
What is an epinephrine auto-injector (epinephrine pen)?

- An epinephrine auto-injector (epinephrine pen) is a way to help treat a severe allergic reaction. Make sure it is **always with your child** if the doctor prescribes one.
- There are several brands of epinephrine pens, and each works 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.
 - Give your child a dose of a medicine called epinephrine. This medicine is used to treat severe allergic reactions and is most often safe and helpful in treating reactions when used properly. Talk with your child's doctor if you have any concerns.
 - Need to be injected into a muscle to work. This is always in the 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 your child's doctor to discuss when your child may be ready for this.

When should an epinephrine pen be used?

An epinephrine pen should be used for sudden, severe allergic reactions. A severe allergic reaction is called anaphylaxis (an-a-fil-ak'-sis) and can be life threatening. Anaphylaxis is an emergency and needs to be treated **right away**.

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

Some signs of a severe allergic reaction include:

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

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

Epinephrine auto-injector, continued

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

What dose of epinephrine does my child need?

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

Sometimes 1 dose of epinephrine is not enough. Your child's doctor may prescribe more than 1 epinephrine pen. If so, follow your child's doctor's instructions.

What causes severe allergic reactions?

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

- Insect stings
- Foods
- Drugs
- Latex

How do I use an epinephrine pen?

Each brand of epinephrine pen works in a slightly different way.

- Read the instructions that come in each package as soon as you get it. This helps you learn about using the epinephrine pen **before** you need to use it in an emergency.
- When you pick up the pen at your local drug store, ask the pharmacist to explain how to use it. Many companies also have online training videos available.
- Refer to your child's anaphylaxis action plan.

The instructions for some pens are included below. Ask your pharmacist or doctor if you have any questions about how to use your child's epinephrine pen correctly and safely.

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

1. Remove the EpiPen auto-injector from the plastic carrying case.
2. Grasp the auto-injector with your fist with the orange tip pointing down.
3. Pull off the blue safety release cap.
4. From a few inches above the thigh, firmly push the orange tip against the 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 the pen, and massage the area for 10 seconds.

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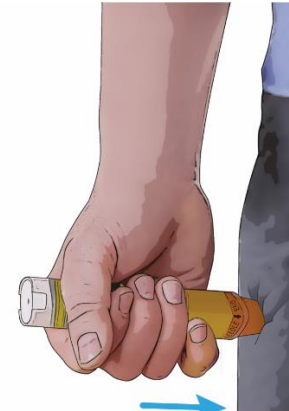
Epinephrine auto-injector, continued



Pull blue safety cap



Point orange tip towards outer thigh



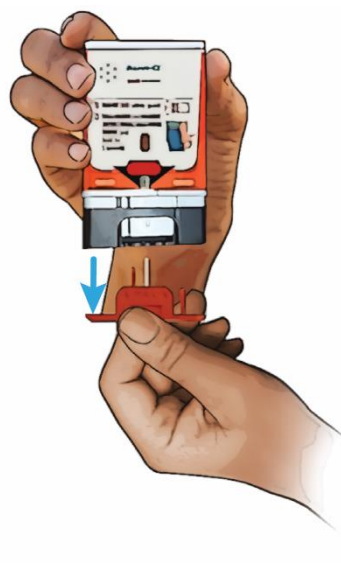
Push EpiPen into outer thigh and hold for 3 seconds

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

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



Remove outer cover



Pull off red safety guard



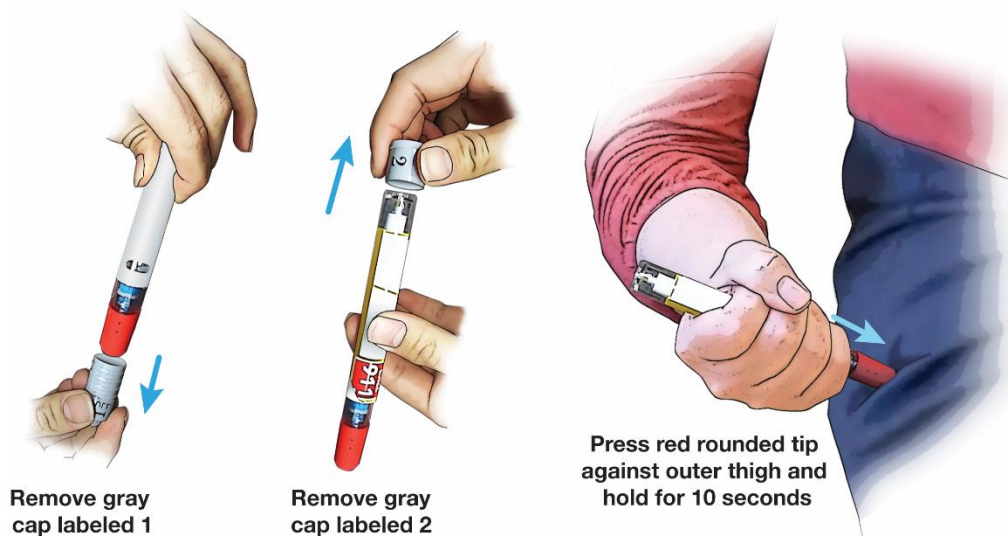
Press black end to outer thigh and hold for 2 seconds

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Epinephrine auto-injector, continued

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

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



After using an epinephrine pen:

- Stay with your child and call 911.
- If possible, keep your child lying down flat or lying on his side just in case they vomit (throw up).

Take the used epinephrine pen with you to the emergency department (ED) for proper disposal.

How do I know my child got an entire dose of medicine?

The medicine is released when you press the epinephrine pen against your child's thigh. If you can see the needle when you remove the epinephrine pen from your child's thigh, the medicine has been released.

Can I re-use an epinephrine pen?

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

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Epinephrine auto-injector, continued

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

Using the epinephrine pen causes very 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.

When should I call my child's doctor?

- After using the epinephrine pen, **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.
- Tell the doctor that you have used the epinephrine pen on your child.
- Also call your child's doctor if you have any concerns about how your child looks or feels once you get home from the hospital.

Do epinephrine pens expire?

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

Can my child use an epinephrine pen themselves?

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

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

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

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

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

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Epinephrine auto-injector, continued

Where can I learn more?

You may visit these websites to learn more about how to use these epinephrine pens:

- 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
- Adrenaclick (epinephrine injection, USP auto-injector) – adrenaclick.com/how_to_use_adrenaclick_epinephrine_injection_USP_auto_injector.php

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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