

# KENTUCKY DEPARTMENT FOR PUBLIC HEALTH CLINICAL PROTOCOL FOR EPINEPHRINE AUTO-INJECTORS IN THE SCHOOL SETTING



## Background

[KRS 158.836](#) makes provisions for students with life-threatening allergies to have access to an epinephrine auto-injector in school, and [KRS 158.832](#) clarifies definitions. KRS158.836 includes:

- A student who has a documented life-threatening allergy shall have:
  - a) An epinephrine auto-injector provided by his or her parent or guardian in his or her possession or in the possession of the school nurse, school administrator, or his or her designee in all school environments that the student may be in.
  - b) A written individual health care plan in place for the prevention and proactive management for the student in all school environments that the student may be in. The individual health care plan may be incorporated in the student's individualized education program or student's 504 plan.
- Each school is encouraged to keep an epinephrine auto-injector in a minimum of two (2) locations in the school so that epinephrine may be administered to any student believed to be having a life-threatening allergic or anaphylactic reaction.
- Schools electing to keep epinephrine auto-injectors shall maintain them in a secure, accessible, but unlocked location. This shall apply to the extent that the epinephrine auto-injectors are donated to a school, or a school has sufficient funding to purchase the epinephrine auto-injectors. Epinephrine auto-injectors may only be purchased with a prescription from a medical provider or pharmacist who may dispense per KRS 311.646 [statute.aspx \(ky.gov\)](#).
- Each school electing to keep epinephrine auto-injectors shall implement policies and procedures for managing student's life-threatening allergic reaction or anaphylactic reaction developed and approved by the local school board.
- Clinical protocols shall be developed by the Kentucky Department for Public Health to address epinephrine auto-injectors kept by schools and to advise on clinical administration of epinephrine auto-injectors.

Anaphylaxis is a life-threatening allergic reaction that can occur quickly and can cause death within minutes. In some instances, signs and symptoms of anaphylaxis can occur up to a few hours after exposure to the allergen.

Common triggers for an anaphylaxis include food (particularly peanuts, tree nuts, shellfish, soy, milk, wheat or eggs); stinging insects (such as wasps or bees); medications, latex, animal dander or exercise.

## Signs and Symptoms of Anaphylaxis

Signs and Symptoms of anaphylaxis may include, but are not limited to:

- Mouth: tingling, itching, swelling of the tongue, lips, or mouth; blue/gray color of the lips
- Throat: tightening of throat, tickling feeling in back of throat, hoarseness or change in voice
- Nose/Eyes/Ears: runny, itchy nose; redness and/or swelling of eyes; throbbing in ears
- Lung: shortness of breath, repetitive shallow cough, wheezing
- Stomach: abdominal cramps, nausea, vomiting, diarrhea
- Skin: itchy rash, hives, swelling of face or extremities, facial flushing, sweating
- Heart: weak pulse; rapid pulse; palpitations; fainting; blueness of lips, face, or nail beds; paleness; lightheadedness; sense of impending doom or loss of consciousness

\*\*\*It is important to note that not all signs and symptoms may be present during anaphylaxis.

Since the severity of an allergic reaction is difficult to predict, the allergic response may rapidly progress to anaphylaxis. It is important for students with known severe allergies who are at risk of anaphylaxis to have an Allergy or Anaphylaxis Emergency Action Plan of Care. ***Epinephrine should be administered promptly at the first sign of anaphylaxis. It is safer to administer epinephrine than to delay treatment for anaphylaxis.***

Epinephrine should be stored at room temperature (between 59-86 degrees F) in a dark area. The epinephrine should be checked monthly to ensure proper storage, expiration date, and medication stability. Expired auto-injectors or those with discolored solution or solid particles should not be used. Discard them in a sharps container. Personnel should be familiar with the type of epinephrine auto injector maintained by the school and its use.

### **Responding to Anaphylaxis**

***This is a life and death decision. Act promptly.***

Go to the student. Never send a student to the health room alone or leave a student alone. Do not move a student who is in severe distress.

A. **For a student with specific orders on file (written individual health plan), follow the student's individually prescribed emergency action plan as it relates to a known life-threatening allergy and/or known history of anaphylaxis.** Note: For some students with known potential for life-threatening allergic reactions, the individual health plan may call for administration of epinephrine by auto-injector after exposure to a known allergen and before symptoms of anaphylaxis may be present.

B. **For a student without specific orders on file:**

1. Based on symptoms observed, determine that an anaphylactic reaction is occurring.
2. Act quickly. Only a few symptoms may be present. The severity of symptoms can change rapidly.
3. Place student on his/her back if possible. Do not give anything by mouth if the individual is unconscious or unable to swallow.
4. Determine the proper dose of epinephrine.  
Dosages for epinephrine auto-injection:
  - a. If the child weighs 33 (15 kg) to 66 pounds (30kg), administer 0.15 mg of epinephrine (junior size auto-injector.)
  - b. If the child is 66 pounds (30kg) or over, administer 0.30 mg of epinephrine (regular size auto-injector.)
5. **Remove colored safety cap and INJECT EPINEPHRINE IMMEDIATELY into outside of mid-thigh (through clothing if necessary), press firmly and hold for 10 seconds for most brands of auto-injectors, such as the EpiPen Auto-Injector, but only 5 seconds for the Auvi-Q auto-injector. Note the time that the epinephrine is administered. For questions regarding dosage or timing of the auto injector brand being used, please see product instructions developed by the manufacturer.**
6. **Call 911 or direct someone to call 911 to request immediate medical assistance.** Advise the 911 operator that anaphylaxis is suspected, and that epinephrine has been given or is being given.
7. Direct someone to call the school nurse or front office.
8. Direct someone to notify the child's parents.

9. Begin monitoring airway and breathing. For a severe reaction consider keeping student lying on back with legs raised.
10. Remain with student and reassure him or her as needed.
11. A second dose of auto-injectable epinephrine may be given 5 minutes or more after the first if symptoms persist or recur.
12. Administer CPR if needed.
13. Document student's name, date and time epinephrine was administered on the used epinephrine auto-injector and give to Emergency Medical Services (EMS), when EMS arrives, so that the information will accompany the student to the emergency department.
14. Even if symptoms subside or go away, EMS must still be summoned to respond, and the student must be evaluated by a physician. A delayed or secondary reaction may occur up to several hours later.
15. Document the incident and complete school incident report.
16. Replace epinephrine stock medication as appropriate.

### **References and Additional Resources**

- [Medication Administration Training Program - Kentucky Department of Education](#) Updated 2021
- KDE [Medication Administration Training Manual \(ky.gov\)](#) Module III, Emergency Medications
- National Association for School Nurses (NASN) [NASN Allergies and Anaphylaxis \(updated March 2019\) includes sample planning checklists, sample policy, sample practice forms, school personnel training resources and education resources.](#)
- American Academy of Allergy Asthma & Immunology (AAAAI) [Anaphylaxis Symptoms, Diagnosis, Treatment & Management | AAAAI](#)
  - [Microsoft Word - Anaphylaxis Emergency Action plan updated 2020 AM.docx \(aaaai.org\)](#)
- [Guidance on Completing a Written Allergy and Anaphylaxis Emergency Plan | Pediatrics | American Academy of Pediatrics \(aap.org\)](#)
- Food Allergy and Anaphylaxis Network (FAAN) [Back-to-School Resource Hub | Food Allergy Research & Education](#)
- CDC Food Allergies [Food Allergies | Healthy Schools | CDC](#)
- CDC [Voluntary Guidelines for Managing Food Allergies In Schools and Early Care and Education Programs \(cdc.gov\)](#)
- Epi Pen Auto-Injector [Epinephrine in Schools | EpiPen4Schools®](#)
  - The *EPIPEN4SCHOOLS* program provides up to four free EPIPEN (epinephrine injection, USP) or EPIPEN JR (epinephrine injection, USP) Auto-Injectors in the form of two EPIPEN 2-PAK® cartons, two EPIPEN JR 2-PAK® cartons or one 2-Pak of each kind along with EPIPEN Trainers and a detailed training video, to qualifying public and private kindergarten, elementary, middle and high schools in the US. Schools may receive the authorized generic versions of EPIPEN and EPIPEN JR.
- Auvi-Q Epinephrine Auto-Injector [AUVI-Q® \(epinephrine injection, USP\) for Anaphylaxis](#)
- Management of Food Allergy in the School Setting, *Pediatrics*, 2010 Sicherer, et al : [Management of Food Allergy in the School Setting | Pediatrics | American Academy of Pediatrics \(aap.org\)](#)