Anaphylaxis Education

What School Staff Need to Know

Awareness Avoidance, Recognition, and Response

A Train the Trainer Toolkit

For

School Nurses

Developed By

Rebecca Cavanaugh, RN, BSN, NCSN
Introduction

In 2008, legislation was passed in Washington State that directed “the office of the superintendent of public instruction, in consultation with the department of health, shall develop anaphylactic policy guidelines for school, to prevent anaphylaxis and deal with medical emergencies resulting from it” (RCW 28A.210.380, 2008). One of the components of these guidelines is to include “content of a training course for appropriate school personnel for preventing and responding to a student who may be experiencing anaphylaxis” (RCW 28A.210.380 (b), 2008). While a number of materials and resources have been developed for use in schools, there was no evidence of available training curricula designed to meet the needs of school districts in educating all school staff.

Using the Anaphylaxis Guidelines (RCW 28A.210.380), information from a literature review, participation in the development of the Office of the Superintendent of Public Instruction’s (OSPI) Guidelines for Care of Students with Anaphylaxis (2009), and the content analysis of the findings from contents of the OSPI’s anaphylaxis resources, this anaphylaxis curriculum was developed. The curriculum is divided into sections: Awareness, Avoidance, Recognition and Response of Anaphylaxis and is intended for use in training all school staff.
Anaphylaxis Education

What School Staff Need to Know

Awareness Avoidance, Recognition, and Response

Dedicated to the faculty and staff of Bothell High School
Toolkit Training for Program School Nurses

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ANAPHYLAXIS Awareness-Avoidance-Recognition-Response
Toolkit Training Program for School Nurses
Trainer Lesson Plan

Purpose/Goal

School nurses will be able to use the Anaphylaxis Education presentation to train school staff in the knowledge and skills to feel confident in fulfilling their responsibilities of providing a safe learning environment and implementing an Emergency Action Plan for a student with a life-threatening allergy.

Objectives: The school nurse will be able to:

1. Define the learner goals of the Anaphylaxis Education: Awareness, Avoidance, Recognition, and Response.

2. List the learner objectives of the Anaphylaxis Education: Awareness, Avoidance, Recognition, and Response.

3. Describe teaching-learning philosophy used in the curriculum.

4. Describe the characteristics of the adult learner in the school setting.

5. Describe the adult learner needs in the school setting.

6. Describe the adult learner motivators to learn new information in the school setting.

7. Describe the school nurse role and responsibilities in providing Anaphylaxis Education to school staff.

8. Identify the key resources and materials needed to implement this training.

9. Demonstrate an understanding of the core content in the training module to be implemented and the related lesson plan.

10. Demonstrate an ability to utilize all equipment/technology needed to implement the training program.
Resources/Materials needed:

- Curriculum- overlay transparencies or compact disk with Microsoft® PowerPoint® Presentation
- Epi-pen/Twinjet auto-injector trainers
- OSPI Guidelines for Care of Students with Anaphylaxis
- Student training packets
ANAPHYLAXIS Awareness-Avoidance-Recognition-Response Toolkit Training Program for School Nurses
Trainer Lesson Plan cont.

Handouts

School Nurse Roles and Responsibilities handout
School District Role and Responsibilities handout
Epi-pen/Twinjet auto-injector training handout
Case study for each student
Training Evaluation

Activities

1. Prior to the scheduled training an email communication will be sent to each enrolled school nurse to instruct them to bring a copy of their:
   School District Emergency Action Plan
   School District Policy and Procedures for Care of Students with Anaphylaxis
   School District Communication Plan

2. Arrange for LD projector to be available for use during training.

3. On the day of the training prepare the room with enough tables and chairs for number of persons expected to attend the training.

4. Set up the power point presentation on the computer and connect to the LD projector.
<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>3”</td>
<td>Introduction and review school nurse goals and objectives</td>
<td>Overlay transparencies or compact disk with didactic curriculum</td>
<td>Define the learner goals</td>
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<tr>
<td>3”</td>
<td>Review learner goals and objectives</td>
<td></td>
<td>List the learner objectives</td>
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<tr>
<td>5”</td>
<td>Instructor led ppt presentation of didactic key messages included in objectives 1-7</td>
<td></td>
<td>Define Anaphylaxis List causes of anaphylaxis List common foods that can cause an anaphylaxis reaction</td>
<td>Content: Learners will list steps to implement ECP developed by group members and present to class Learners will demonstrate administering epinephrine auto-injector to self and another person Post-course assessment tool</td>
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<tr>
<td>10”</td>
<td>II. Avoidance of Anaphylaxis: Discuss ADA 504 Provide learners with audience specific handout – Instructor led discussion</td>
<td>School District Role and Responsibilities handout</td>
<td>Describe avoidance prevention measures associated with the causes of anaphylaxis Describe their individual role and responsibilities to provide avoidance prevention measures for students with life-threatening allergies</td>
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<td>5”</td>
<td>III. Recognition of Anaphylaxis</td>
<td></td>
<td>Describe allergy symptoms that may require immediate emergency treatment</td>
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<tr>
<td>10”</td>
<td>IV. Response to Anaphylaxis: Practice Epi-pen®/Twinjet® administration Instructor led discussion of the parts of the EAP Discuss school district/building communication plan Provide learners with case study Group activity to role play implementing EAP</td>
<td>Epi-pen®/Twinjet® auto-injector trainers Epi-pen®/Twinjet® auto-injector training handout School District Specific Emergency Action Plan</td>
<td>Demonstrate the ability to implement the emergency action plan for a student with a life-threatening allergy, including the administration of an epinephrine auto-injector and contacting emergency medical services</td>
<td>Process: Informal comments from learners validating that the class was helpful Comments on training course evaluation form</td>
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<td>Discuss the learning needs of the adult learner</td>
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<td>Describe the adult learner needs in the school setting</td>
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<tr>
<td>3”</td>
<td>Discuss the learner motivators of school staff</td>
<td></td>
<td>Describe the adult learner motivators to learn new information in the school setting</td>
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</tr>
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<td>5”</td>
<td>Discuss the role of the school nurse in providing anaphylaxis training for school staff</td>
<td>School Nurse Role and Responsibilities handout</td>
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<tr>
<td>5&quot;</td>
<td>Conclusion, review of goals and objectives, evaluations</td>
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Learner Goal

The learners will be able to adopt the knowledge and skills to feel confident in fulfilling their responsibilities of providing a safe learning environment and implementing an Emergency Action Plan for a student with a life-threatening allergy.

Learner Objectives

✓ Define Anaphylaxis
✓ List causes of anaphylaxis
✓ List common foods that can cause an anaphylactic reaction
✓ Describe avoidance prevention measures associated with the causes of anaphylaxis
✓ Describe their individual role and responsibilities to provide avoidance prevention measures for students with life-threatening allergies
✓ Describe allergy symptoms that may require immediate emergency treatment
✓ Demonstrate the ability to implement the emergency action plan (EAP) for a student with a life-threatening allergy, including the administration of an epinephrine auto-injector and contacting emergency medical services

Teaching-Learning Philosophy

✓ Adult learning theory-Andragogy “the art and science of helping adults learn”
✓ Adoption theory
✓ Student-self directed learning- problem-based learning
✓ Educator role–facilitator of learning process

Characteristics of Adult Learner

✓ Age: 18 years old to 65 + years old
✓ Education: High school graduate to graduate degrees of Masters and Doctorate level
✓ Diversity of culture and ethnicity
✓ Learning styles
✓ School culture

Learner Needs

• To feel confident and competent in providing a safe environment for students with life-threatening health conditions,
• opportunities to practice identification of allergy symptoms and implementing an EAP for a student exposed to an allergen,
• a safe and supportive learning environment.
ANAPHYLAXIS Awareness-Avoidance-Recognition-Response
Toolkit Training for School Nurses

Learner Motivation

• Extrinsic-The school staff adult learners will be motivated to learn by the expectations of others (school district administration, parents and students)
• Intrinsic-to feel competent in providing a safe environment for students with life-threatening allergies to learn.

School Nurse Roles and Responsibilities from the Guidelines for Care of Students with Anaphylaxis (2009)

• Meet with the student and parent, prior to school entry and/or prior to each school year, to develop a current and complete ECP/IHP in coordination with the student’s LHCP.

• Present a general districtwide training for all district staff and “departments” involved in the care of the student during any school-sponsored activity about:
  ➢ Life-threatening allergy awareness.
  ➢ Allergen avoidance and prevention.
  ➢ Recognizing symptoms of anaphylaxis.
  ➢ Administration of epinephrine and other emergency medication.
  ➢ ECPs.
  ➢ Provide training, supervision, and monitoring for school staff designated as responsible to implement the student’s specific IHP/ECP.

Note: Training needs to occur annually and/or before the start of the school year and/or before the student attends school for the first time. Systems for substitutes in schools need to be addressed.

• Communicate and review with the district’s nutrition services about the meals program in cases of food allergy. Jointly develop a communication process for students receiving school meals.
• Review periodically the ECP/IHP and medication orders.
• Collaborate with local EMS for systems to provide for care and/or transport of students with life-threatening anaphylactic reactions.
• Ensure the medications are accessible and non-expired including the medication needed for a lockdown, evacuation, or catastrophic event.
• Communicate with the student, staff, and parents on a regular basis.
• Participate in debriefing and planning for the student’s re-entry to school after an anaphylactic reaction.
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A Training Program

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ANAPHYLAXIS Awareness-Avoidance-Recognition-Response
What School Staff Need to Know
Lesson Plan

Subject: Anaphylaxis Education: Awareness, Avoidance, Recognition, and Response

Purpose/Goal: Learners will be able to adopt the knowledge and skills to feel confident in fulfilling their responsibilities of providing a safe learning environment and implementing an Emergency Care Plan for a student with a life-threatening food allergy.

Objectives: The learner will be able to:

1. Define Anaphylaxis.
2. List causes of anaphylaxis.
3. List common foods that can cause an anaphylaxis reaction.
4. Describe avoidance prevention measures associated with the causes of anaphylaxis.
5. Describe their individual role and responsibilities to provide avoidance prevention measures for students with life-threatening allergies.
6. Describe allergy symptoms that may require immediate emergency treatment.
7. Demonstrate the ability to implement the emergency care plan for a student with a life-threatening allergy, including the administration of an epinephrine auto-injector and contacting emergency medical services.

Resources/Materials needed:

Curriculum- overlay transparencies or compact disk with Power Point presentation
Epi-pen/Twinjet auto-injector trainers
School District Emergency Action Plan
School District Policy and Procedures for Care of Students with Anaphylaxis
OSPI Guidelines for Care of Students with Anaphylaxis
ANAPHYLAXIS Awareness-Avoidance-Recognition-Response
Lesson Plan Cont.

Handouts

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| 20"  | IV. Response to Anaphylaxis Epi-pen®/Twinjet® auto-injector trainers Epi-pen®/Twinjet® auto-injector training handout School District Specific Emergency Action Plan Case Study handout | Demonstrate the ability to implement the emergency action plan for a student with a life-threatening allergy, including the administration of an epinephrine auto-injector and contacting emergency medical services | |
| 5"   | Conclusion, review of goals and objectives, evaluations | | | |

Lesson plan
Anaphylaxis Training for School Staff
Awareness-Avoidance-Recognition-Response
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

AWARENESS of Anaphylaxis

Definition:

➤ Anaphylaxis is defined as a serious allergic reaction that is rapid in onset and may cause death
➤ Anaphylaxis can affect two or more systems in the body at the same time
➤ Anaphylactic reaction can occur within a few seconds to minutes to hours after exposure to an allergen
➤ Anaphylactic reaction can re-occur up to four hours after treatment
➤ Anaphylaxis is a medical emergency that requires medical treatment and follow up with a healthcare provider specializing in allergies.

Causes:

Allergens that can cause anaphylaxis include foods, insect stings, latex and medications

Food Allergy: Any food can trigger an anaphylactic reaction in the body. The top eight most common foods are peanuts, tree nuts (walnut, cashew, pecan etc.), shellfish, fish, milk, wheat and soy.

Children often outgrow allergies to eggs, milk and soy
Allergies to peanuts, tree nuts, fish and shellfish continue into adulthood
Food is the leading cause of anaphylaxis in children. Children who have asthma and food allergies are at a greater risk for anaphylaxis and may often react more quickly requiring aggressive and prompt treatment.

*An individual can have an allergy to any food

Insect Sting Allergy: An allergy to the venom of a stinging or biting insect including bees, hornets, yellow jackets, wasps and fire ants.

There is a greater risk of anaphylactic reaction if there are multiple stings at one time or repeated stings in the same season

Immunotherapy is known to be effective in the protection against insect sting allergic reaction
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

AWARENESS of Anaphylaxis cont.

**Latex Allergy**: Natural rubber products that can include but are not limited to: latex gloves, balloons, balls and gym equipment.

There are two types of allergic reactions to latex:
1. contact dermatitis which is a rash that can occur 12-36 hours after contact with a latex product
2. immediate allergic reaction, which can lead to anaphylaxis.

Latex can become airborne, can be inhaled and come in contact with the nose or eyes and cause allergy symptoms.

Students who have spina bifida, congenital urinary problems or have been exposed to many medical and/or surgical procedures seem to have a higher prevalence of developing an immediate allergic reaction.

Cross reactivity allergy: students who are allergic to latex may have an allergic reaction to certain foods with the same allergenic protein as latex: bananas, kiwi fruit, avocados and European chestnuts.

* Contact with the leaves of poinsettia plants have also been documented as causing an allergic reaction.

Exercise and temperature variations of heat and cold have been documented to trigger an anaphylactic response in the body.

Some anaphylactic responses have no known cause.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

AVOIDANCE (Prevention) of Anaphylaxis

- Prevention of exposure to an allergen is the key in avoidance of anaphylaxis.
- The classroom is the most common area where students in school have been reported to experience an allergic reaction.
- It is important to know what actions to take to avoid student exposure to an allergen.

**Food:** Avoidance of the food allergen is the key to preventing an allergic reaction
Persons who have experienced an anaphylactic reaction to a food must strictly avoid that food.

**WASHING HANDS BEFORE AND AFTER EATING** – students and staff
(Hand sanitizers are not effective in removing food allergens and dirt.)
Clean surfaces and areas (cafeteria and classroom) per school district procedures to ensure allergen safe zones
Use of separate utensils for food preparation
Promote nonfood awards/celebrations, school projects, and fundraising efforts
Establish a school rule to prevent food sharing during the school day

**The majority of anaphylactic reactions in school are due to accidental exposure to a food allergen.**

**Insect:** Avoidance of insects is recommended for persons at risk for anaphylaxis
Make sure garbage is stored in securely covered containers away from eating, studying and play areas
Avoid eating outside during high insect activity
Report insect nests noted on or near school grounds so they can be removed

**Latex:** Avoidance is recommended for persons at risk for anaphylaxis. Latex reactions vary from person to person; each student at risk should be evaluated by a healthcare provider, specializing in allergies.

Promote nonlatex awards/celebrations, school projects, and fundraising efforts
Ensure that balls, gym equipment, medical gloves, etc are latex free

Prevention efforts to avoid exposure to allergens need to include special attention to:
- train substitute or guest teachers (internships),
- hidden ingredients in art, science and other classroom projects,
- buses or other modes of transportation for field trips,
- before and after school hours,
- school sponsored events and after school programs.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

AVOIDANCE (Prevention) of Anaphylaxis cont.

∗ Work with your administrator to ensure that substitutes and guest teachers receive training.
∗ Read labels and understand ingredient lists before introducing to students.
∗ Make sure the bus drivers have been trained in anaphylaxis, that “no eating rules” have been implemented and enforced, and the buses being cleaned at the end of the day to prevent a potential exposure during the next day.
∗ Make sure school sponsored events and after school programs have provisions in place to avoid allergen exposure for students who wish to attend.

Review roles and responsibilities of staff from Guidelines- provide handout with Classroom Teachers/Specialists/Para-Professionals/Coaches/After-School Staff, Lunchroom/Playground Assistants, etc, as appropriate to audience.

It important to remember your responsibility to all students and to avoid endangering, isolating, stigmatizing, or harassing students with life-threatening allergies

The Americans with Disabilities Act (ADA) of 1990
∗ The ADA law also prohibits the discrimination of individuals with a disability. A life-threatening food allergy is identified as a physical disability that substantially limits one or more of the major life activities. See http://www.eeoc.gov/policy/ada.html.

Students with life-threatening allergies are eligible for accommodations consistent with Section 504 of the Rehabilitation Act of 1973.
∗ Under this law, public school districts have a duty to provide a Free Appropriate Public Education (FAPE) for students with disabilities. A student with a life-threatening allergy qualifies as a disabled student under Section 504. This section of the federal law protects disabled public school students from discrimination.

IMPORTANT: No student with an allergy should be left in the care of an untrained staff person or volunteer.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

RECOGNITION of Anaphylaxis symptoms

What happens?
In an allergic reaction the body over reacts to a normally harmless substance, the immune system sends out the antibody known as Immunoglobulin E or IgE which triggers the release of histamines and other chemicals that cause the symptoms of the allergic reaction.

Signs & Symptoms:
*Any of the following may occur in person with an anaphylactic reaction.

**Skin**
- Hives, skin rashes or flushing
- Itching/tingling/swelling of the lips, mouth, tongue, throat
- Nasal congestion or itchiness, runny nose, sneezing
- Itchy, teary, puffy eyes

**Breathing**
- Chest tightness, shortness of breath, wheezing or whistling sound
- Change in voice, hoarseness or choking
- Repetitive throat clearing

**Stomach**
- Nausea, vomiting, dry heaves
- Abdominal cramps, or diarrhea

**Circulation**
- Dizziness, fainting, loss of consciousness
- Flushed or pale skin
- Cyanosis (bluish circle around lips and mouth)

**Mental/Psychological**
- Changes in the level of awareness
- A sense of impending doom, crying, anxiety
- Denial of symptoms or severity

Symptoms can range from mild to severe and can quickly become life threatening. There is no way to know how serious a reaction will become, so it is important to treat every reaction quickly.

*Students may suffer from food intolerances that do not result in a life-threatening food allergy reaction (anaphylaxis) but still hamper the student’s ability to perform optimally.*
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

Food intolerance is sometimes confused with food allergy. Food intolerance refers to an abnormal response to a food or food additive that is not an Immunoglobulin E (IgE) allergic reaction. For instance, an individual may have uncomfortable abdominal symptoms after consuming milk. This reaction is most likely caused by a mild sugar (lactose) intolerance, in which the individual lacks the enzymes to break down milk sugar for proper digestion. Another example is noted in Celiac Disease. Individuals develop food intolerance to gluten by producing Immunoglobulin G (IgG) and/or Immunoglobulin (IgA) antibodies.

RESPONSE to Anaphylaxis

Implementation of emergency action plan:

In order to implement a child’s emergency care plan a staff person needs to know the symptoms of anaphylaxis, how to give the epinephrine auto-injector and other necessary medication, and how to activate emergency medical services (911).

Treatment:

Epinephrine is the ONLY medication that can reverse severe anaphylactic symptoms.

* Epinephrine also known as adrenaline is a natural occurring hormone in the body. It is released in the body in stressful situations know as the “fight or flight syndrome.” It increases the heart rate, diverts blood to muscles, constricts blood vessels, and opens the airways. Administering epinephrine by injection (such as an EpiPen® auto-injector) quickly supplies individuals with a large and fast dose of the hormone. An injection of epinephrine will assist the student temporarily. Sometimes, a second dose is needed to prevent further anaphylaxis before the student is transported to a medical facility for further emergency care.

If a child is exhibiting signs of a life-threatening allergic reaction, epinephrine must be given immediately and the Emergency Medical Services (EMS) 911 called for transport.

There should be no delay in the administration of epinephrine.
All students will require the help of others, regardless of whether they are capable of epinephrine self-administration.

The severity of the reaction may hamper their attempt to self-inject.

Adult supervision is mandatory.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

RESPONSE to Anaphylaxis cont.

EpiPen Injection Procedure: Pass out Epipen Trainers
- Remove the EpiPen device from its protective container
- Pull off gray safety cap from the fatter end of the device (this “arms” the unit ready for use).
- Place black tip on outer thigh. The EpiPen is designed so it can be injected through clothing. Hold the EpiPen in your fist with clenched fingers wrapped around it.
- Push EpiPen auto-Injector against thigh until unit activates (until a loud "click" is heard) and then hold in place 10 seconds.
- Remove the pen from the thigh; be careful with the needle that will now be projecting from the EpiPen when you dispose of the device.
- Massage the injection site to increase epinephrine absorption. There may be some slight bleeding at the injection site. (Apply firm pressure with a cloth, tissue, clean handkerchief or bandage.)
- Replace EpiPen into original container with exposed needle pointing downward into container.
  - Assist student to lying position
  - Call 911 and stay with the student until EMS arrives:
  - Record the time that the EpiPen was given on the Emergency Action Plan and give EMS a thorough report.
  - Give EMS the used EpiPen and the Emergency Action Plan.

Epi-pen practice time

Recommendations from AAAAI regarding other medications:

**Antihistamines:**
Antihistamines, such as Benadryl, are often used to further improve the recovery of a person with anaphylaxis.

Antihistamines may be administered with epinephrine but *never* instead of epinephrine because they cannot reverse many of the symptoms of anaphylaxis, such as a drop in blood pressure.

**Asthma medications:** Asthma medications, such as bronchodilators, should never be given in place of epinephrine to treat an anaphylactic reaction, although they may be helpful for asthma symptoms in *addition* to epinephrine.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

Emergency Action Plan
   Student Name
   Allergy to:
   Previous reaction: signs & symptoms, when
   Location of emergency medication
   List of symptoms by system
   Medication orders

RESPONSE to Anaphylaxis cont.

Emergency Action Plan – show example of your school district plan here
Insert sample form from Guidelines
*Discuss parts of EAP listed above

Emergency Action Plan
   GIVE MEDICATION AS ORDERED. AN ADULT IS TO STAY WITH STUDENT AT
   ALL TIMES.
   CALL 911 IMMEDIATELY. EMS must be called WHENEVER epinephrine is
   administered.
   DO NOT HESITATE to administer epinephrine and to call 911 even if the parents cannot
   be reached.
   * Note time medication was given
   * Activate Emergency Medical Services- discuss school district/building communication plan
   here
   * Advise 911 that the student is having a severe allergic reaction and Epi-pen® is being
   administered

   An adult trained in CPR is to stay with student –monitor and begin CPR as necessary.
   Call the School Nurse or Health Services Main Office
   Student should remain with a staff member trained in CPR at the location where
   symptoms began until EMS arrives.
   Notify the administrator and parent/guardian.
   Dispose of used Epi-Pen® in “sharps” container or give to EMS along with a copy of the
   Action Plan
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

Review Anaphylaxis Recognition:

**Skin:** Swelling of face, lips, eyes; flushing; itching, hives, rash

**Airway:** swelling, change in voice, hoarseness, repetitive throat clearing

**Breathing:** rapid breathing, wheeze, fatigue, cyanosis, confusion

**Circulation:** pale, clammy, lightheadedness, faintness, drowsiness, loss of consciousness, collapse

Review Anaphylaxis Response:

- ✓ Give Epinephrine auto-injector
- ✓ Assist student to lying position
- ✓ Call 911
- ✓ Call School Nurse or follow your school’s communication plan
- ✓ Stay with student
- ✓ Administer CPR if needed

There is a natural reluctance to wait to administer epinephrine until symptoms worsen and you are sure the student is experiencing an anaphylactic reaction. There is the same reluctance to call 911. Many fatalities occur because the epinephrine was not administered in a timely manner. Practicing implementation of the ECP can be the most effective strategy to overcome the tendency to delay and to decrease the likelihood of a student fatality.
ANAPHYLAXIS: Awareness-Avoidance-Recognition-Response

RESOURCES:

American Academy of Allergy, Asthma and Immunology http://www.aaaai.org

Asthma Allergy Foundation of America http://aafa.org

Food Allergy and Anaphylaxis Network http://www.foodallergy.org

World Allergy Organization http://www.worldallergy.org

Guidelines for the Care of Students with Anaphylaxis (2009)

Guidelines for the Care of Students with Life-threatening Allergies (2008)

Office of the Superintendent of Public Instruction
http://www.k12.wa.us/HealthServices/resources.aspx
Case Studies

1. Elementary Anaphylaxis- Peanut Allergy
   - Aaron is a seven year old student with severe peanut allergy and asthma. Aaron has been diagnosed with a peanut allergy and asthma since he was three years old. Aaron can not eat any product containing peanuts and has a life threatening anaphylactic response if he is exposed to peanuts or peanut containing foods. An epinephrine auto-injector must be available in the event that Aaron is exposed to peanuts.

   - Aaron complains of continued asthma symptoms even after using a rescue medication inhaler. You know Aaron has a life-threatening allergy to peanuts and it has been 30 minutes since the students’ finished eating lunch. You suspect Aaron may have been exposed to peanut butter at lunch.

2. High School Anaphylaxis- Tree Nut Allergy

   - A high school foreign language teacher has one student (Michael) who has a life-threatening food allergy. The teacher develops a strategy to incorporate a student learning experience with foods (student potluck) of the region without exposing Michael to potential life-threatening allergens. On the day of the potluck Michael is exposed to a life-threatening allergen and is having an allergic reaction during class.

Case Study Resources


Guidelines for Care of Students with Anaphylaxis (2009)
Sample Allergy and Anaphylaxis Training Assessment
(Red font indicates correct answers)

1. What is anaphylaxis?
   - An allergic reaction
   - A sudden, life-threatening allergic reaction
   - An asthma attack

2. Signs and symptoms of an allergic reaction include (check all that apply):
   - Itchy, red rash
   - Hives
   - Sneezing
   - Itching, swelling, or hoarseness of the throat
   - Shortness of breath, cough, and/or wheezing
   - Weak pulse or loss of consciousness ("passing out")
   - Hyperactivity
   - Abdominal pain/discomfort

3. Signs and symptoms of anaphylaxis include (check 1 of the following):
   - Extreme agitation, restlessness
   - Itching and swelling of the lips or tongue, hives, difficulty breathing, vomiting
   - Lethargy, drowsiness

4. If a child with a food allergy complains of any of the above symptoms, it is best to wait and be sure rather than provide emergency treatment. True  False

5. A food allergy reaction or anaphylaxis only occurs after the food-allergic person eats a large amount of the allergy food. True  False

6. If not treated immediately, a food allergy reaction can cause death. True  False
7. Epinephrine does not need to be given for a bee sting unless the student complains of
difficulty breathing, even if the nursing care plan documents a history of anaphylaxis.
True  False

8. Which of the following are possible side effects of epinephrine?
☐ Elevated blood pressure, itching
☐ Headache, nausea
☐ Heart palpitations, anxiousness, headache
☐ Drowsiness, lethargy

9. If the allergy symptoms are relieved after giving epinephrine, Emergency Medical Services
   (911) do not need to be called.  True  False

8. If a food doesn't have a label, it is better not to give it to a student with food allergies even if
   he/she says they think they have had it before.  True  False

9. Everyone experiencing a life-threatening allergic reaction will have hives.
   True  False

10. I have demonstrated I am able to use the epinephrine auto-injector.  Yes  No

11. The epinephrine auto-injector should be given only if an allergy reaction is severe, otherwise
    treatment should begin with an antihistamine while waiting for emergency personnel or
    doctor’s advice.  True  False

12. Stops the symptoms of the allergic reaction. (circle one) Epinephrine  Antihistamine

13. Lessens the effect of the allergic reaction. (circle one) Epinephrine  Antihistamine

14. When using the epinephrine auto-injector, it must be held in place for 10 seconds for all the
    medication to be released.
15. A child with a latex allergy can experience a latex allergen exposure from ______________. Balls, gym equipment, balloons, and first aid gloves.

16. A child eats a sandwich containing peanut butter and a classmate has a peanut allergy, cross-contamination can be reduced by (check 1 of the following):
   - Thoroughly washing hands with soap and water after eating and thoroughly washing the eating surface with soap and water.
   - Using a paper towel to clean up any peanut butter that falls out of the sandwich

19. Craft activities that use foods known to cause allergic reactions in students are safe to do because they won't be eaten. True  False

20. Schools are not considered a high risk setting for exposure to allergens and cross-contamination for students with life-threatening allergies. True  False

21. Life-threatening allergy is classified as a disability under Section 504. True  False

22. The classroom is the most common area students in school are reported to experience an allergic reaction. True  False

23. In order to implement a child’s emergency care plan a staff person needs to know (check one of the following):
   - The name of the allergen, where the emergency care plan is kept, and how to administer the epinephrine auto-injector.
   - The students name, how to activate emergency medical services (911), and cardiopulmonary resuscitation (CPR).
   - The symptoms of anaphylaxis, how to give the epinephrine auto-injector and other necessary medication, and how to activate emergency medical services (911).
The name of the allergen, the symptoms of anaphylaxis, and where the epinephrine auto-injector is stored.

24. A child complains of continued asthma symptoms even after using a rescue medication inhaler. You know this student has a life-threatening allergy to peanuts and it has been 30 minutes since the student finished eating lunch. You suspect this student may have been exposed to peanut butter at lunch.

Describe the next steps you would take.
Guidelines for Care of Students with Anaphylaxis (2009)
Evaluation for Allergy and Anaphylaxis Training

Please rate the following statements using the number scale from 1 to 5

1 = strongly agree 2 = somewhat agree 3 = neither agree nor disagree
4 = somewhat disagree 5 = strongly disagree

I understand my roles and responsibilities as a school district employee toward students with anaphylaxis.

1 2 3 4 5

I understand and feel confident in avoiding/preventing allergen exposures.

1 2 3 4 5

I understand and feel confident I can recognize anaphylaxis symptoms.

1 2 3 4 5

I know how to use an epinephrine auto-injector and am confident in using it.

1 2 3 4 5

I understand and feel confident in following the Emergency Care Plan for a student with anaphylaxis.

1 2 3 4 5

I am confident being responsible for the well-being of a student with allergies.

1 2 3 4 5

I found the training session to be very effective.

1 2 3 4 5

The training time was adequate.

1 2 3 4 5

Adapted with permission from ESD 114 SNC Program
Anaphylaxis Toolkit Training for School Nurses
Pre/Post-Assessment for Allergy and Anaphylaxis Training

Please rate the following statements using the number scale from 1 to 5

1 = strongly agree  2 = somewhat agree  3 = neither agree nor disagree
4 = somewhat disagree  5 = strongly disagree

1. I understand and am confident in my school nurse role and my responsibilities to provide Anaphylaxis Education to school staff.
   1 2 3 4 5

2. I am knowledgeable in the avoidance/prevention measures to take to reduce the risk of an allergen exposure.
   1 2 3 4 5

3. I can describe the relationship between cross-contamination and allergens.
   1 2 3 4 5

4. I understand and feel confident I can recognize anaphylaxis symptoms.
   1 2 3 4 5

5. I know how to use an epinephrine auto-injector and am confident in using it.
   1 2 3 4 5

6. I know how to initiate treatment for an allergic reaction and anaphylaxis.
   1 2 3 4 5

7. I understand how Section 504 pertains to students with allergies.
   1 2 3 4 5

8. I understand the motivations of school staff to learn new information.
   1 2 3 4 5

9. I am confident in my skills to train school staff in anaphylaxis awareness, avoidance, recognition and response.
   1 2 3 4 5