Anaphylaxis – Part 1

- What is Anaphylaxis?
- Common Triggers

What is Anaphylaxis?

It is a life threatening allergic reaction

- The most severe form of allergic reaction
- Potentially life threatening
- Must be treated as a medical emergency
- Requires immediate treatment
- A generalised allergic reaction
- Often involves more than one body system
- Most dangerous reactions involve the respiratory system (breathing) and/or cardiovascular system (heart and blood pressure)

Diagnosis

- Is based on history and physical findings
- Recognising the onset which can occur from minutes to hours after exposure to a substance

People with diagnosed allergies should:

- Avoid all trigger agents
- Have a readily accessible anaphylaxis action plan
- Have a medical alert device
**Common triggers**

Substances, (triggers/allergens) that cause allergies can vary from child to child, or person to person.

**Food** such as peanuts, tree nuts (e.g. hazelnuts, cashews, almonds) eggs, cow’s milk, wheat, soybean etc.) Fish and shellfish cause 90% of allergic reactions, however, any food can trigger anaphylaxis. Even trace amounts can cause a life-threatening reaction. Some extremely sensitive individuals can react to even the smell of a food (e.g. fish).

**Insect venom** - Most common; bee, wasp and jack jumper ant stings. Ticks, green ants and fire ants in susceptible individuals.

**Medication & drugs** - Over the counter and prescribed, herbal or ‘alternative’ medicines.

**Latex and exercise induced anaphylaxis** - less common and occasionally the trigger cannot be identified despite extensive investigation.

**Animals and plants** – Poisonous plants, pollen, animal scratches, animal dander, mould and mildew.

**Other possible triggers** *(commonly found in child care centres and classrooms)*
- Scented markers, chalk dust, perfumes, paint, carpets, fumes.

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**Anaphylaxis – Part 2**

- First Aid
- Duty of Care
- Reporting
- Debriefing

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**Anaphylaxis and first aid**

- Symptoms have a rapid/fast onset
- Start first aid management as soon after the onset of symptoms as possible
- First aid is usually administered by individuals who are not health professionals
- With first aid it is important to take control of the situation and provide an appropriate response quickly

1. **Provide safety:**
   - Start the basic first aid protocols
   - Ensure safety for the child/casualty and those providing medical assistance

2. **Signs and symptoms:**

Look for the signs and symptoms to recognise or diagnose anaphylaxis:
- Signs of envenomation
- Difficult/noisy breathing
- Wheeze or persistent cough
- Swelling of face and tongue
- Tightness in throat and/or difficulty swallowing
- Difficulty talking and/or hoarse voice
- Loss of consciousness or collapse
- Pale and floppy (young children)
- Abdominal pain and vomiting
- Hives, welts, body redness and or rash
- Shock, anxiety, distress, sense of doom

3. First aid:
- Prevent further exposure. Confirm anaphylaxis
- Find action plan and implement, providing this does not delay emergency treatment & seeking medical assistance
- Lay the person flat or sitting if having difficulty breathing
- Administer adrenaline via an auto injector
- Call an ambulance (Dial Triple Zero 000)

4. Whilst waiting for the ambulance:
- Monitor constantly
- Check breathing and circulation
- Administer oxygen or asthma medication if required
- Give further adrenaline if no response after 5 minutes
- If unconscious, place on side
- If breathing stops commence CPR, seek urgent medical aid

Arrange medical aid

IN AN EMERGENCY DIAL 000 AND ASK FOR THE AMBULANCE

When dialing an emergency call it is important to remember:

1. STAY FOCUSED - Answer the prompted questions
2. STAY RELEVANT - Stick to the facts, not what you think
3. STAY ON THE LINE - Until you speak to the ambulance operator

Please note: When using a mobile phone – You can dial 112 as well as 000.
First aider responsibilities

Duty of care
In an emergency, all first aiders and staff have a duty of care to:

- Use common sense
- Don’t act beyond capabilities
- Do as much as they can to take appropriate action
- Be prepared to administer adrenaline without delay

Reporting the incident

The report must:

- Be completed as soon as possible after the incident
- Contain relevant information such as: the date, time, casualty’s full name, any injuries, treatment and medication given
- Be accurate
- Be kept private and confidential

After the incident

Following a first aid incident, you should also consider:

- What else could you have done?
- What you would do differently next time?
- Consider a debriefing about the incident, it would be beneficial

Recognise symptoms and be prepared to administer adrenaline according to the individuals Anaphylaxis Action Plan.

Research shows that fatalities more often occur away from home and are associated with either not using, or a delay in the use of adrenaline.
Debriefing

- To build stronger and better plans for the future we need to be involved in post-event activities.
- This means making observations and collecting relevant information on what went well and what needs improving.
- This process should be seen as a continuous improvement exercise which will help to rethink if necessary, the way emergencies are handled and how responsibilities are allocated.
- Notes should be taken as soon as possible. A checklist or similar method will assist in recording observations. These notes will assist with the debriefing process.
- These contributions will contribute to a more structured review of events and support a formal review for future recommendations.
- You then need to formulate and review contingency planning to identify and select improved or alternative management principles and procedures as required.

A debrief is:

- A structured ‘conference’ in which participants can identify experiences and problems from an operation which will assist in handling similar situations in the future; and
- An opportunity for participants to express and share some of the personal experiences encountered during what is usually a hectic and sometimes stressful period.

A debrief is not:

- A ‘witch-hunt’ of particular groups or individuals. If there are any lessons to be learned, it is to discover ‘what went wrong’ and any improvements that can be made, rather than ‘who went wrong’.

Anaphylaxis – Part 3

- Medication

Medication

Injectable adrenaline

- Adrenaline is a stress hormone produced naturally in the body by the adrenal glands which causes the ‘fight or flight’ reaction
- The immediate injection into a muscle works rapidly to reverse the effects of anaphylaxis
- Usually given using a pre-loaded auto-injecting pen containing an exact dose
- Use for life threatening anaphylaxis only
- Helpful effects are felt within seconds
- Casualty feels the heart speed up and a feeling of anxiousness or nervousness
- Get medical help immediately after giving the injection – EpiPen® or Anapen®
- The effects of the adrenaline will wear off usually between 10-20 minutes
**EpiPen®**

**EpiPen®** - recommended for adults and children over 20kg - Yellow

**EpiPen Jr®** - recommended for children 10-20kg - Green

**Instructions**

Go to this link to view the Action plan for the EpiPen®:

Go to this link to view a video on how to use the EpiPen®:
Anapen®

- recommended for adults and children over 20kg

Anapen Junior®

- recommended for children 10-20kg

Go to this link to view the Allergy Action Plan for Anapen®:

Go to this link to view a video on how to use the Anapen®:
http://www.allergy.org.au/health-professionals/anaphylaxis-resources/how-to-give-anapen

Click here to view a handy chart with steps for using both EpiPen® and Anapen®:
After administration of adrenaline

- Seek medical help as soon as anaphylaxis is diagnosed
- Seek medical help after using the auto-injector even if they feel better
- Effects wear off between 10-20 minutes
- The reaction could return when effects wear off
- Remain with the casualty
- Maintain the airway
- Casualty may find breathing easier if sitting upright
- They may feel dizzy and confused (low blood pressure)
- Confirm that the ambulance has been requested

Anaphylaxis – Part 4

- Risk Management

Risk management

What is risk management?
Risk management is directly related to hazards and risks.

Risk management steps:
1. Hazard identification
2. Risk assessment
3. Eliminate or control
4. Monitor
5. Review

Step 1. Hazard identification

What is a hazard? - A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these.

Every workplace must ensure processes are in place to identify hazards, assess risks the hazard poses and eliminate or control them.

This includes hazards and risks that may cause a child to have an anaphylactic reaction.

If you find a hazard (e.g. triggers for allergic reactions) you must judge how dangerous it is. Ask yourself how seriously someone could be affected and how likely this is to happen.

This is called risk assessment.
Step 2. Risk assessment

- Before you start, inform others of what is happening and why
- Get everyone involved - others may point out things that have been missed
- Make a list of anaphylaxis hazards and children or people with known anaphylactic reactions
- Make a list of all anaphylaxis triggers / allergens at the centre or workplace, including the ones you’re already doing something about
- Everyone should try to find as many as possible

What next?

Think about:

- How severely a child or person could be affected by the hazard
- How likely is it that a child or person would be affected badly by coming into contact with the hazard
- What could be done to solve or reduce the problem?

Step 3. Eliminate or control

Risk Management Matrix

A Risk Management Matrix can help you to:

- Identify the highest priority risks
- Identify consequences of an anaphylaxis reaction
- Put control measures in place to eliminate or reduce the risk of a reaction.

Example Matrix

<table>
<thead>
<tr>
<th>How severely could it hurt someone OR How ill could it make someone</th>
<th>How LIKELY is it to be that bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY likely Could happen at any time</td>
<td>Likely Could happen some time</td>
</tr>
<tr>
<td>Unlikely Could happen but very rarely</td>
<td>Very unlikely Could happen but probably never will</td>
</tr>
<tr>
<td>KILL or cause permanent disability or ill health</td>
<td>1</td>
</tr>
<tr>
<td>Long term illness or serious injury</td>
<td>1</td>
</tr>
<tr>
<td>Medical attention and several days off</td>
<td>2</td>
</tr>
<tr>
<td>First aid needed</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Hazpak: Making Your Workplace Safer, WorkCover NSW

ANY risk identified as number 1 or 2 in the matrix needs IMMEDIATE control measures put in place.
Step 4. Monitor and Step 5. Review

- Re-assess - regularly review prevention strategies & first aid plans
- Regularly update any management plans associated with the administration of the Auto-Injector
- Talk to relevant stakeholders - children, parents, other co workers etc.
- Check if allergy is still present and if prevention strategies & first aid plans are up to date & appropriate

Risk management strategies

Identify those at risk:

- Children & others who are highly allergic to the known allergens
- Those who have had an anaphylactic reaction before
- Do a risk assessment likelihood of recurrent reaction and how severe the reaction would be
- Have a good flow of information & communication with high risk people, children and their parents or carers
- Identify avoidable/possible triggers and eliminate or reduce them

Long term management

1. Develop awareness
2. Education
3. Provide an emergency anaphylaxis action plan
4. Prevention

1. Develop awareness: develop partnerships, share information and clarify expectations. In a school situation it is the responsibility of the parent to notify the school that their child is at risk. The school must then provide support to assist the parent in the management of their child’s health. Educate peers to help with preventing exposure to allergens.

2. Education: on avoidance of triggers: minimise exposure to known allergens. The severity can be influenced by a number of factors including exercise, hot weather and in the case of food allergens, the amount eaten. Avoidance is the only means of prevention.

3. Provision of an emergency anaphylaxis action plan: is essential for first aid management. Develop individual health care plans in consultation with all involved. An emergency response strategy must be developed and implemented. A workplace must develop, provide and use an emergency anaphylaxis action plan and an emergency response plan.

4. Prevention: Identification of avoidable triggers is the first step in prevention. People, children and caregivers must be educated on how to avoid food allergens and/or other triggers. This involves a history, allergy testing (if appropriate) and challenge tests in some occasions to confirm food allergy.
Develop anaphylaxis policies

- Every Australian school or business needs an anaphylaxis management policy!
- Take immediate steps to establish a policy if they have not already done so.
- Outline the responsibilities and ensure ongoing accountability for the functioning of the policy

The policy must outline:

- Responsibilities
- Accountability for the functioning of the policy
- Rights, risk management and responsibilities
- Procedures for identifying people & students at risk and updating forms
- Refresher training courses
- Provisions allowing staff to administer adrenaline to minors without parental consent
- Emergency protocols

Everyone who comes in contact with people and children at risk of anaphylaxis should be aware of their workplace policy.

Anaphylaxis – Part 5

- Prevention Strategies

Strategies for prevention

Medication policies:

- Children should NOT take medication brought from home without staff knowledge
- Inform ALL parents, carers & staff about your administration of medications policy
- Monitor the policy to minimise children bringing unauthorised medications
- Inform the school community of policy about administration of medications and taking medication prescribed only for them

Medication awareness:

- Educate children and peers about medication allergies and the importance of taking medication prescribed only for them
- Encourage affected children to wear medic alert bracelets or necklace
- Implement procedures for giving prescribed medications at the child care centre
- Inform ALL parents and carers about the dangers of class parties and craft items
**Things to avoid:**

**Sharing lunches:**
- Talk to staff & children about the importance of eating their own food and not sharing
- Children should have lunch in a specified area and be supervised constantly

**Trigger foods in the canteen/kitchen:**
- Inform staff of the foods each child or person is allergic to
- Put a copy of emergency response plan on the wall
- Identify foods that contain trigger substances and replace with other suitable foods

**Children’s class parties:**
- Advise the parent or carer of the child at risk about the party beforehand so that they can provide suitable food
- Food for the allergic child should only be approved & provided by the child’s parent or carer
- Inform other parents of trigger substances and ask for these foods to be avoided
- Consider non-food rewards
- Individual cupcakes can be used as replacement for a piece of birthday cake and can be stored in an identifiable container labelled with child’s details in a freezer
- Make everyone aware that craft items can be risk items e.g. milk containers, peanut butter jars and to avoid those items

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**Particular allergy prevention:**

**Latex allergies:**
- Avoid using party balloons
- Avoid contact with swimming caps and latex gloves

**Insect sting allergies:**
- Avoid grassed and garden areas
- Specify play areas that are lowest risk
- Decrease number of plants that attract bees
- Wear shoes at all times
- When using isolation as part of discipline, ensure not to stand child next to flowering plants
Workbook Quiz - Anaphylaxis

Please print the quiz answer sheet, complete your answers on the printed copy and take to your face to face session. This is an important part of the course and the workbook quiz must be completed before continuing with the practical part of the course. There will be a formal written assessment on completion of the entire course.

1. Risk assessments, looking for new individuals at risk of allergic reactions and anaphylaxis, and assessing those already identified, should be conducted and updated regularly. This is achieved by:
   
   (A) Visiting web sites for this information
   (B) Leaving it to others, it is not your job to identify who is at risk
   (C) Asking people to sign a risk register every Wednesday
   (D) Having a good flow of information and communication with people who are high risk listing possible triggers. Assessing all newcomers. Creating awareness people can become allergic at any time

2. Which of the following should be included on an incident/first aid report?
   
   (A) The casualty’s name, problems they had, treatment given
   (B) Only the casualty’s injury or illness
   (C) Only details of any first aid treatment given
   (D) None of these

3. If a child is known to be at risk of anaphylaxis and you are unsure whether the child is experiencing anaphylaxis or suffering from severe asthma, you would:
   
   (A) Give the adrenaline auto-injector first, followed by the asthma reliever medication
   (B) Give asthma reliever medication followed by the adrenaline auto-injector

4. James is a little itchy after eating peanuts. He is starting to break out in hives fairly quickly. You feel it could possibly be Anaphylaxis due to rapid deterioration soon after the exposure. Would this be a true or false assumption to make?
   
   (A) True
   (B) False

5. A child with an allergy to peanuts has been stung by a bee. She is only complaining about the pain at the site of the sting. Another person state that you should administer an adrenaline auto-injector. Is this statement true or false?
   
   (A) True
   (B) False

6. Before you administer an auto-injector adrenaline device such as the EpiPen® or Anapen®, you should:
   
   (A) Ask the casualty if they have medical insurance
   (B) Call a doctor and ask if you should inject the device
   (C) Check for a pulse
   (D) Confirm the casualty has definite signs and symptoms of a severe allergic reaction (anaphylaxis)

7. After treating a fellow worker at a day care centre for anaphylaxis, she was taken to hospital. You are making a report of the incident. You must:
   
   (A) Maintain complete confidentiality
   (B) Tell everyone in the workplace the details, as they will want to know
   (C) Place the incident report on the notice board
   (D) Tell only her friends about the incident

8. Following the administration of adrenaline by EpiPen® or Anapen®, and the casualty has gone to hospital by ambulance, as soon as possible, it is important to:
   
   (A) Block the event out of your mind
   (B) Complete a report detailing what happened, what you did and any other information available to you
   (C) Go on a long coffee break
   (D) Lock the incident in your memory so that you can recall it later if required
9. A child is suffering an allergic reaction whilst playing in the playground. You assess the risks and hazards, prevent further exposure by moving them from the area, and when all is safe you:

(A) Assess the casualty using DRS ABCD and do a secondary survey
(B) Call WorkCover before commencing anything further
(C) Cover the casualty with blankets and keep them warm
(D) Count the number or witnesses for the incident report

10. Workplace documents that may be required to be completed after an anaphylactic emergency would include:

(A) Nothing, records are not required in the workplace
(B) Documents such as incident reports and other statutory requirements
(C) A time sheet for the day of the incident
(D) None of these are correct

11. A workmate has suffered a severe allergic reaction. You provide treatment. When the ambulance arrives you would:

(A) Do nothing – the ambo’s know what they are doing
(B) Provide a brief verbal report of what happened and what you have done
(C) Give the casualty a paper bag to breathe into whilst you chat with paramedics
(D) Race off in case you have done something wrong

12. It is a good idea for a workplace, especially those dealing with children, to:

(A) Employ a doctor to administer the EpiPen® or Anapen® in an emergency
(B) Purchase a ‘training’ EpiPen® or Anapen® and have regular training sessions to remind everyone how to use it
(C) Refuse to participate in continual training, once is enough for anyone
(D) Remember that an injection of adrenaline won’t make any difference to the welfare of a child

13. Auto-injectors are used to inject adrenaline into the body of a person having an anaphylactic reaction. Which of these statements are NOT true about adrenaline and auto-injectors?

(A) Adrenaline is the first line emergency treatment for anaphylaxis (potentially life threatening severe allergic reaction) and must be used promptly
(B) When injected, adrenaline works rapidly (within minutes) to reduce throat swelling, open up airways and maintain blood pressure
(C) Withholding or delaying adrenaline may result in deterioration and can contribute to the death of an individual experiencing anaphylaxis
(D) If signs of anaphylaxis develop, adrenaline should be held off as long as possible and antihistamines should be used to start with

14. During an anaphylactic incident for a person known to be at risk, it is important that you follow the casualty’s action plant in the emergency.

(A) True
(B) False

15. Refrigerating an EpiPen® or Anapen® may damage the auto-injector mechanism. They should be stored in a cool dark place (such as an insulated wallet) at room temperature, between 15 and 25 degrees Celsius, and:

(A) Kept out of reach of small children, however they must be readily available when needed and not in a locked cupboard
(B) Stored with an ASCIA Action Plan for Anaphylaxis
(C) The expiry date on the side of the device needs to be marked on a calendar and the device must be replaced prior to this date
(D) All of these are correct
Quiz Answer Sheet

Please print this page before marking your answers on the table below and take with you to your face to face session to hand in to your trainer.

Please fill in the following:

Name: ...........................................................................................................................................................................
Date: ..................................................................................................................................................................................
Contact number: ....................................................................................................................................................................

| 1 | ⓑ | ⓒ | ⓓ | ⓔ | 7 | ⓑ | ⓒ | ⓓ | ⓔ | 13 | ⓑ | ⓒ | ⓓ | ⓔ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | ⓑ | ⓒ | ⓓ | ⓔ | 8 | ⓑ | ⓒ | ⓓ | ⓔ | 14 | ⓑ | ⓒ | ⓓ | ⓔ |
| 3 | ⓑ | ⓒ | ⓓ | ⓔ | 9 | ⓑ | ⓒ | ⓓ | ⓔ | 15 | ⓑ | ⓒ | ⓓ | ⓔ |
| 4 | ⓑ | ⓒ | ⓓ | ⓔ | 10 | ⓑ | ⓒ | ⓓ | ⓔ |
| 5 | ⓑ | ⓒ | ⓓ | ⓔ | 11 | ⓑ | ⓒ | ⓓ | ⓔ |
| 6 | ⓑ | ⓒ | ⓓ | ⓔ | 12 | ⓑ | ⓒ | ⓓ | ⓔ |