22099VIC
First Aid Management Of Anaphylaxis

In conjunction with the NFA Learners Guide
Objectives

• Describe anaphylaxis / recognise the signs and symptoms

• Differentiate between food allergies, intolerance and anaphylaxis

• Identify and recognise a mild / moderate allergic reaction and an Anaphylactic reaction

• Understand and demonstrate the use of an auto injecting device

• Manage first aid treatment for a mild/moderate / severe allergy

• Apply / manage first aid principles in an undiagnosed patient

• Understand the requirements for risk minimization and management strategies for an anaphylactic emergency
Course Outline

- What is an allergy?
- What is Anaphylaxis?
- Food Intolerance
- Causes and how to recognise anaphylaxis
- How to manage allergies and anaphylaxis
- Adrenaline auto injecting devices
- Anaphylaxis Action Plan
- Anaphylaxis Risk minimisation & management
Anaphylaxis

- Anaphylaxis means “without protection”
- Food, medication and insect venom are the most common severe allergic triggers
- Approximately 10 deaths in Australia occur each year
- The frequency of Anaphylaxis is increasing and attributed to the increasing number of potential allergens to which people are exposed.
- Signs and symptoms may occur almost immediately after exposure
- The single most important step in the management of anaphylaxis is the administration of adrenaline.
What is an allergy?

• An allergy is a general term that describes an abnormal immune response to a usually harmless substance.

• This results in the production of allergy antibodies.

• Antibodies are proteins in the immune system which identify and react with foreign substances.

• An allergy results when the immune system react to a substance in the environment that does not normally affect most people.
An Allergen

• An allergen is the substance that may cause an allergy in some people.

• **Ingested**  
  foods / preservatives

• **Inhaled**  
  pollens / dust mites

• **Absorbed**  
  sprays / chemicals

• **Injected**  
  bites & stings
Common Allergens - Food

Over 95% of all food allergies come from these 8 foods.
Common Allergens

- Eggs and diary are the most common triggers in infants. These generally resolve with age.

- Peanuts, tree nuts and seafood are the most common in older children, adolescents and adults and do not resolve with age.
Common Allergens – Insect Bites

• These include bees, ticks, wasps and ants.
• The venom from each of these insects is different
• Being allergic to one insect does not mean that an allergy will occur from the others
• Most insect stings occur in children but most severe reactions occur in adults over 35
Common Allergens - Medication

Medicines

- **HERBAL**
- **CONVENTIONAL**
- **NATURAL**

ALL CAN CAUSE ALLERGIC REACTIONS AND ANAPHYLAXIS
Common Allergens

Penicillin is the most common reported trigger for medication allergies.

Allergies to medicines are usually life long
Food Intolerance

• Does not involve the immune system
• Does not cause anaphylaxis
• Signs and Symptoms include: headaches, bloating, abdominal pain, vomiting, diarrhoea
• The most common is lactose intolerance where the individual lacks an enzyme needed to digest milk
Allergic Reaction

• Allergens stimulate a response from the immune system releasing chemicals such as histamine

• These chemicals then affect many other tissues and cells in the body and cause an allergic reaction eg: hives, rashes and anaphylaxis

• The chemicals may also trigger symptoms in individuals who have asthma, eczema and allergic rhinitis (hay fever)
Allergic Reaction

• The reaction results when an allergic individual is exposed to an allergen.

• The reaction may affect many organs of the body including the skin, respiratory, gastrointestinal and the cardiovascular system

Not all allergic reactions are dangerous
Allergic Reaction

An Allergic reaction can be

- GENERALISED
- LOCAL

[Images showing generalized and localized allergic reactions]
How to recognize - Mild to Moderate

Symptoms range from mild / moderate to severe and potentially life threatening:

- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting (these are signs of a severe allergic reaction to insects)
How to recognize- Anaphylaxis (Severe Allergic Reaction)

Symptoms are severe and potentially life threatening

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

Death from anaphylaxis is rare.

Approximately 10 people die annually in Australia
How to Manage- Mild to Moderate

- Stay with person and call for help.
- Give medication (if prescribed – eg Sudafed, Zyrtec) with correct dosage.
- Locate the Auto injector (Epi Pen / Anapen)
- Contact family/emergency contact.
- For insect allergy, flick out sting if visible. Do not remove ticks.

*Mild to moderate reactions may or not precede anaphylaxis*

Watch out for **any one** of the following signs of Anaphylaxis.
How to Manage - Anaphylaxis

- Lay the patient flat (do not stand or walk).
- If there is breathing difficulty, allow to sit
- Give/ Administer auto injecting device
- Call ambulance 000
- Contact family / emergency contact
- If there is no response after 5 minutes, administer an additional dose (if available)
Anaphylaxis

If you are in any doubt, assume it is severe and administer the adrenaline auto injector

Epipen

Anapen
How to manage - First time

Allergies or anaphylaxis can occur even when there is no history

- Call ambulance 000
- If available, administer the generic auto injector
- Follow Basic First Aid Principles (DRSABCD)
- Contact parent / emergency contact
Adrenaline

- Adrenaline (Epinephrine) is one of the body’s natural stress hormones.
- Is the only medication proven to reverse the symptoms of anaphylaxis.
- It acts as a natural antidote by:
  - Rapidly reducing throat swelling
  - Opens up the airways to assist in breathing
  - Maintains heart function & blood pressure

Withholding or delaying administration can result in rapid deterioration or death.
Use of Other Medication

• Antihistamines, corticosteroids or asthma medications have no relieving effect on the immediate & dangerous effects of anaphylaxis

• Oxygen should be administered if available (by people trained in its use)
Adrenaline Auto Injector

- Is a disposable, pre loaded automatic injecting device that delivers a single measured dose of adrenaline
- The device has a spring activated concealed needle designed to be self administered or by people without any formal medical or nursing training
- Available in: EpiPen / EpiPen Jnr or Anapen / Anapen Jnr
Adrenaline Auto Injector

**EpiPen / Anapen (.30mg)**
- Generally prescribed for adults and children aged over 5 years.
- Colour coded - yellow

**EpiPen Jnr / Anapen Jnr (.15mg)**
- Generally prescribed for children aged 1 to 5 years.
- Colour coded – green

Medical observation in hospital for at least 4 hours is recommended after anaphylaxis
How to administer - Epipen

• Check the expiry date (shelf of up to 18 months)
• Administer as shown by the diagrams on the device and the Action Plan
• Hold the device against the outer mid thigh 90 degree angle
• Add firm pressure, push down hard (listen for audible click)
• Hold the injector firmly in the thigh for 10 seconds. Gently massage the injection site
• Record the time of administration
How to administer

How to give Anapen® or Anapen® Jr

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 10 seconds. Remove Anapen® and do not touch needle. Massage injection site for 10 seconds.

How to give EpiPen® or EpiPen® Jr

1. Form fist around EpiPen® and pull off blue safety release.
2. 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 10 seconds.
Where to administer

Adrenaline Auto injectors are given in the outer thigh

- It is the largest muscular area and least painful location to inject
- There is minimal risk of nerve or tendon damage
- There is a large vascular area with good blood supply
Adrenaline – Additional Dose

Adrenaline is very fast acting and will last for approximately 10 to 20 minutes. The patient will feel better within minutes.

- If available, an additional injector dose may be administered:
  - If there is no improvement after 5 minutes
  - Symptoms continue to progress
  - Symptoms resolve and then recur

- If the patient does not have a second auto injector, a generic device can be administered
Adrenaline – Side Effects

*Side effects are only temporary*

- Paleness, headache, nausea
- Increased heart rate (palpitations)
- Muscle tremors

Adrenaline is well tolerated in children. The benefits will outweigh the side effects.
Is it Anaphylaxis or Asthma?

The patient is known to be at risk of anaphylaxis and you are unsure whether they are having an anaphylaxis or asthma attack

- Administer the auto injector first
- Then give asthma relieving medication (Ventolin)

Adrenaline will also help relieve asthma symptoms
Anaphylaxis Action Plan

• A written instruction that details the person’s allergic signs & symptoms and outlines what action to take.
• It is important that their action plan is followed.
Anaphylaxis Legislation

There are many Acts and Regulations that cover Anaphylaxis in both child care and school environments.

In general:
When a child who is diagnosed as being at risk of anaphylaxis is enrolled at a children’s service, it is the responsibility of the proprietor to ensure that all staff members on duty when that child is being cared for have completed an accredited anaphylaxis training.
The legislation will also require the centre to develop an individualised risk minimisation plan for every child with anaphylaxis.
Risk Minimisation

A risk management policy is required to document strategies for implementation of best practice anaphylaxis management.

- All staff are aware of which individuals are anaphylactic.

- All individuals who have anaphylaxis can receive appropriate attention in the event of an emergency.

- Staff can respond to the needs of those who have not been diagnosed with anaphylaxis and who may be experiencing an anaphylactic reaction or difficulty breathing.
Risk Minimisation

Risk Minimisation Plan should consider:

• How well has the children’s service planned for meeting the needs of children with allergies who are at risk of anaphylaxis? Needs to be in consultation with the parents.

• Do families and staff know how the service manages the risk of anaphylaxis? Need for a Communication plan.
Risk Minimisation

- Do all staff know how the children’s service aims to minimise the risk of a child being exposed to an allergen?
- Do relevant people know what action to take if a child has an anaphylactic reaction?
- How effective is the service’s risk minimisation plan?
Policies & Procedures

Policies and procedures are be developed in consultation with the parent or guardian and implemented to help protect the child diagnosed at risk of anaphylaxis from accidental exposure to food allergens.

It is also the law.
Assessment

• Practical session: how to use an Auto injector

• Demonstration / Scenario

• Theory assessment