



# Chronic Health Conditions 2013-2014

Including the health conditions of:

Diabetes

Seizures

Food & Insect Sting Allergens

Asthma

# Diabetes in School

- 1 in 400-600 children and adolescents have Type I Diabetes (Body does not produce enough insulin)
- Type II Diabetes is being diagnosed more in children and adolescents particularly in American Indians, African Americans and Hispanic/Latino Americans (Body gradually loses its ability to produce insulin)

# What is Diabetes?

- A Chronic metabolic disorder marked by high blood sugar caused by the failure of the body to produce insulin (Type I Diabetes), or by insulin resistance with inadequate insulin secretion (Type II Diabetes).
- Diabetes is a lifelong condition that can cause health problems involving eyes, nerves, skin, heart and vascular disease if not managed well.

# Risk Factors for Diabetes

- Overweight, inactive
- Family member with Type II Diabetes
- Member of a high risk ethnic group
- Over age 10
- Puberty

# Potential Problems for Students with Diabetes

- Hypoglycemia which is low blood sugar caused by too much insulin, too little food, delay in meal/snack, physical activity, illness or alcohol
- Hyperglycemia which can lead to ketones in blood and urine, Diabetic Ketoacidosis which means the body is burning fat and muscle for energy (Medical Emergency)

### Hypoglycemia (Low Blood Sugar)

- Hunger
- Shakiness
- Headache
- Dizziness
- Sweating
- Personality Changes
- Blurry Vision
- Loss of Consciousness
- Seizure
- Inability to swallow

### Hyperglycemia (High Blood Sugar)

- Thirst
- Frequent Urination
- Fatigue/sleepiness
- Blurry Vision
- Dry mouth
- Nausea/Vomiting
- Labored Breathing
- Confusion
- Unconsciousness

# Signs and Symptoms

# Management of Diabetes in School

- Blood Glucose Monitoring – *Medication dosing is based on results of test, student must have access to meter for monitoring*
- Ketone Monitoring – *Presence of ketones in urine indicates body is burning fat and muscle instead of carbohydrates*
- Insulin Administration - *by injection or pump*
- Nutrition - *with measured amounts of carbohydrates , student must have access to snacks at regular times*
- Activity - *lowers blood sugar at times, but may student may need to check blood sugars more frequently*

# Emergency Plan for Hypoglycemia (Low Blood Sugar)

- If mild or moderate (*complains of hunger, blurry vision, headache or weakness*), provide a quick sugar source like 3-4 glucose tabs, 4 oz juice, or 6oz regular soda, then follow up with a snack of carbs and protein, like cheese and crackers.
- If Severe (*Loss of consciousness, seizure, inability to swallow*) Position on side, contact school nurse or trained personnel who can administer glucagon as ordered. **CALL 911** , parents and stay with the student until help arrives.



# Emergency Plan for Hyperglycemia (High Blood Sugar)

- If Mild or Moderate (*Complains of thirst, urinates frequently, fatigued, stomach aches or headaches*) Allow free use of the bathroom, allow to drink water or sugar free drinks, contact school personnel to check urine and follow Diabetes Management Plan in place.
- If Severe (*Student becomes very weak or unconscious, is vomiting*) **CALL 911**, call school nurse or trained personnel, call parents.

Teachers and bus drivers can refer to the Individualized Health Care Plan developed by your school nurse for each student.



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# Food and Insect Sting Allergens in School

- Food and other allergies can be life threatening if an anaphylactic reaction occurs.
- Students who have Asthma are at higher risk for a severe allergic reaction
- 4 of 6 deaths from food allergies occur in school
- 1%-2% of the general population is at risk for anaphylaxis from food or insect stings

# What is Anaphylaxis?

- A hypersensitivity reaction between an allergen (most commonly foods such as milk, soy, egg, wheat, shellfish or nuts; or insect stings such as bees or wasps) and immunoglobulin E or IgE cells in the body.
- This reaction can occur within minutes and the student will develop an itchy skin rash or swelling near insect sting site which can progress to anaphylaxis (shortness of breath, cough, anxiety and throat or facial swelling)

# Management of Anaphylaxis in School

- Avoidance of the allergen if possible
- Students with food allergies should not trade or share food
- Students are identified as having Severe Allergic Reactions
- Students to have an Individualized Health Care Plan in place with Emergency Plan
- Encourage parents to provide students with Meds A forms signed by physicians and medications such as Benadryl or Epi-Pen (counteracts the allergic reaction) to be administered by trained personnel in the case of contact with the allergen
- Benadryl and Epi-Pens must be sent with staff on field trips

# Emergency Plan for Anaphylaxis

- If student exhibits signs of anaphylaxis call school nurse or trained staff member to administer Benadryl or Epi-Pen and stay with the student until help arrives
- **ALWAYS CALL 911** and family if Epi-Pen is used because most reactions require more than one dose of Epinephrine to counteract a severe allergic reaction and students should be monitored at the hospital
- Please take a few moments to watch the instructional video on how to administer an Epi-Pen injection ( you can practice using Epi-Pen trainers in your school health office )

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# Asthma in School

- According to the CDC 14% of US children have Asthma
- More boys than girls are diagnosed with Asthma
- Children who are racial minorities are more likely to have Asthma
- Children from poor families or those who have allergies or other health related problems have a higher incidence of Asthma



# What is Asthma?

- Asthma is a chronic inflammation of the lungs which obstructs airflow causing wheeze, cough and shortness of breath
- Triggers can include allergens such as dust, mold, air pollutants, foods, medications such as aspirin, physical exercise and strong emotional responses
- Asthma may be mild, or more severe with severe spasm causing a prolonged attack with difficulty walking, talking, hunched over struggling to breathe (This a medical emergency, **call 911** and family if symptoms do not improve with the use of the student's inhaler)

# Management of Asthma in School

- Individualized Health Care Plan including student's triggers, emergency contact information, authorization from physician to give rescue medication such as inhalers which relax the bronchial or lung spasms
- Students may carry their own inhalers by Illinois State Law but physician's orders are obtained by the nurse in the health office at school
- Take medication before exercise if necessary and do warm up exercises
- Provide rest and fluids to improve breathing when an attack does occur in school

# Emergency Plan for Asthma

- If Asthma is severe with symptoms such as wheezing, rapid breathing and clipped speech, stay with student and call school nurse or trained personnel
- Provide rest and give emergency medication (inhaler) if available, student should respond within 15-20 minutes
- If breathing does not improve, **Call 911** and parents (This is a medical emergency)

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# Seizures in School

- By age 20 up to 1% of the US population will have epilepsy
- 70% of new cases of epilepsy have no apparent cause
- There is a higher incidence of epilepsy among racial minorities
- Boys are more likely than girls to develop epilepsy
- Trends show a decrease in childhood onset seizures

# What is a Seizure?

- Seizures, or called Epilepsy, if the condition becomes chronic, is a neurological condition that occurs when recurrent abnormal electrical activity in the brain causes involuntary changes such as unusual movements, or loss of function, sensation, awareness or behavior
- There are many different types of seizures from staring spells, to full loss of muscle control which may be triggered by flashing lights, loud noises, spinning motions, etc.
- Status Epilepticus is a continuous seizure or a series of seizures without a return to consciousness (This is a medical emergency)

# Management of Seizures in School

- Avoid known triggers identified in the student's Individualized Health Care Plan, such as exposure to lights, noise or excitement
- Note that seizures may be preceded by crying or giggling
- Student will need time for rest and observation after a seizure
- Student may be incontinent, offer clean clothes

# Emergency Plan for Seizures

- Time the seizure and note movements made, eye movements or facial expressions, note any blue areas around mouth, monitor breathing
- Loosen restrictive clothing, do not force anything between teeth and turn the student to his side
- Stay with the student, notify school nurse or office
- **Call 911** if seizure occurs on a bus, lasts over 5 minutes, recovery takes longer than usual, a second seizure begins before student recovers from the first one or if student has difficulty breathing



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