

# Recognition and treatment of Anaphylaxis

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# Anaphylaxis - Aims & Objectives

- To raise awareness of the causes of Anaphylaxis
- To recognise the signs & symptoms of an Anaphylactic reaction
- To manage and administer appropriate treatment to patients suffering an Anaphylactic reaction

# Definition of Anaphylaxis

- Anaphylaxis is a severe, life threatening allergic reaction to a substance which would normally be considered harmless
- Incidence of anaphylactic reactions are increasing. On average there are around 20 deaths per year in the UK.

# Common Triggers

## Food



- Seafood
- Nuts/Fruit
- Medication
- Eggs/Diary
- Colouring agents

## Injected



- Insect stings
- Drugs
- Contrast Media

## Inhaled



- Pollen
- Dust
- Spores

## Contact



- Latex

# Fatal reactions

In severe, life threatening cases, symptoms tend to appear rapidly. When anaphylaxis is fatal, death usually occurs very soon after contact with the trigger :-

- Food fatalities can cause respiratory arrest within 30 minutes
- Insect stings can cause death from shock within 15 minutes



# Anaphylaxis – What Happens?

- Antibodies are produced in response to the trigger. These antibodies activate specialist cells which release massive amounts of chemicals throughout the body.

# Signs & Symptoms

Early signs often include swelling and a skin rash

- Severe swelling of the lips, tongue, around the eyes.



Widespread red itchy rash will be present in most cases.

# Signs & Symptoms

Chemicals released cause problems with the airway, breathing and circulation.

- The Airway swells and causes difficulty with breathing
- The Bronchioles constrict causing difficult, noisy breathing and/or a wheeze
- Blood vessels dilate and small blood vessels leak fluid causing the blood pressure to drop, child may feel faint or collapse.

# Signs & Symptoms

MILD :-

- Flushed Appearance
- Urticaria
- Anxiety
- Headache
- Nausea
- Abdominal pain

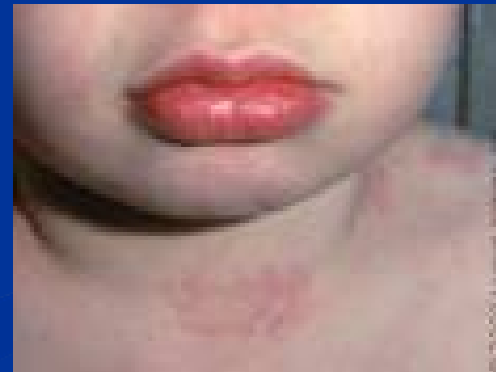


# Signs & Symptoms

## MODERATE :-

- Feeling of Impending Doom!
- Swelling
- Difficulty breathing
- Wheeze
- Stridor
- Fast heart rate

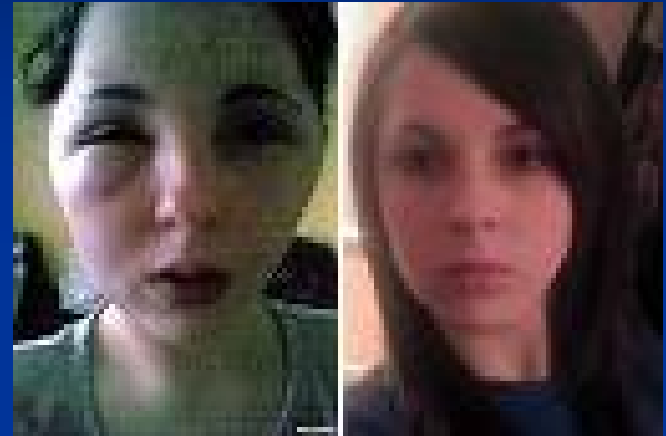
Classic features  
Swelling of lips  
Rash



# Signs & Symptoms

## SEVERE :-

- Swelling of the throat
- Hypoxia (oxygen starvation)
- Hypotension  
(drop in Blood Pressure)
- Decreased level of consciousness
- Respiratory or cardiac arrest



# Immediate Treatment

- Remove the trigger if known e.g. Remove sting, Don't make vomit!
- Call an Ambulance state child is having an Anaphylactic reaction
- Lie child down with or without legs raised. Do not sit or stand them up if feeling faint, this can cause cardiac arrest!
- Administer Adrenaline 'Auto Injector' IM if available
- Recovery position if unconscious

# Adrenaline 1:1000 IM

## Epipen and Anapen Auto-Injectors

Doses	Adult	0.3ml
	Child	0.15ml



By Intra Muscular injection

Only ever use an Auto-injector for the child for whom it is prescribed

Adrenaline can be administered by anyone without a prescription for the purpose of saving life!

# Auto Injectors



# Adrenaline



- Intra Muscular is the route of choice, Auto-Injectors must be administered in the thigh muscle.
- When given early on Adrenaline should begin to reverse symptoms within 1 minute
- Repeat in 5 minutes if no clinical improvement
- In most cases of death, adrenaline has either not been given or given too late!

# Transfer to Hospital



- Any child having had a severe Anaphylactic reaction must be taken to the nearest District General Hospital by ambulance
- 20% have a biphasic reaction
- The child must be transferred by stretcher, prevent risk of empty ventricle syndrome

# Points to consider in School

- Deter sharing food e.g. tuck, celebration food, lunch
- Staff awareness catering staff, people accompanying school trips etc
- Teaching potential problems e.g. cookery, science experiments, handling animal or bird foods

# Prevention is the best policy

Each child should have an individual advice sheet for their specific signs & symptoms

# Gain consent from parents to:

- Administer the emergency injection
- Seek co-operation of other parents i.e. to avoid sending snacks containing the potential trigger to school
- Talk to peers about their child's allergy
- Keep a photo of the child in the staff room to enable identification

# Storage & Disposal

- Auto-injectors should be kept in an easily accessible, safe location
- All staff should be aware of the location
- If used do not touch the needle
- Once used place in a rigid container and give to ambulance staff

# Further Information

- [www.resus.org.uk](http://www.resus.org.uk)
- [www.allergyfoundation.com](http://www.allergyfoundation.com)
- [www.asthma.org.uk](http://www.asthma.org.uk)
- [www.eczema.org](http://www.eczema.org)
- [www.allergyadvice.co.uk](http://www.allergyadvice.co.uk)
- [www.allergyinschools.org.uk](http://www.allergyinschools.org.uk)  
(Anaphylaxis Campaign)

Any Questions



# Summary

- We have raised awareness of the causes of Anaphylaxis
- We can recognise the signs & symptoms of an Anaphylactic reaction
- We can manage and administer appropriate treatment to patients suffering an Anaphylactic reaction