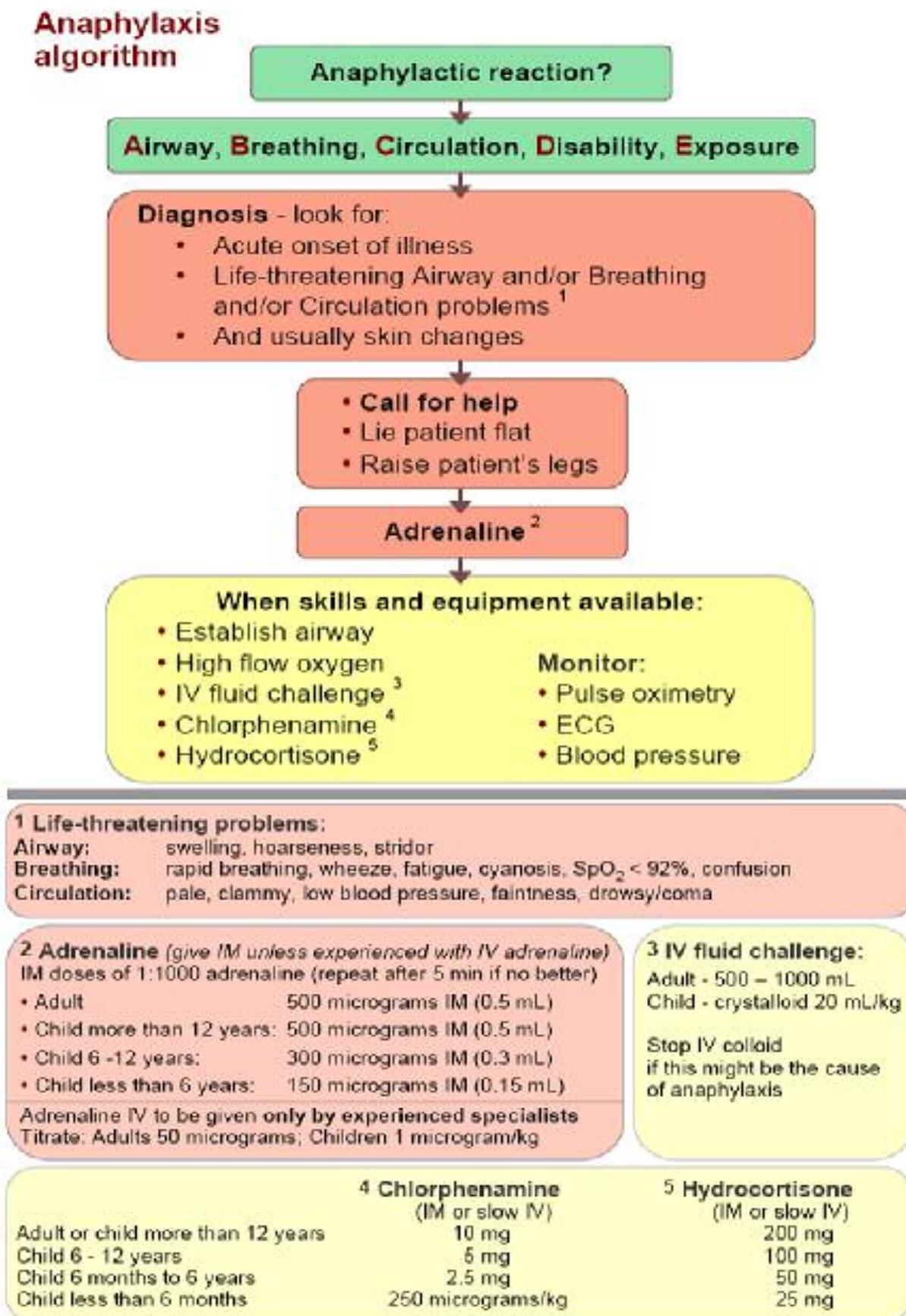
Circulation: pale, clammy, low blood pressure, faintness, drowsy/coma

² Intramuscular Adrenaline

IM doses of 1:1000 adrenaline (repeat after 5 min if no better)

- Adult 500 micrograms IM (0.5 mL)
- Child more than 12 years: 500 micrograms IM (0.5 mL)
- Child 6 -12 years: 300 micrograms IM (0.3 mL)
- Child less than 6 years: 150 micrograms IM (0.15 mL)

Appendix 2



Appendix 3

Advice for adults following an anaphylactic reaction (anaphylaxis)

The reaction you experienced has been diagnosed by your doctor as an anaphylactic reaction (also known as anaphylaxis).

What is an anaphylactic reaction?

An anaphylactic reaction is a severe allergic reaction. The whole body is affected, often within minutes of exposure to the allergen but sometimes after hours. Causes of anaphylaxis can be nuts and other foods, insect stings, latex and medicines, but on rare occasions there may be no obvious trigger.

What are the symptoms?

- 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
- alterations in heart rate
- severe asthma
- abdominal pain, nausea and vomiting
- sudden feeling of weakness (drop in blood pressure)
- collapse and unconsciousness

You may not necessarily experience all of these symptoms.

Why does an anaphylactic reaction occur?

Any allergic reaction, including the most extreme form, anaphylactic shock, occurs because the body's immune system reacts inappropriately in response to the presence of a substance that it wrongly perceives as a threat.

What exactly is going on?

An anaphylactic 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**) with the substance (**allergen**) causing the anaphylactic reaction. This mechanism is so sensitive that minute quantities of the allergen can cause a reaction. The released chemicals act on blood vessels to cause the swelling in the mouth and anywhere on the skin. There is a fall in blood pressure and, in asthmatics, the effect is mainly on the lungs.

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 localised rash - nothing more. This is not serious in itself, and may be treated with oral antihistamines. However, in some cases the allergy may become worse over

time. It is wise in all cases to make an appointment with the doctor and seek a referral to a specialist allergy clinic.

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

What is the treatment for a severe reaction?

You have been given a pre-loaded adrenaline (epinephrine) injection kit Epipen[®]. These are available in two strengths - adult and junior. Please see figure 1 for instructions on administration of the Epipen[®].

Figure 1



The injection must be given, as directed, as soon as a serious reaction is suspected and an ambulance must be called. If there is no improvement in 5-10 minutes, give a second injection.

Check the expiry date on your Epipen[®] regularly to ensure it is within date. When it expires ask your GP to prescribe as necessary.

What are the most common causes of an anaphylactic reaction?

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) or medicines.

How can I avoid problems?

- Wear a MedicAlert talisman (details: **020 7833 3034** or www.medicalert.org.uk).
- Be alert to all symptoms and take them seriously. Reach for the adrenaline (epinephrine) if you think you are beginning to show signs of a severe reaction. Do not wait until you are sure. Even if adrenaline

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July 2008*

(epinephrine) is administered, you will still need to get to hospital as soon as possible. Someone must call an ambulance.

- Make sure others in your family know how to administer the adrenaline (epinephrine) kit - and when. Do not be frightened of adrenaline (epinephrine). It is a well-understood drug. The dose you will administer has very few side effects, which will pass quickly in any case. However, if you have heart difficulties, discuss these with your doctor.
- Develop a crisis plan for how to handle an emergency. Get your GP or hospital doctor to help. Make sure everyone knows where the adrenaline (epinephrine) is when you go out, or when you are at home.

What should I do if I think I am having a serious reaction?

- Is there a marked difficulty in breathing or 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.