

Chronic Diseases and Treatment Measures

Every school has a student who at some time has a chronic condition. If you observe a student coming to the clinic with the same complaint several times, you should alert the teacher and the cluster/school nurse to the problem. Refer to the section of the Health Manual to know how to manage specific chronic diseases.

Index of Chronic Diseases

1. AIDS
2. Asthma
3. Chemotherapy and Immunosuppression
4. Cystic Fibrosis
5. Depression
6. Diabetes
7. Eating Disorders
8. Heart Disease
9. Hemophilia
10. Hypertension
11. Kidney Disease
12. Migraine Headaches
13. Muscular Dystrophy
14. Rheumatic Fever
15. Seizure Disorders
16. Sickle Cell Anemia
17. Spina Bifida

Acquired Immunodeficiency Syndrome

The acquired immunodeficiency syndrome (AIDS) is believed to be caused by the Human Immunodeficiency Virus (HIV). The vast majority of affected individuals are in the three primary risk groups – male homosexuals, hemophiliacs and intravenous drug users. Transmission of the virus is primary through the route of sexual contact and exposure to infected blood or blood products. Newborn children of mothers with AIDS often develop congenital AIDS, a condition that may be seen in school-aged children. Although HIV has been isolated from saliva and tears, transmission by exposure to these sources has not been documented. None of the pediatric AIDS cases in the United States have demonstrated transmission in the school daycare or foster care setting, and indirect casual person-to-person contact is believed to pose no risk for viral transmission. Confidentiality is of extreme importance. Neither confirmation nor denial of suspicion or positive testing results should be given by clinic personnel.

There are no medical or legal reasons to restrict a child of an HIV-infected parent from attending school. Children with HIV infection should not receive live virus vaccines and should be excused from regulations requiring them. Of course, any student including an HIV-infected child who has contracted a contagious disease will not be allowed to attend school without clearance from the public health department or private physician.

Universal precautions should be followed just like with any other child. The key elements include:

- Proper needle handling and disposal
- Hand washing
- Cleaning and disinfecting
- Decontaminating spills of blood
- Proper laundry procedures
- Disposal of infective waste
- Personal protection (gloves, goggles, etc.)

Should you have questions or need additional information, please contact Student Health Services.

Asthma

Characteristics of Asthma:

- most common chronic illness of childhood
- there is no cure and it has an unpredictable course
- generally improves with age
- asthma is different from person to person

What is Asthma?

- chronic illness in which airways are inflamed (irritated) and overactive
- also known as reactive airway disease
- asthma episode is new term for asthma attack
- three things happen in the airways during an episode:
 - 1) excess thick mucus is present
 - 2) lining of the airways swells because of the inflammation
 - 3) muscles around airways contract and tighten
- these three things cause airways to be partially blocked and result in symptoms of asthma – wheezing, coughing and shortness of breath

What Causes an Asthma Episode?

- airways react to different things called triggers
- possible triggers include:
 - infections
 - cigarette smoke
 - odors, fumes, sprays
 - allergies
 - exercise
 - change in weather
 - emotions
- triggers are different from person to person

Early Warning Signs

- runny nose, stuffy nose
- itchy, watery eyes
- congestion
- sneezing
- coughing
- lethargy
- lower peak flow reading

Signs of Breathing Difficulty

- fast breathing rate
- extreme shortness of breath
- increased effort of breathing
- pale/blue skin color
- change in behavior
- low peak flow meter reading

Medicines to Treat Asthma

- most common – Albuterol (also called Proventil, Ventolin)
 - ➔ comes as an inhaler, solution for breathing machine, and syrup called the “rescue medicine” because it works quickly to relax the tight muscles around the airways
- two types of preventive medicine which are given on a daily basis:
 - ➔ Intal (also called cromolyn sodium)
 - ➔ Inhaled steroids (example – Vanceril, Beolvent, Azmacort, Aerobid)
- Medicine for serious asthma episode – steroids taken by mouth (Prednisone, Prelone)

Asthma Equipment

- nebulizer and compressor; to give breathing treatments
- children who use inhalers should use a “spacer” (example – Aerochamber, Inpirease) which allows them to use the inhaler correctly
- peak flow meter; device that measures how open the airways are and therefore helps caregivers know how a child’s asthma is doing; must be at least 5 years old to use

Aerosol Therapy

The student is using an air compressor with a nebulizer to receive his breathing treatment.

The air compressor provides the air for the treatment. The nebulizer is the part that holds the medicine. When the air from the compressor goes through the tubing and meets the medicine inside the nebulizer, it forms the mist. The child inhales the mist until it is gone (which usually takes about 10 minutes). Prescribed medicine is measured and placed into the nebulizer.

The medicine's purpose is to:

- open up the bronchial tubes
- reduce swelling and inflammation

The most common medicine used is "Albuterol." The drug companies have their names for it, which is:

- Proventil
- Ventolin

The medicine from the nebulizer is inhaled through a mask or a mouthpiece.

- Directions
 - measure medicine
 - place medicine in nebulizer
 - turn on machine
 - child inhales the mist until it is gone
 - coughing after this treatment is normal

Inhaler with Spacer

The student is using an inhaler with a spacer to treat his asthma. His doctor strictly prescribes the number of puffs and how often he uses it.

The inhaler contains the prescribed medicine which:

- opens up the bronchial tubes
- reduces swelling and inflammation inside the lungs

The chamber is a hollow tube, which traps the medicine. It can hold the medicine that the child takes one, two or three deep breaths from it. It is best if the child takes a slow deep breath and holds his breath for four to five seconds to allow the medicine to reach all the parts of his lungs.

Instructions:

- shake inhaler
- insert inhaler into spacer
- mouthpiece goes into child's mouth
- press the inhaler
- encourage a slow deep breath
- encourage child to hold his breath
- wait a minute before the second puff (if more than one puff is given)
- coughing after this treatment is normal

Inhaler Procedures

The student uses an inhaler medication to treat his asthma. The number of puffs inhaled and how often it is used is prescribed by his doctor.

Depending upon the medication, it will either:

- open up the bronchial tubes
- reduce swelling and inflammation in the lungs

Correct use of the inhaler:

- shake up the medication
- place inhaler near the mouth (some students still place it inside of the mouth)
- puff the inhaler
- take a deep breath
- hold your breath for five to six seconds, then exhale

If a spacer is used:

- it will trap the medication for the student
- the medication passes through the spacer and gets smaller in size – thus, more medication is able to be delivered into the lungs

Using the spacer with the inhaler:

- shake the inhaler
- insert it into the spacer
- place spacer in mouth
- puff the inhaler
- inhale deeply
- hold breath, then exhale

Child can probably go to school if he has any of these symptoms:

- stuffy nose, but no wheezing
- slight wheezing that goes away after taking medicine
- is able to perform usual daily activities
- is not working harder to breathe
- peak flow number is in the Green Zone or within normal range

“About My Asthma” To My Teachers and Coaches

My name is _____.

I have asthma. I have a hard time breathing when the muscles around my airways tighten and my airways get inflamed (sore and swollen) and plugged with mucus.

My known triggers include:

I work hard to control my asthma. I am learning what to do about irritants and allergens. I am alert for symptoms that tell me when I need my medicine or should take it easy. These early symptoms include: _____

_____ or when my peak flow reading is below _____.

I take several kinds of medicines. One kind of medicine helps open my airways by relaxing the muscles. Other medicines protect or heal my inflamed airways. Taking my medicine on schedule or as soon as I notice my early symptoms keeps my airways from closing up. My medicines include: _____

I have a plan. I use a peak flow meter that shows how well my airways are working. When my peak flow number drops, my asthma management plan tells me how much and which medicine I need. In general, the lower the peak flow number, the more medicine I need. My meter also can help me decide when to take it easy.

When my plan is working, I can play almost any game or sport most of the time. But my asthma changes. If asthma starts to slow me down or hold me back; if my medicine doesn't help; if any of my symptoms get worse; if my chest and neck skin gets sucked in; if my lips and fingernails look blue or if I'm breathing very fast; if my peak flow reading drops below _____; or if I tell you I am in trouble, my parents need to know and/or I need emergency medical help.

Call: _____

See the attached information and student asthma action card for my asthma management plan. My parent(s) will plan or have planned a meeting with you to discuss this asthma management plan.

Also, please contact my parents or nurse practitioner if you have any questions. Thanks for your help.

Home: _____

Mother's work: _____

Father's work: _____

Chemotherapy and Immunosuppression

Condition:

Successful treatment of childhood cancers has increased dramatically, and children with cancer are returning to normal school activities. A child who has received an organ transplant will also be returning to school. Both of these types of students may be on medication to suppress the immune system. Risk of infection is the main consideration.

Management:

Because students must take immunosuppressant or antirejection medications they are at increased risk for the development of infectious diseases. Symptoms include fever above 100°F, lethargy and shortness of breath. Emergency intervention may be required as infection in these children can be life-threatening. When a child is known to have this medical history, school personnel must react quickly to these symptoms, notifying parents immediately. If parents cannot be reached, there should be a plan in place to obtain emergency care without delay.

During outbreaks of certain diseases, their doctor may suggest that the child remain at home as a preventative measure against infections. Parents should be kept informed with immediate notification of any infectious disease at school. For example if the child is directly exposed to chickenpox in the classroom, notify the parents immediately. Medicine can be administered to prevent or lessen the severity of the chickenpox if given to the child with 48-72 hours after exposure.

Cystic Fibrosis

Condition:

Cystic Fibrosis is a chronic, congenital disease. It causes a widespread change in the mucus-secreting glands of the body. These include the pancreas, lungs, salivary and sweat glands. Symptoms of the disease are respiratory difficulties and problems maintaining adequate nutritional status due to the production of abnormally thick mucus by the organs mentioned previously. This thick mucus can clog bronchial passages and block ducts that deliver pancreatic enzymes needed in the intestines for digestion. Cystic Fibrosis is not contagious.

Treatment:

Treatment involves maintenance of good nutrition and prevention of infection. High caloric, high protein foods are essential because this child can lose up to 50 percent of all calories through bowel movements. Prevention of upper respiratory infection is imperative, and school personnel should make every effort to notify parent if student has been exposed to an infectious disease. A child with Cystic Fibrosis requires the following to reach and maintain optimum health:

- Good hygienic practices geared toward prevention of infection
- Well balanced diet, tailored to meet special needs
- Adequate rest
- Regular medical checkups

Limits: If all of the above needs are met, this child can usually participate in regular activities. In some cases, their lack of stamina will restrict playground activities. Attempts should be made to include the child in group activities to prevent feeling of being different or “left out” because of limitations caused by the condition.

Management:

It is important to recognize the first sign of an impending infection. Such signs may be:

- | | |
|----------------------|---------|
| -listlessness | -fever |
| -loss of appetite | -cough |
| -shortness of breath | -pallor |

Parents should be notified immediately if any of these symptoms arise. Before any medications are administered, be certain that you have on file the required authorization medication form with parent and/or legal guardian signature.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitation factors and/or complications, medications administered and reaction.

Depression

Depression also known as unipolar disorder is a syndrome of persistently sad, dysphoric mood accompanied by disturbances in sleep and appetite, lethargy and an inability to experience pleasure. Major depression can profoundly alter social, family and occupational functioning. Suicide is the most serious complication of major depression resulting when the person's feeling of worthlessness; guilt and hopelessness are so overwhelming that he no longer considers life worth living. If you suspect that a child or teenager might be thinking of suicide, do not remain silent. Alert school administration and parents immediately. Suicide is preventable, but you must act quickly.

Causes and Treatment

The multiple causes of depression are completely understood. Current research suggests possible genetic, familial, physical, psychological and social causes.

Depression usually lasts several months or years and often requires special medical or psychiatric treatments such as psychotherapy or psychoactive medications.

Symptoms of Major Depression

Not all people with depression will have all these symptoms or have them to the same degree. If a person has four or more of these symptoms, if nothing can make them go away, and if they last more than two weeks, a doctor or psychiatrist should be consulted.

- Persistent sad or “empty” mood
- Feeling hopeless, helpless, worthless, pessimistic and/or guilty
- Substance abuse
- Fatigue or loss of interest in ordinary activities, including sex
- Disturbances in eating and sleeping patterns
- Irritability, increased crying, anxiety and panic attacks
- Difficulty concentrating, remembering or making decisions
- Thoughts of suicide; suicide plans or attempts
- Persistent physical symptoms or pains that do not respond to treatment

Danger Signs of Suicide

- Talking about suicide
- Statement about hopelessness, helplessness or worthlessness
- Preoccupation with death
- Suddenly happier, calmer
- Loss of interest in things one cares about
- Visiting or calling people one cares about
- Making arrangements; setting one's affairs in order
- Giving things away

Possible Manifestations of Depression in the Classroom

Academic Indicators

- Unexplainable decline in school performance
- Loss of interest in school subjects
- Decline in effort expended
- Work becomes messy or has an appearance that suggests that the child does not care how it looks
- Child gives up easily
- Child stops completing assigned work
- Complains of not having enough energy to complete schoolwork

Social/Behavioral Indicators

- Agitation/hyperactivity
- Increased dependence
- Regression to playing with younger children
- Antisocial behavior (e.g., lying, stealing)
- Bodily complaints
- Disruptive classroom behavior
- Phobias
- Falls asleep during class
- Looks and acts tired
- Alienates peers
- Unpopular
- Withdraws from social contact

Cognitive Indicators

- Indecisiveness
- Concentration difficulties
- Expressions of suicidal wishes
- Expects to do poorly/fail
- Thoughts about death

Affective Indicators

- Poor self-esteem
- Irritable
- Complains excessively
- Dysphoria
- Feels guilty

Physical Indicators

- Sleep disturbance
- Excessive weight gain or loss
- Change in appetite
- Feels weighted down
- Psychomotor disturbance
- Complains about feeling tired

Diabetes Mellitus

Approximately 16 million Americans have diabetes – a condition in which the body is unable to use foods properly. When food is digested it breaks down into a sugar called glucose. Glucose is absorbed into the blood and is carried by the bloodstream to body cells, where it will be used for energy. Glucose requires the assistance of a hormone called “insulin” to enter into the cell.

The pancreas, a gland behind the stomach, produces insulin. The production or utilization of insulin is decreased or absent in diabetes. Without sufficient insulin, the body cannot use glucose and then fat may be broken down for energy. When fat is used, a waste product called “ketones” enters the bloodstream. Ketones cause diabetic ketoacidosis, a serious condition, which can lead to coma.

Cause of Diabetes

The cause of diabetes is not known, but research indicates it may involve a disorder in the functioning of the body’s immune system. The immune system protects the body against disease. When this system malfunctions, the body can destroy its own insulin-producing cells.

Diabetes is not contagious. Heredity and the environment may play a part. Eating too much candy does not cause diabetes.

Two Main Types of Diabetes

Type 1 Diabetes (insulin dependent):

The pancreas stops producing insulin. Type 1 diabetes requires daily insulin injections for survival. It occurs in about one out of 10 people with diabetes. Although Type 1 diabetes typically starts in children or young adults (previously know as juvenile-onset diabetes), it can occur in adults of any age.

Type 2 Diabetes (non-insulin dependent):

Insulin is produced, but the body cells are unable to respond to it properly to change glucose into energy. Although it may be managed without injections, insulin may be required. This type occurs most often in people over 45 years of age. A form of Type 2 diabetes occurring in youths (usually teenagers) referred to as MODY (mature onset diabetes in youth) is increasing. These youths are usually obese.

Symptoms of Diabetes

Frequent Urination:

Decreased insulin production causes the blood sugar (glucose) level to rise (Hyperglycemia) and spill into the urine. The glucose pulls body fluid along with it into the urine resulting in the formation of large volumes of urine and frequent trips to the bathroom. This is the body’s way of getting rid of excess sugar.

Excessive Thirst:

Due to the body fluid loss caused by frequent urination, the body becomes dehydrated. The brain signals its thirst center for additional fluid.

Increased Hunger:

Since the body is unable to utilize the glucose circulating in the blood for energy, the brain sends out a signal for more food.

Weight Loss:

The body, unable to use blood glucose for energy, utilizes the stored body fat, which decreases body weight. As the body uses fat, ketones (a waste product cured by fat utilization) accumulates in the blood and urine.

Fatigue:

The pancreas does not produce enough insulin to change glucose into energy.

Managing Diabetes

Currently diabetes cannot be cured, but it can be managed. The goals of diabetes management include promoting normal growth and development, maintaining overall health and emotional well-being, optimizing learning potential, and normalizing blood glucose. Although it differs between individuals, a general blood glucose target range is 70-150 (may be higher for younger children). Health providers set target ranges. When blood glucose is between 160-200, glucose begins to spill into the urine. When blood glucose is greater than 240, ketones can accumulate in the blood and urine.

Treatment for Diabetes

The treatment components of Type 1 diabetes are:

- Meal plan: three meals and two to three snacks
- Regular exercise
- Insulin administration – usually two to four injections, prior to breakfast, dinner and sometimes bedtime. At times, insulin may be required prior to lunch. Insulin may also be administered continuously by the use of a battery-operated portable infusion pump. Teenagers using a pump are well educated in its use and about diabetes.
- Stress management: stress (happy, sad or illness) may increase the blood sugar
- Monitoring (dark print): Testing is done before meals and when the glucose level seems to be out of control or as directed by the physician and/or parent. It is recommended that monitoring be done in the school clinic, particularly in elementary schools, however, it is recognized that some students will need to check his blood glucose in the classroom. To facilitate this, a meeting with the classroom teacher, principal and clinic personnel must be held. A letter from the student's physician requesting that this procedure be done in the classroom should be presented at this meeting. We request parents demonstrate monitoring with their child for school personnel. This helps school personnel observe the child's reaction and ability.

Blood Glucose: Testing the blood for the level of glucose provides information needed to continually adjust the management program. Testing can also assist in preventing complications. Testing is done by obtaining a blood sample by finger stick. A drop of blood is placed on a test strip and read by a glucose meter or visually matched with a color guide.

Glucose monitors and strips require control to ensure accuracy. It is necessary to test the first strip from each strip container. Some machines require daily testing. Each monitor is different. Parents are responsible for teaching school personnel the method of quality control for their child's meter.

Testing is done before meals and when the glucose level seems to be out of control as directed by the physician and/or parent. Parents should demonstrate monitoring with their child for school personnel. This helps school personnel observe the child's reaction and abilities.

It is recommended that monitoring be completed correctly with as little loss of class time as possible. Supervision and assistance are necessary for a younger child. Monitoring results allow the doctor to order the correct insulin dose. Results should be sent home daily.

Ketone Monitoring: Urine ketones should be monitored anytime the blood glucose is over 240 or when a child with diabetes is sick. Testing is done by obtaining a urine sample and using a test strip visually matched with a color guide. Parents need to review with school personnel. Positive tests for ketones should be called to parents or doctors immediately.

Complications and Treatment

Of the utmost importance to school personnel is the ability to recognize the two most serious emergencies for diabetic children: low blood sugars (insulin reaction or hypoglycemia) and high blood sugar with ketones (diabetic ketoacidosis). It is important to distinguish between the two because each condition requires completely different but immediate actions. Always treat for low blood sugar if unable to distinguish between the two. The blood level is child-specific; young children may be treated below 70 or 80.

Before any medications are administered, be certain that you have on file the required authorization medication form with parent and/or legal guardian signature and a statement written by a licensed physician stating the type of medication, dosage and time it is to be given (or according to individual school policy). Be sure to record on the clinic record and student medication record, information concerning precipitating factors and/or complications, medications administered and reaction.

	Low Blood Sugar (Below 60)	High Blood Sugar (Above 240)
Causes	<p>Too much insulin Delayed/omitted meals Insufficient food Increased activity</p>	<p>Too little insulin Failure to follow meal plan Infection, fever Emotional stress</p>
Signs	<p>Sweating; nervousness; shaking; pale, clammy skin; behavior changes; weakness; headache; hunger; blurred vision; irritability; numbness of mouth or extremities; seizures; unconsciousness</p>	<p>Frequent urination; excessive thirst; fatigue; increased hunger; weight loss; poor concentration; unconsciousness Hyperglycemia with Ketones (Diabetic Ketoacidosis) Cause: body using fat for energy Signs: ketones in urine, acetone smelling breath, stomach cramps, vomiting, unconsciousness</p>
Treatment	<p>Do not leave student unattended. Start treatment immediately with a fast-acting carbohydrate (CHO). Follow the fast-acting CHO with additional slow-acting CHO that will be absorbed more slowly because of the fat content. Fast-acting CHO: the parents should provide a kit with treatment supplies which is kept in the classroom and the child should carry CHO sources.</p> <p>Fast-acting CHO</p> <ul style="list-style-type: none"> • Glucose tablets or gel – 15 grams or amount indicated by parent • Juice, ½ cup or amount indicated by parent • Regular soda, ½ can or amount indicated by parent • Sugar (4 teaspoons) <p>Slow-acting CHO</p> <ul style="list-style-type: none"> • 2% or whole milk (one glass) • ½ meat/cheese/peanut butter sandwich • 5 crackers with cheese/peanut butter <p>Notify parent by note. If reaction is severe, call parents. If child is unresponsive, administer glucagon or call 911. Glucagon is a medication injected only when a child is unconscious or unable to swallow. Administer glucagon according to physician/parent instructions. Since glucagon can cause nausea or vomiting, always place the child on his side after injection.</p>	<p>Do not leave student unattended. Monitor blood glucose; also monitor urine for ketones if blood glucose is over 240. Do not exercise if ketones are present. Insulin may be necessary. Notify parents. Continual high blood sugar may affect learning because the ability to concentrate may be decreased.</p>

Special Considerations

Communications with parents: An annual conference at the beginning of the school year is necessary to formulate a written plan, which specifies the student's individual management plan. This plan should include:

- meal plan
- current medication
- monitoring schedule
- exercise program
- stress management
- emergency care plan

Ongoing dialogue is necessary as changes occur in lunch schedules or PE activity/schedules. Ideally, all school personnel (including the bus driver) involved with student should attend the annual conference to encourage consistency.

Parties: Notify parents ahead of time in order for them to decide if child may eat the same food or provide an alternative.

Field Trips: Trips may change meal times, which can affect blood glucose levels. Notify parents of changes so they can decide if an additional snack is needed and determine the timing of that snack.

Psychological Issues: School personnel's awareness of the possible impact of diabetes on personality development is essential. Children with diabetes should be perceived as normal and fully able to participate in all school activities. It is critical for their self-esteem and peer acceptance. At the elementary level, classmates should be oriented to diabetes and reassured that diabetes is not contagious. At the middle and high school levels, teenagers are less comfortable disclosing a chronic disease for fear of being different than their peers.

Manipulation: When a child/adolescent's frequent requests for food or bathroom trips are questioned, blood glucose testing will resolve the issue. High blood glucose levels will increase the need to urinate.

School Protocols: Refer to individual school protocols for the administration of medication and universal precautions. Remember that syringes and finger stick needles require proper disposal. Always wear gloves when assisting a child with blood glucose or ketone monitoring.

Resources

American Diabetes Association, Georgia Affiliate, Inc.

One Corporate Square
Suite 127
Atlanta, GA 30329
Phone: 404.320.7100

Dial Program

Diabetes Information Action Line
Phone: 1.800.DIABETES
Services: Help line for information on diabetes

Diabetes Association of Atlanta

100 Edgewood Avenue NE
Suite 1004
Atlanta, GA 30303
Phone: 404.527.7150
Services: Support groups, educators, medically indigent assistance with supplies and medication

Juvenile Diabetes Foundation International

120 Wall Street
19th Floor
New York, NY 10005
Phone: 1.212.785.9500

Georgia Affiliate Juvenile Diabetes Foundation

235 Peachtree Street
Suite 675
Atlanta, GA 30303
Phone: 404.420.5990

Children's Healthcare of Atlanta at Scottish Rite

1001 Johnson Ferry Road NE
Atlanta, GA 30342
Phone: 404.250.kids

Children's Healthcare of Atlanta at Egleston

1450 Clifton Rd.
Atlanta, Ga.
Phone: 404.250.kids

Children's Medical Services

Nurse For Kids With Diabetes
2600 Skyland Drive NE
Atlanta, GA 30319
Phone: 404.679.4722

Publications

Diabetes Forecast Monthly Magazine

Phone: 1.800.DIABETES

Subscription rate (subject to change)

Countdown

quarterly magazine

Phone: 1.800.JDF.CURE

Subscription rates (subject to change)

**Guidelines for Diabetes Management
In the School Setting**

Student's Name _____	Birth Date _____
School _____	Grade _____ School Year _____
Teacher _____	Today's Date _____

Physician Information:

Primary Health Care Provider Name _____ Phone _____
Address _____

Endocrinologist Name _____ Phone _____
Address _____

Parent/Guardian Information:

Parent/Guardian Names: _____
Address _____ Home Phone _____
Mother's Work _____
Father's Work _____

Other phone numbers (Cell phones, pagers, etc.) _____

Emergency Contact Other Than Parent:

Name _____ Relationship _____
Phone _____

Diabetes Treatment Plan

Target range of blood glucose is _____ mg/dl to _____ mg/dl.

Current Insulin Regimen:

Student can give his own insulin: Yes: _____ No: _____

Student needs supervision in giving own insulin: Yes: _____ No: _____

Type of insulin used: _____

Dose Taken:

Pre-breakfast @ _____ a.m.

Lunch @ _____ a.m/p.m.

Pre-dinner @ _____ p.m.

Before Bed @ _____ p.m.

Pump Information:

Dietary Guidelines:

Estimated total calories per day: _____

Meal/Snack Times:

Breakfast @ _____ a.m. Snack @ _____ a.m. Lunch @ _____ p.m.

Snack @ _____ p.m. Dinner @ _____ p.m. Bedtime @ _____ p.m.

This student will need to be reminded to take a snack: Yes: _____ No: _____

The foods circled below are appropriate for snacks, school and class parties:

Fresh fruit	Dried fruit	Sugar-free cookies	Diet soda	Cheese/crackers
Pretzels	Nuts	Fruit roll-ups	Milk	Sugar-free punch
Popcorn	Rice cakes	Graham crackers	Frozen Yogurt	Fresh vegetables
	Peanut butter crackers		Angel food cake	

Exercise/Sports Guidelines

This student may participate in: Daily P.E.: Yes: _____ No: _____
After-school sports: Yes: _____ No: _____

Activity Restrictions: _____

Exercise should be delayed or avoided if the blood glucose is higher than _____ mg/dl and lower than _____ mg/dl.

Blood Glucose Monitoring at School:

This student can test own blood glucose levels: Yes: _____ No: _____
Method used: _____ Type of Meter: _____ Strip required: _____

Routine testing times:

Breakfast @ _____ a.m. Lunch @ _____ a.m/p.m.
Dinner @ _____ p.m. Bedtime @ _____ p.m.

Supplemental testing times (please circle below):

Before exercise After exercise Before snack(s)
With symptoms of high/low Other: _____

Treatment of High Blood Sugar:

Student can perform own blood glucose monitoring: Yes: _____ No: _____

If the blood glucose is greater than _____ mg/dl, check the urine for ketones using _____

Notify Parents () or Physician () if ketones are positive or when

Treatment of Low Blood Sugar

If student is conscious and able to swallow, give one of the following:

Item	Amount
_____	_____
_____	_____
_____	_____

After administration of above item, the student's symptoms should improve within 15 minutes. If not, repeat treatment.

Once symptoms subside, give a small snack (crackers/milk) to prevent recurrence of symptoms prior to the next meal or snack.

If student is less cooperative, then give one of the following:

Item	Amount
_____	_____
_____	_____
_____	_____

If student begins to lose consciousness or is having a seizure, then call the (please circle):

Paramedics Parents Physician Other: _____

Parent Signature

Date

Physician Signature

Date

Eating Disorders

Eating disorders are significant problems that are typically diagnosed during adolescence. However, the risk factors for and early symptoms of eating disorders often develop in the elementary and middle school years. Some of the significant identifiable risk factors are: body dissatisfaction, dieting, obesity, parental attitudes and the influence of the media. Early detection involves screening, assessment and referral for appropriate treatment. Prevention programs need to be developed that focus on consultation, education and consciousness-raising.

Two main eating disorders, Anorexia Nervosa and Bulimia Nervosa, are presumed to be of psychological origin and represent a continuum of manifestations of the same disorder.

Anorexia Nervosa

Anorexia Nervosa can be described as a relentless pursuit of excessive thinness. It is a pathological desire to be always thinner and thinner.

At first the dieting is intentional and mild. Slowly, the disease manifests itself and losing weight becomes an obsession. No matter how much weight the person loses, they always want to be thinner. Finally, the significant weight loss begins to take its toll, showing signs of starvation, fatigue and clouding of consciousness. Some cases can even result in death.

Symptoms

- Intense family involvement and interaction
- Daily calorie intake becomes an obsession
- Excessive exercising
- Excessive use of laxatives and diuretics
- Vomiting
- Mirror gazing – Person will stand in front of a mirror for long periods of time and never recognize how thin they really are. This is considered a poor prognostic sign.
- Amenorrhea (cessation of menstruation)

The typical person with anorexia nervosa will go to the doctor about one to two years after dieting, purging, or vomiting excessive exercising and disrupting family life. By this time, they usually have lost about 20% to 40% of their ideal body weight and look very emaciated, but do not think of themselves as being excessively thin. They derive satisfaction from denial of calories and refusal of outside help from parents, friends, physicians or other health professionals.

Persons with anorexia nervosa are usually of a compulsive nature. They maintain a neat appearance and usually get good grades in school. They appear to be joyless individuals who often have strong feelings of helplessness and unworthiness with a paralyzing sense of ineffectiveness.

Treatment

The earlier anorexia nervosa is recognized and treatment is begun, the better the chances for cure. Most cases require a period of separation from the family, usually in a hospital. Treatment must be both psychologically and medically oriented. Strict behavior modification with clearly defined goals is the method employed.

Bulimia Nervosa

The essential features of bulimia nervosa include eating binges followed by feelings of guilt, humiliation, and self-deprecation. These feelings cause the patient to engage in self-induced vomiting, use of laxatives or diuretics, following a strict diet or fasting to overcome the effects of the binges.

Bulimia has no known cause but psychosocial factors may contribute to its development, including family disturbances or conflict, struggle for control or self identity, cultural over emphasis on physical appearance and parental obesity. It can also be associated with depression and sexual abuse.

Diagnosis for bulimia is usually made when the behavior listed below occur at least twice a week for three months

- Recurrent episodes of binge eating and feeling of lack of control during this time.
- Recurrent inappropriate compensation behavior to prevent weight gain (self-induced vomiting, misuse of diuretics, laxatives, enemas, fasting and excessive exercise).

Treatment

Interrelated physical and psychological symptoms must be treated simultaneously. Therapy may continue for several years. Psychotherapy concentrates on interrupting the binge – purge cycle and helping the person regain control over their eating behavior. Treatment may be provided either as inpatient or outpatient setting. It may involve highly structured psycho educational group meeting or individual and family therapy. Anti depressant drugs may also be used in adjunct to psychotherapy.

Heart Disease

Condition:

Heart disease in children can be congenital or acquired. The great majority are asymptomatic; though a small majority may exhibit symptoms of fatigability, blueness or, on occasion, fainting spells. The latter, if it occurs secondary to heart disease, is a danger sign and should be reported. A heart murmur per se does not necessarily imply the presence of heart disease.

Treatment:

Most children are on no medications; those who are usually receive their medication at home before leaving for school and after returning. Occasionally a child, particularly after heart surgery, may need medication during school hours. Children who are cyanotic (blue) are at risk from complications of dehydration, and should be allowed to drink water frequently, particularly in hot weather.

Limits:

Most children have no limitations and should be encouraged to participate in normal activities. Those with more significant lesions should be allowed activity to their tolerance (being given the benefit of the doubt when they say they are fatigued).

Note: Children so designated should avoid those activities from which they cannot withdraw gracefully. This is particularly true of adolescents who may deny the existence of a problem.

Management:

Except as outlined above, most students will not need special consideration. Should confusion arise regarding activity status, clarification should be sought from the physician caring for the child's heart condition.

Should fainting or near fainting spells occur, ease the child to the floor and loosen his clothing. Elevate his legs above the level of his heart. Obtain his heart rate. Allow the child to rest. Contact his parents immediately.

If medications are required, school personnel should follow current policies regarding administering medications to children at school.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factors and/or complications, medications administered and reaction.

Hemophilia

Condition:

Hemophilia is a hereditary blood disease in which a vital blood-clotting factor is missing, causing abnormal bleeding. Common bleeding sites are knees, ankles and elbows but bleeding may occur from any site. Painful, swollen or warm joints may be indicators of bleeding.

Treatment:

There is no cure. Hemorrhages can only be healed with transfusions of fresh whole blood plasma, or clotting factor concentrates.

Management:

Any moderate or severe trauma to the head, abdomen or bones warrants immediate attention. Treat bleeding episodes promptly. Keep the student at rest. Notify parents or guardian immediately. Apply lightweight ice pack to the area. If parents cannot be reached, call 911.

To avoid gaps in the student's education due to time spent in hospital or home, school personnel should maintain close contact with the parents to arrange special educational provision.

Maintain up-to-date information regarding emergency contacts and authorization for emergency treatment.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factors and/or complications, medications administered and reaction.

Hypertension/High Blood Pressure

Condition:

Hypertension is one of the most common medical problems affecting the entire population. About 15 to 20 percent of adults are believed to have blood pressures in excess of normal. The percentage in children is somewhat less, but is probably more common than we realize. Hypertension is defined in children under 10 years of age by a blood pressure greater than 130/80. In older children and adolescents hypertension is recognized by blood pressure greater than 140/90. There are a number of recognized causes for hypertension. These include congenital or acquired heart disease, kidney disease, and occasionally in children with sickle cell anemia. A large group of children may have essential hypertension, which means the exact cause is unknown. Most of the children who are hypertensive have no symptoms. However, with excessively high blood pressure some children may have unexplained severe headaches, dizziness or chest pain.

Treatment:

Treatment consists of correcting the underlying condition, if possible. A low salt diet is generally recommended. Some children may require daily medications to control high blood pressure. These usually need to be taken regularly throughout the day. These medications are effective only if they are taken every day.

Limits:

In general there is no need for limitations on a child with hypertension. In some individuals, it may be recommended that strenuous competitive sports be avoided.

Management:

Symptoms in hypertensive patients are unusual. However, should a known hypertensive patient have an unusual or severe headache or unusual or unexplained dizziness, these symptoms should be reported.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factors and/or complications, medications administered and reaction.

Screening:

The school can play an important role in identifying adolescents with hypertension. When evaluating adolescents, and particularly obese or African-American adolescents, the school nurse should take a blood pressure and report abnormalities to parents.

Kidney Disease

Condition:

Kidney disease in children rarely presents a problem in the classroom unless the disease has progressed to a point where there is evidence of chronic renal failure. The most common types of kidney disease may only require an awareness on the part of the teacher that more frequent trips than usual to the bathroom may be necessary. This need should be documented, however, by a doctor's statement.

Treatment:

A child with severe kidney disease may require continuous medication, some of which may need to be given during the school day. Under some circumstances it is extremely important that these medications be given at an exact time, which the physician may order.

Limits:

As with most chronic disease, it is important to attempt to include students with chronic renal disease in the mainstream of student activities including physical education. Occasionally physical education will be impossible and the physician will prescribe limitations on an individual basis.

Management:

If a child known to have chronic renal disease describes unusual symptoms such as fatigue, decreased mental alertness, muscle cramps, nausea and vomiting, be alert to these early warning signs. Also, fluid retention and decreased urination will possibly follow. It is important to let the parents know about these findings in children who have chronic renal disease. If medications are required, school personnel should follow current policies regarding administering medications to children at school.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factors and/or complications, medications administered and reaction.

Migraine Headaches

Condition:

Migraine headaches are frequently unilateral, usually accompanied by vision and gastrointestinal disturbances. The student may experience irritability, anorexia, nausea, vomiting and photophobia (sensitivity to light).

Frequency:

Migraine headaches in children and adolescents are more common than previously realized. The child with recurrent headaches in school should be directed toward a medical evaluation.

Treatment:

Medications as prescribed, rest, dim lights and quiet environment, allow to sleep. The earlier a prescribed medication is used, the more effective it will be.

Muscular Dystrophy

Condition:

Muscular Dystrophy is the general designation for a group of chronic diseases having the prominent characteristic of progressive degeneration of the skeletal (voluntary) musculature. They are hereditary conditions. Muscular Dystrophy is more common in males than in females. It usually appears in childhood but may occur at any age. First signs of this disease are the increased size of certain muscles a marked “hunchback” or lordosis, and a waddling gait. In the early stages, the calf muscles, deltoids, and muscles attached to the scapulae may become very hypertrophied, yet be very weak. The individual usually exhibits increasing difficulty with ambulation. As the muscles deteriorate, the student will become weaker and more helpless, unable finally to carry out the simplest activities of everyday life or to combat infections.

Treatment:

No satisfactory treatment has been found to arrest the progression of the disease.

Limits:

The student should be encouraged to live as normal and full a life as possible. Self-help devices can assist him to reach a greater degree of independence. The small muscles of the hand are often the last to be affected, so the child can continue to use his fingers. Encourage participation in as many activities as the child’s condition will allow.

Management:

It is important to recognize the first sign of an impending infection. Such signs may be listlessness, loss of appetite, fever or cough. Parents should be notified immediately if an infection is suspected.

Before any medications are administered, be certain that you have on file the required medication administration form with parent and/or legal guardian signature.

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factors and/or complications, medications administered and reaction.

Seizure Disorders

Condition:

A seizure is an involuntary sudden change in sensation, behavior, muscle activity or level of consciousness.

Seizures may be caused by medical conditions such as high fever, diabetes, brain infections, heat exhaustion, pregnancy, poisoning, hypoglycemia, head injury and epilepsy.

Note: Epilepsy is a condition of the brain characterized by a susceptibility to recurrent seizures. Epilepsy is always accompanied by seizures, but seizures are not always epilepsy.

Types of seizures are:

- Generalized tonic-clonic seizures – convulsions usually lasts two to five minutes with complete loss of consciousness and muscle spasms
- Partial seizure – involuntary movement of arm or leg, distorted sensations, or a period of automatic movement in which awareness is blurred or completely absent
- Absence seizures – a blank stare lasting a few seconds

Treatment:

Almost all seizures are self-limited events and the abnormal activity will abate with time. In some instances, the administration of medication intravenously or intramuscularly is necessary to stop the seizure activity.

Most individuals can have their seizure disorder partially or completely controlled with the use of anti-convulsing medication. The medications need to be taken on a routine basis each day.

Management:

Generalized tonic-clonic seizures

- Keep calm
- Stay with student until seizure ends
- Ease the student to the floor
- Remove dangerous objects
- Do not restrain or force anything into the mouth
- Loosen clothing, remove eye glasses
- Cushion and turn head to the side
- Incontinence may occur, provide a change of clothes
- After seizure stops allow student to rest quietly
- Notify parent

When to call 911

- If there is no post history of seizures
- If the seizure lasts more than five minutes
- If consciousness does not return after seizure has stopped
- Or as designated by M.D.
- If the child turns blue or vomits

Important data to note about a seizure

- Precipitating events
- Student's behavior prior to seizure
- Type of seizure and duration
- Description and duration of post seizure sleep or drowsiness

Partial seizure

- Stay with the student and remove dangerous objects
- Give reassurance and emotional support
- Document observations and notify parent or legal guardian
- If this is a first-time happening, medical evaluation should be sought

Absence seizure

- No first aid is needed, but observation should be documented and reported to parent or legal guardian
- Some children with absence seizures are initially thought to have ADHD or limited intellectual ability
- Medical evaluation should be sought

Special Instructions:

Documentation is very important in seizure disorders. If medications are required, clinic personnel should follow current policies regarding medication administration at school.

Seizure Action Plan

Student Name: _____ **Date of Birth:** _____

Teacher: _____ **Grade:** _____

Mother/Guardian

Father

Work Phone: _____ Work Phone: _____

Home Phone: _____ Home Phone: _____

Pager: _____ Pager: _____

Other: _____ Other: _____

Home Address: _____ Home Address: _____

Physician Name: _____

Phone Number: _____

Seizure Profile: _____

Description of Seizure: _____

Medications: _____

Action Plan for School:

Sickle Cell Anemia

Condition:

Sickle cell anemia is a non-contagious, inherited blood disorder for which there is no cure. Sickle cell disease affects one out of every 400 African Americans and the trait affects one out of every 10 African Americans. The disease also occurs among Latin Americans, Puerto Ricans, Indians, Asians and other people of the Caribbean. In Sickle cell anemia, hemoglobin (the substance that gives blood its red color) is abnormal and crystallizes causing cells to lose oxygen and assume a crescent or sickle shape.

Symptoms affect the entire body including:

- Failure to grow properly as a child
- Decreased resistance to infections
- Painful, swollen bones and joints
- Abdominal pain
- Feeling run down

There are also periods of crisis in which there is very severe pain and inability to walk or move. Death may result from overwhelming infections or severe anemia.

Treatment:

Treatment of symptoms as they occur is indicated. There is no treatment for the disease itself. Infections are treated aggressively with antibiotics. Transfusions are occasionally necessary.

Management:

Adequate fluids are essential to help prevent sludging of the red cells. Report crisis-like symptoms to the school nurse or principal. If any of these symptoms occur, have the child lie down or make him comfortable, and notify a parent or guardian immediately. Know your student, his capabilities and limits.

The most common symptoms of sickle cell crisis are:

- Sudden onset of acute, severe abdominal pain
- Sudden, acute severe onset of joint or bone pain

Special Instructions:

Be sure to record on the clinic card and student medication record information concerning precipitating factor and/or complications, medications administered and reaction.

Spina Bifida

Condition:

Spina bifida or myelomeningocele is a congenital problem in which there is a failure of the vertebrae bones (spinal column) to fuse, leaving the enclosed spinal cord unprotected. This may occur anywhere between the neck and tailbone with the lower part of the spine being the most common location. The skin and spinal cord also do not develop properly and a pouch of varying size is present where the bones fail to fuse. In a typical case, the pouch contains the nerves that are supposed to go to the lower pelvis and legs so the child has no control over bowel or bladder and both legs are paralyzed. In some children with spina bifida, the child may be ambulatory but not necessarily have control of bowel or bladder.

Treatment:

Primary treatment of spina bifida is surgical. Total treatment consists of the following procedures, which will have been done by the time the child starts school:

- Repair of the skin defect in lower back
- Shunt type procedures in the brain to prevent or arrest hydrocephalus
- Orthopedic procedures to the legs to enable the child to walk with braces and crutches at an appropriate time
- Urological evaluation to determine the best method of bladder management

Limits:

Most children with spina bifida can be mainstreamed into regular classes with adaptations made to accommodate their wheelchair, walkers or braces. Special scheduling may also be necessary to meet their toileting needs.

Management:

Most children with spina bifida are on an intermittent catheterization schedule for bladder control and if bowel control is a problem they may need diaper changes so the school must provide space and privacy to perform these procedures. The principal is responsible for designating personnel to assist the child or to perform these procedures if the child is unable to do so himself. School personnel should be aware of possible pressure sores from braces and observe the child for any signs of skin breakdown. Child should be observed for signs of infection such as fever, loss of appetite or listlessness and notify the parents if an infection is suspected.

Special Instructions:

If the classroom is having difficulty in managing a child with spina bifida, appropriate channels should be followed to obtain special education services such as physical and occupational therapy.

Individual Health Care Plan

Student: _____

Date of Birth: _____

Date: _____

Health Information to Teacher:

_____ has a health condition of which you as his teacher need to be aware. The description of this problem, as well as emergency care and individual considerations, are stated below:

Medical Diagnosis/Condition: _____

Action: _____

Individual Considerations: _____

Parent Signature

Date

Physician Signature

Date