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
• Demonstrate & 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
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.

Epinephrine & Michigan Law
- Public Act 186
  - Allows prescribers to prescribe and pharmacists to dispense EAls to school boards.
- Public Act 187
  - Requires public schools K-12 to maintain stock epinephrine for anaphylaxis, administered by an RN in the use and administration of an EAI.

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

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
Responding To 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.

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® Adult (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.
**Slide 16**

*Orange tip containing needle*

*Blue safety release cap*

*Photo credit: Anne F. Russell BSN, RN, AE-C. Used with permission.*

---

**Slide 17**

*Safety cap off*

*Needle guard out*

*If the needle guard is not out, the dose of epinephrine was not given.*

*Photo credit: Anne F. Russell, BSN, RN, AE-C. Used with permission.*

---

**Slide 18**

*Using An EpiPen®*

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

Of particular note:

- EpiPen® administration time from puncture to injection is 3 seconds from 10 seconds.
- When placing the needle tip, remember the needle is slanted and push down and push away, vs. Swing and jab.

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

*Adapted from: Genesee ISD Epinephrine Training by Evilia A. Jankowski, MSA, BSN, RN*
Slide 19

- Epinephrine is the 1st 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.

Slide 20

**Using An EpiPen®**

- INJECT EPINEPHRINE IMMEDIATELY.
- Call 911. For emergency treatment the patient is having an anaphylactic event and may need epinephrine when emergency services have been called.
- Do not give epinephrine to a patient with certain conditions. (See the pancreas and liver to avoid an allergic reaction.
- Lie the patient flat, raise legs and keep warm. If breathing is difficult or there are vomiting, move the patient to a sitting position.
- Do not give epinephrine to a patient who has a known allergy to epinephrine. Anaphylaxis can be due to an allergic reaction.
- Alert emergency contacts.
- Transport patient to the nearest hospital.

*Place of training should reflect any signs of indicative injury at injection site.*

Slide 21

**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**

- **REMEMBER!** Students with:
  - a diagnosed allergy
  - a current medical plan for anaphylaxis
  - their own prescribed epinephrine auto-injector

- They 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!*

---

**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

---

**Expiration & Disposal of Epinephrine**

- Check expiration date on stock EAIs at the 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.

---
### Slide 25

**Stock EAI 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.

---

### Slide 26

**Demonstration**

Demonstration: how to use an EpiPen®

---

### Slide 27

**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)*

---
Slide 28

**Demonstration & Practice**

- It is important to have someone help hold a young student while epinephrine is administered.

Slide 29

**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.

Slide 30

**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

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
**Slide 34**

**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

**MASN**

**MASN Anaphylaxis Took Kit: 911 Emergency Protocols**

**Post Epinephrine Administration**

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

- **FOLLOW UP**
  - Complete EAI Administration Documentation form and submit to school administrator.
  - Refer family to primary care health care providers/allergy specialist team.
  - Evaluate/assess staff response to the emergency and any needed improvement steps.

**MASN**

**Slide 35**

**911 EMERGENCY PROTOCOLS**

Post Epinephrine Administration (cont.)

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

- **FOLLOW UP**
  - Complete EAI Administration Documentation form and submit to school administrator.
  - Refer family to primary care health care providers/allergy specialist team.
  - Evaluate/assess staff response to the emergency and any needed improvement steps.

**MASN**

**Slide 36**

**Documentation**

- 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

**MASN**
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.

AllergyHome.org Module

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.