

## Adrenaline for severe allergies (anaphylaxis)

Anaphylaxis is a potentially life threatening, severe allergic reaction and should always be treated as a medical emergency. Adrenaline injected into the outer mid-thigh muscle is the first line treatment for anaphylaxis. Adrenaline (epinephrine) is a natural hormone released in response to stress. When injected, adrenaline rapidly reverses the effects of anaphylaxis by reducing throat swelling, opening the airways, and maintaining heart function and blood pressure.

### Management of anaphylaxis

1. Identify and avoid the cause where possible.
2. Have an ASCIA Action Plan for Anaphylaxis and adrenaline autoinjector close by (easily accessible) to treat if accidental exposure occurs.

ASCIA Action Plans for Anaphylaxis (emergency response plan) must be completed by a doctor and should be kept with the adrenaline autoinjector as the plans include instructions on when and how to give an adrenaline autoinjector. Adrenaline autoinjectors contain a single, fixed dose of adrenaline, and have been designed to be given by non-medical people, such as a friend, teacher, childcare worker, parent, passer-by or by the patient themselves (if they are not too unwell to do this).

### Use of adrenaline in anaphylaxis assists the body's natural response

The body's natural response to anaphylaxis is to release adrenaline, a natural "antidote" to some of the chemicals released as part of a severe allergic reaction. Therefore, injected adrenaline assists the body's natural response. As adrenaline is destroyed by enzymes in the stomach, it needs to be injected. It cannot be given by mouth, and inhaled adrenaline is ineffective. Adrenaline injected into the outer mid-thigh muscle, works rapidly to reduce throat swelling, open up the airways and maintain heart function and blood pressure. It is the only medication available for the immediate treatment of severe allergic reactions (anaphylaxis).

### The potential risks of NOT giving adrenaline far outweigh the potential risks of giving adrenaline

If anaphylaxis is suspected, give the adrenaline autoinjector as not giving the adrenaline autoinjector can be more harmful than giving it, even when it may not have been necessary. If in doubt, give the adrenaline autoinjector.

Common side effects of adrenaline include increased heart rate, trembling and paleness. Therefore, someone may look unwell even after the adrenaline autoinjector has been given. Of course needles may hurt, but you have to remember why you are using it and that the adrenaline can be life-saving.

### Store adrenaline at room temperature

Adrenaline autoinjectors should be stored in a cool dark place at room temperature, but NOT refrigerated as this can damage the autoinjector mechanism. Whilst they should be kept out of the reach of small children, adrenaline autoinjectors must be readily available when needed and not in a locked cupboard. The shelf life of adrenaline is normally 1 or 2 years from the date of supply. You need to regularly check the expiry date on the adrenaline autoinjector.

**Adrenaline should be injected into the outer mid-thigh muscle**

Adrenaline is absorbed most rapidly when injected into the outer mid-thigh muscle. Injecting into the outer mid-thigh also makes it extremely unlikely that damage to any nerves or tendons will occur, or that it will be inadvertently injected into an artery or vein. It is also the least painful part of the body to give an injection.

**There are two doses of adrenaline autoinjectors available in Australia and New Zealand**

Your doctor will advise which dose is required.

- EpiPen adrenaline autoinjectors (0.3mg) are usually prescribed for children over 20kg and adults.
- EpiPen Jr adrenaline autoinjectors (0.15mg) are usually prescribed for children weighing 10-20kg.

Each adrenaline autoinjector contains a single fixed dose of adrenaline. It is designed to be used as a first aid device by people without any medical or nursing training. Instructions for adrenaline autoinjectors are shown on the ASCIA Action Plans for Anaphylaxis that are available on the ASCIA website:

[www.allergy.org.au/health-professionals/anaphylaxis-resources/ascia-action-plan-for-anaphylaxis](http://www.allergy.org.au/health-professionals/anaphylaxis-resources/ascia-action-plan-for-anaphylaxis)

It is important to check that you have been given the ASCIA Action Plan which matches the device you have been prescribed.

If you or your child has been prescribed an adrenaline autoinjector, it is important that you learn and practise how to use it, using a trainer device, which does not contain adrenaline. It is recommended that you practise using the trainer device at least every 3-4 months.

**Further information**

ASCIA anaphylaxis resources: [www.allergy.org.au/health-professionals/anaphylaxis-resources](http://www.allergy.org.au/health-professionals/anaphylaxis-resources)

The ASCIA website ([www.allergy.org.au/patients/patient-support-information](http://www.allergy.org.au/patients/patient-support-information)) includes a list of patient organisation websites including:

- Allergy & Anaphylaxis Australia - [www.allergyfacts.org.au](http://www.allergyfacts.org.au)
- Allergy New Zealand - [www.allergy.org.nz](http://www.allergy.org.nz)

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