Food Allergies in School

What School Staff Need to Know

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School Nurse Slides: Before Getting Started

- The slides in this presentation have been created to augment food allergy and anaphylaxis training and to serve as a teaching tool. This training is intended to be used in conjunction with any additional training done by the school nurse, especially for those who have direct contact with students who have food allergies.
- Content is consistent with guidance documents for managing food allergies in schools (including the CDC's *Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs*, NSBA's *Safe at School and Ready to Learn*, as well as multiple state guidelines including Massachusetts, Colorado, Connecticut, and New York State, and others).
- Prior to making any changes in food allergy management, please discuss with your school nurse, administration and/or school physician.
- Those involved with the creation and production including, but not limited to, the speaker, AllergyHome, editors, and reviewers are not responsible for any adverse consequences from the use of information in this presentation. The content of these slides is solely the responsibility of the authors and does not necessarily represent the views of any specific state or federal agency.

Colorado Staff Training Levels

LEVEL I: ALL school personnel

LEVEL II: School Personnel with Frequent Contact with a Student with Food Allergies (Delegation responsibilities)

LEVEL III: School Personnel that will be trained to administer stock epinephrine in the case of an allergic emergency (Designated Personnel)

For ALL levels: Please be familiar with your school's specific Emergency Protocols in the case of a medical emergency.

Goals of This Module

1. Increase your knowledge of food allergies and teach practical management
2. Promote a team approach working with your school nurse, administration, students and parents to carry out effective food allergy practices
3. Increase awareness and understanding that can help support children with food allergies and may save lives

Food Allergy Facts

Definition: Abnormal immune response to **food protein**

Most Common Allergens: Milk, egg, peanut, tree nut (e.g. cashew), wheat, soy, fish and shellfish (e.g. shrimp)

**people can be allergic to practically any food*

Munoz-Furlong et al. Nutrition Guide To Food Allergies. FAAN. 2005.
Food Allergy Practice Parameter. Annals of Allergy, Asthma & Immunology. 2006.
"Managing Life Threatening Food Allergies in Schools." Mass Dept. of Education.2002
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Food Allergy Facts

Symptoms:

- **Skin and Mucous Membranes (lips, tongue, mouth, eyes):** rash, itching, flushing, hives; lip, tongue, eye swelling; tingling or numbness around the mouth; red, watery eyes
- **Gastrointestinal:** belly pain or cramping, heart burn, nausea, vomiting, diarrhea
- **Upper Respiratory (nose and throat):** sneezing, nasal congestion, hoarse voice, difficulty swallowing, throat swelling, dry cough, numbness around mouth
- **Lower Respiratory (lungs):** deep cough, wheezing, chest tightness, shortness of breath, difficulty breathing
- **Cardiovascular (heart):** blue or pale skin color, weak pulse, fainting, dizziness, loss of consciousness, confusion, shock, low blood pressure
- **Neurologic (brain) and Emotional:** sense of doom, irritability, mood change, confusion, lethargy, decrease in alertness.

"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.
Sampson, HA, Hospital Practice, 2000.
Food Allergy Practice Parameter. Annals of Allergy, Asthma & Immunology. 2006.

Food Allergy Facts

Timing: Most allergic reactions occur within minutes up to a few hours after exposure

McIntyre CL et al., 2005; DATA HEALTH BRIEF.
Munoz-Furlong et al. Nutrition Guide To Food Allergies. FAAN. 2005.
Sampson, HA, Hospital Practice, 2000.
Food Allergy Practice Parameter. Annals of Allergy, Asthma & Immunology. 2006.

Food Allergy Facts

Anaphylaxis:

- Severe life-threatening allergic reaction
  - Can start with mild symptoms
  - Some have no skin symptoms
- Epinephrine
  - 1st line treatment for anaphylaxis
  - Works quickly
  - In many cases is temporary
- First time allergic reactions occur in school

McIntyre CL et al., 2005; DATA HEALTH BRIEF.
Munoz-Furlong et al. Nutrition Guide To Food Allergies. FAAN. 2005.
Sampson, HA, Hospital Practice, 2000.
Food Allergy Practice Parameter. Annals of Allergy, Asthma & Immunology. 2006.

Other Food Allergic Disorders and Celiac Disease

- Eosinophilic Esophagitis (EOE)
- Food Protein Induced Enterocolitis Syndrome (FPIES)
  - Delayed (non-IgE mediated) food allergy of the gastrointestinal tract that **does not** cause symptoms of hives, swelling or anaphylaxis
- Celiac Disease
  - Autoimmune disorder triggered by exposure to gluten (found in wheat, rye, barley, and oats*)

    *some children are able to tolerate gluten free oats under the guidance of their physician

Accidental exposures can cause severe gastrointestinal symptoms and other health issues.

In many cases, the same avoidances strategies that will be discussed in this module should be implemented. Talk to your school nurse about your specific students

NIAID, Guidelines for the Diagnosis and Management of Food Allergy in the United States
NIH, Celiac Disease Awareness Campaign and National Foundation for Celiac Awareness

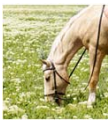
Other Causes of Anaphylaxis

Stinging insects

Latex

Medication

Exercise



Environmental triggers

?

Unknown & Idiopathic

Cold induced

Discuss appropriate management with your school nurse

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education. 2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs," Centers for Disease Control & Prevention. 2013.

Deaths unfortunately do occur in schools

Risk Factors

Peanut or Tree nut Allergies	Adolescence or Young Adulthood	Asthma
Prior Anaphylaxis	Relying on Antihistamines	Delay or No Administration of Epinephrine

Bock JACI 2001;107:191.
Bock JACI 2007;119:4:1016-18.
Sampson et al. JACI 2006;117:391-7.

Emotional and Social Impact
Fear of adverse events and death
Fear of ridicule
Social isolation
Limitations in activities
Bollinger et al. Ann Allergy Asthma Immunol. 2006;96(3):415-21.
Markklund et al. Health and Quality of Life Outcomes 2006, 4:48.
Avery et. al. Pediatr Allergy Immunol 2003; 14:378-382.
ASK

• Most Concerning Troubles/Limitations:
– Limited social activities
– Limited food choices
– Being a burden to others
– Not enough education to others about food allergy at school
Resnick et. al., Ann Allergy Asthma Imm. 2010.
ASK

Food Allergies and Bullying
an et. al. 2010 Oct;10 (4):282-6.
ASK

Key Points about Food Allergy Reactions

- 1st time allergic reactions happen in school
- Fatal and near-fatal reactions are rare but do occur
- **Early recognition** and **treatment** of anaphylaxis can be **life saving**
- Food allergies have social and emotional impact on children

Not Necessary

Allergic reactions can be prevented and dealt with *reasonably* while maintaining quality of life

How do we do this?

Prevention	Emergency Preparedness
A.C.T. to Prevent Accidental Exposures **A**VOID **C**OMMUNICATE **T**EACH	Be prepared to **R.E.Act** **R**ecognize Anaphylaxis **E**pinephrine **Act**ivate Emergency Response **C**all 911-Tell them child with anaphylaxis **T**elephone (NEVER wait to give Epinephrine) Doctors and parents (as per action plan)

These must be applied at all times and in all settings

Food Allergy Emergency Care Plan

Individual Plan For Food Allergy Management

- Emergency Care Plans for Anaphylaxis
- 504 Plans
- Individualized Educational Plans

Food Allergy Management

Prevention

A.C.T. to Prevent Accidental Exposures

- AVOID
- COMMUNICATE
- TEACH

Emergency Preparedness

Be prepared to **R.E.Act**

- Recognize Anaphylaxis
- Epinephrine
- Activate Emergency Response
  - Call 911-Tell them child with anaphylaxis
  - Telephone (NEVER wait to give Epinephrine)
  - Doctors and parents (as per action plan)

A.C.T. to Prevent Accidental Exposures

AVOID

COMMUNICATE

TEACH

A.C.T. to Prevent Accidental Exposures

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A.C.T. to Prevent
Avoid Food Allergen

Ways to come in contact with allergen

Through the mouth

Breathing in

Touching the skin

Oral Ingestion of Food Allergen

How much does it take?

Strict Avoidance

Reading Labels Key

- Each label on food should be read every time
  - Ingredients in products can change without warning
- You should understand labeling laws and their limitations

(US FDA Guidelines for Industry. http://www.fda.gov/)

Food Allergen Labeling and Consumer Protection Act:

The 8 Major Food Allergens

- **Milk, eggs, peanuts, tree nuts, wheat, soy, fish, and crustacean shellfish**
- 90 percent of all food allergies in the United States
- Must be listed in clear, **understandable** language in food labels on all domestic and imported packaged foods
- Any of these major 8 allergens must be stated if found in flavorings, colorings or other additives

(US FDA Guidelines for Industry. http://www.fda.gov/)

Food Allergen Labeling and Consumer Protection Act:

Exceptions

- Foods that do not need clear labeling
  - Any food not regulated by the FDA
    - Includes most meats, poultry, certain egg products, and most alcoholic beverages
  - Any other foods not in the major 8, such as
    - Sesame or other seeds
    - Molluscan shellfish (oysters, clams, mussels, scallops, and others)
    - Gluten (except for wheat)
      - Barley, rye, or oats (hidden in malt, dextrins, flavors, and others)
- Foods not in the major 8 may be hidden in flavorings, colorings or other additives

(US FDA Guidelines for Industry. http://www.fda.gov/)

Major 8 Allergens can be listed in either 1 of 2 ways

1)Following the name of the ingredient

Ingredients:

Sugar, Peanuts (Roasted), Corn Syrup, Palm Kernel and Coconut Oil (Partially Hydrogenated), Nonfat Milk, High Fructose Corn Syrup, Cocoa, Less Than 1%: Glycerin, Dextrose, Whey(From Milk), Salt, Artificial & Natural Flavors, Soy Lecithin, Soybean Oil, Carrageenan, TBHQ and Citric Acid, TBHQ and Citric Acid (to Preserve Freshness), Lactic Acid Esters

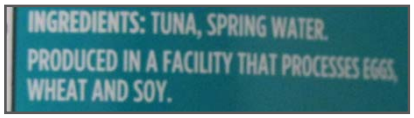
OR

2) Next to a Contains Statement

INGREDIENTS: WHOLE GRAIN OATS, SUGAR, NATURALLY FLAVORED YOGURT COATING (SUGAR, FRACTIONATED PALM KERNEL OIL, DEXTROSE, CORN STARCH, DRIED STRAWBERRIES, DRIED NONFAT YOGURT (HEAT TREATED AFTER CULTURING) (CULTURED NONFAT MILK), SOY LECITHIN, NONFAT MILK, NATURAL FLAVOR, MALTODEXTRIN), OAT BRAN, CORN MEAL, MODIFIED CORN STARCH, CORN SYRUP, SALT, CALCIUM CARBONATE, TRISODIUM PHOSPHATE, BROWN SUGAR SYRUP, ZINC AND IRON (MINERAL NUTRIENTS), COLOR ADDED, VITAMIN C (SODIUM ASCORBATE), A B VITAMIN (NIACINAMIDE), VITAMIN B_6 (PYRIDOXINE HYDROCHLORIDE), VITAMIN B_2 (RIBOFLAVIN), VITAMIN B_1 (THIAMIN MONONITRATE), VITAMIN A (PALMITATE), A B VITAMIN (FOLIC ACID), NATURAL FLAVOR, VITAMIN B_{12}, VITAMIN D, WHEAT FLOUR, VITAMIN E (MIXED TOCOPHEROLS) ADDED TO PRESERVE FRESHNESS.
CONTAINS MILK, SOY AND WHEAT INGREDIENTS.

Avoid products with advisory labeling for allergen of concern

- Statements (Numerous formats & No regulation)
  - "may contain"
  - "processed in a facility that …"
  - "manufactured on shared equipment with…"
  - etc



Hefle et al. JACI 2007.

Hidden Ingredients

- Not an obvious component of food
- Just looking at the food isn't enough to tell if an allergen is in it
- If there is an item that does not have a label it is safest to avoid eating it.

Outside Food

Food Sources in Non-edible items

Finger paint: milk or egg whites

Shaving cream: milk

Paste: wheat

Pet food: anything

Play dough: wheat

Bean bags: beans, nuts, or seeds

Bird feed: nuts, seeds

Food related activities: anything

And others…

Skin Contact With Food Allergens

Simonte. JACI 2003. V112. N1. 180-2.
Wainstein. Pediatric Allergy Immunology 2007; 18:231-9.

(Tulve et al. *Journal of Exposure Analysis and Environmental Epi.*(2002) 12, 259–264)
(Nicas et al. *J Occup Environ Hyg.* 2008 Jun;5(6):347-52)

Inhalation of Food Allergen

Inhalation in some settings can cause allergic reactions

- Reactions of inhalation with **active cooking**
- Caution with powders, flours, small particles of food, etc.

Simonte, et al, JACI 1999.
Roberts Allergy. 2002.

How cross-contact can happen

Kitchen slicers

Food splatter

Deep fryers

Buffets

Garnishing

More ways for cross-contact to occur

Sanitizing dip buckets

High chairs, car seats, etc.

Table tops

Hands

Utensils, dishware, cups, water bottles

Sponges/dishrags

Saliva and pets can also be sources for cross-contact

Saliva

Pet licking

Pet food

Read ingredients

Maloney. JACI. 2006.
Munoz-Furlong. Pediatrics 2003.

Each age group will have different issues with cross-contact

Be aware of the developmental level and capabilities of your child: Different issues with different age groups

Self Care

Proper cleaning can prevent cross-contact

- Establish a cleaning protocol to avoid cross-contact

What Works: Soap and water, commercial hand wipes

What Doesn't: Hand sanitizers

Perry et al. JACI 2004.

A.C.T. to Prevent
Accidental Exposures

AVOID

COMMUNICATE

TEACH

A.C.T. to Prevent

COMMUNICATE:
Staff and Volunteers

- Know which students under your care have a food allergy and discuss with the school nurse.
- Alert other necessary staff (subs, coaches, volunteers included)
- Remember to protect privacy and prior to sharing health information, discuss with school nurse/and or principal to confirm parental consent

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education.2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

A.C.T. to Prevent

COMMUNICATE:
Staff and Volunteers

- Have a means to contact the school nurse, and emergency services
- Emergency identification jewelry is recommended.

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education.2002
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

A.C.T. to Prevent
COMMUNICATE:
Parents and Students

- Notify parents of events that you are planning, where food is served
- Inform all parents and students about rules, practices, and bullying policies regarding food allergies (relevant to your role)
  - at the beginning of the school year or when there are any changes

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education.2002
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

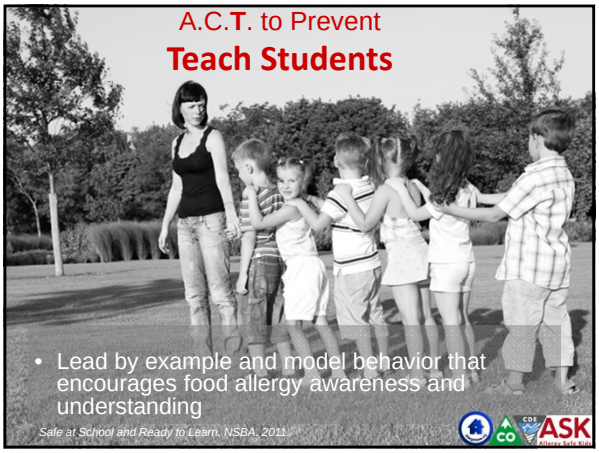
A.C.T. to Prevent
Accidental Exposures

AVOID

COMMUNICATE

TEACH

A.C.T. to Prevent
Teach Students



- Lead by example and model behavior that encourages food allergy awareness and understanding

Safe at School and Ready to Learn. NSBA. 2011

A.C.**T**. to Prevent

Teach Students

- Work with school behavioral health professional to educate students about bullying and teasing in your setting
- Work with your school nurse and administration to consider including as part of routine lessons
  - Teaching Points
    - Signs and symptoms of anaphylaxis
    - Bullying is never OK
    - Get help
    - Get a grown-up
    - Food allergy management strategies
    - Support your peers
- See Schools.AllergyHome.org for student module

Safe at School and Ready to Learn. NSBA. 2011.

A.C.**T**. to Prevent

Teach Parents

- Work with administration and your school nurse to provide food allergy awareness to all parents
  - Outline food allergy school and class room policies
  - Convey that food allergy management is critical and necessary at all times
  - Get parents' help in keeping certain foods out of the classroom
  - Emphasize importance of understanding and support
  - Consider use of announcements, letters, email blasts, listservs, websites, PTA meetings and other events
- See Schools.AllergyHome.org for parent module

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education.2002
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs," Centers for Disease Control & Prevention. 2013.

Emergency Preparedness

Prevention

A.C.T. to Prevent Accidental Exposures

AVOID

COMMUNICATE

TEACH

Be prepared to **R.E.Act**

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response
Call 911-Tell them child with anaphylaxis
Telephone (NEVER wait to give Epinephrine)
Doctors and parents (as per action plan)

Be Prepared to R.E.Act

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response

Call 911-Tell them child with anaphylaxis
Telephone (NEVER wait to give Epinephrine)
Doctors and parents (as per action plan)

Be Prepared to R.E.Act:
Who should know about allergic reactions?

- Anyone who interacts with students, staff or visitors
- Discuss with your school nurse and/or school principal your role in your school's emergency protocol (emergency care plan).
- Some staff may be trained and delegated under the direction of the school nurse to recognize and treat anaphylaxis in those with a known allergy, when a school nurse is not available.
- If your school district has adopted a policy under CRS 22-1-119.5 to stock epinephrine, then 2-3 staff members should be designated and receive additional training in recognition and treatment of anaphylaxis.

Safe at School and Ready to Learn. NSBA. 2011.

Be Prepared to R.E.Act

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response

Call 911-Tell them child with anaphylaxis
Telephone (NEVER wait to give Epinephrine)
Doctors and parents (as per action plan)

Be Prepared to R.E.Act

Recognize Anaphylaxis: Possible Symptoms

Coughing, wheezing, shortness of breath, chest tightness, difficulty breathing

Change in voice, difficulty speaking or swallowing

Throat tightness or closing, tongue swelling

Be Prepared to R.E.Act

Recognize Anaphylaxis: Possible Symptoms

Rash, hives, swelling, skin itching, flushing

Itchy lips, tongue, ears, throat or mouth

Runny nose, sneezing

Red, itchy, or watery eyes

Be Prepared to R.E.Act

Recognize Anaphylaxis: Possible Symptoms

Dizziness, loss of consciousness, fainting

Stomach cramps, vomiting, diarrhea

Irritability, confusion, sense of doom

Skin flushing, paleness, or blue appearance

And others…

Be Prepared to **R**.E.Act

Recognize Anaphylaxis:

"I can't get the taste out!"

Be Prepared to R.E.Act

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response

Call 911-Tell them child with anaphylaxis

Telephone (NEVER wait to give Epinephrine)

Doctors and parents (as per action plan)

Be Prepared to R.**E.**Act

Treatment of Anaphylaxis: **E**pinephrine Auto-injector

- Contact the school nurse immediately.
- For those **with a known** allergy and an auto-injector, a trained and delegated non-licensed staff member can administer an auto-injector in the event that a nurse is unavailable. (Level II training)
- For those **without known** allergies rapidly calling 911 and contacting your nurse is critical.
- If your school district has adopted a policy under CRS 22-1-119.5 to stock epinephrine then only designated responders can administer epinephrine. (Level III training)
- Epinephrine is the first line treatment for anaphylaxis. It works quickly but is short acting. Further evaluation and management in the emergency department is essential.
- **Antihistamines are not first line treatment of anaphylaxis and do not stop or prevent it.**

"Managing Life Threatening Food Allergies in Schools." Mass Dept. of Education 2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.
Simons et al. JACI 1998; 101:1;33-37.
Sampson et al. JACI 2006;117:391-7.

Common Side Effects from Epinephrine

Paleness (100%)

Shaky (80%)

Anxiety (70%)

Fast heart rate (50%)

Headache (20%)

Nausea (20%)

Simons. JACI 109: 171-175, 2002.

Be prepared to R.E.Act

Treatment of Anaphylaxis: Epinephrine Auto-injectors

Adrenaclick ® & generic epinephrine

Auvi-Q®

EpiPen ®

Currently 4 auto-injectors available in US (January 2015)

online video training available

Colorado Food Allergy Emergency

Allergy and Anaphylaxis Action Plan and Medication Orders

Student's Name: _____ D.O.B. _____ Grade: _____
Teacher: _____
ALLERGY TO: _____
History: _____

Place child's photo here

Asthma: ☐ YES (Higher risk for severe reactions) ☐ NO

◊ STEP 1: TREATMENT ◊

SEVERE SYMPTOMS:
Give or more of the following:
LUNGS: Short of breath, wheeze, repetitive cough
HEART: Weak, thready pulse, low blood pressure
THROAT: Tight, hoarse, trouble breathing/swallowing
MOUTH: Obnoxious swelling (tongue and/or lips)
SKIN: Hives, body redness
Or **combination** of symptoms from different body areas:
SKIN: Hives, itchy rashes, swelling (e.g., eyes, lips)
GUT: Vomiting, cramps pain

☐ **Give epinephrine immediately if the allergen was definitely ingested, even if there are no symptoms**

→ 1. **INJECT EPINEPHRINE IMMEDIATELY**
2. Call 911
3. Begin monitoring (see box below)
4. Administer other medications:
- Antihistamine
- Inhaler (quick relief) if asthma

*Antihistamine & quick relief inhalers are not to be depended upon to treat a severe reaction (anaphylaxis). USE EPINEPHRINE

MILD SYMPTOMS ONLY
MOUTH: Itchy mouth
SKIN: Hives, tingling around mouth/face, mild itch
GUT: Mild nausea/discomfort

→ 1. **GIVE ANTIHISTAMINE**
2. Stay with student, alert healthcare provider/parents/EMS
3. If symptoms progress (see above), USE EPINEPHRINE
4. Begin monitoring

DOSAGE
Epinephrine: inject intramuscularly using auto-injector (check one): ☐ **0.3 mg** ☐ **0.15 mg**
☐ Administer 2nd dose if symptoms do not improve in _____ minutes
Antihistamine: (brand and dose)_____
If Asthmatic: (brand and dose)_____
Student has been instructed and is capable of carrying and self-administering own medication. ☐Yes ☐No
Provider (print) _____ Phone Number: _____
Provider's Signature: _____ Date: _____
If this condition warrants meal accommodations from food service, please complete the medical statement for dietary disability

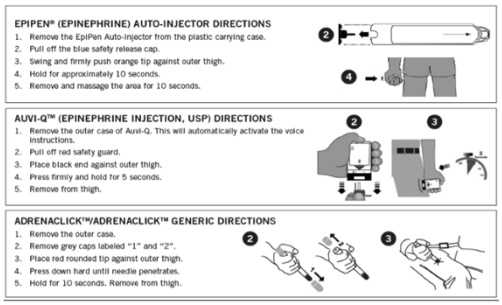
◊ STEP 2: EMERGENCY CALLS ◊

1. If epinephrine given, **call 911**. State that an allergic reaction has been treated and additional epinephrine, oxygen, or other medications may be needed.
2. Parent: _____ Phone Number: _____
3. Emergency contacts: Name/Relationship Phone Number(s)
a. _____ 1) _____ 2) _____
b. _____ 1) _____ 2) _____

EVEN IF PARENT/GUARDIAN CANNOT BE REACHED, DO NOT HESITATE TO ADMINISTER EMERGENCY MEDICATIONS
I give permission for school personnel to share this information, follow the plan, administer medication and care for my child and, if necessary, transport my child to the hospital. I accept the responsibility for providing the school with prescribed medication and delivery/monitoring devices. I approve this Severe Allergy Care Plan for my child.

Parent/Guardian's Signature: _____ Date: _____
School Nurse: _____ Date: _____

Epinephrine Auto-Injectors



EPIPEN® (EPINEPHRINE) AUTO-INJECTOR DIRECTIONS

1. Remove the EpiPen Auto-Injector from the plastic carrying case.
2. Pull off the blue safety release cap.
3. Swing and firmly push orange tip against outer thigh.
4. Hold for approximately 10 seconds.
5. Remove and massage the area for 10 seconds.

AUVI-Q™ (EPINEPHRINE INJECTION, USP) DIRECTIONS

1. Remove the outer case of Auvi-Q. This will automatically activate the voice instructions.
2. Pull off red safety guard.
3. Place black end against outer thigh.
4. Press firmly and hold for 5 seconds.
5. Remove from thigh.

ADRENACLICK™/ADRENACLICK™ GENERIC DIRECTIONS

1. Remove the outer case.
2. Remove grey caps labeled "1" and "2".
3. Place red rounded tip against outer thigh.
4. Press down hard until needle penetrates.
5. Hold for 10 seconds. Remove from thigh.

Recommend having Two doses of epinephrine available

1 in 8 Children need a second dose of epinephrine for food-related anaphylaxis

Rudders et. al., Pediatrics. 2010 Apr;125(4):e711-8.

Where and How to Store Epinephrine

- Store epinephrine in a well-defined, secure, and accessible location
- Avoid Extreme temperatures
  - Keep at 15-30° C (59-86° F)
  - Do not store in car

EpiPen package insert

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education.2002
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Be Prepared to R.E.Act

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response

Be Prepared to R.E.ACT

ACTivate Emergency Response

- Contact the nurse if available and 911 (or local Emergency Medical Services)
  - Caller should state that child having anaphylaxis and request licensed responders that can administer epinephrine
  - The child must be taken to the Emergency Department via Ambulance (child may need additional care and can experience a late phase reaction)
- **After** epinephrine is administered (if appropriate) and **after** 911 called, contact emergency contacts as per emergency allergy action/care plan
- If possible keep the child or adult from rising to an upright position

"Managing Life Threatening Food Allergies in Schools." Mass Dept. of Education.2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.
Sampson et al. JACI.2006;117:391-7.
Pumphrey. JACI. 2003;112:451-2.

After a Reaction

- Complete all appropriate documentation as per school policy and state and local regulations
- Complete CDE epinephrine/anaphylaxis incidence report online
  - http://fs24.formsite.com/305medicaid/form5/index.html
  - Reporting should be completed within 10 days regarding any incident at the school.
- Review your team's emergency response with your school nurse/and or administration
- Provide support to the child and their family upon return to school after experiencing an allergic reaction

"Managing Life Threatening Food Allergies in Schools." Mass Dept. of Education. 2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Food Allergy Management in Specific School Settings

High Risk Situations

- Outside Food in school (birthdays, celebrations, cultural days, bake sales, etc)
- Food allergens where children learn
- Breaks in school routine and field trips
- School Bus & Transportation
- Transitions in care and substitute staff

Food Allergy Management in Specific School Settings

Classroom

- Encourage a supportive environment with immediate and appropriate disciplinary action to address bullying
- Have the ECP in easy access but protect information
- Consider the storage of epinephrine in a well-defined, secure, and accessible location
- No sharing or trading food
- Remind all parents of food allergy policy and class rules
- Examine all food brought into the classroom for potential allergens (Read labels on pre-packaged foods)
- Encourage parents of children with food allergies to provide safe snacks for their child in the event of unexpected circumstances

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education. 2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Classroom (cont)

- Encourage an eating area that is free of allergen
  - Allergy-friendly tables and desks
- Appropriate table/chair cleaning before and after eating
- Appropriate hand washing before and after eating
- Use non-food items for prizes, gifts, awards, and incentives
- Avoid the use of identified allergens in class projects or lessons (arts and crafts, science experiments, cooking, or others)
- Avoid the use of identified allergens for parties, celebrations, holiday events, snacks, rewards or for any other purposes

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Cafeteria

- Classroom food allergy management policies
- Identify food allergic children and ensure that selected food is safe (with parental permission)
- Although bullying needs to be prevented and dealt with in all settings, staff in the cafeteria need to be especially vigilant

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Physical Education and Recess

- Someone trained to recognize and react to anaphylaxis should be present
- Epinephrine and ECPs should be available
- Must be a way to communicate with school nurse and access emergency medical services
- Do not exclude children with food allergies
- Clean hands before and after handling or consuming food

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"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Transportation/Bus

- Eating should not be allowed
  - only exceptions for children with special needs like diabetes
- There needs to be a means of communication with emergency medical services
- Transportation staff should be trained to recognize and react to allergic reactions and implement emergency procedures as per state and local regulations
- Make sure bus drivers are aware if epinephrine is on the bus and are delegated to administer

"Managing Life Threatening Food Allergies in Schools," Mass Dept. of Education. 2002.
"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

School Program Sponsored Events: Field Trips: Prepare Ahead

- Planning before the field trip
  - Discuss and plan well in advance of field trip, at the beginning of school year if possible
  - Determine if the location is safe for children with food allergies
  - Ensure that events and field trips are consistent with food allergy policies
  - Do not exclude children with food allergies from participation in field trips or other events
  - Parents of children with food allergies should be invited, but not required, to attend, in addition to (not instead of) the chaperone
  - Assign a delegated staff member to assist in avoidance of allergen, recognition of anaphylaxis and administration of epinephrine

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"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

School Program Sponsored Events: Field Trips: During the Trip

- Avoid allergen during the field trip
  - Package meals and snacks to prevent cross contact
  - Clean hands before and after handling or consuming food
- Be prepared for a reaction
  - All staff and chaperones should be aware of children with allergies
  - Know the phone number and location of the nearest hospital and whether the ambulances carry epinephrine
  - Easily accessible medications and allergy action plan
  - Have means of communication (test prior to trip and at destination)

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"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

School Program Sponsored Events: Before and After School Activities

- Parents should inform the program coordinator (responsible adult) of the child's allergies as well as other medical conditions
- Program Coordinator
  - Should contact the nurse consultant to obtain a copy of the Emergency Care Plan
  - Should be trained to administer and have access to epinephrine
  - Must have a way to access emergency medical services and the school nurse if available
- Ensure that events are consistent with your food allergy policies
  - Appropriate cleaning is a must
- Do not exclude children with food allergies
  - Specify special needs prior to events
- Package meals and snacks appropriately to prevent cross contact
- Clean hands before and after handling or consuming food

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"Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs." Centers for Disease Control & Prevention. 2013.

Take Home Points

A.C.T. to Prevent Accidental Exposures

AVOID

COMMUNICATE

TEACH

Be Prepared to R.E.Act

Recognize Anaphylaxis

Epinephrine

Activate Emergency Response

Take Home Points

- Anaphylaxis happens
- Be vigilant
- Know your role in an emergency
- Support children with food allergies
- Time is critical
- Epinephrine is the 1st line treatment

Section 504 of the Rehabilitation Act

- Institutions receiving federal funds, including public schools, must comply
- Schools must identify disabled students
- Schools must establish standards and procedures for the evaluation and placement of disabled students
- Schools must meet individual needs of disabled students to insure that they have the same access to education as non-disabled students
- Protections extend to all programs and services, including summer school and field trips
- Each Section 504 Plan should incorporate by reference the student's Individual Health Plan (IHP) and IHP must be consistent with the treating physician's medical orders

District Obligation for 504

- Must contact the parents or guardians of all students to inform them of the district's obligation to evaluate students who, because of disability, need or are believed to need special education or related services
- If a student currently has an IHCP, the district will provide parents or guardians with information regarding the student's possible rights to evaluation, placement, and procedural safeguards
- An IHCP for a student who has a qualifying disability is insufficient if it does not incorporate these rights

Self Carry of Emergency Medications

- 22-1-119.5. Asthma and anaphylaxis health management - self-administered medication.
- A student with asthma, severe allergies, or other related, life-threatening condition may possess and self-administer medication to treat the student's asthma, anaphylaxis, or other related, life-threatening condition if the student has an approved treatment plan.

Stock Epinephrine

- C.R.S.22-1-119.5 (5.5)
- Allows districts to adopt and implement a policy to stock epinephrine auto injectors
- School nurse or designated personnel can administer epinephrine to any student experiencing anaphylaxis under standing orders and protocols from a licensed prescriber

Chapter XIII
Delegation of Nursing Tasks

- 7.2 A professional nurse employed by or contracted by a school district or Licensed Child Care Facility may delegate to one or more specific Delegatee(s) who has successfully completed appropriate training the administration of emergency medications, prepackaged in unit dose preparations, with the expressed exception by the exclusion of injectable epinephrine, where there is an emergency need for such treatment. The professional nurse must provide to the Delegatee a specific written protocol for each Client as determined in the IHP.
- 9.4 The professional nurse who teaches epinephrine auto-injection to designated school staff that act in an emergency situation to assist a Client shall not be construed to be delegating as defined by these Chapter 13 rules.

Reporting Requirements for Incidence of Anaphylaxis or Epinephrine Administration

- According to 22-1-119.5 C.R.S. (8)(e) which states that each school must submit to the Department of Education any incident at school or school related event involving a severe allergic reaction or the administration of epinephrine or both. State Board of Education rules require that this report be made within 10 days of the incident. This report is entered online at: http://fs24.formsite.com/305medicaid/form5/index.html

Reporting of Designated Personnel

- C.R.S. 22-1-119.5(8)(f)
- If a district adopts a policy to stock Epinephrine Auto-injectors, the school nurse must report to CDE whether they have trained and designated any personnel to administer epinephrine auto-injectors and the number of staff that have been trained and designated.
- http://fs24.formsite.com/305medicaid/form6/index.html?1406123500156

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