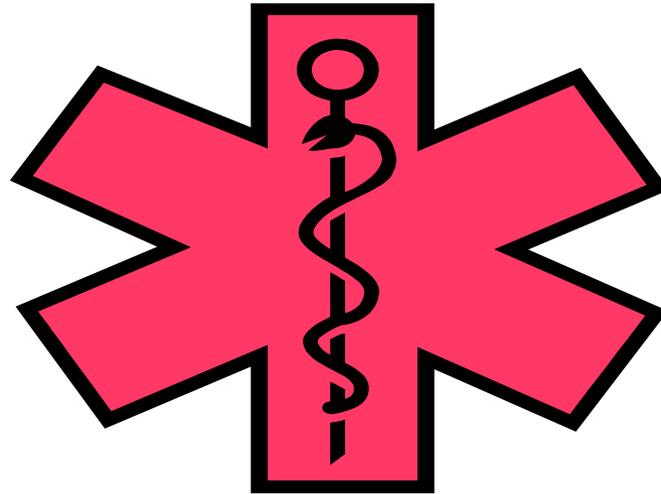


Life Threatening Allergies and EpiPen Administration in a School Setting



Objectives

- Have an understanding of allergies
- Have an understanding of anaphylactic process
- Know the signs & symptoms of anaphylaxis
- Know treatment for anaphylactic process
- Know how to administer an EpiPen
- Demonstrate EpiPen administration to the school nurse



Objectives Continued

- Recognize student-specific warning signs of allergic emergency
- Identify student for whom epinephrine is prescribed
- Accurately read the EpiPen label and follow directions from the label
- Describe the schools plan for responding to life-threatening allergic reactions
- Access resources appropriately, including emergency medical services, school nurse, parents



Allergies

- ▶ Plan should be in place within the school setting.
- ▶ Many school aged children with life-threatening allergies have some experience at avoiding the allergy causing agent but most still require supervision and help.
- ▶ Food allergy is a growing safety concern and challenge for our schools.
- ▶ Approximately 3.9% of children <18yrs were reported to have food/digestive allergies and may be at risk for anaphylaxis, a potentially life-threatening allergic reaction.
- ▶ Currently there are no medications that cure food allergies.



Allergies Continued

- ▶ Strict avoidance of the allergen is the only way to prevent allergic reactions.
- ▶ Deaths have occurred in schools because of delays in recognizing symptoms.
- ▶ Plans that focus on allergy education, awareness, avoidance and immediate treatment of allergic reactions are critical to saving lives.



What is Anaphylaxis?

- ▶ A potentially life-threatening medical condition occurring in allergic individuals after exposure to an allergen.



Symptoms by System

Anaphylaxis

Skin

Swelling
Hives
Rash
Itching

Other

Sense of impending Doom
Anxiety
Itchy, watery, red eyes

Respiratory

Runny Nose
Wheezing
Short of breath
Throat tight
Can't swallow
Voice change

Gastro-Intestinal

Itchy Tongue
Itchy throat
Vomiting
Abdominal pain
Diarrhea

Cardiovascular

Irreg. heartbeat
Flushed
Pale skin
Blue lips/mouth
Fainting
Dizzy



Severity of Symptoms

- All symptoms can become life-threatening. Severity of symptoms can quickly change.



Biphasic Reaction

- ▶ In up to 30% of anaphylactic reactions, the initial symptoms may be followed by a second wave of symptoms two to four hours later and possibly longer.
- ▶ This combination of an early phase of symptoms followed by a late phase of symptoms is defined as *biphasic reaction*.



Anaphylactic Process

- ▶ Immune system identifies an allergen/protein
- ▶ Immune system starts chain of inflammatory reactions in the tissues of the skin, the respiratory system, the gastrointestinal tract and the cardiovascular system.
- ▶ When the inflammatory symptoms are widespread are systemic, the reaction is termed “anaphylaxis.”



Treatment of Choice for severe allergic reactions?



Epinephrine Injection by auto-injector



5 “Rights” of epinephrine administration

▶ Right Student

Use photo id on Emergency form

▶ Right Medication

Epinephrine available in auto injector called epipen
Make sure medication label matches student

▶ Right Dose

Available in two doses, make sure matches order provided

EpiPen 0.3mg (over approx. 66 lbs)

EpiPen Jr. 0.15mg (under approx. 66lbs)

▶ Right Route

EpiPen is administered into the large outer thigh muscles – bare skin or through clothing

▶ Right Time

Based on students symptoms – see symptoms list



Epinephrine and how it works

- ▶ An injectable medication that is the treatment of choice for anaphylactic reactions
- ▶ It quickly constricts blood vessels, raising blood pressure
- ▶ It relaxes smooth muscles in the lungs to improve breathing
- ▶ It will increase the heart rate
- ▶ It works quickly to reverse the hives and swelling around the face and lip
- ▶ Effects last up to 15 minutes
- ▶ There are no contraindications to the use of epinephrine for a potentially life-threatening allergic reaction



Symptoms & Treatment

- ▶ Symptoms indicative of Epinephrine treatment
 - Hives spreading over the body
 - Wheezing
 - Difficulty swallowing or breathing
 - Swelling in face or neck
 - Tingling or swelling tongue
 - Vomiting
 - Signs of shock – paleness/gray color, clammy skin or loss of consciousness



Symptoms & Treatment Con't

- ▶ Anaphylaxis may occur in the absence of any skin symptoms such as itching or hives.
- ▶ Fatal anaphylaxis is more common in children who present with respiratory symptoms, or GI symptoms such as abdominal pain, nausea or vomiting.
- ▶ Always err on the side of caution – if in doubt give epinephrine!



Is the student in a B.I.N.D.?

Acronym: “B.I.N.D.”

- **B** = breathing is difficult, throat or chest is tight
- **I** = itchy lips, hives, swelling
- **N** = nausea, vomiting
- **D** = dizzy, unsteady, confused



In Their Own Words...

- ▶ Children have unique ways of describing their experiences and perceptions, including allergic reactions.
- ▶ Precious time is lost when adults do not immediately recognize that a reaction is occurring or don't understand what the children might be telling them.
- ▶ Know that sometimes children, especially very young ones, will put their hands in their mouths, or pull or scratch at their tongues, in response to a reaction. Children's voices may become hoarse or squeaky, and they may slur their words.



Examples of Their Own Words...

- ❖ This food's too spicy
- ❖ My tongue is hot (or burning)
- ❖ It feels like something's poking my tongue
- ❖ My tongue itches
- ❖ It (my tongue) feels like there is hair on it
- ❖ My mouth feels funny
- ❖ There's a frog in my throat
- ❖ There's something stuck in my throat
- ❖ My tongue feels full (or heavy)
- ❖ My lips feel tight
- ❖ It feels like there are bugs in there (to describe itchy ears)
- ❖ It (my throat) feels thick
- ❖ It feels like a bump is on the back of my tongue (throat)

Steps in EpiPen Administration

- ▶ Have student lie down
- ▶ Look at the directions on the EpiPen

Breathe...

- ▶ Form fist around auto-injector (black tip down)
- ▶ With your other hand, pull off gray cap.
- ▶ Hold black tip near outer thigh
- ▶ Swing and jab firmly into outer thigh so auto-injector is at 90° to thigh
- ▶ If a click is heard then EpiPen is engaged, hold for 10 seconds

Call 911...



The EpiPen buys you 15 minutes of time...



- ▶ Activating emergency services via 911 immediately is critical
- ▶ Let 911 know that an EpiPen has been administered
- ▶ Know who the CPR trained staff are in your building so that persons trained in life support can be dispatched to your location

After EpiPen Administration you must remember to...

- ▶ Document the time of administration
- ▶ Notify parent/legal guardian regarding incident, student's condition and hospital destination.
- ▶ Have someone notify the student's doctor (on emergency form) regarding incident and where student is being transported



How is Epinephrine Stored & Handled?

Keep at room temperature until the marked expiration date.

Do not freeze, refrigerate, or expose to extreme heat or sunlight, it will cause it to oxidize and turn brown.

- Solution should be clear and colorless, check prior to use
- After using epinephrine auto-injector, it should be placed in sharps container or given to EMS Personnel to take to Emergency Department.

Be aware needle will be extending from the end of auto injector after use.



Field Trips



- ▶ You will see the nurse at least 2 days prior to leaving for your field trip to review if any students have an Emergency Care Plan.
- ▶ You will meet with the allergic student, explaining that you will have his/her EpiPen. Students may have Doctor permission to carry the EpiPen themselves (this must be on file in the health office). Let the student know you will be readily available to the student throughout the trip. This includes bus and lunch time.
- ▶ Student Buddy
- ▶ You must have telephone access to call 911 at all times while off school property with students.

Can I be sued if I make a mistake?

- ▶ No...According to NH RSA 200:45 – No school district, member of a school board, or school district employee shall be liable in a suit for damages as a result of any act or omission related to a pupil's use of an epinephrine auto-injector if the provisions of RSA 200:42 have been met.