

Health Trainings

Asthma – Part I

Educational In-Service Program
Presented by the Glen Ridge School Nurses

Asthma

- Asthma is a chronic lung condition with ongoing airway inflammation that results in recurring acute episodes (attacks) of breathing problems.
- Asthma cannot be cured but it can be controlled.

Asthma Statistics

- An estimated 20 million people are diagnosed with Asthma in U.S. (1:15)
- Asthma is the most common chronic childhood disease (1:20)
- 15% of NJ children have asthma and 69% continually suffer from its effects
- Asthma caused 5,500 deaths each year nationwide
- Incidence is higher in inner cultures and lower socio-economic groups
- 2 million ER visits per year due to asthma
- Leading reason for school absenteeism

Asthma Management in School

- Each student will have an Asthma treatment plan (a 24 hour treatment plan) which:
- Indicates asthma medication and route of administration
- Time to administer medication (before gym, recess, or when needed)
- Includes medications that are administered at home that may or may not be administered in school
- Medical authorization for self-administration if applicable
- Emergency treatment for symptoms that are not responding to medication
- Promotes communication between teachers, parents, child, physician and school nurse

Strategies for Treating Asthma

- Increase awareness of early warning signs of asthma ØUse of controller medication to decrease inflammation ØPre-medicate before exercise and/or gym
- REDUCE ENVIRONMENTAL TRIGGERS
- Promote healthy eating
- Promote regular physical activity

Asthma triggers

- Exercise--running or playing hard--especially in cold weather
- Upper respiratory infections (cold or flu)
- Laughing or crying hard
- Allergens and food allergies
- History of a food allergy
- Pollens – from trees, plants, grasses, including freshly cut grass
- Animal dander – from pets with fur or feathers
- Dust mites – in carpeting, pillows, upholstery
- Cockroach droppings
- Molds

Asthma Triggers

- Irritants
- Cold air
- Strong smells and chemical sprays, including perfumes, paint and cleaning solutions, chalk dust, lawn and turf treatments
Weather changes
- Cigarette and tobacco smoke

Signs and Symptoms of an Asthma Episode

- **Observable changes**
- Coughing
- Wheezing
- Mouth breathing
- Shortness of breath
- Sighing
- Fatigue
- Rapid breathing, difficulty talking – short, choppy sentences
- **Verbal Complaints**
- Chest tightness and/or chest discomfort (hurts)
- Stomach discomfort
- Cannot catch breath
- Dry mouth
- Neck 'feels' funny
- Doesn't feel well

Role of the teacher/staff in Asthma management

- Reduce exposure to asthma triggers in the classroom
- Observe students who are coughing or showing signs of discomfort
- Instruct student to **Stop Activity**
- Do not lie down
- Stop and rest
- “Do you have Asthma?”
- Stay calm
- “Relax shoulders and breathe out slowly through puckered lips”
- “Do you have a rescue inhaler?”
- Notify the nurse
- Get Help- 911 or emergency #
- Call for ambulance for any:
 - Breathing gets harder or does not improve
 - Trouble walking or talking
 - Lips or fingertips are blue

Medications used to treat Asthma

- As needed: Quick relief medications
- Albuterol, Proventil
- Daily: Long – term control medications
- Flovent, Singular, Advair

- Medication can be administered by
- Inhalation with MDI (metered dose inhaler) ,
- Nebulizer - which delivers an aerosol mist
- Orally

Health Training: Guidelines for the Management of a Life- Threatening Allergic Reaction: Part II

Objectives

- To comply with the New Jersey Department of Education standards for the administration of epinephrine via auto-injector in accordance with New Jersey P.L.2007, c.57
- Educate staff to recognize symptoms related to anaphylaxis
- Instruct delegates in the proper method of administering epinephrine auto-injector in the event of a life-threatening allergic reaction
- To seek volunteers to become delegates to ensure the safety of our students

How are you affected by this law?

Delegates must be trained for students who may require the emergency administration of epinephrine by auto-injector for anaphylaxis when the school nurse is not available.

Epinephrine must be in a secure but unlocked location that is easily accessible to the school nurse or delegate in the event of an allergic emergency at school or at a school sponsored function.

School sponsored functions include:

Any activity, event or program occurring on or off school grounds, whether during or outside of regular school hours, that is organized and/or supported by the school

Rationale

- All staff members should be aware of students “ under their supervision” who may require administration of epinephrine, and..... be prepared to take action.

Definitions:

- Anaphylaxis – “a life threatening allergic reaction”
- Epinephrine/Adrenaline – Medication used to treat anaphylaxis
- Auto-injector - Automatic syringe that contains epinephrine/adrenaline
- Designee/delegate - a staff member who volunteers to learn how to administer epinephrine in an emergency

Common Foods that can cause an allergic reaction:

- Milk
- Eggs
- Peanuts
- Tree nuts (walnuts, pecans)
- Soy
- Fish
- Shellfish
- Wheat
- Sesame seeds/other seeds

What else can cause an allergic reaction?

Common causes of anaphylaxis include:

- Medications
- Insect stings
- Latex

Less common causes of anaphylaxis include:

- Exercise
- Food-dependent exercise induced anaphylaxis (occurs when a person eats a specific food and exercises within three to four hours after eating)
- Idiopathic anaphylaxis: anaphylaxis with no apparent cause

What Happens?

- Symptoms of an allergic reaction may occur within minutes to two hours after ingestion.
- **Almost any food** can cause an allergic reaction.
- There is no cure for a food allergy.
- Complete and strict avoidance is the only way to prevent a reaction.

Symptoms that may occur during an allergic reaction/anaphylaxis

- **Respiratory tract:**
Itchy, watery eyes, running or stuffy nose, sneezing, cough, itching or swelling of the lips, tongue and mouth, wheezing
- **Gastrointestinal tract**
Abdominal cramps, nausea, vomiting, diarrhea
- **Skin**
hives, eczema, itchy red rash, swelling on face or extremities
- **General**
Panic, sudden fatigue, chills, feeling of impending doom

Symptoms of a Severe Food Allergic Reaction

- **Respiratory**

Shortness of breath, wheezing, difficulty swallowing, chest tightness, tingling of the mouth, itching or swelling of the mouth or throat, change in voice, hoarseness, hacking cough

- **Cardiovascular**

Drop in blood pressure, loss of consciousness/fainting, shock

- **Gastro-intestinal**

Nausea/vomiting

Symptoms, continued

- Symptoms sometimes progress rapidly to severe reactions.
- There is no way to know how serious a reaction will become so it is important to treat all reactions quickly.

Avoid Accidental Exposure

- Read all ingredient labels to be sure food is allergen-free
- **NO food trading**
- Clean utensils and table surfaces to avoid contamination from other foods

How to help someone having a severe allergic reaction

- Do not hesitate!!
- Administer Epinephrine
- Call 9-1-1 tell dispatcher that epi-pen has been given- Ask for paramedics to be dispatched
- Remain with the student
- Student must always be transported to the Emergency Room, even if the symptoms subside
- Give spent auto-injector to medical personnel
- Notify parents/guardians

Bi-Phasic Reaction

A Bi-Phasic reaction is a second anaphylactic reaction that may occur in a person who was treated for anaphylaxis. It is imperative for a person who has been treated for an anaphylactic reaction to remain under medical observation in a hospital setting for at least four hours after initial symptoms subside.

Epinephrine Auto-injector Administration Procedure:

- Grasp the auto-injector in one hand and form a fist around the unit
- With the other hand, pull off the safety cap (never place your fingers or hand over either end of the device)
- Hold the tip of the auto-injector near the student's outer thigh (the auto injector can be injected through the student's clothing if necessary).

Epinephrine procedure continued

- Press firmly and hold the tip into the student's outer thigh-auto injector should be at a 90 degree angle. You may hear a click
- Hold the auto-injector in place for 10-15 seconds
- Remove the auto-injector from the thigh and gently massage the area for several seconds
- Give the spent auto-injector to EMS or dispose of it in a sharps container

How to become a designee

Volunteer and give 10 more minutes of time for additional training which includes:

- Review of epinephrine administration process
- Demonstration using an epinephrine trainer
- Return demo demonstration
- Quiz

Designee continued

- Donating 10 more minutes to complete part 2 of this training enables you to become a designee.

References

- www.epipen.com
- The Food Allergy & Anaphylaxis Network: www.foodallergy.org
- Information about anaphylaxis treatment: www.twinject.com
- The food Allergy Initiative: www.foodallergyinitiative.org
- Video: “*Keeping Our Children Safe*”, The Food Allergy & Anaphylaxis Network
- **Epi-pen Demonstration always available in nurse’s office.**