

The recommended treatment for anaphylaxis is a medication called epinephrine. It is the drug form of the hormone adrenaline which the body produces in response to stressful situations. Epinephrine works to reverse the symptoms of a severe allergic reaction by opening the airways and increasing blood pressure.

Epinephrine Auto-injectors

This life-saving medication is given using an auto-injector, a hand-held device which releases a pre-measured dose of epinephrine when applied to the mid-outer thigh. There are currently two epinephrine auto-injectors available in Canada: EpiPen® and ALLERJECT®. Individuals at risk of anaphylaxis are advised to carry an epinephrine auto-injector with them at all times when age appropriate, usually by age 6 or 7. It's important to regularly check the expiry date and replace the device as needed.

Weight/Dosage

According to product instructions, the 0.3 mg dosage of the EpiPen® and ALLERJECT® auto-injectors should be used for adults and children weighing 30 kg (66 lbs) or more; and the 0.15 mg dosage should be used for children weighing 15-30 kg (33-66 lbs).

Some health care providers may prescribe differently than these dosages. The individual's health care provider will prescribe the correct dose for each person, including the switch from the lower dosage to the higher dosage and the dose for those who weigh less than 15 kg (33 lbs).

Body Position

When giving epinephrine, it is recommended to have the person **SIT or LIE DOWN.**

Once it has been given, they should be placed on their back (if they are not already lying down) with their legs raised.

If they feel sick or are vomiting, they should be placed on their side so that the airway is clear and they do not choke on vomit.

It may be helpful to lie down with a young child to keep them calm.

Note: If the person has trouble breathing, they may prefer to stay sitting up.



Although a young child may wish to be held or carried, it is recommended that they remain lying down until emergency medical services come directly to them.

It is very important that they **DO NOT** sit up or stand suddenly during an anaphylactic reaction, even after receiving epinephrine. Sudden changes of position may lower their blood pressure and actually worsen their condition, potentially resulting in death.^{1,2} Also, individuals should not walk to the ambulance, but have emergency responders directed to them.

For Your Information

- Epinephrine will not cause harm if given unnecessarily to a normally healthy person.
- In order to reverse the reaction or prevent it from worsening, it should be given at the start of a known or suspected anaphylactic reaction.
- The risk of not giving epinephrine far outweighs the potential side effects of the medication (e.g. rapid heart rate, dizziness, headache).
- Epinephrine auto-injectors can be given through one layer of clothing, if necessary.
- A second dose of epinephrine may be given as early as 5 minutes after the first dose if there is no improvement in symptoms.
- The effects of epinephrine can wear off. After someone receives epinephrine, 9-1-1 or local emergency medical services should be called, and the individual should go to the hospital immediately (ideally by ambulance) for further treatment and/or evaluation.
- Antihistamines and asthma medications should not be used instead of epinephrine for treating anaphylaxis.
- Epinephrine auto-injectors should be kept at room temperature – not exposed to extreme cold (fridge/freezer) or heat (glove box in a vehicle).
- In Canada, epinephrine auto-injectors are available as behind-the-counter medication which means that a prescription is not required.

References:

1. Simons FER et al, World Allergy Organization Guidelines for the Assessment and Management of Anaphylaxis. WAO Journal 2011; 4:13-37.
2. Pumphrey RSH. Fatal posture in anaphylactic shock. Journal of Allergy and Clinical Immunology 2003;112:451-452.

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