Anaphylaxis & Administration Of Stock Epinephrine

Training for Michigan Schools

From: Michigan Association of School Nurses
Welcome & Thank You

Today we will Learn & Practice

Learn to recognize the symptoms of anaphylaxis and practice using stock epinephrine.

Learn about anaphylaxis:
✓ causes
✓ signs/symptoms
✓ treatment

Adapted from: Genesee ISD Epinephrine Training by Evilia A. Jankowski, MSA, BSN, RN
Training Session Outline

• Discuss Michigan law requiring school stock epinephrine & anaphylaxis training

• Watch video (if available): Food Allergies & Anaphylaxis in School - What School Staff Need to Know by AllergyHome.org

• Recognition of anaphylaxis

• Demonstration & practice using epinephrine auto-injector (EAI) trainer device

• Discuss case scenarios

• Questions/Answers

• Competency checklist & quiz

• Evaluation
What Is Anaphylaxis?

Anaphylaxis has been defined as a serious allergic reaction that is rapid in onset and may cause death.

Symptoms typically involve more than one body system:
- Brain
- Gut
- Heart
- Lungs
- Mouth
- Skin
- Throat

Anaphylaxis is **ALWAYS** a life-threatening medical emergency.

The quicker anaphylaxis is identified and treated, the greater the chance of survival.
Emergency Anaphylaxis Plan For Stock Epinephrine

This protocol covers critical information and steps including:

- Signs/symptoms of anaphylaxis
- Action steps
- Monitoring steps
- Follow-up responsibilities

MASN Emergency Anaphylaxis Plan for Stock Epinephrine
Food Allergy Is A Risk Factor For Anaphylaxis

Top 8 Food Allergens:
- Milk
- Soy
- Peanut
- Egg
- Fish
- Tree Nuts
- Wheat
- Shellfish


Medical Identification

- Look for medical identification.
- Forms of medical identification might include:
  - bracelets
  - sports wrist bands
  - necklaces
  - cell phone
  - shoe tags
- Younger students may wear clothing labels listing their allergies.
Public Act 186
• Allows prescribers to prescribe and pharmacists to dispense EAIs to school boards.

Public Act 187
• Requires public schools K-12 to maintain stock epinephrine for anaphylaxis and have staff trained by an RN in the use and administration of an EAI.
Immunity/Protection:

“According to state law, authorized school personnel who use an epinephrine auto-injector in good faith are immune from criminal charges or civil damages unless an act or failure to act was due to gross negligence or willful and wanton misconduct.”
**MDE Model Policy Addendum**

- Schools maintain documentation of all training.

- Documentation available upon request.

- Designated school staff check expiration dates and integrity of stock epinephrine auto-injectors at least twice per year and re-stock as needed.
District Policies

- Know your district
  - medication administration policy
  - stock epinephrine policy

- Understand role as school staff

- Be aware of specific roles and names of key school personnel involved in anaphylaxis
Sample guidance from MDE includes these steps:

**Based on symptoms:**
- Determine if an anaphylactic reaction appears to be occurring.
- Act quickly.
- It is safer to give epinephrine than to delay treatment.
- Anaphylaxis is a life-threatening reaction.
Sample guidance from MDE continued:

If you are alone & able to give epinephrine:
- Call out for help immediately.
- Get stock epinephrine and give it.
- Do not take extra time seeking: give the epinephrine.
- Call 911 promptly AFTER administering the epinephrine.
Epinephrine Auto-injector

Training focus: EpiPen®
Website: www.epipen.com

• EpiPen® Full Strength (regular)
  • Dose 0.3mg per single EpiPen®
  • Yellow box & yellow cap
  • Over 55 lbs.

• EpiPen® Junior
  • Dose 0.15mg per single EpiPen®
  • Green box & green cap
  • 22 - 55 lbs.
EpiPen®

Orange tip containing needle

Blue safety release cap

Photo credit: Anne F. Russell BSN, RN, AE-C. Used with permission.
If the needle guard is not out, the dose of epinephrine was not given.
Using An EpiPen®

www.epipen.com also has a video showing how to use an EpiPen®

Of particular note:
* EpiPen administration time has been reduced to 3 seconds from 10 seconds.
* Consider placing the orange tip of the EAI against the mid-outer thigh and just press and push firmly vs. Swing and Jab

www.epipen.com
Adapted from: FARE
• Epinephrine is the 1\textsuperscript{st} line of treatment for anaphylaxis.

• The faster epinephrine is given at the onset of anaphylaxis the better the chance of reversing the symptoms.

• EpiPen® is an auto-injector device which delivers one dose of epinephrine and is disposable.
Using An EpiPen®

1. **INJECT EPINEPHRINE IMMEDIATELY.**
2. **Call 911.** Tell emergency dispatcher the person is having anaphylaxis and may need epinephrine when emergency responders arrive.
   - Consider giving additional medications following epinephrine:
     » Antihistamine
     » Inhaler (bronchodilator) if wheezing
   - Lay the person flat, raise legs and keep warm. If breathing is difficult or they are vomiting, let them sit up or lie on their side.
   - If symptoms do not improve, or symptoms return, more doses of epinephrine can be given about 5 minutes or more after the last dose.
   - Alert emergency contacts.
   - Transport patient to ER, even if symptoms resolve. Patient should remain in ER for at least 4 hours because symptoms may return.

Of particular note:
*Patients/families should report any signs of infection/injury at injection site.*
Epinephrine Availability

• Stock epinephrine auto-injectors
  • must be available for use at school during school hours. (PA 187)

  • should not be taken off campus

  • may be available before and after school, (should be reflected in School Board policy)

Never Lock Up Epinephrine Auto-injectors!
Epinephrine Availability

• REMINDER! Students with
  • a diagnosed allergy
  • a current medical plan for anaphylaxis
  • their own prescribed epinephrine auto-injector
    should have their EAI available as planned/ordered

• May include
  • before and after school activities
  • field trips
  • the bus ride to and from school.

These arrangements will need to be worked out by the team planning for the individual student.

Never Lock Up Epinephrine Auto-injectors!

Adapted from Genesee ISD Epinephrine Training by Evilia A. Jankowski, MSA, BSN, RN
Storage & Stocking of Epinephrine

Protect from exposure to:

- Light
- Extreme heat or cold
- Store at room temperature

Maintenance & tracking

Replenish supply

Places to check EpiPen® expiration date


www.epipen.com

Adapted from: Genesee ISD Epinephrine Training by Evilia A. Jankowski, MSA, BSN, RN

Photo Credit: Anne F. Russell, BSN, RN, AE-C. Used with permission.
Expiration & Disposal of Epinephrine

- Check expiration date on stock EAIs at start of the school year.
- Track expiration dates.
- Dispose of expired EAIs per MDEQ Guidance.
- Order new EAIs prior to expiration.
- Replace if solution is discolored or contains any precipitate.

EpiPen® window to check color of medication
Stock EAI's During Summer or Breaks

• Replace any stock EpiPens® in late August that will expire during the next academic year.

• Stock EpiPens® with a long expiration period that will last well into next school year.

• Store stock EpiPens® at room temperature over summer and breaks.
Demonstration: how to use an EpiPen®
Tips For Using An EpiPen®

• Securely hold student.
• Inspect injection site for items that may interfere with delivery of medication (e.g. phones)
• Instructions may vary depending on brand of epinephrine auto-injector device.

Of particular note:
*In young children, the leg should be held firmly in place to limit movement prior to injection - to minimize injury (e.g. lacerations/embedded needles)
It is important to have someone help hold a young student while epinephrine is administered.
1 Person Hold

- Young student is able to sit up safely on lap of rescuer.
- Student is held securely while administering injection.
- One arm of rescuer holds student’s upper torso and arms in place away from injection site.
- Injection is given in mid-outer thigh with student’s leg held securely between legs of rescuer.

Photo credit: Michael Pistiner, MD, MMSc. Used with permission.
2 Person Hold For Outer Thigh Injection

- **Young student** sits on holder’s lap facing sideways.

- **Holder** restrains student’s outer arm. Legs are either restrained between holder’s legs or by placing hand on student’s outer knee or lower leg.

- **2nd rescuer** uses one hand to hold outer thigh in place and injects using other hand into mid-outer thigh.
Epinephrine Side Effects

Common side effects from epinephrine:

- Pale
- Shaky
- Heart racing
- Anxious
- Nausea
- Headache


Practice: become more familiar and comfortable with use of an EpiPen®

EpiPen® trainer device: does not contain medication or needle
911 Emergency Protocols

Post Epinephrine Administration: 6 Important Steps

CALL
- Call 911
- Report anaphylaxis suspected & time EpiPen® given

REPORT
- Stay on phone until all questions are answered
- Know identifying number on closest outside door for EMS
911 Emergency Protocols

Post Epinephrine Administration (cont.)

NOTIFY

- Inform office of 911 call, student name, and your location.
- Office to notify parent/guardian

STAY

- Remain with student until EMS arrives
- Keep student calm and sitting if having breathing difficulty.
- Keep in lying position with feet elevated if pale and faint
- Roll to side if vomiting
Post Epinephrine Administration (cont.)

- Give 2nd EpiPen® (from twin pack) in 5 to 15 minutes if symptoms persist or return before EMS arrives.
- Start CPR if necessary.

- Complete EAI Administration Documentation form and submit to school administrator.
- Refer family to primary care health care providers/allergy clinic team.
- Evaluate/review staff response to the emergency and any needed improvement steps.
✓ Note time of event
✓ Take notes as event occurs.
✓ Send documentation and emergency contact information with EMS technicians.
✓ Complete district incident report
✓ This information will be reported to MDE in June
Take Away Points

- Law mandates that stock epinephrine is available during the school day.
- “Think Anaphylaxis” when assessing an ill student.
- Treat with epinephrine if anaphylaxis is suspected.
- Call 911.
- Document.
- Evaluate the event.
Food Allergies & Anaphylaxis in Schools: What School Staff Need to Know
Conclusion & Q/A Time

- Training you received today may help save a life.

- The school district and students/families appreciate your time, effort and willingness to be trained.

- Please routinely review material.

- The AllergyHome.org module is available on that website to view at your convenience.
Conclusion & Q/A Time

- Questions and Answers
- Evaluation
- Self Assessment Quiz and Review
- Competency Checklist
- Certification of Completion of Training