Module 5

Anaphylaxis

Online Module Overview

This document has been provided for participants completing a Revive2Survive First Aid Training course.

Please use this material to complete the Course Pack and answer the online multiple-choice theory assessment.

There are no assessments in these module packs, please use the link and attachment provided in your course confirmation email.

This information is to be used as a learning tool and while information contained in this online learning is frequently updated, medical advice should be sought from a practitioner in an emergency.

Module 1- CPR Resuscitation & the Airway

Module 2- Medical Emergencies

Module 3- Bleeds, Burns & Wounds

Module 4- Environmental Emergencies

Module 5- Anaphylaxis

Module 6- Asthma

Module 7- Assessment of a Casualty

Please note-

**HLTAID009 Provide CPR is recommended to be renewed every 12 months

**HLTAID011 Provide First Aid is recommended to be renewed every 3 years

Module 5 Overview

- Allergy vs Anaphylaxis
- Signs & Symptoms
- Adrenaline
- Adrenaline Devices
- Anaphylaxis Prevention
- ASCIA Action Plans
- Adrenaline Device Administration
- Handover
- Incident Review
- Stress Management
- Risk Minimisation
- Communication Plan

Allergy vs Anaphylaxis

What is an allergic reaction?

Mild – Moderate is not life threatening, external of the body

The immune system reacts to allergens in the environment that are harmless to most people. The allergen enters the body and is wrongly identified by the immune system as a dangerous substance.

The immune system overreacts and makes antibodies to attack the allergen.

Antibodies trigger a cascade of immune system reactions, including the release of chemicals (mast cells), most commonly known is histamine.

Histamine causes itching and reddening of the local area.

Allergy vs Anaphylaxis

What is Anaphylaxis?

Severe allergic reaction are known as ANAPHYLAXIS

Anaphylaxis is potentially life threatening. It must be treated as a medical emergency, requiring immediate treatment and medical attention.

There are 4 ways the body can absorb an allergen- **inhale, ingest, absorb or inject.**

Triggers:

People can be anaphylactic to anything but some of the most common allergens include:

- Food (peanuts, nuts, milk, egg, fruits, seafood etc)
- Insect Bites (bees, wasps, ants etc)
- Medication (aspirin, antibiotics, herbal etc)
- Other: Latex, exercise, cold water, grasses

If the casualty has both asthma and severe allergy symptoms, treat them with the Adrenaline Device first

Signs & Symptoms

MILD or MODERATE

Swelling of lips, face eyes

Hives or welts

Tingling mouth

Abdominal pain, vomiting (these are signs of anaphylaxis for insect alllergy)

SEVERE

Difficult or noisy breathing

Swelling of tongue

Swelling or tightness in throath

Wheeze or persistent cough

Difficulty talking or hoarse voice

Persistent dizziness or collapse

Pale and floppy (young children)

Abdominal pain, vomiting (these are signs of anaphylaxis for insect alllergy)

Adrenaline

How does adrenalin/epinephrine work?

- Adrenaline is naturally produced by the adrenal glands in times of stress
- When swelling occurs as an allergic reaction, the soft tissue within the patient's throat can also swell, compromising the airway.

Adrenalin rapidly reverses severe effects of allergic reactions by reducing throat swelling, relaxing and opening airways, and maintaining blood pressure.

EpiPen® is available as follows:
- EpiPen® Jr (150mcg) 7.5kg-20kg
- EpiPen® (300mcg) 20kg +


EpiPen® Junior (150 microgram)


EpiPen® (300 microgram)

Anapen® is available as follows:
- Anapen® 500mcg for children and adults over 50kg


Anapen® 500 (500 microgram)

If no other option available, a 300mcg or 500mcg Adrenaline Device can be given to children weighing over 7.5kg

Adrenaline Devices

Adrenaline Devices (Anapen/EpiPen):

- Contain one single, pre-measured dose of adrenaline.
- Has an expiry date of approximately 12-18 months.
- Should be stored safely & out of direct sunlight at a temperature of 15-25˚C.
- Expiry date is listed on the side of the device. An expired Adrenaline Device should not be used unless it is the only device available or directed by Emergency Services.
- Viewing window should be checked to see that medication is clear, colourless and sediment-free. An Adrenaline Device that is not clear should not be used unless it is the only device available or directed by Emergency Services
- A prescription is not required to purchase an Adrenaline Device.
- Are designed to be used by anyone, including those not medically trained.
- May be administered to a person who appears to have anaphylaxis who has not previously been diagnosed.
- You do not need to call 000 for permission to administer an Adrenaline Device, follow ASCIA Action Plan if available.
- Adrenaline Devices should be replaced if past their expiry date, heat effected or have been administered.

Anaphylaxis Prevention

Prevention is better than treatment

To reduce risk of an anaphylactic reaction you could do the following:

- Have individual ASCIA Action Plans for those diagnosed
- Have in place risk minimisation strategies
- Have a communication plan in place for all staff
- Conduct staff training in First Aid and Anaphylaxis

Strategies To Avoid Allergens:

- Plan outdoor activities by conducting site checks prior to excursion/outings
- Wearing appropriate clothing
- Bring medication and action plans
- Inform First Aid Officer of those in attendance diagnosed with anaphylaxis
- Clearly label food & check all supplies before use by staff/children, e.g: egg carton for craft

ASCIA Action Plans

There are 3 types of ASCIA Action Plans:

Green: ASCIA Action Plan for Allergic Reactions

Orange: ASCIA First Aid Plan for Anaphylaxis

Red: ASCIA Action Plan for Anaphylaxis

Action Plans and Adrenaline Devices should be kept in a centralised location, out of reach of children, not behind a locked door and at a temperature of 20-25 degrees Celsius.

Action Plans must be signed off by a doctor or nurse practitioner.

- Action Plans are recommended to be updated every 12-18months or after an allergic reaction.
- The Action Plan is specific to the individual and prepared in consultation with the individual, parent or carer and medical practitioner
- Action Plans must include location of the Adrenaline Device, emergency contact details, personal details and relevant medical information

ASCIA Action Plans

ascia
www.allergy.org.au

ACTION PLAN FOR Allergic Reactions

Name: _____ Date of birth: DD / MM / YYYY

Confirmed allergen(s): _____

Family/emergency contact(s):

1. _____ Mobile: _____

2. _____ Mobile: _____

Plan prepared by: _____ (doctor or nurse practitioner) who authorises medications to be given, as consented by the patient or parent/guardian, according to this plan.

Signed: _____ Date: DD / MM / YYYY

Antihistamine: _____ Dose: _____

This plan does not expire but review is recommended by: DD / MM / YYYY

This ASCIA Action Plan for Allergic Reactions is for people who have allergies but do not have a prescribed adrenaline (epinephrine) device.

MILD TO MODERATE ALLERGIC REACTIONS

SIGNS:

- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting - **these are signs of anaphylaxis for insect allergy**

Mild to moderate allergic reactions may not always occur before anaphylaxis

ACTIONS:

- Stay with person, call for help
- **Give antihistamine - see above**
- Phone family/emergency contact
- Insect allergy - flick out sting if visible
- Tick allergy - seek medical help or freeze tick and let it drop off

SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTIONS)

Watch for ANY ONE of the following signs:

- Difficult or noisy breathing
- Swelling of tongue
- Swelling or tightness in throat
- Wheeze or persistent cough
- Difficulty talking or hoarse voice
- Persistent dizziness or collapse
- Pale and floppy (young children)

ACTIONS FOR ANAPHYLAXIS

1 LAY PERSON FLAT - do NOT allow them to stand or walk

- If unconscious or pregnant, place in recovery position - on left side if pregnant
- If breathing is difficult allow them to sit with legs outstretched
- Hold young children flat, not upright

2 GIVE ADRENALINE DEVICE IF AVAILABLE

3 Phone ambulance - 000 (AU) or 111 (NZ)

4 Phone family/emergency contact

5 Transfer person to hospital for at least 4 hours of observation

IF IN DOUBT GIVE ADRENALINE DEVICE

Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS GIVE ADRENALINE DEVICE FIRST and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication (who may have been exposed to the allergen) has **SUDDEN BREATHING DIFFICULTY** (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms.

If adrenaline is accidentally injected, phone your local poisons information centre. Continue to follow this action plan for the person with the allergic reaction.

ASCIA Action Plans

ascia
www.allergy.org.au

FIRST AID PLAN FOR
Anaphylaxis

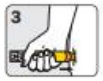
Anaphylaxis is the most severe type of allergic reaction and should always be treated as a medical emergency. Anaphylaxis requires immediate treatment with adrenaline (epinephrine). If treatment with adrenaline is delayed, this can result in fatal anaphylaxis.

How to give adrenaline (epinephrine) devices

EpiPen®

Form fist around EpiPen® and PULL OFF **BLUE** SAFETY RELEASE

Hold leg still and PLACE ORANGE END against outer mid-thigh (with or without clothing)



PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds REMOVE EpiPen®

EpiPen® Jr (150 mcg) is for children 7.5-20kg

EpiPen® (300 mcg) is for children over 20kg and adults

Anapen®

PULL OFF **BLACK** NEEDLE SHIELD

PULL OFF GREY SAFETY CAP from red button

PLACE NEEDLE END FIRMLY against outer mid-thigh at 90°angle (with or without clothing)

PRESS **RED** BUTTON so it clicks and hold for 3 seconds. REMOVE Anapen®

Anapen® 500 is for children and adults over 50kg

MILD TO MODERATE ALLERGIC REACTIONS

SIGNS
- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting - **these are signs of anaphylaxis for insect allergy**

ACTIONS
- Stay with person, call for help
- Locate adrenaline device
- Phone family/emergency contact
- Insect allergy - flick out sting if visible
- Tick allergy - seek medical help or freeze tick and let it drop off

Mild to moderate allergic reactions may not always occur before anaphylaxis

SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTIONS)

Watch for ANY ONE of the following signs:
- Difficult or noisy breathing
- Swelling of tongue
- Swelling or tightness in throat
- Wheeze or persistent cough
- Difficulty talking or hoarse voice
- Persistent dizziness or collapse
- Pale and floppy (young children)

ACTIONS FOR ANAPHYLAXIS

1 LAY PERSON FLAT - do NOT allow them to stand or walk
- If unconscious or pregnant, place in recovery position - on left side if pregnant
- If breathing is difficult allow them to sit with legs outstretched
- Hold young children flat, not upright

2 GIVE ADRENALINE DEVICE
3 Phone ambulance - 000 (AU) or 111 (NZ)
4 Phone family/emergency contact
5 Further adrenaline may be given if no response after 5 minutes
6 Transfer person to hospital for at least 4 hours of observation

IF IN DOUBT GIVE ADRENALINE DEVICE
Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS give adrenaline device FIRST if someone has SEVERE AND SUDDEN BREATHING DIFFICULTY (including wheeze, persistent cough or hoarse voice), even if there are no skin symptoms. **THEN SEEK MEDICAL HELP.**

If adrenaline is accidentally injected, phone your local poisons information centre. Continue to follow this action plan for the person with the allergic reaction.

ASCIA Action Plans

ascia
australasian society of clinical immunology and allergy
www.allergy.org.au

ACTION PLAN FOR Anaphylaxis

Name: Ben Smith Date of birth: 09 / 01 / 20xx

Confirmed allergen(s): Bee Stings

Family/emergency contact(s):

1. Zara Smith Mobile: 0421 234 567
2. Samuel Smith Mobile: 0429 876 543

Plan prepared by: Dr. Samantha D'Arcy (doctor or nurse practitioner) who authorises medications to be given, as consented by the parent/guardian, according to this plan.

Signed: [redacted] Date: 12 / 09 / 20xx

Antihistamine: Fexofenadine (Telfast) Dose: 5mL

This plan does not expire but review is recommended by: 12 / 09 / 20xx

How to give adrenaline (epinephrine) devices

EpiPen®

1. Form fist around EpiPen® and PULL OFF BLUE SAFETY RELEASE
2. Hold leg still and PLACE ORANGE END against outer mid-thigh (with or without clothing)
3. PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds REMOVE EpiPen®

EpiPen® Jr (150 mcg) is prescribed for children 7.5-20kg

EpiPen® (300 mcg) is prescribed for children over 20kg and adults

Anapen®

1. PULL OFF BLACK NEEDLE SHIELD
2. PULL OFF GREY SAFETY CAP from red button
3. PLACE NEEDLE END FIRMLY against outer mid-thigh at 90°angle (with or without clothing)
4. PRESS RED BUTTON so it clicks and hold for 3 seconds. REMOVE Anapen®

Anapen® 500 is prescribed for children and adults over 50kg

MILD TO MODERATE ALLERGIC REACTIONS

SIGNS:
- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting - **these are signs of anaphylaxis for insect allergy**

Mild to moderate allergic reactions may not always occur before anaphylaxis

ACTIONS:
- Stay with person, call for help
- Locate adrenaline device
- **Give antihistamine - see above**
- Phone family/emergency contact
- Insect allergy - flick out sting if visible
- Tick allergy - seek medical help or freeze tick and let it drop off

SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTIONS)

Watch for ANY ONE of the following signs:
- Difficult or noisy breathing
- Swelling of tongue
- Swelling or tightness in throat
- Wheeze or persistent cough
- Difficulty talking or hoarse voice
- Persistent dizziness or collapse
- Pale and floppy (young children)

ACTIONS FOR ANAPHYLAXIS

1 LAY PERSON FLAT - do NOT allow them to stand or walk
- If unconscious or pregnant, place in recovery position - on left side if pregnant
- If breathing is difficult allow them to sit with legs outstretched
- Hold young children flat, not upright

2 GIVE ADRENALINE DEVICE

3 Phone ambulance - 000 (AU) or 111 (NZ)

4 Phone family/emergency contact

5 Further adrenaline may be given if no response after 5 minutes

6 Transfer person to hospital for at least 4 hours of observation

IF IN DOUBT GIVE ADRENALINE DEVICE

Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS GIVE ADRENALINE DEVICE FIRST, and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication (who may have been exposed to the allergen) has **SUDDEN BREATHING DIFFICULTY** (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms.

If adrenaline is accidentally injected, phone your local poisons information centre. Continue to follow this action plan for the person with the allergic reaction.

Adrenaline Device Administration

What do you do if a severe reaction occurs...

1. Lie casualty down, do not stand or walk – if hard to breathe, sit upright with legs out in front. Check for dangers.
2. If the reaction is due to an insect allergy, remove the stinger with fingernail or credit card.
3. Check Action Plan and administer Adrenaline Device.
4. Note the time!
5. Call 000-Provide time the reaction started, time adrenaline administered and vital signs.
6. If difficulty breathing continues after 5 minutes, administer further doses.

Commence CPR if breathing stops.

Give used Adrenaline Device to paramedics, pharmacist or dispose of in a sharps container.

If you accidently inject yourself with the casualty's Adrenaline Device, lay down, contact your local Poison Information Centre (13 11 26) and administer the generic Adrenaline Device to the casualty.

Adrenaline Device Administration

How to give Anapen® adrenaline (epinephrine) injector

PULL OFF **BLACK** NEEDLE SHIELD

PULL OFF GREY SAFETY CAP
from red button

PLACE NEEDLE END FIRMLY
against outer mid-thigh at 90°angle
(with or without clothing)

PRESS **RED** BUTTON so it clicks and
hold for 3 seconds. REMOVE Anapen®

How to give adrenaline (epinephrine) injectors

EpiPen®

Form fist around EpiPen® and PULL OFF **BLUE** SAFETY RELEASE

Hold leg still and PLACE **ORANGE** END against outer mid-thigh (with or without clothing)

PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds REMOVE EpiPen®

Medical Handover

After the arrival of Paramedics, it is vital to provide a detailed handover.

Information they require:

- Introduce the casualty
- The history (if known) including time the reaction started
- Allergen (if known)
- Time the reaction started
- Time you administered the adrenaline dose/s
- What the casualty is reporting/reported about their condition
- Signs and symptoms that were observed
- Give the used Adrenaline Device/s to the Paramedics
- Give a copy of the ASCIA Action Plan to the paramedic (if available) which includes parent contact details
- All children should be accompanied by a carer/teacher

The casualty requires transport to hospital by ambulance for observation for a minimum of 4 hours

Review of Incident

- Debrief with staff, children & families involved. Talk to the children about their emotions and response to the event, refer to additional support if needed.
- Complete workplace incident report.
- Notify relevant authorities e.g. Government Departments, relevant governing bodies.
- Replace Adrenaline Device.
- Update Action Plan.
- Review response/procedure.

Review, evaluate and assess the response

- Was the response timely?
- Where are the Adrenaline Devices kept?
- How would I get the generic Adrenaline Device in a hurry?
- Does the casualty carry their Adrenaline Device with them?
- Do their friends know how to recognise signs, symptoms and/or administer the Adrenaline Device (if age appropriate)?

Stress Management

After an incident it is important to observe for signs of stress:

- Observe changes in behaviour
- If upset, ask if they want to talk about it
- Offer reassurance
- Listen attentively, be calm and supportive
- For children if they don't want to talk, they may want to draw pictures to describe how they are feeling
- Talk to the parents/carers of your observations if you are concerned

Risk Minimisation

Employers have a responsibility to provide a safe caring environment.

Key steps are:

- Find out which individuals are known to have Anaphylaxis – obtain current action plan.
- Develop individual Anaphylaxis Management Plans for those who have been identified and implement practical strategies to avoid exposure to known allergens
- Remove potential sources of allergens or identify those that cannot be removed.
- Note differing environments and how this impacts risk.
- Develop communication to raise awareness of Anaphylaxis. This includes age-appropriate education of children with allergies.
- Ensure staff are trained in treating Anaphylaxis.
- Ensure ASCIA Action Plans and adrenaline Adrenalin Device are stored together in an unlocked location.
- Develop an Emergency Response Plan for Anaphylaxis & educate relevant staff.
- Review management plans annually or after an anaphylactic event.

For examples of risk minimisation strategies for schools, preschools and childcare service

https://allergyfacts.org.au/allergy-management/schooling-childcare/childcare-resources

Communication Plan

It is important that everyone in a workplace/school/ childcare facility is aware of the seriousness of severe allergic reactions, how to avoid them, how to identify signs and symptoms and the correct emergency first aid response.

Communication plan is informing stakeholders of the workplaces policies and procedures and their roles and responsibilities in an emergency.

Communication can be distributed via face to face, flyers, noticeboards, online portals, emails etc. Communication plans should be reviewed at a minimum annually.

This information should be circulated amongst:

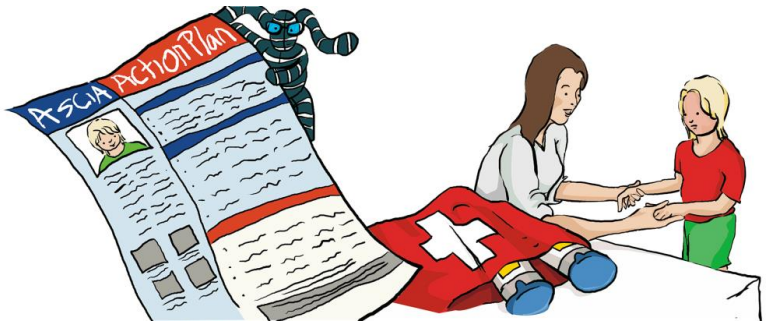
- Workplace first aiders
- Students
- Teachers/early childhood staff
- Parents/careers/volunteers
- Casual or specialist staff
- Caterers, cooks or canteen staff
- Providers of camp/conferences
- Incursions visitors
- Excursion facilitators

Communication Plan

Key information needing to be communicated:

- Those at risk
- Awareness of the seriousness of the condition
- Triggers of allergic reactions
- Signs and symptoms
- ASCIA Action Plan location
- Adrenalin Device location

Communication plans should be reviewed annually to ensure effectiveness.



Information

To find out current information , guidelines, protocols and state information, contact:

- Australasian Society of Clinical Immunology and Allergy (ASCIA)
  www.allergy.org.au
- Allergy and Anaphylaxis Australia
  www.allergyfacts.org.au
- National Allergy Strategy
  www.nationalallergycouncil.org.au
- Ministerial Order 706- Anaphylaxis Management in Victorian Schools
  www2.education.vic.gov.au/pal/anaphylaxis/policy
- Australian Children's Education & Care Quality Authority
  www.acecqa.gov.au
- Australian Resuscitation Council
  www.resus.org.au/guidelines
- Education and Care Services National Law
  www.education.vic.gov.au/childhood/providers/regulation/Pages/anaphylaxis.aspx

The best practice recommendation for educational currency in Anaphylaxis includes;

- Refresher training be undertaken whenever a new adrenaline device becomes available in Australia
- Training in 22578VIC Course in First Aid Management of Anaphylaxis be renewed every two years
- Skills and knowledge relating to using adrenaline Adrenaline Devices be refreshed annually

Information

Australasian Society of Clinical Immunology and Allergy (ASCIA) have created a Non-Accredited Refresher e-training for schools, children's education/care and community into a short, accessible animated video.

You can choose watch this to reinforce the information in this presentation by clicking on the below link. This video runs for 16 minutes.

- Click here to view the presentation.

Module 5 Complete

Please continue to Module 6

First Aid Gear
AUSTRALIA

For first aid supplies visit

www.firstaidgearaustralia.com.au

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FIRST AID TRAINING