Managing Allergies and Anaphylaxis at School: Training for School Personnel

Recognizing Severe Allergic Response
Use of Epinephrine Auto-Injectors

The resources for this presentation were created by the New York Statewide School Health Services Center in collaboration with New York State Department of Health (NYSDOH) New York State Education Department (NYSED)

www.schoolhealthservicesny.com
This training program may be used to provide training on signs and symptoms of severe allergic reactions (Anaphylaxis) and training on use of epinephrine auto-injectors to allow **Unlicensed school staff** to administer epinephrine auto-injectors to **students or staff members regardless of known history of allergy**. This training is delivered by the collaborative provider or their designee as specified in the collaborative agreement.
Objectives

Upon completion of this training you will be able to:

- Describe the state regulations which allow unlicensed staff to possess and administer epinephrine auto-injectors in life threatening situations.
- Identify common causes of allergic emergencies
- Recognize warning signs of allergic emergency
- Follow district policy to call for emergency transport
- Follow the correct steps to administer an epinephrine auto-injector
- List steps for providing ongoing care while awaiting emergency transport
- Describe methods for storing, handling, and disposing of epinephrine auto injectors
- Complete the post-training test on causes, signs and symptoms and appropriate use of epinephrine auto-injector for anaphylaxis, required storage, documentation and reporting with 100% accuracy.
Unlicensed school staff may:

Administer an EAI to someone who does not have an order if trained by the collaborative provider or their designee in accordance with the collaborative agreement (Education Law Article 19 § 921, and Public Health Law 3000c)
Why Is This Important

Timely administration of epinephrine can mean the difference between life and death.

25% Students Undiagnosed
Terms to Know

- **Allergen**: a substance capable of producing an immediate hypersensitivity (allergy)

- **Anaphylaxis**: A potentially life-threatening medical condition occurring in allergic individuals after exposure to an allergen

- **Trained/Designated Staff**: School staff who have successfully completed approved training on anaphylaxis and use of epinephrine auto-injectors (EAI)

- **Emergency Care Plan or Emergency Action Plan**: A plan of care that describes step by step how to care for someone with a health emergency

- **Epinephrine auto-injector (EAI)**: Medical device used to deliver a measured dose of epinephrine using auto-injector for the treatment of acute allergic reactions to avoid or treat the onset of anaphylactic shock.
Allergy Overview

- Many different substances can cause allergic reactions
- Reactions begin when a susceptible person eats, drinks or touches the offending item or it gets into their eyes, nose, or mouth
- Initial exposure may create no symptoms and go unnoticed
- Reactions can occur minutes to hours after ingestion
- Symptoms can be mild to life-threatening depending on the location in the body in which the response occurs
Anaphylaxis

A potentially life-threatening medical condition occurring in allergic individuals after exposure to an allergen is called **ANAPHYLAXIS**

Symptoms include but not limited to:

- Breathing difficulties
- Drop in blood pressure or shock

Both may be potentially fatal

**Immediate Intervention Is Needed**
Common Causes of Allergic Reactions

- Foods are the common cause for children
- Venom from insect stings such as bees, wasps, hornet and yellow jackets.
- Plants such as poison ivy and oak, and pollen from ragweed and grasses
- Medications including antibiotics and others
- Other causes include latex, glue, soaps and other over the counter products
Food Allergies Are The Most Common

- 5-6% of students have a food allergies
- 16-18% of students experience their first reaction at school
<table>
<thead>
<tr>
<th>Common Food Allergies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanuts</td>
</tr>
<tr>
<td>Shellfish</td>
</tr>
<tr>
<td>Fish</td>
</tr>
<tr>
<td>Treenuts (i.e. pecan, walnut, cashews, etc.)</td>
</tr>
<tr>
<td>Eggs</td>
</tr>
<tr>
<td>Milk</td>
</tr>
<tr>
<td>Soy</td>
</tr>
<tr>
<td>Wheat</td>
</tr>
</tbody>
</table>
THINK  F.A.S.T.

**Face:**
- redness, itching or swelling of lips
- tongue
- face

**Airway:**
- trouble breathing
- swallowing
- talking

**Stomach:**
- pain
- cramps
- vomiting
- diarrhea

**Total Body:**
- hives, itchiness
- swelling
- paleness
- fainting/dizziness
- sense of doom
Talking The Talk
How A Child Might Describe A Reaction

My lips feel tight
My mouth/tongue feels funny
There’s something stuck in my throat
My tongue is itching, burning or tingling
There’s a frog in my throat
Signs and Symptoms

**Timing**

- Symptoms usually appear within minutes
- Can occur up to 2 hours later
- Rebound effect is resurgence of symptoms
# Epinephrine Auto Injectors

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Needle Exposed After Injection</th>
<th>Dosing Per Manufacturer All Brands</th>
<th>Dosing Per 2011 NIAID-Sponsored Expert Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrenaclick™</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auvi-Q™</td>
<td>No</td>
<td>0.15 mg</td>
<td>0.15 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33 - 66 lbs</td>
<td>&lt; 55 lbs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approximate Ages 4-8</td>
<td>Approximate Ages 4-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grades Pre K-3</td>
<td>Grades Pre K-1</td>
</tr>
<tr>
<td>EpiPen® and EpiPen Jr®</td>
<td>No</td>
<td>0.3 mg</td>
<td>0.3 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66 lbs or &gt;</td>
<td>55 lbs or &gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approximate Ages 8-adult</td>
<td>Approximate Ages 6-adult</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grades 3-12/adult</td>
<td>Grades 1-12/adult</td>
</tr>
<tr>
<td>Epinephrine Injection, USP</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>auto-injector (Authorized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>generic (AG) of Adrenaclick™</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 4 types
- Directions for use vary by type
- 0.15 pediatric dose
- 0.30 adult dose
- Adult dose can be used if no pediatric dose is available

Note: Age/Grade levels are approximate based on CDC Growth Charts (2000) at www.cdc.gov/growthcharts
What Does Epinephrine Do?

Epinephrine, also known as Adrenalin:

- Constricts blood vessels raising blood pressure
- Opens airways in the lungs to improve breathing
- Stimulates the heart beat
- Works to reverse hives and swelling
Severe Allergic Reaction

**Step 1 Administer and Activate EMS**

- **Notify the school nurse (if available)**
  - Follow the directives of the collaborative agreement

- **Call 911 Activate EMS**
  - Request dispatcher repeat back the school information
Severe Allergic Reaction

Step 2 Monitor and Support

Student with specific order
- Monitor for improvement
- Lie person down with feet elevated to reduce shock

Student/Staff without a specific order
- Monitor for improvement
- Lie person down with feet elevated to reduce shock
Severe Allergic Reaction

Step 3 Notify, Document and Debrief

- Notify family and administration
- Report administration to collaborative provider
- Document all steps with time and action taken
- Report to REMSCO within 48 hours if practicable
Epinephrine Disposal

- Epi Pen®/Epi-Pen Jr.® and Auvi-Q™/Auvi-Q Jr.™ needle is not visible after use
- Adrenaclick™/Adrenaclick Jr.™ and Epinephrine Injection, USP needles are visible after use
Liability Protection

The risk of death from untreated anaphylaxis outweighs the risk of adverse side effects from using epinephrine.

Refresher training should be at least annually, upon request, and as directed in the collaborative agreement.
Summary of Response

- Know your school’s emergency response procedures and local EMS response for anaphylaxis
- Follow district policy for emergency transport
- Call 911
- Locate the school’s stock epinephrine and administer it as directed in the collaborative agreement
- Have student lie down, feet elevated
- Notify the school nurse (if available) and follow the directives of the collaborative agreement
- Notify parents/guardians and administration
- Document time, suspected allergen if known and response steps taken to provide to EMS
- Report administration to collaborative provider

Most fatalities occur due to delay in delivery of epinephrine
Allergy Resources On Our Website

www.schoolhealthservicesny.com
Additional Resources

- American Academy of Pediatrics  www.aap.org
- Allergy Home  www.allergyhome.org
  - School Allergy Training  www.allergyhome.org/schools/
- CDC, Food Allergies in Schools  www.cdc.gov/healthyyouth/foodallergies/
- Food Allergy Resource and Education (FARE)  www.foodallergy.org
- National Association of School Boards  www.nasb.org
- New York State Education Department  StudentSupportServices@mail.nysed.gov
- New York Statewide School Health Services Center  www.schoolhealthservices.org
Take the Next Step

- Watch the appropriate epinephrine training video on the next slide
- Complete the post-test which is available from your school district or on the NYSSHSC Epinephrine in Schools webpage
- Bring the completed test and training checklist to your school nurse for students with an order, or person indicated by your school for general administration
- Demonstrate the correct use of the epinephrine auto-injector (EAI)
<table>
<thead>
<tr>
<th>Product</th>
<th>Runtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrenaclick™</td>
<td>5:13</td>
</tr>
<tr>
<td>Auvi-Q™</td>
<td>5:13</td>
</tr>
<tr>
<td>Epi-Pen®</td>
<td>5:11</td>
</tr>
<tr>
<td>Epinephrine Injection, USP</td>
<td>5:46</td>
</tr>
</tbody>
</table>

Click the links to go to the manufacturer’s website to view the training videos.