

INFORMATION ABOUT ANAPHYLAXIS & USE OF ADRENALINE AUTO-INJECTORS

INTRODUCTION

An allergy is the inappropriate and harmful response of the body's immune system to normally harmless substances. It can follow exposure to medicines, (e.g. penicillin), insect stings (e.g. wasps, bees), food (e.g. peanuts, other nuts, eggs), pollens, animal hair and latex.

This pack has been compiled to provide information and advice about how to recognise and treat allergic reactions. It will focus on anaphylaxis (a severe reaction), as this can be a severe life threatening condition.

WHAT HAPPENS IN THE BODY?

The allergic reaction involves a large amount of HISTAMINE and other chemicals being released into the body. This can cause one or more of the following changes to occur in the body:

- Itchiness and rashes.
- Redness (flushing).
- Swelling of various parts of the body. This happens when blood vessels open up (dilate) allowing fluids in the body to move from the circulation to the tissues. If severe they may feel faint.
- The breathing tubes (airways) go into spasm and produce lots of mucous, which causes coughing, wheezing and difficult, noisy breathing.
- Blood vessels in the bowel may dilate and leak causing nausea, vomiting, stomach cramps and diarrhoea.

The reaction can be mild, perhaps causing an itchy but harmless rash, or it can be severe and LIFE THREATENING. This severe reaction is called ANAPHYLAXIS. A child can have a severe reaction despite having only one of the above symptoms. The symptoms may occur singly or together.

A mild reaction may develop into a severe reaction so observe the child carefully, give antihistamine medication but keep Epipen® or Anapen® ready.

REACTIONS

HOW TO RECOGNISE AN ANAPHYLACTIC REACTION

- ◆ YOU WILL BE ABLE TO RECOGNISE A SEVERE REACTION BY ASSESSING THE CHILD'S
 - ◆ **AIRWAY** (MOUTH AND THROAT),
 - ◆ **BREATHING**
 - ◆ **CIRCULATION** (THEIR COLOUR AND WHETHER THEY FEEL FAINT).

- ◆ **REMEMBER A B C**

MILD AND MODERATE REACTIONS CAN DEVELOP INTO SEVERE

- ◆ IF A REACTION DOES NOT APPEAR SEVERE MAKE SURE YOU HAVE THE EPIPEN AVAILABLE AND OBSERVE THE CHILD VERY CAREFULLY UNTIL THE REACTION HAS SUBSIDED.

MILD AND MODERATE ALLERGIC REACTIONS

1. **Nettle rash and hives** (this is called Urticaria)

This is not life threatening, providing there are not problems with the throat and breathing. The rash may be in one place or all over the body. It is very itchy and may last up to 24 hours.

Treatment:

- ◆ Apply cold compress or calamine lotion.
- ◆ Give anti-histamine medication (syrup is best) at the correct dose for the child e.g.
 - Zirtek / Cetirizine**
 - Clarytin / Loratadine**
 - Xyzal / Levocetirizine**
 - Piriton / Chlorphenamine**

POTENTIAL SEVERE ALLERGIC REACTIONS

2. **Swelling** (this is called angio-edema)

These are very large hives in tissues below the skin or swollen areas that can merge into one another. Unlike the nettle rash it is **tender** rather than itchy. The skin may be a normal colour the swelling can occur in any part of the body but may involve the eyelids, mouth, throat, and voice box. The swelling comes on suddenly and can last 24 to 72 hours. The reaction may start with the child experiencing an odd sensation ("feeling funny").

Treatment:

- ◆ Give anti-histamine medication (syrup is best)
 - ◆ ~ Zirtek/Cetirizine
 - ◆ ~ Xyzal/Levocetirizine
 - ◆ ~ Clarityn/Loratadine
 - ◆ ~ Piriton/Chlorphenamine

SWELLING OF THE SKIN IS NOT DANGEROUS BUT IF IT INVOLVES THE THROAT (THE AIRWAY) IT MAY BE LIFE THREATENING AND MUST BE TREATED WITH THE EPIPEN®/ANAPEN®.

- ◆ If there is swelling of the mouth and/or throat and there is difficult or noisy breathing (the child can not talk in sentences) USE THE EPIPEN® /ANAPEN®.
- ◆ Some Doctors prescribe inhaled Adrenaline which can be effective in reducing throat symptoms but is not going to help in the treatment of anaphylaxis

SEVERE REACTIONS

**ANY OF THESE SYMPTOMS ARE A MEDICAL EMERGENCY
USE THE EPIPEN®/ANAPEN®**

AIRWAY BLOCKED, look out for: hoarse voice, wheezing, swelling of lips, itching sensation in throat or tongue.

BREATHING CHANGED, listen for: breathlessness, noisy breathing, unable to speak in sentences.

CIRCULATION NOT GOOD, look out for: pale, clammy skin, blue around lips and mouth. At this stage it is best to lay the child down.

Treatment:

- ◆ DO NOT LEAVE THE CHILD ALONE
- ◆ USE THE EPIPEN® / ANAPEN® IMMEDIATELY in the outer thigh muscle
- ◆ DIAL 999 FOR THE AMBULANCE

The person making the telephone call should state:

1. Where to find the child
2. That the child is having an anaphylactic or severe reaction
3. The name and the age of the child

- ◆ After the EpiPen®. or Anapen®. has been given remember to check the following again:

AIRWAY, BREATHING, CIRCULATION

- ◆ If showing signs of wheeze or if the child is tight chested, able to sit up and is still responsive, give 10 puffs of Salbutamol (Ventolin) via spacer if available.
- ◆ If showing signs of collapse the child must remain lying down until stable (if possible with their legs raised) to increase the flow of blood to the heart.

- ◆ If collapsed and showing signs of wanting to vomit turn head to one side to protect the airway. If they do vomit turn on to their side into recovery position and clear the airway.
- ◆ Give basic life support if you have completed a First Aid Course or follow the instructions of the Ambulance Co-ordinator.
- ◆ If there is no improvement in the child's condition within 5 to 10 minutes of giving the first Epipen®/Anapen® a second injection can be given.
- ◆ Once professional help has arrived ask a colleague to notify the child's parents.
- ◆ Go with the child to hospital by ambulance taking the used injector(s) with you. (NB take care of the exposed needle)
- ◆ In the ambulance oxygen should be given.

AVOIDING A SEVERE REACTION

- Be careful to avoid the food or other substance, which can cause an allergic reaction.
- Check food labels for the food that can cause an allergic reaction. It may be hidden in the list of ingredients.
- Be careful on school trips, at parties and in restaurants. Question people about ingredients. If in doubt speak to the person who prepared the food.
- Wear a MedicAlert® bracelet or similar, these are internationally recognised.
- When travelling abroad make sure you know the translation of the name of the allergen and the phone number to call the emergency services.
- Be aware of all the symptoms of a severe allergic reaction (anaphylaxis).
- The earlier adrenaline is used the better. Remember to seek medical help immediately - call an ambulance.
- Make sure you are comfortable with your auto-injector and know how to use it. It is advisable that family and friends know how and when to give adrenaline.

EPIPEN[®]/ANAPEN[®]

HOW DOES THE EPIPEN[®]/ANAPEN[®] WORK?

- It works directly on the heart and lungs to reverse the effects of a severe allergic reaction.

WHAT HAPPENS IF THE EPIPEN[®]/ANAPEN[®] IS USED ACCIDENTALLY?

- It is likely to cause a fast heart rate, some sweating and may cause the person to look pale. There should be no serious effects but you should seek medical help.
- Be careful not to inject the Epipen[®]/Anapen[®] into fingers or thumb by holding it incorrectly. If this happens you must get medical help.
- It is advisable to regularly study the instructions supplied with the Epipen[®]/Anapen[®] to ensure that you are prepared for emergencies.

STORAGE OF THE EPIPEN[®]/ANAPEN[®] AND EXPIRY DATE

- Adrenaline is stable at room temperature until the marked expiry date.
- Avoid exposing the Epipen[®]/Anapen[®] to extreme hot or cold as this can damage the adrenaline.
- Always replace the Epipen[®]/Anapen[®] with a fresh unit prior to the expiry date.

HOW TO USE THE EPIPEN®

Never put thumb, fingers or hand over the black tip

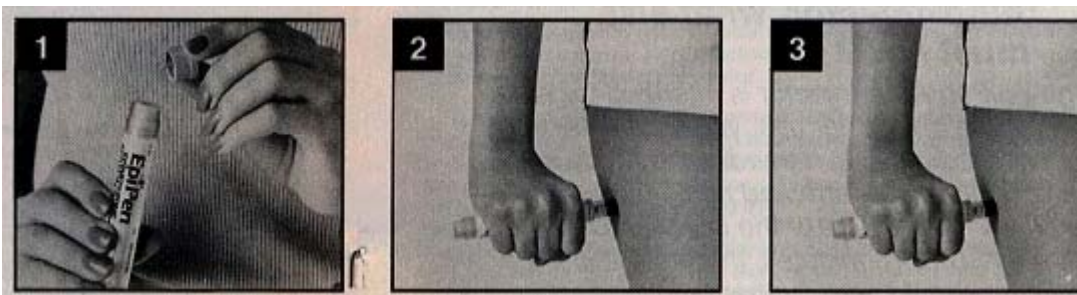
Do NOT remove the grey cap unless ready to use.

Use EpiPen® directly onto the skin, if necessary it may be used through clothing.

Do not shake the EpiPen®.

1. Grasp the EpiPen® forming a fist around the barrel (black tip down).
2. Activate the EpiPen® by removing the grey safety cap.
3. Hold the black tip near the outer thigh.
4. Jab firmly into outer thigh with the EpiPen® at right angles to the thigh.
5. Hold in place against the thigh for 10 seconds. This releases a spring-activated plunger, pushing the concealed needle into the thigh and expelling a dose of adrenaline. **You will hear the device fire when the EpiPen® releases the drug into the thigh.**
6. Remove EpiPen® carefully and massage area for several seconds.
7. Check black tip = if needle is exposed you will have received a dose.
= if not repeat actions 3 to 6.
8. Note most of the liquid stays in the EpiPen® and cannot be reused.
9. Bend the needle back against a hard surface.
10. Carefully put the used EpiPen® (needle first) back into the carrying tube (without the grey activation cap).
11. Immediately call an ambulance - the child will need medical attention.
12. Take the EpiPen® with you to the doctor who will dispose of it for you.

REMEMBER not all reactions need adrenaline treatment, but if you are in doubt or the situation is worsening, the earlier you give adrenaline the more likely recovery becomes.



THE ANAPEN®

The Anapen® works in a similar way to the EpiPen®, but contains a firing button. The doses are the same so for all basic information follow the guidelines already given.

The Anapen® is given differently to the EpiPen® see instructions below on:
How To Use The Anapen®

HOW TO USE THE ANAPEN®

Never put thumb, fingers or hand over the needle end of the Anapen®
Do NOT remove the black needle cap or the black safety cap from the red firing button unless ready to use.

Use Anapen® directly onto the skin, if necessary it may be used through clothing.
Do not shake the Anapen®.

1. Remove the black needle cap.
2. Remove the black safety cap from the red firing button.
3. Hold Anapen® against the outer thigh and press the firing button.
4. Hold the Anapen® in position for 10 seconds. This allows the full dose of adrenaline to be injected.
5. Remove the Anapen® and gently massage the injected site for several seconds.
6. After use replace the black needle cap.
7. Immediately call an ambulance - the child will need medical attention.
8. Take the Anapen® with you to the doctor who will dispose of it for you.

Reference: Manufacturer's recommendations: Celltech Pharmaceutical Ltd

REMEMBER not all reactions need adrenaline treatment, but if you are in doubt or the situation is worsening, the earlier you give adrenaline the more likely recovery becomes.

How to administer the Anapen®



1. Remove the black needle cap



2. Remove the black safety cap from the red firing button



3. Hold Anapen® against the outer thigh and press the firing button



4. Hold Anapen® in position for 10 seconds



Controlled delivery when they need it most

**WHAT TO DO IN THE EVENT OF AN ANAPHYLACTIC OR SEVERE
ALLERGIC REACTION**

DO NOT LEAVE CHILD
ALONE

GIVE EPIPEN[®] or
ANAPEN[®]

DIAL 999

REASSURE CHILD

ASSESS

AIRWAY BLOCKED
Hoarse, wheezy,
Swelling and itchy lips
and eyelids

BREATHING CHANGES
Breathlessness
Noisy, unable
to talk in sentences

CIRCULATION NOT GOOD
Pale, clammy
Blue around mouth,
Severe abdominal pain.

ASSESS

IF NO IMPROVEMENT AFTER 5 –10
MINUTES, GIVE ANOTHER
EPIPEN[®] or ANAPEN[®]

AWAIT MEDICAL HELP
ACCOMPANY CHILD TO
HOSPITAL

THE USE OF ADRENALINE IN SCHOOLS

If your child has been diagnosed at risk of anaphylaxis you should organise a meeting with the school nurse as soon as possible. You will need to discuss:

- ◆ **Training of school staff.** Staff should be aware of avoiding foods that may cause a reaction. They need to recognise an allergic reaction if it occurs, and know how to treat it. It is recommended that at least four key members of staff should be trained to administer adrenaline. School nurses in Southampton will have received appropriate training to be able to support school staff.

- ◆ **Where to keep the medication.** Two adrenaline auto-injectors should be kept in a clearly marked container that is kept safely in a central, accessible place from which it can be collected at short notice e.g. school office. The auto-injectors in their container must accompany the child on school outings.

- ◆ **Written instructions.** You should provide written instructions for the school to include:
 - Details of known allergies
 - Specific details about previous reactions
 - Written authority from a Doctor and the Parents for school staff to administer treatment
 - Contact numbers

