



# GET TRAINED<sup>®</sup>



*National  
Association of  
School Nurses*

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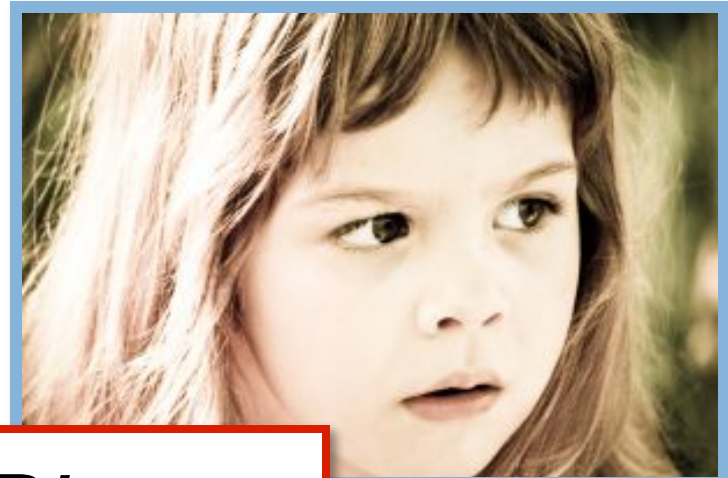
A program for school nurses to train school staff to administer epinephrine using an auto-injector



**It's time for all school staff to  
GET TRAINED  
to administer an epinephrine auto-injector  
in an emergency!**

# What Would You Do?

- Bianca has a bee sting allergy
- Her class is on a field trip
- She tells the teacher that she was stung –
  - The teacher sees that she is pale and can hear that she is wheezing
  - Her tongue starts to swell, she gasps for air
  - Bianca is experiencing anaphylaxis



*Bianca*

# You have moments to react

- Bianca is having a life-threatening allergic reaction
- Without prompt treatment with a drug called epinephrine, Bianca could die within minutes
- **Do you know what to do?**
- **Do you know how to give epinephrine?**

# BE EMPOWERED TO SAVE A LIFE -



# Objectives

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- Learn the signs and symptoms of anaphylaxis
- Have the skills to administer an epinephrine auto-injector
- Review the use of an Emergency Care Plan in responding to a student health emergency

**Learn to save the life of a child like Bianca!**



# What is Anaphylaxis?



# What is an allergic reaction?

- An allergy occurs when the immune system mistakenly attacks a food protein or normally harmless substance – it perceives the food or substance as a harmful or foreign one
- Exposure to the offending food or allergen may trigger the sudden release of chemicals, including histamine, resulting in symptoms of an allergic reaction
- The symptoms may be mild or severe – may progress over minutes or hours



# Allergic Reactions

- Common things people are allergic to (allergens) include:
  - Bee stings
  - Latex
  - Food Allergies - most common allergens:

Peanut	Tree nuts (walnuts, cashews, pecans, etc.)
Milk	Egg
Wheat	Soy
Fish	Shellfish

# Allergic Reactions

## Mild

- Usually only mild skin symptoms
- Don't tend to have trouble breathing
- May be treated with antihistamines

## Life-Threatening (Anaphylaxis)

- Difficulty breathing or feeling faint
- Often multiple body systems involved
- Treatment =  
Epinephrine NOW

Important to make the distinction based on the signs and symptoms seen in a student!

# Anaphylaxis (“an-a-fi-LAK-sis”)

- Anaphylaxis is a severe allergic reaction that can be life-threatening in a matter of minutes
  - Almost always unanticipated
- It must be treated immediately
- The drug of choice is epinephrine
- The time to learn how to give life-saving medication is NOW– it needs to be given without delay

**It' s time to GET TRAINED!**

*Sicherer & Simons, 2007*

*Schoessler & White, 2013*

# Allergic Management

- Preventing an exposure is key
- For students with a diagnosed allergy:
  - **Know who can help!**
    - ✓ Talk to your school nurse or healthcare coordinator
  - **Know how to react!**
    - ✓ Know the signs and symptoms of anaphylaxis
    - ✓ Learn about the student's Action / Emergency Care Plan
    - ✓ Know where your student's medication is and how to help in an emergency
- IF A CHILD IS HAVING A FIRST TIME REACTION AND DOESN'T HAVE A PLAN – **DON'T DELAY USING EPINEPHRINE IF NEEDED**

# Allergy Management

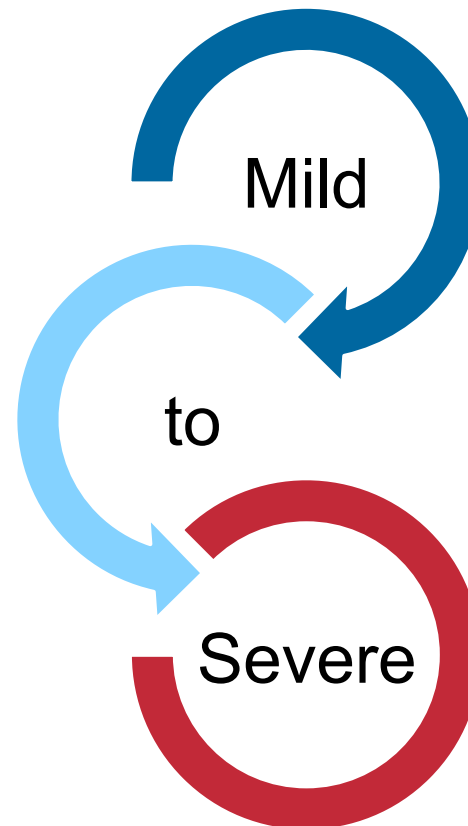
- Collaboration is vital – everyone should be aware of students with allergies

Classroom Teachers	School Administration
Special Area Teachers	Food Service
Student Instructional Support Personnel	Facilities and Maintenance Staff
Transportation Staff	Everyone!

- Must be willing to work as a team to keep these students safe
  - A Coordinated Approach / Effective Partnerships



# Signs and Symptoms



# What does it look like?

## Mild Allergic Reaction:

- **MOUTH:** Itchy mouth
- **SKIN:** A few hives around mouth/face, mild itch
- **ABDOMINAL AREA/ STOMACH:** Mild nausea/discomfort

# What does it look like?

Anaphylaxis: **Any SEVERE SYMPTOMS** after suspected or known ingestion or exposure:

- **One or more** of the following:
  - **LUNG:** Short of breath, wheezing, repetitive cough
  - **HEART:** Pale, blue, faint, weak pulse, dizzy, confused
  - **THROAT:** Tight, hoarse, trouble breathing /swallowing
  - **MOUTH:** Obstructive swelling (tongue and/or lips)
  - **SKIN:** Many hives over body



# What does it look like?

Anaphylaxis: **Any SEVERE SYMPTOMS** after suspected or known ingestion or exposure:

- Or **combination** of symptoms from different body areas:
  - **SKIN:** Hives, itchy rashes, swelling (e.g., eyes, lips)
  - **ABDOMINAL AREA/ STOMACH:** Vomiting, diarrhea, crampy pain
  - **HEENT:** Runny nose, sneezing, swollen eyes, phlegmy throat
  - **OTHER:** Confusion, agitation, feeling of impending doom

# How will I know what to do?

- School Nurse will develop an Emergency Care Plan for students with a diagnosed allergy
- Includes steps to follow
- Should be reviewed regularly
  - Includes information from the healthcare provider/allergist
  - Use school protocol if available
- Ask: Are signs and symptoms of possible anaphylaxis present and was there an exposure to a possible trigger?
- But be ready to respond if a child doesn't have a plan

**Be prepared to act!**

# Allergy Action/Emergency Care Plan

- Individual – specific to the student
- Plan should be shared with school staff responsible for care
- Information should be treated with care
- Everyone should know where medication is and **HOW TO REACT**

+ **FARE**  
Food Allergy Research & Education
FOOD ALLERGY & ANAPHYLAXIS EMERGENCY CARE PLAN

Name: \_\_\_\_\_ D.O.B.: \_\_\_\_\_

Allergy to: \_\_\_\_\_

Weight: \_\_\_\_\_ lbs. Asthma: [  ] Yes (higher risk for a severe reaction) [  ] No

PLACE PICTURE HERE












NOTE: Do not depend on antihistamines or inhalers (bronchodilators) to treat a severe reaction. USE EPINEPHRINE.

**Extremely reactive to the following foods:** \_\_\_\_\_

THEREFORE:

[  ] If checked, give epinephrine immediately for ANY symptoms if the allergen was likely eaten.

[  ] If checked, give epinephrine immediately if the allergen was definitely eaten, even if no symptoms are noted.

FOR ANY OF THE FOLLOWING: <b>SEVERE SYMPTOMS</b>				<b>MILD SYMPTOMS</b>			
 <b>LUNG</b> Short of breath, wheezing, repetitive cough	 <b>HEART</b> Pale, blue, faint, weak pulse, dizzy	 <b>THROAT</b> Tight, hoarse, trouble breathing/ swallowing	 <b>MOUTH</b> Significant swelling of the tongue and/or lips	 <b>NOSE</b> Itchy/runny nose, sneezing	 <b>MOUTH</b> Itchy mouth	 <b>SKIN</b> A few hives, mild itch	 <b>GUT</b> Mild nausea/ discomfort
 <b>SKIN</b> Many hives over body, widespread redness				 <b>GUT</b> Repetitive vomiting, severe diarrhea		 <b>OTHER</b> Feeling something bad is about to happen, anxiety, confusion	
OR A COMBINATION of symptoms from different body areas.				<b>FOR MILD SYMPTOMS FROM MORE THAN ONE SYSTEM AREA, GIVE EPINEPHRINE.</b>			
<b>1. INJECT EPINEPHRINE IMMEDIATELY.</b> <b>2. Call 911.</b> Tell them the child is having anaphylaxis and may need epinephrine when they arrive.				<b>FOR MILD SYMPTOMS FROM A SINGLE SYSTEM AREA, FOLLOW THE DIRECTIONS BELOW:</b>			
<ul style="list-style-type: none"> <li>• Consider giving additional medications following epinephrine:               <ul style="list-style-type: none"> <li>» Antihistamine</li> <li>» Inhaler (bronchodilator) if wheezing</li> </ul> </li> <li>• 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.</li> <li>• If symptoms do not improve, or symptoms return, more doses of epinephrine can be given about 5 minutes or more after the last dose.</li> <li>• Alert emergency contacts.</li> <li>• Transport them to ER even if symptoms resolve. Person should remain in ER for at least 4 hours because symptoms may return.</li> </ul>				<ol style="list-style-type: none"> <li>1. Antihistamines may be given, if ordered by a healthcare provider.</li> <li>2. Stay with the person; alert emergency contacts.</li> <li>3. Watch closely for changes. If symptoms worsen, give epinephrine.</li> </ol>			
<b>MEDICATIONS/DOSES</b>							
Epinephrine Brand: _____							
Epinephrine Dose: [ <input type="checkbox"/> ] 0.15 mg IM [ <input type="checkbox"/> ] 0.3 mg IM							
Antihistamine Brand or Generic: _____							
Antihistamine Dose: _____							
Other (e.g., Inhaler-bronchodilator if wheezing): _____							

PARENT/GUARDIAN AUTHORIZATION SIGNATURE \_\_\_\_\_
DATE \_\_\_\_\_
PHYSICIAN/HCP AUTHORIZATION SIGNATURE \_\_\_\_\_
DATE \_\_\_\_\_



# Epinephrine Administration

**FARE** FOOD ALLERGY & ANAPHYLAXIS EMERGENCY CARE PLAN

Name: \_\_\_\_\_ D.O.B.: \_\_\_\_\_  
Allergy to: \_\_\_\_\_  
Weight: \_\_\_\_\_ lbs. Asthma:  Yes (higher risk for a severe reaction)  No

NOTE: Do not depend on antihistamines or inhalers (bronchodilators) to treat a severe reaction. USE EPINEPHRINE.

Extremely reactive to the following foods: \_\_\_\_\_  
THEREFORE:  
 If checked, give epinephrine immediately for ANY symptoms if the allergen was likely eaten.  
 If checked, give epinephrine immediately if the allergen was definitely eaten, even if no symptoms are present.

**FOR ANY OF THE FOLLOWING:**

<b>LUNG</b> Short of breath, wheezing, repetitive cough	<b>HEART</b> Pale, blue, faint, weak pulse, dizzy	<b>THROAT</b> Tight, hoarse, trouble breathing/ swallowing	<b>MOUTH</b> Significant swelling of the tongue and/or lips
<b>SKIN</b> Many hives over body, widespread redness	<b>GUT</b> Repetitive vomiting, severe diarrhea	<b>OTHER</b> Feeling something bad is about to happen, anxiety, confusion	<b>OR A COMBINATION</b> of symptoms from different body areas.

**SEVERE SYMPTOMS**

**MILD SYMPTOMS**

**FOR MILD SYMPTOMS FROM SYSTEM AREA, GIVE E**

**FOR MILD SYMPTOMS FROM AREA, FOLLOW THE DIRECTIONS**

1. Antihistamines may be given by healthcare provider.
2. Stay with the person, alert & calm.
3. Watch closely for changes. If symptoms worsen, give epinephrine.

**1. INJECT EPINEPHRINE IMMEDIATELY.**  
**2. Call 911.** Tell them the child is having anaphylaxis and may need epinephrine when they 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 them to ER even if symptoms resolve. Person should remain in ER for at least 4 hours because symptoms may return.

**MEDICATIONS/DOSES**

Epinephrine Brand: \_\_\_\_\_  
Epinephrine Dose:  0.15 mg IM  0.3 mg IM

Antihistamine Brand or Generic: \_\_\_\_\_  
Antihistamine Dose: \_\_\_\_\_

Other (e.g., inhaler bronchodilator if wheezing): \_\_\_\_\_

PARENT/GUARDIAN AUTHORIZATION SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
PHYSICIAN/PCP AUTHORIZATION SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

Know what to do!

Act Quickly!

# Epinephrine

- Epinephrine is the first line treatment for anaphylaxis
- Should be administered IMMEDIATELY
  - Some protocols call for epinephrine to be administered with or without symptoms
  - Parents & school administrators should not be concerned about adverse health effects of epinephrine – it has an impressive safety profile
    - ✓ When in doubt – give the epinephrine
  - Adverse effects for average healthy child not harmful – anxiety, palpitations

**A delay in treatment can have devastating results**

*Schoessler & White, 2013*

*Robinson & Ficca, 2011*

*Sicherer & Simons, 2007*

# Epinephrine Auto-Injectors

- Epinephrine Auto-injectors are easy to use
- Come with instructions
  - Trainers available for practice use
- Websites have video demonstrations – know how to administer your student's auto-injector!

<b>Epi-Pen® video</b>	<a href="http://www.epipen.com/how-to-use-epipen/Epipen4schools.com">http:// www.epipen.com/ how-to-use-epipen Epipen4schools.co m</a>
<b>Auvi-Q® video</b>	<a href="https://www.auvi-q.com/">https://www.auvi- q.com/</a>
<b>Adrenaclick®</b>	<a href="http://www.adrenaclick.com/about-adrenaclick/adrenaclick-training.aspx">http:// www.adrenaclick.com/ about-adrenaclick/ adrenaclick- training.aspx</a>
<b>Generic</b>	<a href="http://www.epinephrineautoinject.com/">http:// www.epinephrineautoi nject.com/</a>

# General Auto-injector Instructions

- GET SPECIFIC DEMONSTRATION / TRAINING FROM YOUR SCHOOL NURSE
  - It is preferable to use training device from student's brand of epinephrine auto-injector
- Determine that the student requires epinephrine – use protocol or identify symptoms
- Call 911 – have someone call EMS while you administer epinephrine
- Check medication expiration date

# General Auto-injector Instructions

1

- Remove safety cap from auto-injector
- Place auto-injector against outer thigh

2

- Push auto-injector firmly against thigh until auto-injector activates

3

- **HOLD FIRMLY FOR AT LEAST 10 SECONDS**
- Keep device to give to EMS



# Steps to Follow in an Emergency

- Follow the building emergency response plan/ protocol and:
  - 1. IMMEDIATELY ADMINISTER EPINEPHRINE AUTOINJECTOR PER STANDING ORDER:**
    - 0.15 mg - body weight less than 55 pounds
    - 0.30 mg - body weight 55 pounds or more
    - Inject into middle outer side of upper leg, note time and site of injection (can be given through clothing)
    - *Stay with student and monitor closely*
  - 2. Designate a person to call Emergency Medical System (911) and request ambulance with epinephrine**

# Steps to Follow in an Emergency

3. Designate a person to notify, school administration, school nurse and student's emergency contact(s)
  - Stay with and observe student until EMS (ambulance) arrives.
  - Maintain airway, monitor circulation, start CPR as necessary.
  - Do not have the student rise to an upright position.
  - Consider lying on the back with legs elevated, but alternative positioning is needed for vomiting (side lying, head to side) or difficulty breathing (sitting).
  - Observe for changes until EMS arrives.

# Steps to Follow in an Emergency

- **IF NO IMPROVEMENT OR IF SYMPTOMS WORSEN IN ABOUT 5 OR MORE MINUTES, ADMINISTER A SECOND EPINEPHRINE DOSE *according to local policy***
- Provide EMS with identifying information, observed signs and symptoms, time epinephrine administered, used epinephrine autoinjector to take with to the hospital
- **Transport to the Emergency Department via EMS even if symptoms seem to get better.**

# Document and Debrief

- Discuss with the school nurse how to record that you gave an epinephrine auto-injector dose and the symptoms you witnessed
- Have a debriefing meeting with the nurse and school administration after giving an epinephrine auto-injector
  - Talk about how response went
  - Talk about feelings
  - Talk about ways to improve in the future

# You Can Do It!

- You know what to do when a student is having a life-threatening allergic reaction
- You know how to give epinephrine

You know how to save  
the lives of children  
like Bianca!



*Bianca*

# YOU'VE BEEN EMPOWERED TO SAVE A LIFE!





Thank you for taking the time to  
**GET TRAINED**  
to administer an epinephrine auto-injector  
in an emergency!

# References

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