



## ADRENALINE AUTO-INJECTORS

### EpiPen® and EpiPen Jr®, Anapen® and Anapen Jr ®

The Therapeutics Goods Administration (TGA) has approved these devices for emergency treatment of anaphylaxis in Australia.

The physical difference between the different brands of devices is the mechanism to activate delivery of adrenaline. The doses are the same for the full size (0.3mg) and half strength (Jr. = 0.15mg) device

- The full size device is recommended for children >20Kg.
- The Jr. half-size is for children weighing about 9.5kg to 20Kg.
- For those in the 6 to 9 kg weight range – I advise 0.1ml the 1:1000 adrenaline (1/10<sup>th</sup> of an ampoule) to be given with a needle and syringe (the 0.3 ml syringe with a needle attached is best for this purpose)

EpiPens and Anapens are classified as **S3** drugs so they can be bought from pharmacies **without a prescription** but they are kept behind the counter rather than on the open shelf.

**Two devices can be prescribed at the subsidised rate for all age groups if they have a recognised risk of anaphylaxis.**

To qualify for the PBS subsidy for the auto-injector, the **initial prescription** requires an authority:

- After being assessed by, or in consultation with, an allergy specialist, immunologist, respiratory physician or paediatrician
- After discharge from hospital or ED following treatment for an allergic reaction with anaphylaxis

For further **prescriptions**, where the patient has previously been issued with an authority prescription for this drug according to the above criteria **and the previous supply has been used or expired**, any doctor can issue further authority PBS-subsidised prescriptions so there is a supply available in the event of an anaphylaxis.

All devices, whether they are prescribed or not, should be replaced by the expiry date or immediately after they are used. The auto-injector should always be provided with advice about when and how to use the device and a written emergency action plan. For further information see the Australasian Society of Clinical Immunology and Allergy website at [www.allergy.org.au](http://www.allergy.org.au).

An EpiPen or Anapen in any first aid kits is advisable as anaphylactic reactions occur unpredictably and in those at risk one may not be enough or, in a worst-case scenario, the one available for the person is misused in some way. A spare EpiPen or Anapen in a school or other emergency kit should NOT be a substitute for individuals at high risk of anaphylaxis having at least one prescribed device.

A person without specific first-aid training in anaphylaxis can administer an auto-injectable device in an emergency if there is no other person nearby who has had basic training in the use of EpiPen or Anapen if the person administering first aid has reasonable grounds for believe the patient is having an acute allergic reaction. Symptoms and signs of anaphylaxis are shown on the ASCIA Action Plan for Anaphylaxis (general), which should accompany an EpiPen or Anapen in any first aid kit.



Instructions for giving the EpiPen and Anapen are shown on the barrel of the device, package insert and the ASCIA Action Plan for Anaphylaxis.

There is always time in an emergency to read these instructions.

Rushing and panicking lead to mistakes.

#### PRECAUTIONS

- Because of the risk of rebound after the adrenaline effect has worn off (in about 20 minutes) an ambulance should be called immediately after giving the EpiPen or Anapen to take the patient to hospital, so that the patient can remain under observation – this is particularly the case if food containing a problem allergen has been ingested as it can take 4 hours and up to 12 hours for the reaction to completely subside
- There are no absolute contraindications (factors which make it unwise to give treatment) for use of an adrenaline auto-injector in a patient who is experiencing anaphylaxis. If there is delay in administering the adrenaline when it is clear that something needs to be done, the adrenaline might not work as well as it would have done if given when first indicated.
- It is very unlikely any serious or permanent harm will occur from mistakenly administering adrenaline via auto-injector to a person who is not experiencing anaphylaxis. Any number of children and adults have administered the device by accident without harm.
- Transient side effects such as pallor, palpitations, and feeling weak and shaky are to be expected.

Cautionary note for older overweight children and adults

*Pediatrics*. 2009;124:65-70

In **up to 30%** of older children and adults the needle length on the full dose (0.3-mg) auto-injector is not long enough to reach the muscle tissue in the outer thigh and the time for the adrenaline to work can be 30 minutes. In instances where the child or adult has a large amount of fat over their leg muscle, education will need to be given about the use of a longer needle and drawing up the adrenaline from an ampoule.