



LOS ANGELES UNIFIED SCHOOL DISTRICT
Medical Services Division
District Nursing Services Branch

EMERGENCY TREATMENT OF ANAPHYLAXIS EPINEPHRINE AUTO-INJECTOR / NASAL SPRAY

I. GENERAL GUIDELINES

A. PURPOSE

1. To counteract the adverse reaction to an allergen.
2. To provide immediate treatment and access to emergency medical care.

B. GENERAL INFORMATION

1. Anaphylaxis—A severe, systemic, potentially life-threatening allergic reaction affecting multiple body systems.
2. Anaphylactic reaction can occur immediately or be delayed up to two hours or more after exposure. In some cases, symptoms resolve, then recur 8 to 12 hours later (biphasic reaction) and can be more severe.
3. **Causes of Anaphylaxis** may include, but are not limited to:
 - a. Stinging insects—wasps, yellow jackets, hornets, bumble bees, honeybees.
 - b. Foods, especially high-protein foods—most common: seafood (shellfish, fish), nuts (especially peanuts), fruit, wheat, milk, eggs, soy, and food additives.
 - c. Air inhalants—pollen, mold, animal dander or secretions, house dust mites.
 - d. Medications.
 - e. Latex—commonly found in occupational therapy elastic bands, balloons, rubber balls or toys, art supplies, science supplies (e.g., microscope eye pieces, pencil erasers, computer mousepads, gloves, tapes, elastic bandages).
 - f. Chemicals.
 - g. Exercise and idiopathic causes (unknown reason)
4. Signs and Symptoms of Anaphylaxis:
 - a. **Mouth:** Itching, tingling, or swelling of lips, tongue, or mouth.
 - b. **Skin:** Itching or burning, hives, rash, swelling of face or extremities, flushing.
 - c. **Stomach:** Nausea, abdominal cramps, vomiting, diarrhea.
 - d. **Throat:** Tightening of throat, hoarseness or change of voice, hacking, or repetitive coughs.
 - e. **Lung:** Shortness of breath, wheezing, chest pain/tightness, nasal flaring, or complaints of not being able to “catch my breath”.
 - f. **Heart:** Weak or thready pulse, low blood pressure, paleness, blueness, general body weakness, dizziness, fainting/unconsciousness.
 - g. **Other:** Localized or general body swelling apprehension, anxiety, red/itchy/watery eyes, excessive sneezing, nasal congestion.
5. Allergic reactions may also be delayed and present as joint pain, aches,

and/or localized inflammation days after exposure. In these cases, the student should be referred to their licensed healthcare provider.

6. Epinephrine is the most effective treatment of anaphylaxis. A common side effect is an increased heart rate and slight tremor.
7. There are no contraindications to the use of epinephrine for life-threatening allergic reactions. An antihistamine, corticosteroid or bronchodilator may be prescribed to further reduce symptoms after emergency treatment.
8. If using the Epinephrine Auto-Injector, epinephrine cartridge window should be examined periodically to ensure that the solution is colorless, contains no floating particles or are expired and must be replaced.
9. Call 911 for all individuals who receive Emergency Epinephrine.
10. The school nurse in collaboration with the healthcare provider, the school staff, parents, and student develop an emergency care plan.

C. PERSONNEL

1. School nurse.
2. Designated and trained school personnel under indirect supervision of school nurse. Certification in CPR is recommended but not required.

D. EQUIPMENT

1. Provided by parent/guardian:
 - a. Epinephrine Auto-Injector(s) - e.g., EpiPen® and EpiPen Jr® Auto-Injector(s), or epinephrine nasal spray - e.g., Neffy®
 - b. Other prescribed medications.
 - c. Antiseptic wipes if ordered (e.g., alcohol wipes)
2. Provided by the school:
 - a. Disposable non-latex gloves
 - b. Sharps container

II. GENERAL GUIDELINES

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
1. Determine whether the student has signs or symptoms of anaphylaxis	<p>Stay with the student. Remain calm and reassure student. Calming reduces distribution of allergen in the body.</p> <p>Student is not to be moved unless in immediate danger. Lay student down if tolerated, with lower extremities elevated.</p>
2. Ask for HELP Direct other adult to call 911 emergency services immediately.	<u>Obtain medication from storage location</u> if student does not carry the medication. Notify school administrator and school nurse. School nurse or school administrator will notify the parent/guardian.

<p>3. If able, wash hands and put on disposable gloves.</p>	<p>Gloves are not required if not immediately available. Hand sanitizer may be used if water is not available.</p>
<p>4. If using Epinephrine Auto-Injector, administer Epinephrine Auto-Injector (<u>See Figure 1 – Table 1</u>)</p> <ol style="list-style-type: none"> Open and remove the EpiPen from the carrier tube. Tip and slide the Auto-Injector from the carrier tube. Grasp EpiPen with fist around unit with the orange tip facing downward. Pull off the BLUE Safety Release Cap without bending or twisting it. Firmly push the orange tip against the middle outer thigh (90-degree angle) until it clicks. HOLD firmly in place against the thigh for 10 seconds to deliver the medicine. Remove the auto-injector from the thigh. Massage the injection site for 10 seconds. Assess need for second dose of epinephrine in 5-15 minutes. Place EpiPen, needle first back into carrier tube. <p><u>DO NOT USE AUTO-INJECTOR IF USING NASAL SPRAY</u></p>	<p>Epinephrine acts immediately, but the effects last only 15-20 minutes.</p> <p>Student may feel heart pounding. This is normal. Do NOT remove safety cap release until ready to use auto- injector.</p> <p>EpiPen can be injected through clothing. Never put thumb, fingers, or hand over the tip of auto-injector.</p> <p>The orange tip will extend to cover the needle.</p> <ol style="list-style-type: none"> Patient should respond within 5-10 minutes. Alert patient to expected response to epinephrine (anxiety, headache, fear, palpitations, restlessness, tremor, weakness, dizziness, respiratory difficulty) A second dose of epinephrine may be given in 5-15 minutes after the first, if symptoms have not subsided, or if response is inadequate and paramedics have not arrived. <p>*DO NOT ADMINISTER SECOND DOSE OF EPI IN SAME SITE AS FIRST DOSE. IT MAY CAUSE NECROSIS.</p> <p>Place used auto-injector back in the carrier tube. Note the time Epinephrine was given and vital signs, if taken.</p>
<p>5. If using Epinephrine Nasal Spray (<u>Only for use with patients >= 30 kg or >= 66 pounds</u>), Administer Epinephrine Nasal Spray (See Figure -2)</p> <ol style="list-style-type: none"> Insert the nozzles of the nasal spray fully into one nostril until your fingers touch the nose. Holding the nasal spray straight into the nose, press plunger firmly. Assess need for second dose of epinephrine in 5 minutes. In absence of clinical improvement or if symptoms worsen after initial treatment, administer a second dose of nasal spray in the same nostril with a new nasal spray starting 5 minutes after the first dose. 	<p>Consider using Epinephrine Auto-Injector, instead, for patients with underlying structural or anatomical nasal conditions.</p> <p>Each Nasal Spray blister package is for <u>single use</u> and delivers the entire dose upon activation.</p> <p>Do not prime nasal spray.</p> <p>Use the right hand to administer nasal spray to right nostril and left hand to administer nasal spray to left nostril.</p> <p>Do not administer more than two doses. More than two doses must be administered under direct medical supervision.</p>

DO NOT USE NASAL SPRAY IF USING AUTO-INJECTOR	Note the time Epinephrine was given and vital signs, if taken.
6. While waiting for Paramedics: <ol style="list-style-type: none"> Stay with the student and observe for signs of shock. Cover the student with blanket as needed to maintain normal body temperature. Monitor airway and breathing. Verify that 911 emergency services have been called. If certified, provide CPR if needed. If trained, take vital signs. 	Signs of Shock are: <ul style="list-style-type: none"> • Rapid, shallow breathing • Cold, clammy skin • Rapid, weak pulse • Dizziness, fainting, or weakness
7. If the student self-administers EpiPen or Nasal spray, trained school personnel need to be notified IMMEDIATELY after self-administration of medication. Call “ 911 ” Emergency services.	School personnel are to remain with student and contact school nurse and site administrator.
8. If the reaction is the result of an insect sting, after administering the medication, remove stinger by scraping sideways with a fingernail or a flat, firm object such as a credit card. Cool Compress may be applied to the affected area.	Do NOT push, pinch, or squeeze the stinger area. This may cause more venom to be released.
9. Paramedics may administer additional epinephrine when they arrive.	Expended auto-injector in the carrier tube or expended nasal spray blister package is given to paramedic. Provide written information: Medication, Dose, route, time(s) of medication administration, vitals if taken and all information regarding exposure to allergen and student’s reaction. A copy of emergency card may be given to paramedics.
10. Document information on the student’s electronic health record.	Individual who does not have access to the electronic record must document on paper log.

FIGURE 1: EPINEPHRINE AUTO-INJECTOR INSTRUCTIONS FOR USE

Table 1. EpiPen auto-injector dosing

Auto-Injector	Epinephrine Concentration	Patient Weight
EpiPen Auto-Injector	0.3 mg (0.3 mL, 1:1000)	≥30 kg (≥66 pounds)
EpiPen Jr Auto-Injector	0.15 mg (0.3 mL, 1:2000)	15-30 kg (33-66 pounds)



A dose of EpiPen adult or EpiPen Jr requires 3 simple steps: Prepare, Administer, and Get emergency medical help.



Step 1. Prepare EpiPen or EpiPen Jr for injection

Remove the EpiPen or EpiPen Jr from the clear carrier tube.

Flip open the **yellow cap of your EpiPen** or the **green cap of your EpiPen Jr carrier tube**.



Tip and slide the auto-injector out of the carrier tube.



Grasp the auto-injector in your fist with the orange tip pointing downward. With your other hand, **remove the blue safety release by pulling straight up** without bending or twisting it.

Note:

- The needle comes out of the orange tip.
- To avoid an accidental injection, never put your thumb, fingers or hand over the orange tip. If an accidental injection happens, get medical help right away.



Step 2. Administer EpiPen or EpiPen Jr

Hold the auto-injector with orange tip near the middle of the outer thigh (upper leg).

Swing and firmly push the orange tip against the middle of the outer thigh until it 'clicks'.

Keep the auto-injector firmly pushed against the thigh at a 90° angle (perpendicular) to the thigh.



Hold firmly against the thigh for approximately 10 seconds to deliver the medicine. The injection is now complete.



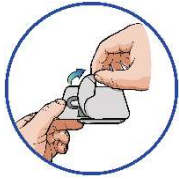
Remove the auto-injector from the thigh. The orange tip will extend to cover the needle.



Massage the injection area for 10 seconds.

Step 3. Get emergency medical help now. You may need further medical attention. You may need to use a second EpiPen or EpiPen Jr auto-injector if symptoms continue.

FIGURE 2: EPINEPHRINE NASAL SPRAY INSTRUCTIONS FOR USE



Remove nasal spray device by pulling open packaging.



Hold device as shown with your thumb on the bottom of the plunger and fingers on either side of the nozzle. Do not pull or push the plunger. Do not test or pre-spray the device.

First Dose



Insert the nozzle into a nostril until your fingers touch your nose. Keep the nozzle straight into the nose pointed toward your forehead.

DOSAGE FORMS AND STRENGTHS Nasal Spray: 2 mg/0.1 mL of epinephrine per spray in a single-dose nasal spray. Only for use with patient weight of greater than 30 kg (66 lbs).



Press plunger up firmly to activate. Discourage sniffing during and after administration. If second dose of nasal spray is needed, administer into the same nostril 5 minutes after the first dose.

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