

Epinephrine devices should be used for moderate to severe allergic reactions called anaphylaxis (an-a-fil-ak'-sis), which can be life threatening.

- Anaphylaxis is an emergency and needs to be treated **right away**.
- Epinephrine devices include epinephrine auto-injectors and epinephrine nasal sprays.

What is an epinephrine auto-injector (EAI)?

- An epinephrine auto-injector (also known as an epinephrine pen, Epi-Pen or Auvi-Q) is an injectable home medicine used to help treat a severe allergic reaction. Make sure 2 devices are **always with your child** if the doctor prescribes this medicine.
- There are several brands of epinephrine auto-injectors. Each functions in a slightly different way. They all:
 - Are handheld devices and contain a dose of medicine, a chamber to hold the medicine, a spring to inject it, and a needle.
 - Need to be injected into a muscle to work. This is always in the middle, outer thigh (upper leg) muscle. You may inject it through your child's clothes if needed.

NOTE: Some pen cartons may contain a blank “dummy” pen to use for training.

- It looks a lot like a real epinephrine pen, except it does **NOT** contain any medicine or a needle.
- You may use the training pen to practice the steps in case you need to use the real epinephrine pen in the future.
- Children may also use the training pen for practice as they get older. This is in case they need to use the real epinephrine pen on themselves. Talk with the doctor to discuss when your child may be ready for this.

What is an epinephrine nasal spray?

- An epinephrine nasal spray is a medicine used to help treat a severe allergic reaction by spraying the medicine in a nostril.
- Make sure 2 epinephrine nasal spray devices **and** an epinephrine auto-injector are **always with your child** if the doctor prescribes this medicine.

When should an epinephrine device be used?

If your child has a condition that could result in anaphylaxis, the doctor will prescribe an epinephrine device and may give you an anaphylaxis action plan. Talk about this plan with your child's doctor to be sure you understand when to use the device.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Epinephrine device, continued

Some signs of a severe allergic reaction include:

- Trouble breathing
- Wheezing and coughing
- Hoarseness (changes in the way the voice sounds)
- Repeated sneezing or runny nose
- Vomiting or diarrhea
- Hives
- Swelling of the face, lips or tongue
- Severe itching
- Severe rash
- Feeling very anxious

If your child has any of these signs and you think they may be having an allergic emergency, use the epinephrine device right away and then call 911.

What dose of epinephrine does my child need?

Your child's dose is based on their body weight. The doctor will prescribe the dose that is right for them. Each device contains 1 dose of epinephrine.

Sometimes 1 dose is not enough. Another dose may be given if symptoms do not get better after 5 to 15 minutes. If needed:

- A second epinephrine auto-injector may be given in the opposite thigh.
- A second dose of an epinephrine nasal spray may be given in the same nostril.

What causes severe allergic reactions?

Allergic reactions may be caused by many things. Some more common causes include:

- Insect stings
- Foods
- Drugs or medicines
- Latex

How do I use an epinephrine device?

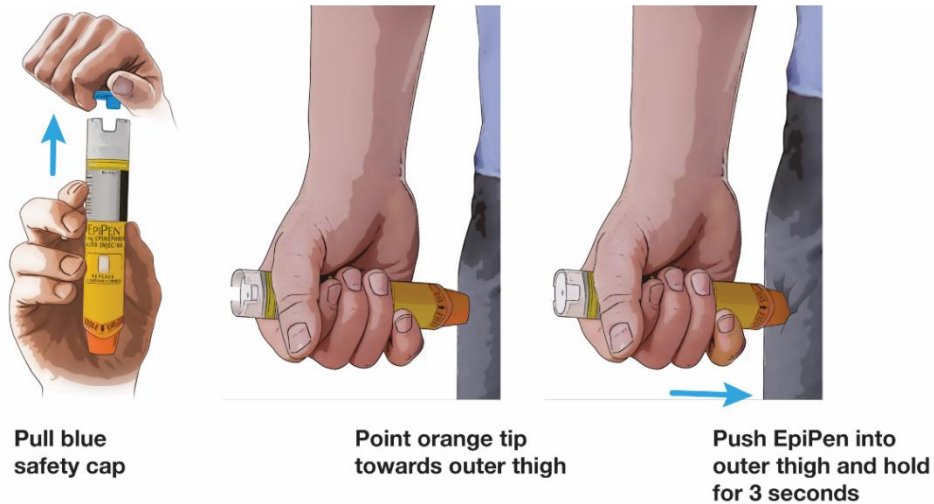
- Read the instructions that come in each package as soon as you get it. This helps you learn about using the device **before** you need to use it in an emergency.
- When you pick up the device, ask the pharmacist to explain how to use it. Many companies also have online training videos.
- Refer to your child's anaphylaxis action plan.
- Ask your pharmacist or doctor if you have any questions about how to use your child's epinephrine device correctly and safely.

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Epinephrine device, continued

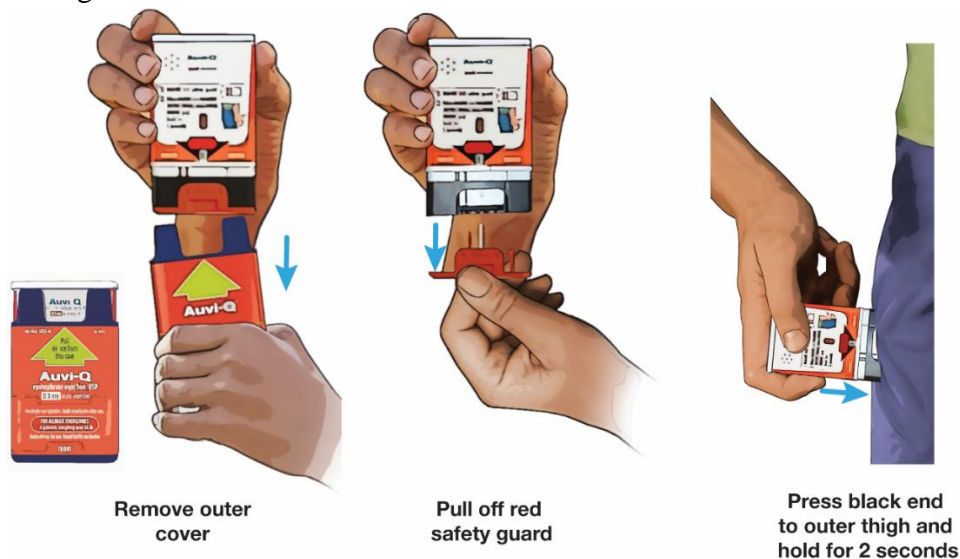
How to use EpiPen (epinephrine) or EpiPen generic auto-injector:

1. Remove from case.
2. Hold auto-injector with your fist with orange tip pointing down.
3. Pull off blue safety cap.
4. **Firmly push orange tip against mid-outer thigh until you hear a click.** It is not necessary to swing the pen from a distance.
5. **Hold it there for 3 seconds.**
6. Remove from thigh, and massage the area for 10 seconds.



How to use Auvi-Q (epinephrine injection, USP):

1. Remove outer case. This will start voice instructions.
2. Pull off red safety guard.
3. Place black end against mid-outer thigh.
4. **Press firmly, and hold it there for 2 seconds.**
5. Remove from thigh.

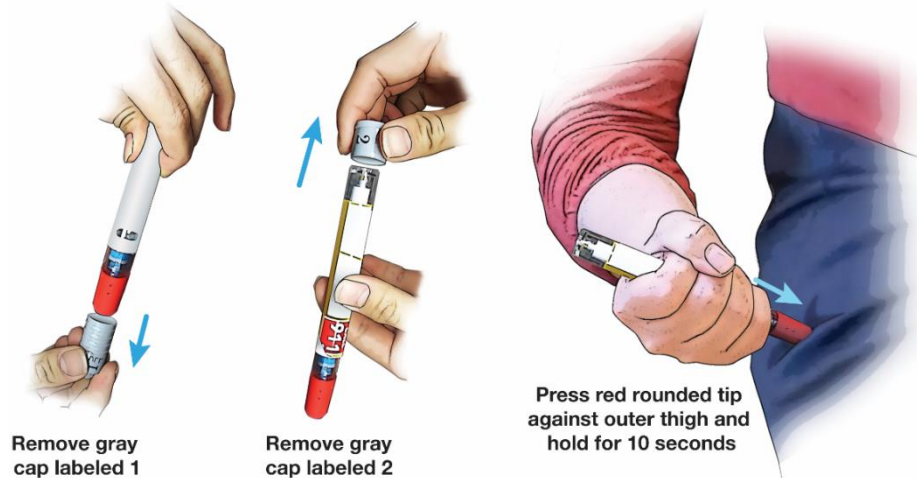


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Epinephrine device, continued

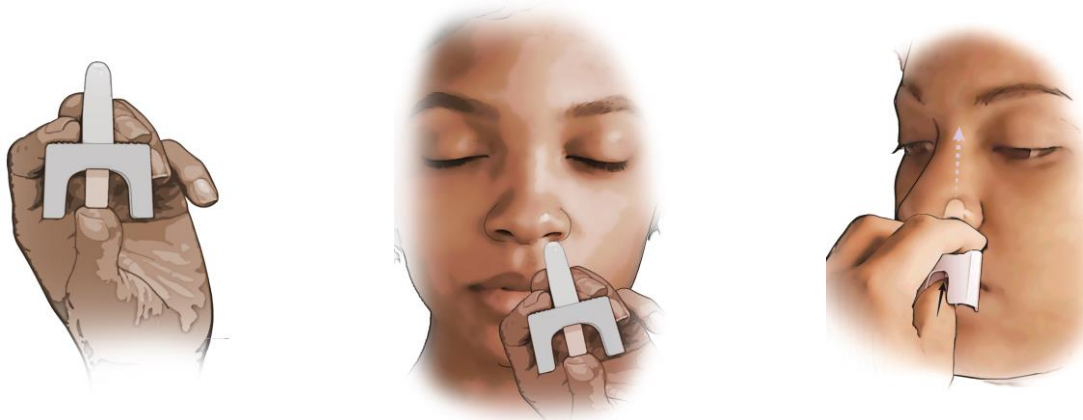
How to use Adrenaclick (epinephrine injection, USP auto-injector):

1. Remove outer case.
2. Remove grey caps labeled “1” and “2”.
3. Place red rounded tip against mid-outer thigh.
4. Press down hard until needle goes in the skin.
5. **Hold it there for 10 seconds.**
6. Remove from thigh.



How to use Neffy (epinephrine nasal spray):

1. Hold device with your thumb on bottom of plunger and a finger on either side of the nozzle.
2. Insert the nozzle fully into 1 nostril until your fingers touch the nose. Keep it straight. Do not angle the tip towards the inner or outer wall of the nose.
3. Press plunger firmly. **Your child should not sniff during or after getting the nasal spray.**
4. A second Neffy device may be used in the same nostril after 5 minutes if symptoms do not get better.



Always carry 2 Neffy devices and an epinephrine auto-injector with your child.

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Epinephrine device, continued

What should I do after using an epinephrine device?

- **Stay with your child and call 911 right away.** The effects of the medicine begin to wear off after 10 to 20 minutes. Your child may need more care at the hospital.
- If possible, keep your child lying down flat or lying on their side in cases where there is vomiting.
- Take the used epinephrine device with you to the emergency department (ED) for proper disposal.

When should I call my child's doctor?

- Call the doctor after your child gets to the hospital. Let them know that your child needed their epinephrine device.
- Also call the doctor if you have any concerns about how your child looks or feels once you get home from the hospital.

Can I re-use an epinephrine device?

No. The epinephrine device should only be used 1 time. Once you use an epinephrine device, get another one at your drug store **right away** so you have it to use in case of another emergency.

What will my child feel after I use the epinephrine device?

Using an epinephrine device causes little pain. Your child may feel a faster heartbeat, nervousness, sweating, dizziness and headache. These feelings most often go away in a short time with rest.

Do epinephrine devices expire?

Yes. The expiration date is printed on the epinephrine device.

Can my child use an epinephrine device themselves?

Many older children use the epinephrine device themselves. Talk with the doctor about when to teach your child to use the epinephrine device and call 911.

Who else needs to have an epinephrine device for my child?

Check with your child's doctor about who should have an epinephrine device and learn how to use it for your child. Others may include:

- Daycare or school workers.
- Other close family members, such as grandparents.
- Other adults that may be around your child for long periods of time. This might include scout leaders or team coaches.

Consider having your child wear a medical ID necklace or bracelet for severe allergies. You can buy one at the drug store or online.

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Epinephrine device, continued

Where can I learn more?

Visit these websites to learn more about how to use epinephrine devices:

- EpiPen (epinephrine) – epipen.com/en/about-epipen-and-generic/how-to-use-epipen
- Auvi-Q (epinephrine injection, USP) – auvi-q.com/about-auvi-q#voice-instructions
- Neffy (epinephrine nasal spray) – <https://neffipro.com/#dosing-and-administration>

Children's Healthcare of Atlanta has not reviewed all of the sites listed as resources and does not make any representations regarding their content or accuracy. Children's Healthcare of Atlanta does not recommend or endorse any particular products, services or the content or use of any third party websites, or make any determination that such products, services or websites are necessary or appropriate for you or for the use in rendering care to patients. Children's Healthcare of Atlanta is not responsible for the content of any of the above- referenced sites or any sites linked to these Sites. Use of the links provided on this or other sites is at your sole risk.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

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