



# GET TRAINED<sup>®</sup>

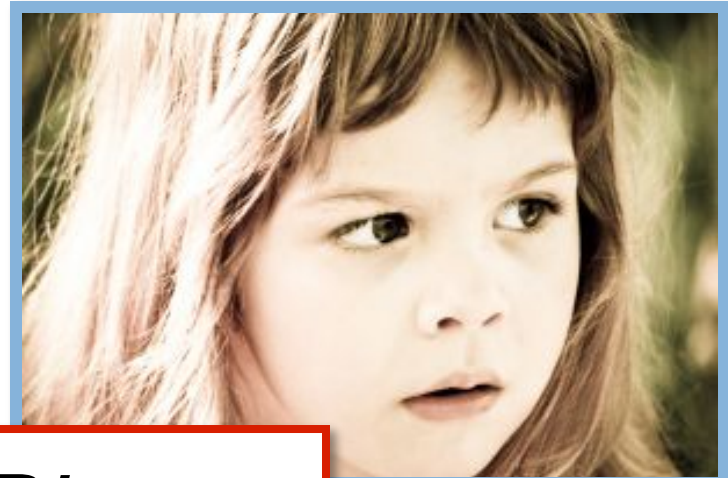




**It's time for all school staff to  
GET TRAINED  
to administer an epinephrine auto-injector  
in an emergency!**

# 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?



Insect  
Sting  
Allergies

Food  
Allergies

Latex  
Allergies

# 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

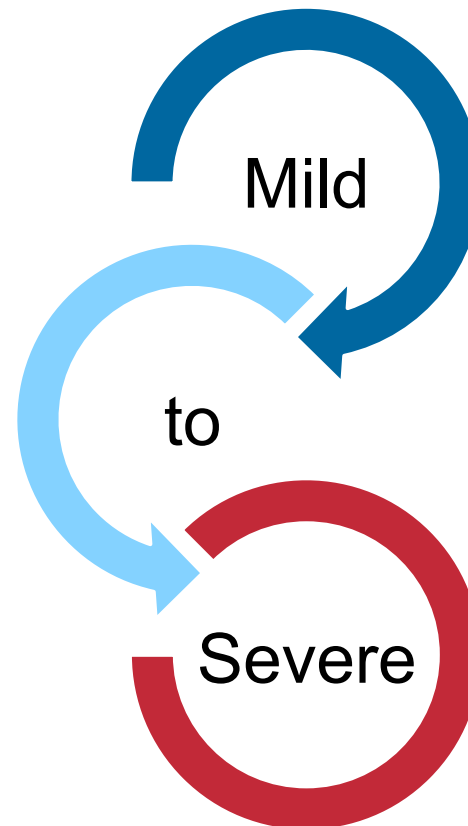
- Collaboration is vital – everyone should be aware of students with allergies

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: SEVERE SYMPTOMS	MILD SYMPTOMS
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <b>LUNG</b>            Short of breath, wheezing, repetitive cough         </div> <div style="text-align: center;">   <b>HEART</b>            Pale, blue, faint, weak pulse, dizzy         </div> <div style="text-align: center;">   <b>THROAT</b>            Tight, hoarse, trouble breathing/swallowing         </div> <div style="text-align: center;">   <b>MOUTH</b>            Significant swelling of the tongue and/or lips         </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">   <b>SKIN</b>            Many hives over body, widespread redness         </div> <div style="text-align: center;">   <b>GUT</b>            Repetitive vomiting, severe diarrhea         </div> <div style="text-align: center;">   <b>OTHER</b>            Feeling something bad is about to happen, anxiety, confusion         </div> </div> <p style="text-align: center; font-size: 0.8em;">OR A COMBINATION of symptoms from different body areas.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <b>NOSE</b>            Itchy/runny nose, sneezing         </div> <div style="text-align: center;">   <b>MOUTH</b>            Itchy mouth         </div> <div style="text-align: center;">   <b>SKIN</b>            A few hives, mild itch         </div> <div style="text-align: center;">   <b>GUT</b>            Mild nausea/discomfort         </div> </div> <p style="text-align: center; font-size: 0.8em;">FOR MILD SYMPTOMS FROM MORE THAN ONE SYSTEM AREA, GIVE EPINEPHRINE.</p> <p style="text-align: center; font-size: 0.8em;">FOR MILD SYMPTOMS FROM A SINGLE SYSTEM AREA, FOLLOW THE DIRECTIONS BELOW:</p> <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>
<p><b>1. INJECT EPINEPHRINE IMMEDIATELY.</b></p> <p><b>2. Call 911.</b> Tell them the child is having anaphylaxis and may need epinephrine when they arrive.</p> <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>	
<p style="text-align: center; font-weight: bold;">MEDICATIONS/DOSES</p> <p>Epinephrine Brand: _____</p> <p>Epinephrine Dose: [ <input type="checkbox"/> ] 0.15 mg IM [ <input type="checkbox"/> ] 0.3 mg IM</p> <p>Antihistamine Brand or Generic: _____</p> <p>Antihistamine Dose: _____</p> <p>Other (e.g., Inhaler-bronchodilator if wheezing): _____</p>	

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:

SEVERE SYMPTOMS			
<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.

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.

**MILD SYMPTOMS**  
NOSE: Itchy/runny nose, sneezing  
MOUTH: Itchy mouth, A.F.M.

FOR MILD SYMPTOMS FROM SYSTEM AREA, GIVE E  
FOR MILD SYMPTOMS FROM AREA, FOLLOW THE DIR

- Antihistamines may be given by healthcare provider.
- Stay with the person, alert &
- Watch closely for changes. If give epinephrine.

**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

- Centers for Disease Control and Prevention (CDC). (2013). *Voluntary guidelines for managing food allergies in schools and early care and education programs*. Washington DC: US Department of Health and Human Services.
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