

Module 5

Anaphylaxis



REVIVE²SURVIVE

1300 000 112

Overview

This document has been provided for participants completing a Revive2Survive training course.

Please use this material to complete your course pack and answer your 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



Allergy vs Anaphylaxis

What is an allergic reaction?

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

- The immune system reacts to an allergen 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.

- Allergies can be **inhaled, ingested, absorbed or injected**

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 Auto-Injector 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 allergy)

SEVERE



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)



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



Adrenaline

How does adrenalin/epinephrine work?

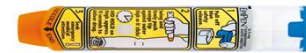
- Adrenaline is naturally produced by the adrenal glands in times of stress
- When swelling occurs as an allergic reaction, the soft tissue within the patient's throat can also swell, compromising the airway
- Adrenalin rapidly reverses severe effects of allergic reactions by reducing throat swelling, relaxing and opening airways, and maintaining blood pressure

EpiPen® is prescribed as follows:

- **EpiPen® Jr (150 mcg)** for children 7.5-20kg
- **EpiPen® (300 mcg)** for children over 20kg and adults



EpiPen® Junior (150 microgram)



EpiPen® (300 microgram)

Anapen® is prescribed as follows:

- **Anapen® 150 Junior** for children 7.5-20kg
- **Anapen® 300** for children over 20kg and adults
- **Anapen® 500** for children and adults over 50kg



Anapen® Jr (150 microgram)



Anapen® 300 (300 microgram)



Anapen® 500 (500 microgram)

If no other option available an adult auto-injector can be given to children weighting over 7.5kg



Adrenaline Auto-Injectors

Adrenaline Auto-Injectors (Anapen/EpiPen):

- Contain one single, pre-measured dose of adrenaline.
- Have an expiry date of approximately 12-18 months.
- The expiry date is listed on the side of the device. An expired Auto-Injector should not be used unless it is the only device available or directed by Emergency Services.
- A prescription is not required to purchase an Auto-Injector
- Are designed to be used by anyone, including those not medically trained.
- An adrenaline auto injector 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 Auto-Injector, follow ASCIA Action Plan if available.
- Auto-Injectors should be replaced if past their expiry date, heat effected or have been administered.



Anaphylaxis Prevention

Prevention is better than treatment

In a workplace environment to prevent an anaphylactic reaction occurring, you can 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 and check all supplies before being used 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 auto-injectors 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 12-18 months or after an allergic reaction.
- The Action Plan is prepared in consultation with the individual, parent or carer and medical practitioner.





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) injector.

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 INJECTOR 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 INJECTOR

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

Adrenaline injector doses are:
 • 150 mcg for children 7.5-20kg
 • 300 mcg for children over 20kg and adults
 • 300 mcg or 500 mcg for children and adults over 50kg
 Instructions are on device labels.

ALWAYS GIVE ADRENALINE INJECTOR 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.



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), which is injected into the outer mid-thigh muscle. If treatment with adrenaline is delayed, this can result in fatal anaphylaxis.

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®**

EpiPen® doses are:
EpiPen® Jr (150 mcg) for children 7.5-20kg
EpiPen® (300 mcg) 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® doses are:
Anapen® 150 Junior for children 7.5-20kg
Anapen® 300 for children over 20kg and adults
Anapen® 500 for children and adults over 50kg

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

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 injector
- 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



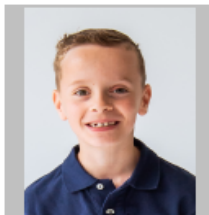
2 GIVE ADRENALINE INJECTOR

- 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 INJECTOR

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

ALWAYS give adrenaline injector 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.**



Name: Ben Smith Date of birth: 09 / 10 / 20XX
Confirmed allergen(s): Bee Sting

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:  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) 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®**

EpiPen® is prescribed as follows:
EpiPen® Jr (150 mcg) for children 7.5-20kg
EpiPen® (300 mcg) 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® is prescribed as follows:
Anapen® 150 Junior for children 7.5-20kg
Anapen® 300 for children over 20kg and adults
Anapen® 500 for children and adults over 50kg

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

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 injector
- 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 INJECTOR

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

IF IN DOUBT GIVE ADRENALINE INJECTOR

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

ALWAYS GIVE ADRENALINE INJECTOR 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.



Auto-Injector 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 your fingernail or a credit card.
 3. Check Action Plan and administer adrenaline auto-injector.
 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 auto-injector to paramedics.
 - If you accidentally inject yourself with the casualty's Auto-Injector, lay down, contact your local Poison Information Centre (13 11 26) and administer the generic auto-injector to the casualty



Auto Injector 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)



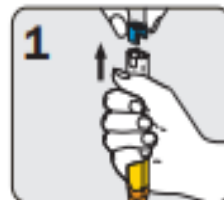
PRESS **RED** BUTTON so it clicks and hold for 3 seconds. REMOVE Anapen®

Anapen® is prescribed as follows:

Anapen® 150 Junior for children 7.5-20kg
Anapen® 300 for children over 20kg and adults
Anapen® 500 for children and adults over 50kg

How to give adrenaline (epinephrine) injectors

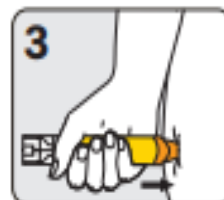
EpiPen®



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®

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



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 you administered the adrenaline dose/s
- Give the used auto-injector/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



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 auto-injectors.
- Update action plan.
- Review response/procedure.

Review

- Where are the auto-injectors kept?
- How would I get the generic auto-injector in a hurry?
- Does the casualty carry their auto-injector with them?
- Do their friends know how to recognise signs, symptoms and/or administer the auto-injector (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
- 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 auto-injectors are stored together in an unlocked location
- Develop an Emergency Response Plan for Anaphylaxis
- 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 and the correct emergency first aid response.

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

Communication can be distributed via face to face, flyers, noticeboards, online portals, emails etc.

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

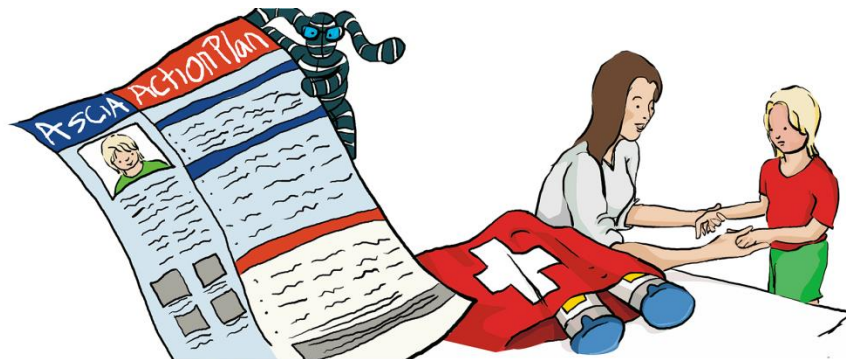


Communication Plan

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
- Auto-Injector 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
- Department of Education – for Schools and Childcare www.education.vic.gov.au
- 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



Module 5 Complete

Please continue to Module 6



For first aid supplies visit-
www.firstaidgearaustralia.com.au



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