Chapter 2

Injury Management & Emergency Medical Concerns

• Assessment of Injuries and Medical Concerns in the School Setting
  – Initial Assessment 3
  – Triage 4
  – Reporting Accidents 5
  – Suggested First Aid Procedures 5
  – Pediatric Vital Signs 5
  – Wong-Baker FACES Pain Rating Scale 6

• Injury Management
  – Abdominal Blunt Injury 7
  – Abdominal Open Wounds 7
  – Amputation 7
  – Bites 8
  – Bleeding 9
  – Burns 9
  – Cuts, Scrapes, Abrasions 10
  – Dislocation 10
  – Earache and Ear Injuries 10
  – Eye Injuries 10
  – Fractures, Sprains and Strains 12
  – Groin Injuries 12
  – Head Injuries / Concussion 12
    – Concussion Resource Guide 14
    – Concussion Signs and Symptoms Checklist 15
    – Report to Parent/Guardian of a Head Injury 17
    – Know Your Concussion ABCs, Fact Sheet for School Nurses 18
    – Preparticipation Physical Evaluation Forms 26
  – Lacerations 30
  – Puncture Wounds 30
  – Snake Bites 30
  – Spinal Injury, Suspected 30
  – Sports Injuries 31
  – Stings and Insect Bites 33
• Emergency Medical Concerns
  – Abdominal Pain
  – Allergic Reaction Anaphylaxis
  – Allergic Reaction Severe
  – Anaphylaxis Action Plan
  – Asthma
  – Breathing Stops
  – Chest Pain
  – Choking
  – Dental Emergencies
  – Diabetes (low and high blood sugar)
  – Hypoglycemia and Hyperglycemia Chart
  – Dysmenorrhea
  – Fainting
  – Headaches
  – Heat Illness
  – Hyperventilation
  – Nosebleeds
  – Seizures/Convulsions
  – Shock

• Prevention and Preparedness
  – Automated External Defibrillator (AED) Programs in Schools
  – Emergency Care for Students with Special Needs
  – Emergency Information Form for Children with Special Needs
  – Emergency Preparedness in Schools
  – Emergency Preparedness – The Role of the School Nurse
  – Emergency Supplies – “Go Bag”
  – Preventing Playground Injuries
  – Special Considerations for Field Day and Other Outdoor Activities

• Sample Forms
  – Emergency Transportation/Treatment Release
  – Accident/Incident Report Form
  – Accident Incident Report Form to Parent
Assessment of Injuries and Medical Concerns in the School Setting

When a student has an accident or emergent medical condition that requires immediate medical care, the school nurse or other staff member with First Responder or first aid training can give first aid at the scene or in the clinic. The principal should be notified immediately. The student’s clinic card should also be pulled and emergency instructions followed. School administration has the authority to call an ambulance for emergency transportation and to notify the parent. When the parent is notified, share as much information as possible about what happened, including where the student is being taken for emergency treatment. The immediate care of the child is the school nurse’s first responsibility, so another staff member may be assigned to make the calls and assist the nurse. A written plan for emergency procedures should be available in the school, so that everyone involved will be aware of individual responsibilities and will communicate appropriately. Attention to standard precautions is always necessary (see Ch. 4, Communicable Diseases and Infection Control). After an emergency situation is over, the school nurse and principal should review how well the plan worked and make adjustments as needed. Documentation should be completed and include details such as what happened and when, procedures done, whether parent(s) were called, whether the student left the premises and with whom, etc. Review the Accident/Incident Report Form at the end of this Chapter.

Initial Assessment

The process should be organized and systematic. History and physical assessment may be conducted simultaneously. Assessment of general appearance and the A-B-C’s (Airway, Breathing and Circulation) should be completed first, with intervention as needed.

<table>
<thead>
<tr>
<th>General Appearance</th>
<th>Assess overall impression of health, level of distress, emotional response and physical symptoms. Provide calm reassurance, safety of the area both for the first-responder and others in the area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
<td>While completing the Airway Assessment, stabilize the head-neck if there is concern for a neck injury. Do this by instructing the student to lie still and by instructing an assistant to place hands on both sides of the child’s head to prevent movement of the head and neck. Assess patency, ability to cry or talk, position, airway sounds, color. Open airway, perform obstructed airway maneuvers if needed.</td>
</tr>
<tr>
<td>Breathing</td>
<td>Assess work of breathing, rate, nasal flaring, retractions, difficulty speaking, breath sounds. Position for open airway, assist ventilations if needed.</td>
</tr>
<tr>
<td>Circulation</td>
<td>Assess perfusion of vital organs, skin color and temperature, active bleeding capillary refill, peripheral pulses. Initiate CPR if needed, control bleeding with direct pressure (using multiple sterile gauze pads with overlying barrier or gloves if available; if gauze is not immediately available, use a sufficient amount of child’s clothing to prevent personal exposure to the child’s blood). Position to maintain perfusion (legs elevated if shock symptoms).</td>
</tr>
<tr>
<td>Disability</td>
<td>Assess level of consciousness (alert or unresponsive), awareness of injury or illness, activity level, level of pain. Provide reassurance; orient to time, place and person as needed. Position to maintain comfort.</td>
</tr>
<tr>
<td>Expose/Examine</td>
<td>Open clothing as needed to observe breathing. Examine injuries, rashes as appropriate.</td>
</tr>
<tr>
<td>Fahrenheit</td>
<td>Check temperature, maintain temperature in a normal range using blankets (or undressing, sponging, fanning if hyperthermia is a concern).</td>
</tr>
<tr>
<td>Get Vital Signs</td>
<td>Obtain baseline HR, RR, BP (if possible), check capillary refill.</td>
</tr>
<tr>
<td>Head-to-Toe</td>
<td>Can be focused or complete, depending on student’s health status, mechanism of injury and school policy.</td>
</tr>
<tr>
<td>Isolate</td>
<td>Provide isolation measures according to public health and school policy.</td>
</tr>
</tbody>
</table>
Triage

Triage literally means “to sort.” It is a means of sorting multiple victims and/or determining the urgency of each individual’s illness or injury. It is a way for the school nurse to decide the order of priority for emergency actions and treatment. The three commonly used triage categories are: Emergent, Urgent and Non-Urgent.

Emergent: Call EMS and notify parents

This category represents an acute condition that is a potential threat to life or function and requires immediate medical attention. Examples include:

- Cardiopulmonary arrest
- Shock
- Uncontrolled bleeding
- Possible anaphylactic reaction even if respiratory symptoms (e.g., cough) or circulatory symptoms (e.g., dizziness) appear mild
- Severe respiratory distress/failure
- Severe burns
- Seizure lasting longer than five minutes or associated with cyanosis or first-time seizure
- Altered level of consciousness
- Severe trauma
- Limb trauma with loss of distal pulse or with obvious deformity
- Spinal injury (suspected)
- Severe pain, i.e. chest or abdomen
- Femoral fracture
- Heat stroke
- Uncontrollable behavior that threatens self or others
- Dental injury with avulsion of a permanent tooth
- Ingestion of poison: call Georgia Poison Control Center (1-800-222-1222) for specific instructions
- Child with diabetes - low blood sugar (with or without seizure) that requires glucagon

Urgent: Notify parent or guardian immediately

This category represents a condition that is not severe or life-threatening, but requires medical intervention within two hours. Examples include:

- Suspected fracture with pulses present and no obvious deformity
- Lacerations requiring sutures without large amounts of blood loss
- Head injury without loss of consciousness
- Seizure (NOT first-time or status epilepticus)
- Wheezing, unresponsive to medication
- Diarrhea/vomiting
- Febrile illness with temperature greater than 100.4°F
- Dental injury other than avulsion of a permanent tooth
- Eye injury
- Any abdominal pain after an injury
- If moderate to large ketones are present in the urine, and/or the child is vomiting
- If child has low blood sugar that requires treatment with more than two juices or glucose gel

Non-Urgent: Notify parent or guardian, per district policy

This category represents a condition that is non-acute or minor. It may or may not require referral for medical care. Examples include:

- Minor scrapes/bruises
- Muscle sprains/strains (urgent if fracture suspected)
- Headache without fever or vomiting or other symptoms
- Wheezing that responds to treatment (without respiratory distress)
- Mild pain
- Upper respiratory infection toothache
- Child with diabetes - if small to trace ketones in the urine
- Child with diabetes - if child has a low blood sugar requiring treatment

Note: Always notify parents or guardians of any unusual event. Follow your school district’s guidelines. Always be alert for possible child abuse. For additional information, please see Child Abuse Prevention, Recognition and Reporting in Chapter 1.
Reporting Accidents

All accidents that require medical attention are to be reported to the principal, using the Report of Accident/Incident Form at the end of this Chapter. This form should be completed as soon as possible by the adult witnessing the accident or first on the scene and the school nurse or clinic personnel providing emergency treatment.

Suggested First Aid Procedures

- Have a written plan for emergencies, with someone designated to call 911 and/or to call parents while clinic personnel care for the child. Don’t be surprised if you have to delegate someone at the time of the incident due to where it has occurred. Make sure that you make eye contact with that person as you tell him or her to call so there is no question that this task is done.
- Notify or delegate someone to alert the principal of the need to call 911 if situation is emergent or life-threatening.
- Keep a list of staff with current CPR or First Responder training in your manual and posted in the health clinic, the PE area and the front office. These trained personnel can be alerted to assist you in an emergency.
- Apply ice for most injuries (do not use for burns or for students who also have sickle cell disease).
- May use frozen gel packs, small freezer-size zip lock bag with a frozen sponge or ice cubes. Keep ice available in the health clinic if at all possible.
- Always put a thin layer of paper towels or cloth between skin and ice applications.
- Leave ice on for 10-15 minutes, and reapply every 30-60 minutes as needed to decrease pain and swelling.
- Keep student NPO (nothing by mouth) with most injuries because of the possible need for conscious sedation or surgery or possibility of vomiting with aspiration (heat cramps and heat exhaustion are exceptions to this rule).
- Use distraction techniques (music/headphones, a favorite book, etc.) to calm students.
- Use judgment regarding the decision to move the child. With possible neck or extremity injury, it will be advisable, at times, to NOT move the child until EMS arrives.

Pediatric Vital Signs

- The student’s normal range should always be taken into consideration.
- Heart rate, BP and respiratory rate are expected to increase during times of fever or stress.
- In a clinically decompensating child, the blood pressure will be the last vital sign to change.
- Just because the BP is normal, don’t assume that the student is “stable.”
- Bradycardia (slow heart rate) in children is an ominous sign, usually a result of hypoxia. Act quickly, as this condition in a child is extremely critical.
- Bradypnea (slow RR) is an ominous sign and is usually a sign of either respiratory fatigue or extreme obstruction. Act quickly.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Respiratory Rate</th>
<th>Heart Rate</th>
<th>Systolic Blood Pressure</th>
<th>Weight in Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn</td>
<td>30-50</td>
<td>120-160</td>
<td>60-70</td>
<td>4.5-7</td>
</tr>
<tr>
<td>Infant (1-12)</td>
<td>30-50</td>
<td>80-140</td>
<td>70-100</td>
<td>9-22</td>
</tr>
<tr>
<td>Toddler (1-3 yrs)</td>
<td>24-40</td>
<td>80-130</td>
<td>80-110</td>
<td>22-31</td>
</tr>
<tr>
<td>Preschooler (3-5 yrs)</td>
<td>22-34</td>
<td>80-120</td>
<td>80-110</td>
<td>31-40</td>
</tr>
<tr>
<td>School-Age (6-12 yrs)</td>
<td>22-34</td>
<td>80-120</td>
<td>80-120</td>
<td>41-109</td>
</tr>
<tr>
<td>Adolescent (13+ yrs)</td>
<td>12-20</td>
<td>80-105</td>
<td>110-120</td>
<td>&gt;120</td>
</tr>
</tbody>
</table>
Wong-Baker FACES Pain Rating Scale

All children may experience some pain from time to time whether it is from a headache, injury or cancer treatment. Only the child knows how much pain he/she has. They need to be able to communicate their pain to their school nurse or other designated staff member.

Communicating the Pain

Using a pain rating scale, like the one below, is helpful for young patients to communicate how much pain they are feeling.

Instructions

Explain to the child that each face is for a person who feels happy because he has no pain (hurt) or sad because he has some or a lot of pain.

Face 0 is very happy because he doesn’t hurt at all.
Face 1 hurts just a little bit.
Face 2 hurts a little more.
Face 3 hurts even more.
Face 4 hurts a whole lot more.
Face 5 hurts as much as you can imagine, although you do not have to be crying to feel this bad.

Ask the child to choose the face that best describes how he/she is feeling.

Injury Management

Abdominal Blunt Injury

- Obtain history of injury from witness. Be aware that injury could have occurred prior to arriving at school or even days before if slow bleeding is from a spleen injury.
- Place student supine with legs elevated.
- Observe for change in vital signs, capillary refill, signs of shock, respiratory distress and level of pain.
- Keep student NPO (nothing by mouth).

Call 911 and notify parents if:

- Abdominal distension, rigidity or persistent pain.
- Blood in urine.
- Signs of shock such as:
  - Skin is cool and clammy—it may appear pale or gray;
  - The pulse is weak and rapid—breathing may be slow and shallow, or hyperventilation (rapid or deep breathing) may occur
  - Blood pressure is below normal
  - Nausea or vomiting
  - Eyes are lack luster and may seem to stare—sometimes the pupils are dilated
  - The person is unconscious, or if conscious, the person feels faint or is very weak or confused. Shock also sometimes causes a person to become overly excited and anxious.

Abdominal Open Wounds

- Call 911 and notify parents.
- Wearing gloves, control bleeding with firm pressure.
- Cover open areas with sterile, moist dressing. Do not try to replace protruding tissue.
- Hold dressing in place with firmly applied bandage.
- If breathing is difficult, keep student’s head and shoulders elevated with a pillow or rolled blanket, etc.
- Give first aid for shock, if suspected (see Shock).
- Do not give fluids or food.

Amputation

- Stay with student! Have other school personnel call 911 and parents, and try to find amputated body part.
- Place detached part, wrapped in moist sterile gauze, in a plastic bag. Close bag and put into container of ice water. Send with student.
- Do not put amputated part directly on ice.
- Keep student NPO (nothing by mouth).
Bites (Animal)

Bites from many animals may transmit rabies and will need medical attention (dog, ferret, bat, raccoon, opossum, skunk, fox, coyote and cat).

- For minor bites:
  - Wearing gloves, wash area well, with soap and water, irrigating for five minutes if possible.
  - Apply clean bandage. If the bite is bleeding, apply gentle pressure directly on the wound using a sterile bandage or clean cloth until the bleeding stops.
  - Medical attention is needed “promptly” if skin was broken. The longer the delay in proper cleansing/debridement of the wound, the greater the risk of infection.
  - Contact parent/guardian to seek medical attention.
  - Supply parent with as much information as possible regarding the biting animal.
  - Antibiotics may be prescribed, and rabies prevention treatment may be considered.

- For more serious bites:
  - Follow the same procedures as minor bites above.
  - Treatment considerations for the student with more serious injuries may include repair to damaged nerves, tendons, suturing and cosmetic repairs, as well as prescribed antibiotics and rabies prevention.
  - Keep student NPO (nothing by mouth), especially if it appears sutures may be needed.
  - Do not apply ointments or disinfecting agents.
  - Do wash with low pressure water irrigation if the child will permit.

NOTE: All animal bites should be reported to county animal control. Call Poison Control Center (800-222-1222) for advice related to rabies risk.

Bites (Human)

Because of the types of bacteria and viruses that are in the human mouth, human bites can be as dangerous as or even more dangerous than animal bites. If someone cuts his/her knuckles on another person’s teeth, as often happens in a fight or while playing in a contact sport, this is also considered a human bite.

If a student sustains a human bite that breaks the skin:

- Treatment is needed promptly. Contact parent/guardian to seek medical attention (antibiotics may be prescribed).
- Wearing gloves, wash area well with soap and water, irrigating for five minutes if possible, using low pressure.
- Apply a clean bandage.
- If the bite is bleeding, apply gentle pressure directly on the wound using a sterile bandage or clean cloth until the bleeding stops.
- Supply parent/guardian with as much information as possible regarding the biting incident.

Treatment considerations for the student with more serious injuries may include repair to damaged nerves, tendons, suturing and cosmetic repairs, as well as prescribed antibiotics for infection prevention. As a result, keep student NPO (nothing by mouth), especially if it appears sutures may be needed.

If the student has not had a tetanus shot within five years, their doctor may recommend a booster. In this case, he/she should have the booster within 48 hours of the injury.
Bleeding

• Wearing gloves, press firmly over wound with clean bandage.
• Apply continuous pressure for seven to 10 minutes.
• Elevate bleeding body part gently, above the heart level.
• If bleeding continues, apply pressure to point over supplying artery in addition to maintaining direct pressure.
• Do not use tourniquet.
• Bandage wound firmly with pressure dressing, and reinforce as necessary. Do not remove dressing.
• Notify parents.
• Call 911 immediately if blood is spurting out with each pulse beat, does not stop with normal measures, or amputation has occurred.
• Observe and treat for shock, if needed (do not elevate legs if head injury is suspected).

Burns

Chemical burns

• Call Poison Control Center at 800-222-1222 for further instructions.
• Wear gloves. Remove clothing and jewelry.
• Rinse burned area immediately with large amount of cool, clean water for 10-20 minutes.
• Follow recommendations for thermal burns (see below).
• Notify parents to seek medical attention.

Note: Chemical burns to the eye: refer to Eye Injuries section.

Electrical burns/Electrical shock

• Call 911 if there is loss of consciousness; initiate CPR if needed.
• Turn off power source. Do not touch student until power off.
• Treat any burns (see thermal burns, below).
• Notify parents.

Thermal burns

From heat or fire, three types may be present:

• Superficial—redness only
• Partial thickness—redness and blisters, very painful
• Full thickness—charred or pale, may involve muscle or other tissue
  - cover with a cool, wet, sterile cloth. Do NOT immerse large burns with cold water; doing so can cause hypothermia
  - continually observe for airway and breathing
  - bandage area loosely with a sterile bandage
  - notify parents
  - keep student NPO (nothing by mouth)
  - do not apply ice to burns, break blisters or remove tissue; do not put anything else on the burn.

• Call 911
  - if burn is large or deep or involves the eye
  - on the face, hands, feet (unless small or superficial; first degree)
  - student is unconscious or having difficulty breathing or is in substantial pain not managed with cool compresses.
Cuts, Scrapes, Abrasions

- After controlling bleeding (using standard precautions), wash the wound gently with soap and water to remove dirt and decrease chance of infection. Irrigate with low pressure water for five minutes if tolerated. For abrasions, more vigorous washing may be needed to remove all material. Do this only if tolerated.
- Rinse and pat dry.
- Apply a clean bandage (non-adhering type for abrasions if possible).
- Time is important if there has been gross contamination (road burn) or if the child does not permit adequate washing of the abrasion.
- The general rule is not to close lacerations that are more than six hours old.
- Notify parents per school policy.

Note: There is much controversy about applying Neosporin® to minor cuts, scrapes, etc. The current recommendation by most dermatologists is not to use this; only use soap and water and rinse off well. Refer to your district guidelines for further questions.

Dislocation

- Symptoms—severe pain and deformity are present with swelling.
- Check peripheral pulse in affected extremity.
- Call 911 if no pulse.
- Splint and immobilize the affected joint in the position found.
- Do not attempt to put joint back in place.
- Use sling if needed (i.e. shoulder).
- Place ice on dislocated joint.
- Keep student calm and quiet.
- Keep student NPO (nothing by mouth).
- Notify parents of need for medical attention.
- Consider 911 if the parent cannot transport the child promptly to the hospital.

Earache and Ear Injuries

- While wearing gloves, control bleeding of the external ear with pressure if necessary. Bleeding from the ear canal cannot be controlled by the layperson.
- Notify parents of earaches, injuries and draining ears; advise medical attention.
- Apply a warm compress or towel for an earache.
- Do not put anything in the ear, or attempt to remove foreign object from ear.

Eye Injuries

Knowing what to do for an eye emergency can save valuable time and possibly prevent vision loss. Below are some instructions for basic eye injury first aid.

Specks in the eye

- Do not let the student rub the eye. This can scratch or damage the cornea.
- Encourage the student to let tears wash the speck out. If this does not work, use saline eyewash or room temperature water.
• Have the student lift the upper eyelid outward and down over the lower lid. Using a clean finger and thumb, he should gently pull the upper eyelid down over the top of the lower eyelid. This should cause tearing and flush the object out. He may need to repeat this several times.

• If he can see the object, he may try to remove it from the eye with a sterile gauze or clean cloth.

• If the speck does not wash out, keep the eye closed, bandage it lightly and have the student see a doctor.

Blows to the eye

• Apply a cold compress without putting pressure on the eye. Crushed ice in a plastic bag can be taped to the forehead to rest gently on the injured eye. Place a cloth or some type of barrier between the skin and the cold pack.

• Examine eye with flashlight for hemorrhaging into the eye itself.

• In cases of pain, reduced or blurred vision, nausea or discoloration (black eye), prompt transport to an ER should be arranged. Any of these symptoms could mean internal eye damage.

• Check for satisfactory extraocular movement (look up, down, side to side).

Cuts and punctures of the eye or eyelid

• Have the student see a doctor right away.

• Do not wash out the eye with water or any other liquid.

• Do not try to remove an object that is stuck in the eye.

• Cover the eye with a rigid shield without applying pressure. The bottom half of a paper cup can be used.

With any of the above situations, do not assume that any eye injury is harmless. When in doubt, have the student see a doctor right away. While waiting for parent, have student rest with eyes closed.

Penetrating eye injury

• Keep student lying down flat. Remain calm.

• Do not attempt to remove object.

• Call 911 and parents.

• Cover affected eye with small cup or eye shield. Do not put any pressure on the eye.

• Apply clean dressing or patch to unaffected eye to avoid eye movement.

• Keep student NPO (nothing by mouth).

Chemical Burn to the Eye

• Note: It is a very good idea for the school nurse to educate science teachers about emergency actions needed for chemical spills/burns before they happen.

• Time MAY be critical, particularly if substance is a strong alkalai. Call 911 if substance is known to be alkaline and call Poison Control Center at 800-222-1222.

• Irrigate eye with large amounts of low flowing lukewarm water under a water tap or flush with normal saline over a sink or eye station for about 20 minutes.

• Hold student’s head with eye under the tap as water is running; you may have to hold the eye open with one hand while flushing with the other.

• Call parent and send to ER.

• While waiting for parent and/or EMS, have student rest with eyes closed and keep the room darkened.
Fractures, Sprains, Strains

Treat all injured parts as if they might be fractured.

Symptoms
Pain or guarding, swelling, discoloration, limited movement, bent or deformed bone, joint deviation.

Treatment
P-R-I-C-E (Protect-Rest-Ice-Compression-Elevate)

- Support and elevate injured part gently if possible. Do not move student unnecessarily.
- Apply ice to minimize swelling (unless student has sickle cell disease).
- Check pulse, capillary refill, movement and sensation distal to injury initially; and continue to monitor.
- Splint in position of comfort to limit movement (if pulses are present).
- Keep student NPO (nothing by mouth).
- Call 911 if:
  - absent pulses
  - bone/joint with severe swelling, deformity
  - skin is broken over possible fracture (cover with sterile dressing)
  - possible fracture of femur.
- Notify parents to obtain medical care.
- Observe for shock, and treat if necessary.

Refer to Preventing Playground Injuries and Sports Injuries for more information.

Groin Injuries

- Sudden onset of testicular pain, notify parents to seek immediate medical attention.
- Allow student to lie down.
- Keep student NPO (nothing by mouth).
- Notify parents to arrange very prompt transport to the ER. If treatment is delayed for just a few hours, the testicle may become non-viable and will need to be removed.

Head Injuries/Concussion

Head injuries that happen at school may vary from mild (temporary confusion or passing out) to severe (coma for a longer period of time). They are caused by trauma such as a hard bump or blow to the head or a sudden harsh movement or jarring of the head as in a fall. **Head injuries, including “mild” head injuries, should be taken seriously so that the student’s brain can heal completely.**

A concussion is a type of head injury. Head injuries from falls, sports injuries and violence may be more serious. With a more serious head injury it should be assumed there may also be an injury to the neck or spinal cord. If there is an open wound, head wounds usually bleed easily, and there may be considerable swelling or bleeding under the skin. Evaluate for possible need for stitches (see also Lacerations).
All head injuries should be evaluated. Follow these steps in each case:

1. Get a description of the accident from a witness.
2. Use the below guide in responding to the student with a head injury.
3. Document the incident with the:
   - Concussion Signs and Symptoms Checklist (included in this section)
   - “Report to Parent/Guardian of a Head Injury Form” (A sports concussion notification form may be found in the concussion reference guide in this section).
   - Any other school-required documentation.
4. Notify the parent.
5. Give the “Mild Head Injury and Concussion Teaching Sheet” to the parent (included in Chapter 11, For Families).
6. Instruct the parent to follow up with child’s primary care doctor.

For head injuries when student is alert:

- Allow student to rest.
- Apply cold pack to injured area, if tolerated.
- If vomiting or a severe headache, call 911.
- If persistent headache or a history of lack of consciousness, call parents promptly and make arrangements for prompt medical evaluation.
- Allow student to return to class if no other symptoms or findings, and return in one to two hours or before leaving school for recheck.
- Advise teacher and parents of injury, and need for follow up with their primary care doctor in 24-48 hours.
- Provide family with teaching sheet.

For more severe injuries, when student is conscious:

- If a neck or spinal injury is suspected, do not move student, maintain a position of comfort.
- Call 911 and notify parents.
- Observe and document any of the following symptoms:
  - vomiting more than once
  - confusion, being dazed, not able to recognize people or places
    - is hard to wake up
    - cannot think clearly or remember things
  - decreased level of consciousness
  - blood or watery fluid from the ears or nose
  - neck pain
  - scalp swelling that gets bigger
  - headache that gets worse
  - seizure
  - blurred or double vision
  - slurred speech
  - numbness or tingling anywhere on the body
  - unconsciousness, even if for a brief duration.
- Control bleeding with pressure.
- Apply ice for swelling.
- Evaluate any laceration for possible need for stitches, but do not move neck to do so if there is neck pain (see also Lacerations).
For the unconscious student:

- Stabilize spine and maintain open airway, using jaw thrust maneuver, if spinal or neck injury suspected.
- Call 911 and notify parents.
- Treat bleeding.
- Observe for shock or vomiting (log roll entire body to side if vomiting).

The best treatment for a head injury or concussion is rest, both cognitive (for the brain) and physical (for the body). This type of rest can be frustrating for the student and seem long, but is needed to help the brain heal and prevent another injury. Rest is usually needed until the student is symptom-free. We encourage return to school as soon as possible as extended absences may increase work related stress. However, if academic work induces symptoms such as headaches, a brief absence from school, or accommodations such as delaying examinations may be appropriate.

Some students may need additional support or a 504 plan to assist with their return to school work. A student will need clearance from a doctor to return to sports. A student should be able to fully perform in school without symptoms before returning to full game play in sports.

Resources included in this section:

1. Concussion Signs and Symptoms Checklist (CDC)
   - Note - please check the Websites listed below to see if these teaching sheets have been updated.
2. Report to Parent/Guardian of a Head Injury

Additional Resources in this Manual

1. Know Your Concussion ABCs, Fact Sheet for School Nurses - refer to the Prevention and Preparedness section in this Chapter.
2. Chronic issues related to Brain Injury / Concussion (including 504 planning), refer to Chapter 5.
   - This sheet includes information on the following:
     - Cognitive Rest
     - Return to School, Bookwork, Studies Guidelines
     - Return to Sports, Play, Activities Guidelines

Resources

Concussion and Mild TBI – CDC
[cdc.gov/concussion/signs_symptoms.html](http://cdc.gov/concussion/signs_symptoms.html)

Concussion Program – Children’s Healthcare of Atlanta
[choa.org/concussion](http://choa.org/concussion)

Heads Up to Schools: Know Your Concussion ABCs
[cdc.gov/concussion/HeadsUp/schools.html](http://cdc.gov/concussion/HeadsUp/schools.html)

Pediatric Brain Injury – Brain Injury Association of America
Concussion Signs and Symptoms

Checklist

Student’s Name: ___________________________ Student’s Grade: ______ Date/Time of Injury: ______________

Where and How Injury Occurred: (Be sure to include cause and force of the hit or blow to the head.)
_______________________________________________________________________________________________________________________

Description of Injury: (Be sure to include information about any loss of consciousness and for how long, memory loss, or seizures following the injury, or previous concussions, if any. See the section on Danger Signs on the back of this form.)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

DIRECTIONS:

Use this checklist to monitor students who come to your office with a head injury. Students should be monitored for a minimum of 30 minutes. Check for signs or symptoms when the student first arrives at your office, fifteen minutes later, and at the end of 30 minutes.

Students who experience one or more of the signs or symptoms of concussion after a bump, blow, or jolt to the head should be referred to a health care professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a health care professional, observe the student for any new or worsening symptoms right before the student leaves. Send a copy of this checklist with the student for the health care professional to review.

OBSERVED SIGNS

<table>
<thead>
<tr>
<th>0 MINUTES</th>
<th>15 MINUTES</th>
<th>30 MINUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appears dazed or stunned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is confused about events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeats questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers questions slowly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can’t recall events prior to the hit, bump, or fall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can’t recall events after the hit, bump, or fall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loses consciousness (even briefly)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows behavior or personality changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forgets class schedule or assignments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PHYSICAL SYMPTOMS

Headache or “pressure” in head
Nausea or vomiting
Balance problems or dizziness
Fatigue or feeling tired
Blurry or double vision
Sensitivity to light
Sensitivity to noise
Numbness or tingling
Does not “feel right”

COGNITIVE SYMPTOMS

Difficulty thinking clearly
Difficulty concentrating
Difficulty remembering
Feeling more slowed down
Feeling sluggish, hazy, foggy, or groggy

EMOTIONAL SYMPTOMS

Irritable
Sad
More emotional than usual
Nervous

To download this checklist in Spanish, please visit: www.cdc.gov/Concussion.
Para obtener una copia electrónica de esta lista de síntomas en español, por favor visite: www.cdc.gov/Concussion.
**Danger Signs:**
Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if s/he has:

- One pupil (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

**Additional Information About This Checklist:**
This checklist is also useful if a student appears to have sustained a head injury outside of school or on a previous school day. In such cases, be sure to ask the student about possible sleep symptoms. Drowsiness, sleeping more or less than usual, or difficulty falling asleep may indicate a concussion.

To maintain confidentiality and ensure privacy, this checklist is intended only for use by appropriate school professionals, health care professionals, and the student’s parent(s) or guardian(s).

For a free tear-off pad with additional copies of this form, or for more information on concussion, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

**Resolution of Injury:**

- ___ Student returned to class
- ___ Student sent home
- ___ Student referred to health care professional with experience in evaluating for concussion

**Signature of School Professional Completing This Form:** ________________________________

**Title:** ____________________________________________________________________________

**Comments:**

For more information on concussion and to order additional materials for school professionals FREE-OF-CHARGE, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).
Dear Parents/Guardian,

This is to inform you that your child ____________________________ in Grade ___________ has suffered a head injury today during school.

We:  □ notified you and this is a follow-up informational letter.
      □ attempted to notify you at _____________________ am/pm. ___________________
           (Phone #)

The following events occurred:

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Area of the head affected: _____________________ Time of injury: _________ am/pm

You child’s condition when first seen in the health clinic:

________________________________________________________________________________________
________________________________________________________________________________________

Treatment given your child:

________________________________________________________________________________________
________________________________________________________________________________________

Your child’s condition before leaving school:

________________________________________________________________________________________
________________________________________________________________________________________

For instructions on caring for your child at home, please refer to the “Mild Head Injury and Concussion Teaching Sheet” provided to you by the school.

Please Note:  We recommend strongly that with any serious head injury/bump that you at least call your healthcare provider and let him/her know about this incidence. The healthcare provider may recommend you bring your child in for an evaluation.

Sincerely,

____________________________________ Phone #: __________________________

(Print Name & Title)
A Fact Sheet for School Nurses

What is a concussion?
A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a fall or blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious.

How can I recognize a concussion?
To help you recognize a concussion, ask the injured student or witnesses of the incident about:

1. Any kind of forceful blow to the head or to the body that resulted in rapid movement of the head. 
   -and- 

2. Any change in the student’s behavior, thinking, or physical functioning. (See the signs and symptoms of concussion.)

The Facts:
* All concussions are serious.
* Most concussions occur without loss of consciousness.
* Recognition and proper response to concussions when they first occur can help aid recovery and prevent further injury, or even death.

To download this fact sheet in Spanish, please visit: www.cdc.gov/Concussion.
Para obtener una copia electrónica de esta hoja de información en español, por favor visite: www.cdc.gov/Concussion.
How can concussions happen in schools?

Children and adolescents are among those at greatest risk for concussion. Concussions can result from a fall, or any time a student’s head comes into contact with a hard object, such as the floor, a desk, or another student’s head or body. The potential for a concussion is greatest during activities where collisions can occur, such as during physical education (PE) class, playground time, or school-based sports activities.

Students may also get a concussion when doing activities outside of school, but then come to school when symptoms of the concussion are presenting. For example, adolescent drivers are at increased risk for concussion from motor vehicle crashes.

Concussions can have a more serious effect on a young, developing brain and need to be addressed correctly. Proper recognition and response to concussion symptoms in the school environment can prevent further injury and can help with recovery.
What are the signs and symptoms of concussion?

Students who experience one or more of the signs and symptoms listed below after a bump, blow, or jolt to the head or body should be referred to a health care professional experienced in evaluating for concussion.

There is no one single indicator for concussion. Rather, recognizing a concussion requires a symptom assessment. The signs and symptoms of concussion can take time to appear and can become more noticeable during concentration and learning activities in the classroom. For this reason, it is important to watch for changes in how the student is acting or feeling, if symptoms become worse, or if the student just “doesn’t feel right.”

**SIGNS OBSERVED BY SCHOOL NURSES**

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can’t recall events prior to the hit, bump, or fall
- Can’t recall events after the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes

**SYMPTOMS REPORTED BY THE STUDENT**

**Thinking/Remembering:**
- Difficulty thinking clearly
- Difficulty concentrating or remembering
- Feeling more slowed down
- Feeling sluggish, hazy, foggy, or groggy

**Emotional:**
- Irritable
- Sad
- More emotional than usual
- Nervous

**Physical:**
- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired
- Blurry or double vision
- Sensitivity to light or noise
- Numbness or tingling
- Does not “feel right”

**Sleep***:
- Drowsy
- Sleeps less than usual
- Sleeps more than usual
- Has trouble falling asleep

*Only ask about sleep symptoms if the injury occurred on a prior day.

Remember, you can’t see a concussion and some students may not experience or report symptoms until hours or days after the injury. Most young people with a concussion will recover quickly and fully. But for some, concussion signs and symptoms can last for days, weeks, or longer.
What are concussion danger signs?

In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull. The student should be taken to an emergency department right away if s/he exhibits any of the following danger signs after a bump, blow, or jolt to the head or body:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (even a brief loss of consciousness should be taken seriously)

For more information and tool kits for youth sports coaches and high school coaches, visit www.cdc.gov/Concussion.
What can school nurses and school professionals do?

Below are steps for you to take when a student comes to your office after a bump, blow, or jolt to the head or body.

1. **Observe student for signs and symptoms of concussion for a minimum of 30 minutes.**

2. **Complete the Concussion Signs and Symptoms Checklist and monitor students consistently during the observation period.** The form includes an easy-to-use checklist of signs and symptoms that you can look for when the student first arrives at your office, fifteen minutes later, and at the end of 30 minutes, to determine whether any concussion symptoms appear or change.

3. **Notify the student’s parent(s) or guardian(s) that their child had an injury to the head.**

   > If signs or symptoms are present: refer the student right away to a health care professional with experience in evaluating for concussion. Send a copy of the Concussion Signs and Symptoms Checklist with the student for their parent(s) or guardian(s) to review and ask them to continue to observe the student at home for any changes. Explain that signs and symptoms of concussion can take time to appear. Note that if signs or symptoms appear, the student should be seen right away by a health care professional with experience in evaluating for concussion.

   > If signs or symptoms are not present: the student may return to class, but should not return to sports or recreation activities on the day of the injury. Send a copy of the Concussion Signs and Symptoms Checklist with the student for their parent(s) or guardian(s) to review and ask them to continue to observe the student at home for any changes. Explain that signs and symptoms of concussion can take time to appear. Note that if signs or symptoms appear, the student should be seen right away by a health care professional with experience in evaluating for concussion.

---

Heads Up to Schools: Know Your Concussion ABCs

Children and teens with a concussion should NEVER return to sports or recreation activities on the same day the injury occurred. They should delay returning to their activities until a health care professional experienced in evaluating for concussion says they are symptom-free and it’s OK to return to play. This means, until permitted, not returning to:

- Physical Education (PE) class,
- Sports practices or games, or
- Physical activity at recess.
What do I need to know about students returning to school after a concussion?

Supporting a student recovering from a concussion requires a collaborative approach among school professionals, health care professionals, parents, and students. All school staff, such as teachers, school nurses, counselors, administrators, speech-language pathologists, coaches, and others should be informed about a returning student’s injury and symptoms, as they can assist with the transition process and making accommodations for a student. If symptoms persist, a 504 meeting may be called. Section 504 Plans are implemented when students have a disability (temporary or permanent) that affects their performance in any manner. Services and accommodations for students may include speech-language therapy, environmental adaptations, curriculum modifications, and behavioral strategies.

Encourage teachers and coaches to monitor students who return to school after a concussion. Students may need to limit activities while they are recovering from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms (such as headache or tiredness) to reappear or get worse. After a concussion, physical and cognitive activities—such as concentration and learning—should be carefully monitored and managed by health and school professionals.

If a student already had a medical condition at the time of the concussion (such as chronic headaches), it may take longer to

School Policies: 
*Students Returning to School after a Concussion*

Check with your school administrators to see if your district or school has a policy in place to help students recovering from a concussion succeed when they return to school. If not, consider working with your school administration to develop such a policy. Policy statements can include the district’s or school’s commitment to safety, a brief description of concussion, a plan to help students ease back into school life (learning, social activity, etc.), and information on when students can safely return to physical activity following a concussion.
recover from the concussion. Anxiety and depression may also make it harder to adjust to the symptoms of a concussion.

School professionals should watch for students who show increased problems paying attention, problems remembering or learning new information, inappropriate or impulsive behavior during class, greater irritability, less ability to cope with stress, or difficulty organizing tasks. Students who return to school after a concussion may need to:

- Take rest breaks as needed,
- Spend fewer hours at school,
- Be given more time to take tests or complete assignments,
- Receive help with schoolwork, and/or
- Reduce time spent on the computer, reading, or writing.

It is normal for a student to feel frustrated, sad, and even angry because s/he cannot return to recreation or sports right away, or cannot keep up with schoolwork. A student may also feel isolated from peers and social networks. Talk with the student about these issues and offer support and encouragement. As the student’s symptoms decrease, the extra help or support can be gradually removed.

**What can I do to prevent and prepare for a concussion?**

Here are some steps you can take to prevent concussions in school and ensure the best outcome for your students:

**Prepare a concussion action plan.** To ensure that concussions are identified early and managed correctly, have an action plan in place before the start of the school year. This plan can be included in your school or district’s concussion policy. You can use the online action plan for sports and recreation activities at: www.cdc.gov/concussion/response/html. Be sure that other appropriate school and athletic staff know about the plan and have been trained to use it.

**Educate parents, teachers, coaches, and students about concussion.** Parents, teachers, and coaches know their students well and may be the first to notice when a student is not acting normally. Encourage teachers, coaches, and students to:

- Learn about the potential long-term effects of concussion and the dangers of returning to activity too soon.
- Look out for the signs and symptoms of concussion and send students to see you if they observe any or even suspect that a concussion has occurred.
- View videos about concussion online at: www.cdc.gov/Concussion.

**Prevent long-term problems.** A repeat concussion that occurs before the brain recovers from the previous concussion—usually within a short period of time (hours, days, or weeks)—can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions...
can result in edema (brain swelling), permanent brain damage, and even death. Keep students with a known or suspected concussion out of physical activity, sports, or playground activity on the day of the injury and until a health care professional with experience in evaluating for concussion says they are symptom-free and it is OK for the student to return to play.

Create safe school environments. The best way to protect students from concussions is to prevent concussions from happening. Make sure your school has policies and procedures to ensure that the environment is a safe, healthy place for students. Talk to all school staff and administrators and encourage them to keep the physical space safe, keep stairs and hallways clear of clutter, secure rugs to the floor, and check the surfaces of all areas where students are physically active, such as playing fields and playgrounds. Playground surfaces should be made of shock-absorbing material, such as hardwood mulch or sand, and maintained to an appropriate depth. Proper supervision of students is also important.

Monitor the health of your student athletes. Make sure to ask whether an athlete has ever had a concussion and insist that your athletes are medically evaluated and are in good condition to participate in sports. Keep track of athletes who sustain concussions during the school year. This will help in monitoring injured athletes who participate in multiple sports throughout the school year.

Some schools conduct preseason baseline testing (also known as neurocognitive tests) to assess brain function—learning and memory skills, ability to pay attention or concentrate, and how quickly someone can think and solve problems. If an athlete has a concussion, these tests can be used again during the season to help identify the effects of the injury. Before the first practice, determine whether your school would consider baseline testing.

For more detailed information about concussion diagnosis and management, please download Heads Up: Facts for Physicians about Mild Traumatic Brain Injury from CDC at: www.cdc.gov/Concussion.

Again, remember your concussion ABCs:

A—Assess the situation
B—Be alert for signs and symptoms
C—Contact a health care professional

For more information on concussion and to order additional materials for school professionals FREE-OF-CHARGE, visit: www.cdc.gov/Concussion.
# Preparticipation Physical Evaluation

## HISTORY FORM

(Note: This form is to be filled out by the patient and parent prior to seeing the physician. The physician should keep this form in the chart.)

Date of Exam _____________________________

Name __________________________________________________________________________________

Date of birth __________________________

Sex _______ Age ___________ Grade ____________ School _____________________________

Sport(s) __________________________________

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____________________________

Signature of parent/guardian _____________________________

Date _____________________________


---

### Medications and Allergies

Please list all of the prescription and over-the-counter medicines and supplements (herbal and nutritional) that you are currently taking:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you have any allergies? □ Yes □ No

If yes, please identify specific allergy below.

□ Medicines □ Pollens □ Food □ Stinging Insects

---

### General Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has a doctor ever denied or restricted your participation in sports for any reason?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Do you have any ongoing medical conditions? If so, please identify below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ High blood pressure □ A heart murmur □ High cholesterol □ A heart infection □ Kawasaki disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other: _____________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Have you ever passed out or nearly passed out DURING or AFTER exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Have you ever had surgery?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Have you ever had discomfort, pain, tightness, or pressure in your chest during exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Has a doctor ever ordered a test for your heart? (For example, ECG/EKG, echocardiogram)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do you get lightheaded or feel more short of breath than expected during exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Have you ever had an unexplained seizure?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Have you ever had an unexplained fall or injury?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Heart Health Questions About You

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Do you get lightheaded or feel more short of breath than expected during exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Have you ever had an unexplained seizure?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Do you get more tired or short of breath more quickly than your friends during exercise?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Heart Health Questions About Your Family

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Has any family member or relative died of heart problems or had an unexpected or unexplained sudden death before age 50 (including drowning, unexplained car accident, or sudden infant death syndrome)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Does anyone in your family have hypertrophic cardiomyopathy, Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy, long QT syndrome, short QT syndrome, Brugada syndrome, or catecholaminergic polymorphic ventricular tachycardias?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Does anyone in your family have a heart problem, pacemaker, or implanted defibrillator?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Has anyone in your family had unexplained fainting, unexplained seizures, or near drowning?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Bone and Joint Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Have you ever had an injury to a bone, muscle, ligament, or tendon that caused you to miss a practice or a game?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Have you ever had any broken or fractured bones or dislocated joints?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Have you ever had an injury that required x-rays, MRI, CT scan, injections, therapy, a brace, a cast, or crutches?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Have you ever had a stress fracture?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Have you ever been told that you have or have you had an x-ray for neck instability or atlantoaxial instability? (Down syndrome or dwarfism)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Do you regularly use a brace, orthotics, or other assistive device?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Do you have a bone, muscle, or joint injury that bothers you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Do any of your joints become painful, swollen, feel warm, or look red?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Do you have any history of juvenile arthritis or connective tissue disease?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Medical Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. Do you cough, wheeze, or have difficulty breathing during or after exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Have you ever used an inhaler or taken asthma medicine?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Is there anyone in your family who has asthma?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Were you born without or are you missing a kidney, an eye, a testicle (males), your spleen, or any other organ?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Do you have groin pain or a painful bulge or hernia in the groin area?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Have you had infectious mononucleosis (mono) within the last month?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Do you have any rashes, pressure sores, or other skin problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Have you had a herpes or MRSA skin infection?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Have you ever had a head injury or concussion?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Have you ever had a hit or blow to the head that caused confusion, prolonged headache, or memory problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Do you have a history of seizure disorder?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Do you have headaches with exercise?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Have you ever had numbness, tingling, or weakness in your arms or legs after being hit or falling?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Have you ever been unable to move your arms or legs after being hit or falling?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. Have you ever become ill while exercising in the heat?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. Do you get frequent muscle cramps when exercising?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. Do you or someone in your family have sickle cell trait or disease?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. Have you had any problems with your eyes or vision?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44. Have you had any eye injuries?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45. Do you wear glasses or contact lenses?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46. Do you wear protective eyewear, such as goggles or a face shield?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. Do you worry about your weight?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. Are you trying to or has anyone recommended that you gain or lose weight?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. Are you on a special diet or do you avoid certain types of foods?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. Have you ever had an eating disorder?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51. Do you have any concerns that you would like to discuss with a doctor?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Females Only

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>52. Have you ever had a menstrual period?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53. How old were you when you had your first menstrual period?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54. How many periods have you had in the last 12 months?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Explanation of “Yes” answers:**

If you have answered yes to any of the questions above, please explain the reason in the space provided below:

---

**Explain “Yes” answers here:**

---

**Explain “Yes” answers here:**

---

**Explain “Yes” answers here:**

---

**Explain “Yes” answers here:**

---

**Explain “Yes” answers here:**

---

**Explain “Yes” answers here:**

---
**Preparticipation Physical Evaluation**

**THE ATHLETE WITH SPECIAL NEEDS: SUPPLEMENTAL HISTORY FORM**

**Date of Exam** ________________________________________________________________________________________________________________

**Name** __________________________________________________________________________________  **Date of birth** ________________

**Sex** _______  **Age** __________  **Grade** _____________  **School** _____________________________  **Sport(s)** __________________________________

1. **Type of disability**
2. **Date of disability**
3. **Classification (if available)**
4. **Cause of disability (birth, disease, accident/trauma, other)**
5. **List the sports you are interested in playing**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Do you regularly use a brace, assistive device, or prosthetic?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do you use any special brace or assistive device for sports?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Do you have any rashes, pressure sores, or any other skin problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Do you have a hearing loss? Do you use a hearing aid?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Do you have a visual impairment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Do you use any special devices for bowel or bladder function?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Do you have burning or discomfort when urinating?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Have you had autonomic dysreflexia?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Have you ever been diagnosed with a heat-related (hyperthermia) or cold-related (hypothermia) illness?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Do you have muscle spasticity?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Do you have frequent seizures that cannot be controlled by medication?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explain “yes” answers here**

Please indicate if you have ever had any of the following.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantoaxial instability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray evaluation for atlantoaxial instability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislocated joints (more than one)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy bleeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlarged spleen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteopenia or osteoporosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty controlling bowel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty controlling bladder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling in arms or hands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling in legs or feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weakness in arms or hands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weakness in legs or feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent change in coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent change in ability to walk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spina bifida</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latex allergy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explain “yes” answers here**

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

**Signature of athlete** __________________________________________________________________________________  **Signature of parent/guardian** __________________________________________________________________________________  **Date** ________________

PHYSICIAN REMINDERS

1. Consider additional questions on more sensitive issues
   - Do you feel stressed out or under a lot of pressure?
   - Do you ever feel sad, hopeless, depressed, or anxious?
   - Do you feel safe at your home or residence?
   - Have you ever tried cigarettes, chewing tobacco, snuff, or dip?
   - During the past 30 days, did you use chewing tobacco, snuff, or dip?
   - Do you drink alcohol or use any other drugs?
   - Have you ever taken anabolic steroids or used any other performance supplement?
   - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
   - Do you wear a seat belt, use a helmet, and use condoms?

2. Consider reviewing questions on cardiovascular symptoms (questions 5–14).

EXAMINATION

<table>
<thead>
<tr>
<th>Height</th>
<th>Weight</th>
<th>☐ Male</th>
<th>☐ Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>/</td>
<td>(</td>
<td>/</td>
</tr>
</tbody>
</table>

MEDICAL

- Appearance
  - Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, arm span > height, hyperlaxity, myopia, MVP, aortic insufficiency)

- Eyes/ears/nose/throat
  - Pupils equal
  - Hearing

- Lymph nodes

- Heart*
  - Murmurs (auscultation standing, supine, +/- Valsalva)
  - Location of point of maximal impulse (PMI)

- Pulses
  - Simultaneous femoral and radial pulses

- Lungs

- Abdomen

- Genitourinary (males only)b

- Skin
  - HSV, lesions suggestive of MRSA, tinea corporis

- Neurologicc

MUSCULOSKELETAL

- Neck
- Back
- Shoulder/arm
- Elbow/forearm
- Wrist/hand/fingers
- Hip/thigh
- Knee
- Leg/ankle
- Foot/toes

Functional
  - Duck-walk, single leg hop

*Consider ECG, echocardiogram, and referral to cardiology for abnormal cardiac history or exam.

bConsider GU exam if in private setting. Having third party present is recommended.
cConsider cognitive evaluation or baseline neuropsychiatric testing if a history of significant concussion.

☐ Cleared for all sports without restriction
☐ Cleared for all sports without restriction with recommendations for further evaluation or treatment for ________________________________

☐ Not cleared
  - ☐ Pending further evaluation
  - ☐ For any sports
  - ☐ For certain sports ________________________________

Reason ________________________________

Recommendations ________________________________

I have examined the above-named student and completed the preparticipation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).

Name of physician (print/type) ________________________________ Date ________________________________

Address ________________________________ Phone ________________________________

Signature of physician ________________________________ MD or DO
Preparticipation Physical Evaluation
CLEARANCE FORM

Name _______________________________________________ Sex ☐ M ☐ F Age __________ Date of birth __________

☐ Cleared for all sports without restriction

☐ Cleared for all sports without restriction with recommendations for further evaluation or treatment for ____________________________________________________________

☐ Not cleared

☐ Pending further evaluation

☐ For any sports

☐ For certain sports _______________________________________________

Reason ____________________________________________________________

Recommendations ____________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

I have examined the above-named student and completed the preparticipation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).

Name of physician (print/type) __________________________________________ Date __________

Address __________________________________________ Phone __________

Signature of physician __________________________________________, MD or DO

EMERGENCY INFORMATION

Allergies ________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Other information ______________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Lacerations

- Wearing gloves, control bleeding with direct pressure (may take 7-10 minutes).
- **Call 911** if distal pulses absent or bleeding cannot be controlled.
- Clean with soap and water, dry and cover with clean bandage.
- Notify parents to have evaluated for possible stitches (should be seen same day, within four hours) if wound is:
  - gaping open or longer than ½ inch
  - significantly contaminated
  - on the face, hand or foot
  - with tissue protruding
  - there is a crush injury
  - keep student NPO (nothing by mouth), if stitches are a possibility
  - do not apply ointment of any kind.

Puncture Wounds

- Deep puncture wounds of the foot, especially, may become infected and must receive medical attention.
- Wearing gloves, rinse the wound thoroughly.
- Wash with soap and water, and dry.
- Do not probe or remove penetrating object.
- Apply clean dressing.
- Do not allow weight-bearing if there is a suspected foreign body in the foot. This may be the case even if a penetrating object has been removed.

Note: Notify parents to seek medical advice regarding injury and tetanus immunization status.

Snake Bites

- Bites should receive medical attention, whether from poisonous or non-poisonous snakes.
- **Call 911** and Georgia Poison Control Center (800-222-1222).
- Keep the student quiet and calm, lying down.
- Immobilize the bitten extremity, at or below the level of the heart. Remove jewelry at site of injury, as swelling may progress rapidly.
- Wash the area with soap and water.
- If snake is killed, bring with student to hospital.
- Note characteristics of snake: color, shape of head, pits, etc.

Spinal Injury, Suspected

- Immobilize head, cervical spine and neck. Do not move student.
- **Call 911**.
- Give aid as needed to maintain airway (use jaw thrust maneuver) and breathing, control bleeding, manage shock.
Sports Injuries

Safe Kids USA has estimated that each year, approximately 715,000 sports and recreation injuries occur in school settings alone. Additionally, nearly three-quarters of U.S. households with school-age children have at least one child who plays organized sports.

Consider these sports injury-related statistics provided by Safe Kids Georgia:

- Collision and contact sports are associated with higher rates of injury. However, injuries from individual sports tend to be more severe.
- The most common sports-related injuries in children are sprains (ankle), muscle strains, bone injury, repetitive motion injuries and heat-related injuries.
- The rate and severity of sports-related injury increases with the age of the child.
- Most organized sports-related injuries occur during practices (62 percent), rather than games.
- From 2001 through 2009, it is estimated that there are 1,770,000 emergency department visits, 6 percent of these for traumatic brain injuries, among children ages 14 and under for injuries related to sports or recreation.
- According to the CDC, overall the activities associated with the greatest Traumatic Brain Injury (TBI)-related ED visits include bicycling, football, playground activities, basketball and soccer.¹
- National surveillance of nine high school sports, revealed that numbers and rates of sports-related concussions are highest in football (55,007; 0.47 per 1000 athlete exposures) and girls’ soccer (29,167; 0.36 per 1000 athlete exposures).

Many of these sports- and recreation-related injuries can be prevented through basic interventions and steps such as using protective safety gear, proper physical and psychological conditioning, a safe environment, adequate adult supervision and enforcement of safety rules. Pre-participation sports physicals are very important and can help eliminate unforeseen medical problems with athletes. The American Academy of Pediatrics recommends that before beginning a formal strength-training program, a medical evaluation should be performed by a pediatrician or family physician.²

Additionally, proper resistance techniques and safety precautions should be followed so the strength-training programs for preadolescents and adolescents are safe and effective. Proper technique and strict supervision by a qualified instructor are critical safety components in any strength-training program involving preadolescents and adolescents. Any sign of illness or injury from strength training should be evaluated fully before allowing resumption of the exercise program. The school nurse may play a role in tracking the types and numbers of injury, encouraging provision of adequate hydration, emphasizing the importance of safety gear and providing excellent first aid and referrals as needed.

Health education and physical education classes should include information on the importance of physical conditioning, adequate hydration, using proper protective equipment, and paying attention to any symptoms that develop and injuries that may occur in normal play.

See Preparticipation Physical Evaluation Form in Prevention and Preparedness Section of this Chapter.

See also resources from the Sports Medicine Program at Children’s Healthcare of Atlanta.
choa.org/Childrens-Hospital-Services/Orthopaedics/Programs-Services/Sports-Medicine/Sports-Injuries-and-Conditions/Sports-Tips

¹ CDC Concussion in Sports and Play: Get the Facts, Fact Sheet; From cdc.gov/traumaticbraininjury/get_the_facts.html. Retrieved on 8/17/2015.
Acute Orthopedic Sports Injuries (see Fractures, Sprains, Strains in this chapter for specific treatment):

- Fractures are more common in growing children than sprains and strains. Look for pain, point-tenderness over growth plates, swelling and potential deformity, and check neurovascular status frequently whenever a fracture is suspected.
- Dislocations occur when joints slip out of their normal position.
- Sprains happen when ligaments stretch or tear.
- Strains occur with stretching or tearing of tendons or muscles. Simple first aid treatment of these injuries includes P-R-I-C-E (Protect, Rest, Ice, Compress-gently and Elevate).

Whenever a fracture is suspected or a child complains of significant pain, the extremity should be splinted or immobilized in the position of comfort until further medical evaluation is complete.

Overuse Injuries

These injuries occur with chronic repetitive stress to normal tissues, producing an inflammation or irritation of the growth centers at the ends of the long bones. They are commonly seen in the 8-15-year-old age group. Overuse injuries can be caused or aggravated by inadequate warm-up, excessive duration or frequency of playing, improper technique or unsuitable equipment/shoes. Pain is with activity; tenderness is usually localized, and there are usually no other significant abnormalities. Examples include swimmer’s shoulder, Little League elbow, gymnast’s wrist and shin splints.

Overuse injuries include:

- Osgood Schlatter’s “Disease” is the most common of the named overuse injuries. The patellar tendon of the thigh muscle pulls and overworks the growth plate of the tibia, causing a painful inflammation, especially with running and jumping, and a small bony prominence below the knee.
- Sinding-Larsen-Johansson’s, sometimes called “jumper’s knee,” occurs when repetitive motion overworks the site where the patellar tendon inserts on the patella.
- Sever’s is a growth center inflammation of the heel bone which occurs when the calf muscles pull the Achilles tendon over this growth plate during running and jumping.

Treatment of overuse injuries is aimed at reducing symptoms—ice can be used for 20-30 minutes after activities and again in the evening. Parents should consult their healthcare provider about pain medication and activity modification.

Sports and Other Medical Conditions

Anabolic Steroids (and so-called “natural” muscle-building and performance-enhancing supplements) are sometimes used by student athletes in some areas. Anabolic steroids, commonly called “roids,” “juice,” “hype” or “pump” by users, can be taken orally or by injection.

Oral steroids include Anadrol, Anavar, Dianabol and Winstrol. Injectable steroids include Deca-Durabolin, Durabolin, Depo-testosterone and Equipoise. Side effects of these drugs include liver damage, testicular atrophy and impotence in males, amenorrhea and breast atrophy in females; acne; increased cholesterol; increased blood pressure; decreased glucose tolerance; growth plate damage; hirsutism; mood swings; aggressiveness; depression and addiction.

Ephedra-containing preparations are also used for weight loss, energy and performance enhancement. Side effects of these include nervousness, increased heart rate and blood pressure, palpitations, constriction of blood vessels, seizures and stroke. School nurses, trainers and coaches should stress the dangers of these supplements to student athletes, especially anabolic steroids and supplements containing ephedra.

Exercise-induced asthma is often seen, and exercise may be the only time these children experience asthma symptoms. Wheezing, persistent cough or chest tightness with exercise can often be prevented with a quick relief inhaler used before the activity, and students with asthma should always have ready access to their quick relief inhaler whenever symptoms occur. Parents should be encouraged to consult the child’s healthcare provider if asthma symptoms with exercise are a concern.
Dehydration can occur when an athlete is trying to “make weight” to qualify to play sports like wrestling. Exercise in hot conditions with inadequate hydration is common and can be life-threatening. Marching band practices and performances, as well as sports practices and games, could also be potential situations where dehydration may occur. Coaches and trainers should provide and encourage constant and easy access to water during practices and games, and avoid practices in the hottest part of the day. Early morning practices are the safest in the hottest areas and times of year.

Eye Injuries, including corneal abrasions, detached retinas and bleeding in the eye chamber, can occur in any sport and require immediate medical attention.

Head Injuries / Concussions may be inadequately managed when they occur, especially when more subtle signs of injury are not recognized during an athletic event. Repeated concussions can cause decreased performance in learning activities. No sport is “immune” from head injuries. Therefore, it is essential that all head injuries that occur during sports are evaluated promptly and the student be allowed to rest. It is highly recommended for students to be cleared by a doctor before returning to sports.

Refer to the Injury Management section in this Chapter for specific information on assessment of Head Injuries / Concussions. Refer to the Prevention and Preparedness section in this Chapter for information on Concussion ABCs. For information on chronic issues related to Brain Injury / Concussion or services available through the Children’s Healthcare of Atlanta Sports Medicine program, refer to Chapter 5.

Low Blood Sugar can occur while involved in physical activity. Monitor for signs and symptoms. Child should check blood sugar prior to participating in and every hour of physical activity (see Hyperglycemia and Hypoglycemia Charts and the Diabetes section of Chapter 5 for additional information).

Menstrual Irregularities (athletic amenorrhea) are common, especially with long-distance female athletes. Menses usually returns after the training season.

Tinea Rashes (fungal infections) are common whenever moist conditions are shared (i.e. showers, mats). These rashes are usually easily treated with pharmacist-recommended over-the-counter medications, unless they involve the scalp or nail beds.

Stings and Insect Bites (See also Allergic Reactions)

Minor bites and stings
Symptoms: Redness, swelling, pain at site of sting
• If you see a stinger, remove it by flicking it out gently with an object like a driver’s license or credit card.
• Do not squeeze the stinger.
• Wash with soap and water.
• Apply cold compress, and observe.

Severe reactions (whether previous allergy known, or not)
Symptoms: Facial swelling, respiratory distress, wheezing, persistent cough, severe hives, dizziness
• Administer Epipen and call 911 (use Anaphylaxis Action Plan).
• Notify parents.
• If you see a stinger, remove it by flicking it out gently.
• Wash with soap and water.
• Apply cold pack to the affected area.
• Lay student flat on their back (in supine position) and elevate legs, as respiratory status tolerates.
• Facial swelling in itself does not necessarily warrant 911, particularly if it is localized away from the mouth. Marked lip swelling or any tongue swelling (as evidenced by abnormal speech) would warrant 911.
Emergency Medical Concerns

Abdominal Pain

- Allow student to rest in position of comfort.
- Check child’s temperature.
- Notify parents/school nurse for severe pain, persistent pain or pain made worse with movement; pain associated with vomiting or vaginal bleeding; or pain located in the right lower area of the abdomen. (Be alert for possibility of appendicitis, ectopic pregnancy, ovarian cyst.)
- Ask if child has eaten, needs to go to the bathroom.
- Do not give anything by mouth unless pain is minimal and child states he missed a meal and feels hungry.

Allergic Reaction, Anaphylaxis

Students with known history of severe allergies should be known to appropriate school staff, and should have an Anaphylaxis/Allergy Action Plan available at all times.

Facts about Allergies

- Insects whose stings or bites can cause allergies include bees, hornets, yellow jackets, wasps, ants, deer flies, black flies and yellow flies.
- Foods that most commonly cause allergic reactions in children are peanuts, tree nuts (almonds, pecans, walnuts, etc.), milk, eggs, soy, fish, shellfish and wheat. Often, allergies to milk, eggs and wheat may be outgrown; but allergies to nuts and seafood are more often lifelong. For additional information on food allergies, please refer to this “Clinical Report – Management of Food Allergy in the School Setting” at pediatrics.aappublications.org/content/early/2010/11/29/peds.2010-2575.
- Latex allergies can occur in children, especially children with severe chronic conditions such as spina bifida.
- The amount of exposure to the allergen that will cause a reaction varies from person to person. Ingesting even a tiny amount of food containing the allergen can often be a problem.
- Symptoms of a minor reaction include watery, itchy eyes; a stuffy nose; hives; or sneezing.
- Specific reactions to allergens vary from person to person as well. One child may have nausea and vomiting, and another may have hives and wheezing when exposed to the same offending allergen.
- Anaphylaxis symptoms often appear within one to five minutes, or may be delayed for several hours after exposure to the allergen. Anaphylaxis symptoms usually occur within 30 minutes of exposure.
- Each exposure to the allergen carries the potential for a more severe reaction.
- Insect sting allergy can cause fatal anaphylaxis, similar to food allergy. Allergic reactions to insect stings should be treated just like allergic reactions to foods—by giving epinephrine quickly. Unlike food allergy, insect sting allergy can be cured by insect-allergy shots that are given in an allergy physician’s office on a regular basis. If a child has had a systemic allergic or severe reaction to an insect sting, the parents and the student should be told to ask his/her physician for a referral to an allergist for further evaluation and treatment to cure the life-threatening condition of insect sting allergy.
- The Asthma & Allergy Foundation along with WebMD state that roughly one in five Americans suffer from allergies. They are the fifth leading cause of chronic health diseases in the U.S. (all ages) and the third most common chronic health condition in children under 18 years of age (2008 data).
Allergic Reaction, Severe

An emergency situation may occur at any time or any place during the school day when a hypersensitive student is exposed to an allergen. Allergens can include insect stings, foods such as peanuts and eggs, and products such as latex.

Allergic reactions (anaphylaxis) can be life-threatening within minutes, requiring the immediate availability of emergency medication and staff trained to use it. Anaphylaxis is the collection of symptoms of allergic reaction affecting multiple systems in the body, such as breathing difficulties, shock, hives, nausea, vomiting, abdominal pain and facial swelling. Anaphylaxis is both preventable and treatable.

Researchers believe the prevalence of allergies, especially food allergies, is increasing, and children are the largest group of the population affected. It is estimated that one to two percent of the population is at risk for anaphylaxis from food allergies, insect stings and other sources such as drugs and latex, so there is high likelihood of these children attending any school.

Identification and treatment protocols for students with risk of anaphylactic reactions should be prescribed by their healthcare provider and provided to the school by a parent/guardian. School personnel should create a systematic team approach for dealing with these students—including precautions to prevent exposure to known allergens and preparations to deal with emergencies that happen in spite of precautions.

All appropriate school personnel should be aware of students who have been prescribed epinephrine. Information about the specific allergy, warning signs of reactions, and Anaphylaxis Action Plan (at the end of this section) should be available to clinic personnel, administrators, teachers and school staff including cafeteria workers. To provide confidentiality, these plans and lists should not be available or visible to other parents or students. This information should be discussed with parents and repeated for staff at the beginning of each school year. Appropriate school staff and faculty should receive annual training/inservice on this information for students who are in your school setting.

If emergency medication is prescribed, it should be clearly labeled with name and classroom of the student. Identified school personnel should be trained and updated regularly in the use of the injector and should know where it is kept. Expiration dates should be checked regularly, and parents should be notified when expiration time is within the month. Epinephrine should be kept in easily accessible locations. The epinephrine injector should be taken along whenever the child goes on field trips or other outings away from the school building.

If a severe allergic reaction (anaphylaxis) occurs, there are “3 R’s” for handling the reaction: (adapted from the Food Allergy Network’s School Food Allergy Program):

- Recognize the symptoms.
- React quickly.
- Review what caused the reaction, and how well the emergency plan worked.

RECOGNIZE THE SYMPTOMS
Symptoms can occur in the skin, respiratory tract, gastrointestinal tract, and/or cardiovascular system and can include:

- Itchy skin, eyes, mouth or throat
- Hives (itchy, reddened, raised rash on any area of skin)
- Swelling of any body parts—eyes and lips especially
- Itching, swelling or tightness of the throat, often with a change of voice
- Runny or stuffy nose
- Red, watery eyes
- Coughing, usually a dry, shallow cough
- Wheezing
• Difficulty breathing; “chest feels tight”
• Difficulty swallowing
• Sense of doom or increased anxiety
• Dizziness
• Fainting or loss of consciousness
• Change of color (pale or blue).

The definition of anaphylaxis does not require a person to have all those symptoms. Epinephrine should be given if someone recognizes that any of those symptoms are present and there is reasonable evidence to think that the symptoms are due to an allergic reaction. Reactions can progress from one or more of the minor symptoms to difficulty breathing and loss of consciousness in a matter of minutes, so early recognition of symptoms is key.

REACT QUICKLY

Symptoms can progress quickly:
• Follow the Anaphylaxis Action Plan; remain calm.
• Use Epipen®/EpipenJr®.
• Call 911 and parents (as symptoms may recur in 10-20 minutes, even if Epipen®/EpipenJr® was used).
• All people who receive epinephrine should then be made to lay flat on their back on the floor, with legs elevated, unless respiratory status does not tolerate this position. Epinephrine can be injected into thigh while person is standing, seated or lying down.
• Look for medical alert bracelet and/or check health information card to determine possible trigger.
• Keep student NPO (nothing by mouth).
• Encourage student to sit quietly, breathe slowly if primary problem is respiratory. If there are signs of shock, keep student supine with legs elevated.
• Maintain airway with head tilt, chin lift. Initiate CPR if needed.
• Give second dose of epinephrine using another auto injector in five to 20 minutes, if needed for symptoms that are worsening or not adequately improving.

Note: The EpiPen Jr. dose and the lower dose of the other epinephrine auto injector devices is 0.15 mg, which is designed for children weighing between approximately 30 to 65 pounds. In an emergency situation, if the 0.15 mg device is unavailable and the only device that is available is Epinephrine 0.3 mg, that 0.3 mg dose should be given even if the child weighs less than 65 pounds. It is preferable to give the 0.3 mg dose rather than rather than withholding epinephrine. The reason why is because if no epinephrine is given, the child may die. There is no evidence that the 0.3 mg dose will harm a child weighing less than 65 lbs, and it could save his life.

Immediate notification of emergency team members by any school employee who sees any of these symptoms in a student (even a student not previously known to have allergies) is necessary for the best response. If possible, this notification should take place by phone, intercom, pager or walkie-talkie, since time is of the essence. The emergency team should, of course, be identified ahead of time—usually including the clinic personnel (school nurse if available), principal or designee, and other staff who are trained in first aid and CPR.

If emergency medication is kept in the classroom, the teacher should be notified to bring it to wherever the incident occurs. Someone should be designated ahead of time to notify EMS and parents. This person should have quick access to the Anaphylaxis Action Plan for the student. Even if epinephrine is available and injected quickly, the student’s symptoms can return after 10-20 minutes, so call 911 immediately after the injection.
REVIEW
After the student has been cared for, the team needs to sit down and review what caused the reaction and how well the emergency plan worked. Usually it is best to do this the same day, while the incident is still fresh in everyone’s mind. Everyone who was involved with the student before the incident was recognized, during the incident and with aftercare should be included in this meeting. Any need for changes should be discussed thoroughly and implemented immediately. Follow-up actions might include further training for staff, changes in location of equipment and medication and improved communication.

Some of the questions to ask include:
• Were preventive measures in place?
• How did the exposure occur?
• Was the recognition of symptoms prompt?
• Was the team notified appropriately?
• Were the details of the plan for this student readily available to the team?
• Did the team respond according to the plan?
• Were there problems with availability of medication, emergency equipment, notification of EMS and parents?

Epinephrine: Drug of Choice for Treatment of Anaphylaxis/Severe Allergic Reaction
Epinephrine is a natural hormone that the body releases frequently in response to stressful situations (i.e., you see a snake three feet away from you, you see a car slamming on brakes and almost hit you). It is also a “drug” used to treat allergic reactions. During an allergic reaction, while the nurse is getting out the EpiPen, the allergic-reaction victim’s body has already begun releasing epinephrine.

Epinephrine is a drug (and natural hormone) that interferes with the body’s response to an allergen. It acts in the body to relieve the respiratory symptoms of bronchospasm, reduce swelling and congestion in the throat and lungs, and helps counteract all of the symptoms of anaphylaxis. It therefore reverses hypotension, hives, swelling and GI symptoms. Epinephrine is available by prescription only and is available in two strengths.

• EpiPen® and EpiPen Jr.® are auto-injectors, about the size of a marker. There are other epinephrine auto injectors that deliver the same epi doses, but the devices are not identical. Therefore, anyone who thinks they might give an epi injection must learn how to use the auto injector that the student or school has. The appropriate size should be ordered by the healthcare provider and available at all times in the school. The expiration date should be checked at the beginning of the year and noted carefully so that parents may be notified in a timely manner if it is to expiring soon.

• Emergency epinephrine is designed to be administered into the thigh muscle (through clothing if necessary).

INSTRUCTIONS FOR “EPIPEN”
• Pull off blue cap.
• Place orange tip against upper outer thigh.
• Press hard into outer thigh until pen clicks.
• Hold in place 10 seconds, and then remove. Someone else may need to help the child hold still.
• Send the used EpiPen®, EpiPenJr® with EMS personnel. EpiPen has an orange plastic top that will automatically cover up the needle after it injects and the person that removes it from the thigh. Give it to the EMS personnel.

• EMS (911) should still be called immediately since a return of symptoms is possible within 20 minutes.
• The student should never be left alone until further medical attention is available.
• See also: epipen.com to learn more about anaphylaxis and treatment products.
In some cases, a student’s healthcare provider may feel that an oral medication (antihistamine) can be used to treat minor symptoms. Commonly used antihistamines are:

- Diphenhydramine (Benadryl®)
- Hydroxyzine (Atarax®)
- Chlorpheniramine (Chlor-Trimeton®)

These are prescribed based on the student’s weight. For those students that have difficulty swallowing pills, there are some antihistamines now in melt-away tabs.

For more information on Epinephrine, refer to Chapter 3, Administration of Medications – Epinephrine.

The Anaphylaxis/Allergy Action Plan is included on the next page.

**Resource**

American Academy of Allergy, Asthma & Immunology

aaaai.org/conditions-and-treatments/allergies/anaphylaxis.aspx
ANAPHYLAXIS ACTION PLAN

Name: ___________________________________________ Age/DOB: ____________________________

Allergy:  ❑ Insect Sting  ❑ Food  ❑ Latex  ❑ Medication

Food Allergies: _______________________________________________________

Other: _____________________________________________________________

History of anaphylaxis: ❑ Yes  ❑ No

History of asthma (high risk for severe reaction): ❑ Yes  ❑ No

Other health problems besides anaphylaxis: ______________________________

Other currently used medications: _______________________________________

Signs & Symptoms of Anaphylaxis May appear anxious or express a sense of pending doom

MOUTH itching, swelling of lips and/or tongue

THROAT* itching, tightness/closure, hoarseness

SKIN itching, hives, redness, swelling

GUT vomiting, diarrhea, cramps

LUNG* shortness of breath, cough, wheeze

HEART* weak pulse, dizziness, passing out

Only a few symptoms may be present. Severity of symptoms can change quickly.

*Some symptoms can be life-threatening - ACT FAST!

ADMINISTER EPINEPHRINE IMMEDIATELY if two or more of above symptoms are present or

one symptom after a known allergen exposure.

EPINEPHRINE IS THE FIRST LINE OF TREATMENT!

What to do in order of importance:

1. ACT IMMEDIATELY: Inject Auto-Injectable Epinephrine in thigh
   • EpiPen Jr. (0.15mg)
   • EpiPen (0.3 mg)
   • Other Auto-Injectable Epinephrine

2. Call 911 or Rescue Squad

3. After giving epinephrine, lay the person on his back and raise the legs, as respiratory status tolerates, until the
   ambulance arrives. Observe for signs of improvement.

4. If no improvement in 5-15 minutes, give second dose of epinephrine.

5. Additional medications to be given: ______________________________

   IMPORTANT: ASTHMA INHALERS AND/OR ANTIHISTAMINES CAN'T BE DEPENDED ON IN ANAPHYLAXIS

EVENT REPORT: Please complete and send with patient to emergency department

Circle any symptoms above that were reported by patient or that you observed

Time patient first reported symptoms: ____________________________ Date: ____________________________

Time of first dose: ____________________________ Time of second dose: ____________________________

Name/Signature of person giving injection/treatment: ___________________________________________

GSHRM Chapter 2 Page 39
EMERGENCY CONTACT #1:
Name:______________________________ Phone:_____________________
Relationship:________________________

EMERGENCY CONTACT #2:
Name:______________________________ Phone:_____________________
Relationship:________________________

EMERGENCY CONTACT #3:
Name:______________________________ Phone:_____________________
Relationship:________________________

Comments:__________________________________________________________________

Parent/guardian permission to treat immediately
Signature/Date: _____________________________________________________________

Healthcare Provider
Name:______________________________ Phone:_____________________
Signature/Date: _____________________________________________________________

* This information is for general purposes and is not intended to replace the advice of a qualified health professional.
** This form was adapted from forms created by the Allergy & Asthma Network, Anaphylaxis Community Experts and the American Academy of Allergy, Asthma & Immunology.

Insert Photo Here
**Asthma, wheezing, difficulty breathing** (See also Asthma, Chapter 5)

Students with history of asthma/breathing difficulties should be known to appropriate school staff and should have a health and emergency care plan (Asthma Action Plan, Chapter 5) developed and available at all times.

**Early symptoms** include recurring cough, mild wheezing. Later symptoms of increasing breathing difficulty include wheezing, rapid breathing, nasal flaring, increased use of chest muscles in breathing, feeling of chest tightness, excessive coughing, retractions, inability to speak a full sentence without stopping.

- Evaluate status of child.
- Administer rescue inhaler or nebulization if available.
- Contact parent (especially if medication is not available).
- Encourage student to sit quietly, breathe out through pursed lips (extra pressure created helps to keep airways open).
- Observe student continuously.
- **Call 911** if unable to reach parent and/or breathing difficulty is getting worse.
- Maintain airway, initiate CPR, if needed.
- Keep student NPO (nothing by mouth).

For more details on this subject and for treatments, please refer to Chapter 5 and Chapter 6.

**Breathing Stops**

- **Have another staff member call 911 and call parents.**
- Open airway (head tilt, chin lift), check for breathing.
- If a spinal injury is suspected, use jaw-thrust maneuver.
- Begin CPR with artificial respirations, if needed.
- Perform measures for obstructed airway, if needed.

**Chest Pain**

Assess for:

- Level of pain
- History of trauma
- Illness
- Asthma (many children present with chest pain and no other symptoms, refer to asthma section of this chapter)
- Sickle cell disease
- Vital signs (including apical pulse)
- Level of consciousness
- Respiratory effort.

**Note:** To help assess level of pain, use a scale of 1 through 10 (10 being the worst level of pain), and/or for the really young student, use the Wong-Baker FACES Pain Rating Scale.
Severe pain

If pain is associated with any of the following symptoms, call 911 and notify parents.

While waiting, have student rest in position of comfort, observe continuously and reassess vital signs every three to five minutes:

- Severe chest pain
- Abnormal heart rate, palpitations
- Difficulty breathing or wheezing
- Anxiety, restlessness
- Diaphoresis, clammy, cool skin
- Nausea, weakness
- Cyanosis (blueness) of lips and nailbeds
- Capillary refill > three seconds
- Weak, thready or absent peripheral pulses
- Hypotension (low blood pressure)
- Decreased level of consciousness (or responsiveness).
- Have student describe if possible, his/her level of pain by using a scale of 1 to 10, 1 being the least amount of pain and 10 being the most pain.

Moderate chest pain

For chest pain lasting longer than three minutes, anxiety, elevation in vital signs, increased work of breathing:

- Encourage student to breathe slowly for one minute. Chest pain can be commonly associated with hyperventilation, especially in adolescents.
- Do NOT have student breathe into a paper bag.
- Monitor and support airway, breathing, circulation.
- Have student describe if possible, his/her level of pain by using a scale 1 to 10, 1 being the least amount of pain and 10 being the most pain.
- Rest in position of comfort.
- Observe continually, and call 911 if any deterioration occurs.
- Call 911 if pain persists for more than a few minutes AND is associated with any of the signs listed above under severe pain.
- Notify parents.
- If student has history of sickle cell or increased work of breathing, assess temperature and notify parents immediately.

Mild chest pain

For chest pain with no history of trauma, asthma or sickle cell; no change in vital signs; no change in work of breathing:

- Allow student to rest in position of comfort and notify parents.
- Continue to monitor level of pain for any of the signs above under severe pain.

See also AEDs in Schools in the Prevention and Preparedness section of this Chapter.

Choking

If a student or staff member is found to be choking, use the choking guidelines that you were taught in your CPR certification class. All clinic personnel should be certified in CPR procedures.

The following is only a brief outline:

- Ask, “Are you choking?” If student is able to cough and talk, do nothing except observe and encourage coughing.
• If unable to cough, breathe, speak or if turning blue, use either the American Red Cross (ARC) methods of rescue or the American Heart Association (AHA) method of rescue; whichever one you have been certified in.

American Red Cross (ARC) method of rescue:
• Give five back blows between the shoulder blades with the heel of your hand.
• Give five Heimlich maneuver (abdominal thrusts).
• Have someone call 911.
• Continue alternating between back blows and Heimlich (abdominal thrusts) until the object is expelled or the student becomes unconscious.
• If unconscious, then follow the unconscious airway obstruction protocol.

American Heart Association (AHA) method of rescue:
• Omit the back blows (except for infants).
• Just do the Heimlich maneuver (abdominal thrusts).
• Have someone call 911.
• Continue with the Heimlich (abdominal thrusts) until the object is expelled or the student becomes unconscious.
• If unconscious, then follow the unconscious airway obstruction protocol.

Heimlich Maneuver (abdominal thrusts):
• For pregnant or too large a victim, use the upper chest technique.
• Standing behind victim, wrap arms around waist and grasp one fist with other hand.
• Press your fist, thumb side in, into the center of the victim’s waist.
• Deliver firm, upward thrusts into the abdomen.

Dental Emergencies

Inflamed or irritated gum tissue
• Rinse red, swollen or sore gums well with warm salt water solution (½ teaspoon salt in a small glass of warm water) for one to two days only. Rinsing more than two days with salt water may result in further irritation to the gums. Direct parents to consult their dentist as soon as possible.
• Poor oral hygiene can cause inflamed, bleeding gum tissue. Direct parents to consult their dentist as soon as possible.
• Hormone changes such as puberty can cause hormonal gingivitis (a heightened response to the presence of plaque).
• Daily plaque removal by brushing and flossing will allow the gums to return to health.
• Toothpaste does not have to be used to remove plaque.
• A soft bristled wet toothbrush and dental floss can remove it.
• Bleeding gums may also be caused by a Vitamin C deficiency or a systemic problem.*
  – If the condition does not improve with good oral hygiene (brushing two to three times daily and flossing once a day), a dental consultation must be performed and possibly a medical evaluation.
• A blow (trauma) to the mouth can cause the gum tissue to swell and bleed.*
  – Gums and teeth should be kept clean to decrease the chance of an infection.
  – To help control swelling, a cold compress may be applied to the outside area to the cheek or lip.
  – To control bleeding, use sterile gauze (2 x 2 inch square) to apply direct pressure to the injured area.
• Give pain reliever with parent permission only.*

*See Important Notes under Dental First Aid Basic Supplies at the end of this section.
Canker Sores
Canker sores usually occur inside the mouth. They may be on the tongue and in the fold between the cheek and the gum tissue (vestibule).

- Canker sores may last approximately seven to 10 days (severity varies with each person).
- May present with localized fever, swelling and pain.
- Orabase* with benzocaine* may be applied for temporary relief if ordered.
- Rinse with warm salt water (½ teaspoon salt in a small glass of warm water) two to three times a day. Rinsing more days with salt water may result in further irritation of the gums.
- Avoid spicy and acidic foods.
- If condition persists for longer than 14 days, consult a dentist.

*See Important Notes under Dental First Aid Basic Supplies at the end of this section.

Cold Sores and Fever Blisters (may be herpetic and very contagious)
These are usually on the outside of the mouth, and commonly found on the lip or the skin directly around the lip. Cold sores and fever blisters usually recur in the same area each time.

- Avoid skin to skin contact—lesion may be contagious!
  - Apply petroleum jelly or Orabase* (with a Q-tip, cotton swab or gloved hands).
  - Avoid touching even one’s own sores as infection may spread to the eyes, hands, other areas of the body or to other people.
  - Avoid exposure to wind and sun.
- Lesions may last approximately seven to 10 days.
- Contact dentist if not healed in 14 days.
- Consult dentist for recommended over the counter (OTC) or prescription medications.

*See Important Notes under Dental First Aid Basic Supplies at the end of this section.

Toothache
Contact the parent or legal guardian if child has a toothache or other apparent dental emergency, and direct parent to see their dentist as soon as possible!

- Hot, Red and Swollen area needs IMMEDIATE Attention—Emergency Room.
- Check temperature by ear as orally is not recommended for toothache.
- Call and direct parent or legal guardian to take child to dentist as soon as possible.
- Rinse mouth vigorously with warm salt water to keep it clean.
- Use dental floss and toothbrush to remove any food trapped between teeth.
- If swelling is present, apply a cold compress to outside of cheek.
- Keep head elevated to reduce pressure to head area.
- Oil of cloves may be applied to the affected tooth with a cotton swab.
- DO NOT PLACE aspirin directly on the area—it will cause a chemical burn!
- Give pain reliever with parent or legal guardian’s permission only.

*See Important Notes under Dental First Aid Basic Supplies at the end of this section.
Prolonged or Recurrent Bleeding after Tooth Extraction (having a tooth pulled)
These activities create suction and can dislodge the blood clot in the extraction site.

- First 24 hours—do not rinse or swish.
- Do not use a straw when drinking beverages.*
- Do not drink or eat hot foods.
- Do not smoke for 48 hours.*

Do not be alarmed if there seems to be a lot of blood. Remember—the blood is mixing with saliva and may appear to be bleeding more.

If there is more than oozing (bright red) or it is frightening:
- At the extraction site, have the child bite down firmly on a sterile 2 x 2 inch gauze.
- Replace the gauze every 15 minutes for one hour.
- Encourage child not to chew on the gauze.
- If the bleeding persists, wrap a moistened tea bag in a sterile 2 x 2 inch gauze.
- Place the tea bag at the extraction site and have the child bite down for 30 to 45 minutes. Repeat as necessary.
- Avoid aspirin—it will reduce the blood's ability to clot.
- If bleeding cannot be controlled within an hour, contact and direct the parent or legal guardian to call their dentist or physician IMMEDIATELY!

*See Important Notes under Dental First Aid Basic Supplies at the end of this section.

Broken or Displaced Tooth
If tooth is broken, displaced or avulsed, contact and direct the parent or legal guardian to take the child to a dentist AS SOON AS POSSIBLE!

- Try to clean the soil, blood and other debris from the injured area with sterile gauze or cotton swab with warm water or diluted hydrogen peroxide.
- If the tooth is painful to touch, have child gently rinse with warm water or diluted hydrogen peroxide.
- To reduce swelling, apply a cold compress to cheek or lip area next to the injured tooth.
- If tooth/teeth is/are not out of alignment, check for tooth/teeth displacement by having child gently bite teeth together.
- Do not try to realign a tooth as this may cause more harm.
- If tooth has been pushed into the socket or gum, do not attempt to pull it into position. It may re-erupt normally on its own.
- If the broken tooth has created a sharp edge, it may be covered with wax to prevent tissue laceration.
- Wrap a sterile 2 x 2 inch gauze moistened with warm water around the tooth if it is sensitive to air when inhaling.

Traumatic Avulsion (loss of) Permanent Teeth
A permanent tooth that has been knocked out of the socket and has an intact root is an “avulsed” tooth. Note: Baby teeth, which have been knocked out, cannot be replaced.

- Contact the child’s parent or legal guardian to take the child to their dentist immediately (within 30 to 60 minutes).
- Wearing gloves, control bleeding if needed with direct pressure.
- If the entire tooth is found:
  – Hold it by the crown and gently rinse the tooth with sterile or clean water.
– DO NOT touch or scrub it, only remove gross amounts of dirt and debris. Removing any of the tissue or blood on the tooth will lessen the chances of a successful re-implantation.
– Try gently placing the tooth into the socket before the blood clot forms. It may take some force.
– Have child hold tooth in place by biting on clean gauze.
– If not current with his tetanus immunization, child should receive a booster injection within 24 hours. Tetanus (lockjaw) can cause serious health problems.
– If the child is uncooperative or the school nurse is uncomfortable with reinserting the tooth, place it in Hank’s Balanced Salt Solution or a cup of milk. If not available, place it in a cup of sterile or clean water or saline.
• Look in the area where the tooth was knocked out to try to find it. It is imperative to find it if at all possible!
– If tooth is found within one hour—many times it can be re-implanted and saved. Time is extremely important.
• If the tooth is broken off at the gumline, a root canal or possible extraction are the only options.

Lacerated Lip or Tongue
• Have child rinse mouth with warm water (vigorous bleeding may be expected at first).
• With gloves on, apply direct pressure to the bleeding area with moistened, sterile 2 x 2 inch gauze square, for 15 to 30 minutes.
• Assess mouth for missing broken/fractured, displaced or avulsed teeth, and any other trauma to the face.
• If lip is swollen or bruised, apply a cold compress or ice pack.
• See discussion of TETANUS under “Traumatic Avulsion”
• If Injury is SEVERE:
  – Assess child for possible head injury. Watch for nausea/vomiting, change in pupils, headache, dizziness or change in level of consciousness.
  – Call 911, and contact the child’s parent or legal guardian to take the child to the emergency room—especially if bleeding does not stop after 15 minutes!

Possible Jaw Dislocation or Fractures
Contact the child’s parent or legal guardian to take the child to an oral surgeon or hospital emergency room immediately! If a jaw fracture or dislocation is suspected, immobilize the jaw by any available means. A scarf, handkerchief, tie or towel can be placed under the chin and the ends tied on top of the child’s head.

Tooth Eruption Pain
• Prolonged pain (over one week) is unusual and may be caused by inflammation of the tissue around an impacted or partially erupted tooth.
  – Discomfort associated with an erupting tooth is usually intermittent and less painful than with a badly decayed tooth.
  – This pain may be prolonged and periodic and is fairly common with eruption of first permanent molars and third molars or wisdom teeth.
• Vigorously rinsing with warm salt water two to three times a day will help relieve inflammation and dislodge debris and food which may be impacted.
  – DO NOT place an aspirin directly on the tissue in the area of pain as it will cause a chemical burn.
• A cold compress or a piece of ice wrapped in a sterile 2 x 2 inch gauze can be directly applied to the eruption site. The numbing effect of the cold can provide temporary relief.
• If the pain persists—contact a dentist!
Objects Wedged Between Teeth

- Try to remove the object with a toothpick, tweezers or dental floss.
- Remember to gently guide the floss against teeth so as to not injure the gum tissue.
- DO NOT try to remove the object with a sharp or pointed plastic or metal tool/instrument, as it may cause injury.
- If unsuccessful, contact the child’s legal guardian to have the child taken to a dentist.

Orthodontic (braces) Emergencies or Problems (if an orthodontist is not immediately available)

- If there is a protruding wire, simply cover the end with orthodontic wax (which the child usually has), a piece of gauze, or a small cotton ball to stop the irritation and have the parent take the child to the dentist/orthodontist.
- If a wire or appliance becomes loose or broken and cannot be removed easily, contact the child’s parents or legal guardian to take them to the dentist/orthodontist immediately!
- Do not attempt to remove any wire that is embedded in the cheek, gum or tongue.
- Contact the child’s parent or legal guardian to take them to the dentist/orthodontist immediately.
- The placement and adjustment of orthodontic bands/wires can cause discomfort for a few days.
  - A semi-solid diet is recommended until the child is comfortable to resume a normal diet.
  - Pain medication may be ordered by the orthodontist.

Oral Piercing Complications

- Increased salivary flow
- Excessive drooling
- Infection
- Chipped or cracked teeth
- Injuries to the gums
- Damage to fillings
- Hypersensitivity to metals
- Scar tissue
- Nerve damage.

Swelling, up to five days after initial piercing, is normal. Excessive swelling with the potential to block the airway is possible.

Contact the parent or legal guardian to take the child to dentist or physician IMMEDIATELY if child presents with any sign of severe swelling or infection (swelling, pain, fever, chills, shaking or red streaked appearance around site of piercing)!

Clean and free any matter that may collect on the jewelry by rinsing. Most piercing guides recommend avoiding alcohol containing rinses, such as Listerine, due to the potential for irritation.

Remind students to always wash hands thoroughly before touching jewelry.
Your School First Aid Kit should contain these items for dental emergencies:

- Salt
- Hydrogen Peroxide solution (3%)
- Orabase with benzocaine—do not use Kenalog with Orabase, see important note below.
- Milk
- Hank's Balanced Salt Solution.

Basic Supplies

- Non-latex exam gloves (vinyl or nitrile)**
- Petroleum Jelly (Vaseline)
- Sterile cotton gauze square (2 x 2 inch)
- Sterile cotton swabs
- Gauze pads
- Dental floss
- Tea bags
- Flashlight
- Tongue blades
- Ice pack or wet frozen washcloth
- Toothbrushes
- Oil of Cloves
- Toothpicks
- Paraffin, candle or orthodontic wax
- Tweezers

** Special precaution must be used as children may have a known or unknown latex or rubber allergy.

Important Notes

- Written permission from a parent or guardian is required for any medications given to students in school. **Medications may only be given if there is written parental permission.**
- **DO NOT USE** any product with benzocaine on a child 2 years or younger as it can cause blood cell damage or death!
- **Aspirin should be avoided** in children with influenza, chickenpox or other viral illness because of the possible association with Reye's Syndrome.

For more information on this subject, routine care of the mouth and gums, or more emergency information visit [dph.georgia.gov/oral-health](http://dph.georgia.gov/oral-health).

Adapted and approved by the Georgia Department of Public Health for submission into the 2013 Georgia School Health Resource Manual.
Diabetes (See also Diabetes-Chapter 5)

Students with history of diabetes should be known to appropriate school staff, and should have a health and emergency care plan (Diabetes Management Plan) developed and available at all times.

Of utmost importance to school personnel is the ability to recognize the two most serious emergencies for diabetic children: low blood sugar (insulin reaction or hypoglycemia) and high blood sugar with moderate to large ketones (diabetic ketoacidosis). It is necessary to distinguish between the two because each condition requires completely different, but immediate actions. Always treat for low blood sugar levels if unable to distinguish between the two. The target blood sugar level is individualized; children generally are treated when the blood sugar level is below 70 or 80 or if they are symptomatic.

In either situation, you should assist students in checking their blood sugar if their blood sugar meter and supplies are available. If blood sugar meter and/or supplies are unavailable, the parent needs to be contacted to bring the student’s meter and supplies immediately. If the student is having symptoms of a high blood sugar and no meter or supplies are available, the student needs to remain in the clinic until a parent brings in the meter and/or supplies to obtain a blood sugar measurement, and then you should follow the student’s Diabetes Management Plan. If the student does not have a meter and/or supplies available and the student is having symptoms of a low blood sugar, treat immediately as outlined, following the student’s Diabetes Management Plan, and contact the parent to bring in the student’s meter and/or supplies immediately.

Treatment of high and low blood sugar levels is addressed in the student’s Diabetes Management Plan. Please also use the Hypoglycemia and Hyperglycemia charts on the next page as a guideline for the signs and symptoms as well as treatment of low blood sugar and high blood sugar levels.

Hypoglycemia – American Diabetes Association
diabetes.org/type-1-diabetes/hypoglycemia.jsp

Treating Low Blood Sugar Video – Children’s Healthcare of Atlanta
youtube.com/watch?v=-Jk98DexGF8&list=PL5D4F88C136E168EB&feature=plcp
**Hypoglycemia**

<table>
<thead>
<tr>
<th>Causes</th>
<th>Do not leave student alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too much insulin</td>
<td>Do not allow the student to return to class until blood sugar is greater than 70/80.</td>
</tr>
<tr>
<td>Not enough food</td>
<td>Notify parents of low blood sugar.</td>
</tr>
<tr>
<td>Increased physical activity</td>
<td></td>
</tr>
<tr>
<td>Late or skipped meals (if on NPH, Novolog 70/30 or Humalog 75/25)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Severe Symptoms - Call 911</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweating</td>
<td>Unconscious</td>
</tr>
<tr>
<td>Slurred speech</td>
<td>Unable to swallow</td>
</tr>
<tr>
<td>Shaky</td>
<td>Combative</td>
</tr>
<tr>
<td>Pale</td>
<td>Seizure</td>
</tr>
<tr>
<td>Headache</td>
<td></td>
</tr>
<tr>
<td>Clammy skin</td>
<td></td>
</tr>
<tr>
<td>Hunger</td>
<td></td>
</tr>
<tr>
<td>Confusion</td>
<td></td>
</tr>
<tr>
<td>Irritable</td>
<td></td>
</tr>
<tr>
<td>Blurry vision</td>
<td></td>
</tr>
<tr>
<td>Weakness or Fatigue, Sleepy</td>
<td></td>
</tr>
<tr>
<td>Change in behavior</td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td></td>
</tr>
<tr>
<td>Fast heartbeat</td>
<td></td>
</tr>
<tr>
<td>Numb lip/tongue</td>
<td></td>
</tr>
<tr>
<td>Dizzy</td>
<td></td>
</tr>
<tr>
<td>Poor coordination</td>
<td></td>
</tr>
<tr>
<td>Poor concentration</td>
<td></td>
</tr>
</tbody>
</table>

**Treatment - Check blood sugar level**

Treat if blood sugar is below 70/80 or symptoms of low blood sugar are present as outlined in students’ Diabetes Management Plan.

If the student does not have a plan or supplies and the student is having symptoms – TREAT AS OUTLINED BELOW

If student is able to swallow, give 15 grams of fast-acting carbohydrates such as three to four glucose tablets, 4 oz. fruit juice or regular (not diet) soda, or three packets (teaspoons) of sugar. If unable to take glucose tablets, juice, soda, or sugar, treat with 15 grams of glucose gel by placing small amounts of glucose gel into the student’s mouth, allowing the mucous membranes to absorb the gel.

**Recheck blood sugar in 10-15 minutes.** If blood sugar level is not greater than 70/80, give another 15 grams of fast-acting carbohydrates. Then recheck blood sugar in 10-15 minutes. Repeat this three times. **Notify the parent and/or doctor if it does not resolve after three attempts.** Continue to treat with 15 grams of fast-acting carbohydrates and recheck blood sugar every 10-15 minutes until the parent/doctor returns the call.

**Be prepared to give glucagon** and call 911 if student is not responsive, seizing or if their condition deteriorates.

**Once the blood sugar is above 70/80**

If the student is on intermediate acting insulin (ex: Novolog 70/30 or Humalog 75/25), after the above treatment follow with a snack like cheese and crackers or half of a sandwich.

If the student takes rapid acting insulin (Novolog or Humalog) at meals and snacks and will not be having a meal or snack within the next hour, follow the treatment for a low blood sugar with a small snack (15 grams of slow-acting carbohydrates such as crackers and peanut butter or half a sandwich).

If student is taking insulin using an insulin pump, follow Diabetes Management Plan for specific instructions on managing the pump.

* **Glucagon Emergency Kit**

If a severe low occurs (loss of consciousness, seizures or inability to safely eat or drink), Glucagon** should be administered if authorized by the Diabetes Management Plan.

A glucagon injection may be given for severe low blood sugars (unconsciousness, unresponsiveness, seizures or the inability to safely eat or drink). Refer to package insert and the Diabetes Management Plan for use and dose.

**Glucagon is a naturally occurring hormone made in the pancreas. It raises blood sugar levels by stimulating the liver to release stored glucose.**
Hyperglycemia

**Causes**
- Not enough insulin
- Missed doses
- Too much food (carbohydrates)
- Infection, fever, illness
- Stress
- Growth and/or hormonal changes
- Spoiled or expired insulin (most insulin expires a month after opening)

**Symptoms**
<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stress</td>
<td>Poor Concentration</td>
</tr>
<tr>
<td>Blurry vision</td>
<td>Dry skin</td>
</tr>
<tr>
<td>Thirst</td>
<td>Face flushed</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>Nausea</td>
</tr>
<tr>
<td>Frequent urination</td>
<td>Lethargic</td>
</tr>
<tr>
<td>Hunger</td>
<td>Sweet and fruity breath odor</td>
</tr>
<tr>
<td>Drowsiness / Sleepy</td>
<td></td>
</tr>
</tbody>
</table>

**Treatment - Check blood sugar level**

If blood sugar is greater than 300, check for ketones:

- If ketones are trace to small, encourage the student to drink water and recheck in three to four hours.
- If ketones are moderate to large, call the parent as the student needs medical attention.
  - Call the doctor if parent cannot be reached.
- If any ketones are present, students should refrain from any physical activity.
- Notify the parent if hyperglycemia does not respond to treatment as outlined in Diabetes Management Plan.

**Severe Symptoms – Call 911**

<table>
<thead>
<tr>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labored breathing</td>
</tr>
<tr>
<td>Confusion</td>
</tr>
<tr>
<td>Decreased consciousness - monitor airway</td>
</tr>
</tbody>
</table>

**Do not leave student alone**

- Extra insulin may be needed.
- Follow instructions on Diabetes Management Plan.
- When blood sugar level is high, students may need more frequent bathroom breaks and free access to water or sugar free fluids (if fully conscious and not vomiting).

**If student is taking insulin using an insulin pump, follow Diabetes Management Plan carefully.**

One should always suspect that the pump/tubing may not be working correctly:

- Check site and have student change site, tubing and reservoir using new vial of insulin if there is any leaking, redness, tenderness or the cannula is dislodged.
- Check for ketones if blood sugar level is over 250.

**IF NO ketones or ketones are TRACE to SMALL:**

- Bolus with pump ONE TIME per school plan.
- Recheck blood sugar level in one hour; if blood sugars have not decreased, give a second bolus by INJECTION of FAST-ACTING INSULIN using a SYRINGE per Diabetes Management Plan.
- Change the site, tubing and reservoir of the pump using a new vial of insulin to refill the reservoir.

**IF ketones are MODERATE to LARGE:**

- Call the parent.
- Give a bolus by INJECTION of FAST ACTING INSULIN using a syringe per Diabetes Management Plan.
- Change the site, tubing and reservoir of the pump using a new vial of insulin to refill the reservoir.
- Offer sugar-free liquids every 30 minutes until parent arrives.
Dysmenorrhea (menstrual cramps)

- Allow student to rest in a position of comfort.
- Give analgesic if medication authorized and provided by parent.
- Apply heating pad for 10 to 15 minutes; can sometimes alleviate mild to moderate cramping.
- Notify parents if not better after 20 to 30 minutes and treatment is ineffective.
- Urge medical care if cramps are disabling or heavy bleeding occurs.

Fainting (including dizziness or threatened faint)

- Have student lie down with feet elevated 10-12 inches and loosen tight clothing.
- Maintain open airway.
- Do not give anything by mouth until student is alert. Then give juice or regular soda.
- If student vomits, turn to one side.
- Bathe face gently with cool water.
- Notify parents of episode.
- **Call 911** if not fully alert in two to three minutes.
- Do not allow return to physical activity.

Note: Repeated fainting episodes or fainting during physical exertion should be referred for prompt evaluation by the student’s healthcare provider.

Headaches

- Let student rest.
- Assess headache history, quality of pain, location, radiation, duration and provoking factors.
- Headaches accompanied by the following require immediate medical attention:
  - vomiting
  - high fever (any fever if HA persists)
  - neck stiffness
  - convulsions
  - decreased level of consciousness or confusion
  - increasing severity of pain
  - headache following a moderate to severe head injury.
- May give analgesic if authorized and provided by parent.
- If the student has diabetes, check blood sugar to determine if treatment is required as directed by Diabetes Management Plan.
- Offer juice or crackers if student is hungry.
**Heat Illness** (See also Preventing Heat Illness)

<table>
<thead>
<tr>
<th>Assess for:</th>
<th>• temperature</th>
<th>• skin color</th>
<th>• dizziness, lack of coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• mental status/orientation</td>
<td>• sweating</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of Heat Illness</th>
<th>Symptoms</th>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Cramps</td>
<td>Mild cramping of legs, muscle spasms, normal body temperature, awake and alert</td>
<td>Allow rest in a cool environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encourage fluid replacement with water or electrolyte drinks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gently stretch the cramping muscles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notify parents.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitor for worsening symptoms.</td>
</tr>
<tr>
<td>Heat Exhaustion</td>
<td>Body temperature elevated to 101°F or above, skin is flushed not pale, moist, unusual fatigue, nausea/vomiting, headache, dilated pupils, cramping muscle spasms</td>
<td>Remove from activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allow rest in a cool environment (at least two hours).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loosen clothing, remove equipment such as pads and other excessive clothing, fan student and elevate legs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rehydrate with water or electrolyte drinks if not vomiting (at least 4 oz. every 15 minutes).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apply cool, wet cloths to face, chest, armpits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitor for worsening symptoms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notify parents if not totally back to normal in 30 minutes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seek medical care if fever over 102°F, fainting, confusion or seizures occur.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May not return to hot environment or any physical activity that day.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoid exposure to high temperatures for several days.</td>
</tr>
<tr>
<td>Heat Stroke (Medical Emergency)</td>
<td>Skin is red, hot and dry, decreased level of consciousness, extremely high body temperature (104°F), incoordination, disoriented, twitching, seizures, diminished respirations</td>
<td><strong>Call 911</strong>, notify parents.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transport to an air-conditioned room, remove equipment and as much clothing as possible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sponge or spray with cool water, apply cool packs to head, armpits, groin and replace as necessary; fan student.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep student NPO (nothing by mouth) because of altered level of consciousness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep from physical activity till medically cleared.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoid exposure to high temperatures until approved by MD.</td>
</tr>
</tbody>
</table>
Preventing Heat Illness

Heat illness is a preventable injury. When the body's ability to cool itself is overwhelmed, an increase of body temperature results.

Understanding the risk factors of developing heat illness are the keys to prevention:

- Hot, humid environmental conditions
- Dehydration
- High intensity exercise
- Use of heavy equipment or clothing
- Short-term illness, fever
- Deconditioning
- Certain medications (e.g., diuretics)
- Some chronic diseases (i.e., diabetes)
- Alcohol consumption
- Other substance abuse
- Recent move to hot, humid environment
- Eating disorders, obesity

The symptoms of heat illness range from mild to life-threatening. Recognition and treatment of mild symptoms can prevent more serious injury. A common symptom of heat illness is denial that one is developing overheating that will lead to an injury! When the body begins to overheat, you lose your cognitive ability to make rational decisions like stopping what you are doing to cool down. For a good example, refer to: well.blogs.nytimes.com/2008/06/09/a-common-symptom-of-heat-illness-denial.

Tips for preventing heat illness:

- Educate students about the importance of adequate hydration, early signs and symptoms of heat injury and the need to alert teacher or coach if they start feeling bad.
- Provide unlimited access to fluids, and insist that students drink frequently. Ideally body weight should be measured before and after practice. Student athletes should drink:
  - at least 16 oz. two hours before exercise.
  - approximately 4-8 oz. every 10-20 minutes during exercise (depending on temperature, humidity and body weight).
- Allow for adaptation to hot, humid conditions by gradually increasing practice and exercise time and intensity over 10-14 days.
- Pay attention to the daily heat index (see chart below), and schedule strenuous exercise in the early morning or evening. During PE and recess in the hotter parts of the day, plan indoor activities or modify intensity of activity and increase frequency and length of rest and water breaks.
- Wear loose fitting, light-colored clothing to help promote heat loss.
- When exercising outside, stay in the shade as much as possible.
- Avoid salt tablets. Cool flavored drinks with sodium, like sports drinks, can help replace electrolytes lost during sweating, particularly in poorly conditioned athletes.
### Heat Index Chart

<table>
<thead>
<tr>
<th>Heat Index</th>
<th>70</th>
<th>75</th>
<th>80</th>
<th>85</th>
<th>90</th>
<th>95</th>
<th>100</th>
<th>105</th>
<th>110</th>
<th>115</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>64</td>
<td>69</td>
<td>73</td>
<td>78</td>
<td>83</td>
<td>87</td>
<td>91</td>
<td>95</td>
<td>99</td>
<td>103</td>
<td>107</td>
</tr>
<tr>
<td>10%</td>
<td>65</td>
<td>70</td>
<td>75</td>
<td>80</td>
<td>85</td>
<td>90</td>
<td>95</td>
<td>100</td>
<td>105</td>
<td>111</td>
<td>116</td>
</tr>
<tr>
<td>20%</td>
<td>66</td>
<td>72</td>
<td>77</td>
<td>82</td>
<td>87</td>
<td>93</td>
<td>99</td>
<td>105</td>
<td>112</td>
<td>120</td>
<td>130</td>
</tr>
<tr>
<td>30%</td>
<td>67</td>
<td>73</td>
<td>78</td>
<td>84</td>
<td>90</td>
<td>96</td>
<td>104</td>
<td>113</td>
<td>123</td>
<td>135</td>
<td>148</td>
</tr>
<tr>
<td>40%</td>
<td>68</td>
<td>74</td>
<td>79</td>
<td>86</td>
<td>93</td>
<td>101</td>
<td>110</td>
<td>123</td>
<td>137</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td>69</td>
<td>75</td>
<td>81</td>
<td>88</td>
<td>96</td>
<td>107</td>
<td>120</td>
<td>135</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td>70</td>
<td>76</td>
<td>82</td>
<td>90</td>
<td>100</td>
<td>114</td>
<td>132</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70%</td>
<td>70</td>
<td>77</td>
<td>85</td>
<td>93</td>
<td>106</td>
<td>124</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td>71</td>
<td>78</td>
<td>86</td>
<td>97</td>
<td>113</td>
<td>136</td>
<td>157</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td>71</td>
<td>79</td>
<td>88</td>
<td>102</td>
<td>122</td>
<td>150</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>72</td>
<td>80</td>
<td>91</td>
<td>108</td>
<td>133</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The heat index shows the effects of the combination of heat and humidity. The apparent temperature is the heat your body “thinks” it is. To use the chart, locate the temperature along the top row and the humidity along the left-hand column. Where the two intersect is the current heat index.

### Resources

A Guide to Heat Acclimatization and Heat Illness Prevention
nfhslrn.com/courses/34000

How to Acclimate Student Athletes to Heat
athleticbusiness.com/athlete-safety/how-to-acclimate-student-athletes-to-heat.html

National Weather Service Forecast Office
srh.noaa.gov/ffc/

Preseason Heat Acclimatization Guidelines for Secondary School Athletics
nata.org/health-issues/heat-acclimatization
Hyperventilation (often associated with numbness of hands)

- Be calm and reassuring with student.
- Have student sit down, and “coach” him to take slower breaths of normal depth.
- Tell student you will stay with him and distract his attention if possible.
- Do NOT have student breathe into a paper bag.

Nosebleeds (Epistaxis)

- Wear gloves, and encourage mouth-breathing.
- Place student in sitting position, head forward. Do not let student put his head back. This is to avoid swallowing blood.
- Apply constant, uninterrupted pressure by compressing nostrils together or affected nostril against bony cartilage for at least seven to 10 minutes. Most children cannot apply enough pressure for a long enough time without assistance. Apply ice pack to nose or to the bridge of the nose or cheek, if tolerated. Icepacks help stop the bleeding by constricting the blood vessels.
- Avoidpeeking to check bleeding status until the first seven to 10 minutes of pressure is done. If bleeding persists after this, repeat for another seven to 10 minutes. It takes time for the blood vessel to clot off and stop bleeding.
- Keep student quiet and notify parents if bleeding is not easily stopped.
- **DO NOT let student blow his/her nose.**
- Prolonged or recurrent nosebleeds may need medical attention.

Seizures/Convulsions (See also Seizures, Chapter 5)

Students with known history of seizures should be known to appropriate school staff and should have a health and emergency care plan (Seizure Action Plan) developed and available at all times.

In the case of a seizure:
- Prevent student from hurting him/herself and lower him/her to the floor.
- Check time to monitor duration of seizure.
- Check airway and monitor breathing.
- **Do not put anything in the student’s mouth and do not restrain the student.**
- Consult and follow Seizure Action Plan.
- Loosen constricting clothing; turn to side if vomiting occurs.
- **Call 911 if:**
  - first known seizure
  - repeated seizures without regaining consciousness
  - seizure lasts longer than five minutes (unless noted in seizure action plan that seizures do last longer than five minutes)
  - student cannot be aroused after seizure.
- **If child has diabetes and is seizing, administer glucagon.**
- Notify parent(s).
- Assist to side-lying position after seizure.
- Allow student to rest and monitor him/her continuously after seizure.

Additional resources can be found from the Epilepsy Foundation at epilepsy.com/get-help/seizure-first-aid.
Shock (can occur with any severe infection or injury)

This is a medical emergency!

Symptoms: Skin is pale (or bluish) and cool to touch, moist and clammy, weak or lethargic, rapid pulse, rapid breathing, dilated pupils or dizzy when standing.

- Give urgent first aid measures immediately if cause of shock is known (i.e. control bleeding).
- Keep the student lying down with head flat, feet elevated.
- Cover enough to keep student warm but do not bundle or overheat student.
- If on the ground, place a blanket under student.
- Call 911, and notify parents.
- Do not give anything by mouth.
Prevention and Preparedness

Automated External Defibrillator (AED) Programs in Schools

On average, 900-1000 Americans will suffer sudden cardiac arrest every day. These tragic events happen to as many as three children and adolescents every day. When any sudden cardiac arrest occurs, time is critical—effective CPR within one to two minutes and shock with a defibrillator within three to five minutes is needed to have a chance to save the victim’s life. These life-threatening cardiac arrests could happen in any school at any time to students, staff, parents or visitors, and local emergency services cannot be expected to respond within that critical time frame. For these reasons, many schools in Georgia are choosing to deploy AEDs and implement comprehensive AED programs. In 2008, the state legislature passed HB 1031, requiring all public high schools with interscholastic athletic programs to have an AED onsite (legis.ga.gov/Legislation/20072008/84498.pdf). Many Georgia school districts have deployed AEDs in all schools in their district (55 percent by 2011).

A scientific statement was issued by the American Heart Association, American Academy of Pediatrics, National Association of School Nurses and others in 2004, titled “Response to Cardiac Arrest and Selected Life-Threatening Medical Emergencies—The Medical Emergency Response Plan for Schools.” This document recommends that a medical emergency response plan include the following elements:

- Effective and efficient communication throughout the school campus, including outdoor facilities and practice fields
- Coordinated and practiced response plan developed with administration, school nurses, team physicians, athletic trainers and local EMS
- Risk reduction efforts such as injury prevention and identification of students and staff at risk
- Training and equipment for first aid and CPR for staff and high school students
- Implementation of a lay rescuer AED program in schools with an established need (those with staff or students with known risk factors, or when a reliable local EMS call-to-shock response time of less than five minutes cannot be achieved).

Full article at:
heart.org/idc/groups/heart-public/@wcm/@ecc/documents/downloadable/ucm_425826.pdf

Project S.A.V.E. (Sudden Cardiac Death: Awareness, Vision for Prevention and Education), a program at Children’s Healthcare of Atlanta since 2004, has a prevention manual and other resources in place to assist Georgia schools with development of a well-planned and practiced emergency response plan including implementation of a comprehensive emergency procedure, training of a first responder team, deployment of AEDs, maintenance checks, all-staff awareness and practice drills. Ideas for fundraising, sample forms and letters and training grants are also part of the free assistance offered to Georgia schools.

Once a school has implemented a quality plan, it can be recognized as a Project S.A.V.E. Heart-Safe school. Over 900 Georgia schools have already been recognized through this program. Project S.A.V.E. is the state affiliate of Project ADAM at Children’s Hospital of Wisconsin. Visit choa.org/projectsave to obtain contact information.

Resources

Anyone Can Save a Life (excellent templates for sports emergency action plans and drills)
anyonecansavealife.org
Emergency Care for Students with Special Needs

Children considered to have special (healthcare) needs are those children that have or are at risk for chronic physical, behavioral, emotional or developmental conditions that require health services within the school environment beyond those required by the general population of students. Often the conditions these children have end up requiring emergency care for acute life-threatening episodes at some time during their school career. Sadly, to this day these children still often lack good health records concerning their history, treatments and medications. It is even more important for these children to have plans in place at the very beginning of the school year that include not only their daily health directives but also any emergency directives that may arise.

The AAP (American Academy of Pediatrics) Committee on Children with Disabilities has published statements that emergency information should be considered a part of the overall plan of service for a special needs student. To accomplish this goal, they developed an "Emergency Information Form for Children with Special Needs (EIF Form)" that can be found on the next page. As is always good nursing practice, confidentiality should be adhered to at all times; keeping the records secure, yet readily available in an emergency.

# Emergency Information Form for Children With Special Needs

<table>
<thead>
<tr>
<th>Name:</th>
<th>Birth date:</th>
<th>Nickname:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Address:</td>
<td>Home/Work Phone:</td>
<td></td>
</tr>
<tr>
<td>Parent/Guardian:</td>
<td>Emergency Contact Names &amp; Relationship:</td>
<td></td>
</tr>
<tr>
<td>Signature/Consent*:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Language:</td>
<td>Phone Number(s):</td>
<td></td>
</tr>
</tbody>
</table>

## Physicians:

| Primary care physician: | Emergency Phone: | |
| Current Specialty physician: | Emergency Phone: | |
| Specialty: | Fax: | |
| Current Specialty physician: | Emergency Phone: | |
| Specialty: | Fax: | |

**Anticipated Primary ED:**

**Anticipated Tertiary Care Center:**

## Diagnoses/Past Procedures/Physical Exam:

1. **Baseline physical findings:**

2.  

3. **Baseline vital signs:**

4.  

**Synopsis:**

**Baseline neurological status:**

*Consent for release of this form to health care providers
### Diagnoses/Past Procedures/Physical Exam continued:

**Medications:**

1. 

2. 

3. 

4. 

**Significant baseline ancillary findings (lab, x-ray, ECG):**

5. 

6. 

**Prostheses/Appliances/Advanced Technology Devices:**

7. 

8. 

### Management Data:

**Allergies:** Medications/Foods to be avoided and why:

1. 

2. 

3. 

**Procedures to be avoided** and why:

1. 

2. 

3. 

### Immunizations (mm/yy)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT</td>
<td></td>
<td>Hep B</td>
<td></td>
</tr>
<tr>
<td>OPV</td>
<td></td>
<td>Varicella</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
<td>TB status</td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

**Antibiotic prophylaxis:**

**Indication:**

**Medication and dose:**

### Common Presenting Problems/Findings With Specific Suggested Managements

<table>
<thead>
<tr>
<th>Problem</th>
<th>Suggested Diagnostic Studies</th>
<th>Treatment Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Comments on child, family, or other specific medical issues:

**Physician/Provider Signature:**

**Print Name:**

Emergency Preparedness in Schools

True school-based emergencies happen rarely. The occurrence can be said to be low frequency-high risk and potentially devastating if not recognized and treated promptly and skillfully. Emergency response must be planned for and practiced so that everyone involved will know their responsibilities. Policies and procedures must be written, reviewed regularly and communicated to all concerned staff.

The school nurse can identify teachers and staff who would be willing to take on these roles, coordinate their training, update their training annually or more often as needed, and recognize them for their efforts. The components of the response system include:

- available staff members who know their roles
- EMS availability
- easy access to the students’ emergency information
- necessary equipment on site.

Bioterrorism

Heightened awareness of national vulnerability to terrorism after September 11, 2001, has put a focus on the need to educate and prepare healthcare professionals, including school nurses on responding to bioterrorism.

The American Academy of Pediatrics, Centers for Disease Control and Prevention, American Red Cross and Federal Emergency Management Agency all have information readily available to school nurses, other school personnel and parents to help students deal with the reality and the emotions surrounding these events. The biological agents that have been identified as potential threats are anthrax, brucellosis, inhalational tularemia, pneumonic plague, Q-fever, smallpox, viral encephalitis and viral hemorrhagic fevers (VHFs). Biological toxins include botulinum, enterotoxin-B and T-2 mycotoxins. Chemical agents include mustard gas, ricin and sarin.

Resources from key agencies on emergency preparedness and bioterrorism response

Children and Disaster – American Academy of Pediatrics (AAP)
aap.org/disasters/index.cfm

Disaster Planning for Schools – AAP
pediatrics.aappublications.org/content/122/4/895.full.pdf+html

Disaster Preparedness Links – National Association of School Nurses
nasn.org/ToolsResources/DisasterPreparedness

Emergency Equipment and Supplies in the School Setting - NASN Issue Brief
portal.nasn.org/members_online/members/viewitem.asp?item=5079&catalog=OTH&pn=1&af=NASN

Emergency Preparedness & Response – CDC
bt.cdc.gov
Role of the School Nurse in Emergency Management

- Leader in planning for and providing emergency care
- Writer and evaluator of policies relating to emergency care
- Initiator of triage and emergency interventions
- Evaluator of the school environment for potential problems, patterns of injury
- Developer of specific emergency plans for students with known health needs
- Coordinator of training in first aid and CPR for staff
- Liaison with parents, administrators, teachers, medical advisors and EMS staff
- Evaluator of outcomes, problems and improvements after the emergency is over
- Communicator of the plan.

Response to Emergencies in the School

- First responder duties—current list of CPR and First Responder trained staff
- Initial assessment
- Triage decisions—emergent, urgent and non-urgent
• Guidelines and protocols—nursing interventions
• Individual health plans (IHPs) and individual emergency management plans (IEMPs) for chronically ill children
• Individual health plans (IHPs) and individual emergency management plans (IEMPs) for medically fragile children
• Assist EMS and transport as needed
• After the emergency, debrief everyone involved
• Evaluation of outcomes, change procedures if needed
• Follow-up with involved students and staff
• Identification of factors that may prevent future emergencies such as routine assessment of major emergencies that have happened recently in schools around the country.

Additional roles include:
• Need for community wide planning, involving all necessary responders and agencies
• Check of communication tools (walkie-talkies may be on police radio frequency)
• Practice of the plan (i.e. mock disaster drills)
• Media assistance to notify parents where students are taken
• Need for emergency equipment available to take to area
• Communication of building layout to EMS responders ahead of time
• Plan how students will be evacuated and sent to a safe place to be picked up by parents.

Suggested roles for lay health workers and other school personnel include:
• Initiating CPR and first aid
• Notifying the school nurse or other designated healthcare provider
• Assisting the school nurse with crowd control, contacting student’s family, and contacting emergency personnel
• Waiting to meet EMS and escorting them to and from the victims or emergency situation.

Resources included in this section:
Emergency Preparedness and Response in the School Setting

– The Role of the School Nurse

Position Statement

SUMMARY

It is the position of the National Association of School Nurses (NASN) that the registered professional school nurse (hereinafter referred to as school nurse) provides leadership in all phases of emergency preparedness and response. School nurses are a vital part of the school team responsible for developing emergency response procedures for the school setting using an all-hazards approach.

The school nurse is often the first health professional who responds to an emergency. The school nurse has the education and knowledge to identify emergent situations, manage the emergency until relieved by emergency medical services (EMS) personnel, communicate the assessment and interventions to EMS personnel, and follow up with the health care provider.

BACKGROUND

Each school day, families entrust our nation’s schools to provide safe and healthy learning environments for approximately 55 million elementary and secondary school students in public and nonpublic schools (U. S. Department of Education [USDE], 2012). Families and communities expect that schools will keep children safe from threats (e.g., human-caused emergencies such as crime and violence) and hazards (e.g., natural disasters, disease outbreaks, and accidents) (USDE, 2013). There is a fundamental link between day-to-day emergency readiness and disaster preparedness. Schools that are well prepared for an individual emergency involving a student or staff member are more likely to be prepared for complex events such as community disasters (AAP, 2008).

School nurses respond to emergencies and disasters that can range from one student or adult injured to the mass illness situations observed with the H1N1 influenza pandemic (Pappas, 2011). An emergency is a dangerous event normally managed at the local level (Doyle, 2011). Disasters are distinguished from emergencies by the greater level of response required. A disaster is a dangerous event that causes a significant human and economic loss, and demands a crisis response beyond the scope of local and state resources (Federal Emergency Management Agency [FEMA], 2011; Doyle, 2013). Whether for an emergency or disaster, preparedness is essential to ensure an effective response (Doyle, 2011). Planning for health-related emergencies involves developing emergency plans for students with known health-related conditions, and utilizing first aid skills to assess and respond to other unanticipated medical emergencies.

The types of emergency events for which the school nurse must be prepared to respond include:

- Student, staff and visitor health-related emergencies, due to injury or illness.
- Large numbers of individuals in casualty incidents, such as the collapse of bleachers, exposure to toxic gas, or a school shooting (Doyle, 2013).
- Weather-related emergencies (e.g., hurricanes, tornadoes, tsunamis and flooding, snow and ice storms).
- Hazards such as explosions and fires, physical plant, technological hazards, or nuclear meltdowns that may cause damage in the school and result in physical injuries, or loss of life.

For larger scale emergencies and disasters, the National Response Framework (NRF) offers guiding principles that enable all response partners to prepare for and provide a unified national response to disasters and emergencies –
from the smallest incident to the largest catastrophe (FEMA, 2013). The term “response” as defined by NRF includes taking immediate action to save lives, protect property and the environment, and meet basic human needs. Response also includes the execution of emergency plans and actions to support short-term recovery. The NRF also describes how agencies, such as schools, can work together with communities, tribes, states, the federal government, and private partners (Doyle, 2011).

Two national response models serve as the framework for local policy and response plans. The National Incident Management System (NIMS) is a comprehensive national design for approaching incident management. NIMS provides the template for management of the incident, while the NRF provides the structure and mechanisms for national-level policy for incident management (FEMA, 2011). One component of the NIMS is the Incident Command system (ICS), which provides a standardized approach for incident management, regardless of cause, size, location, or complexity. By using ICS during an incident, schools will be able to more effectively work with the responders in their communities (USDE, 2013).

To maximize success, effective management of school emergencies requires training, preparation and planning for best practices (RWJ, 2012).

RATIONALE

Schools should be responsible for anticipating and preparing to respond to a variety of emergencies (Doyle, 2013). School nurses, by virtue of their education, are experts in the nursing process, which includes assessment, planning, implementation and evaluation (Doyle, 2011). During emergencies, these steps closely parallel the phases of emergency management, which include prevention/mitigation, preparedness, response, and recovery. The school nurse, as a leader, is in the unique position to provide continuous integration, coordination, and training of all school and community members within the framework of the school’s emergency management plan. The role of the school nurse within the four identified phases of emergency management planning includes the following:

Prevention/ Mitigation: School nurses should participate in an ongoing assessment to identify hazards from all possible sources and to reduce the potential for an emergency to occur. Examples include educating students and staff about recognizing and reporting suspicious behaviors and persons, implementing and maintaining an effective immunization program for students and staff, improving security measures to control access to school facilities and using metal detectors at entry points if appropriate (Doyle, 2011).

Preparedness: School nurse participation on community-wide planning groups is helpful in the facilitation of a rapid, coordinated, effective emergency response within the framework of the ICS. This includes establishing standard emergency response plans and practicing skills, drills and other exercises to evaluate the response capabilities of a school, as well as the effectiveness of the plan (e.g., medical emergency, evacuation, shelter-in-place, lock down, and intruder). Specifically, the school nurse can be instrumental in identifying unique emergency preparedness needs for children with special health care needs, as well as specific equipment and supplies needed to respond, and to assess for and provide first aid.

Response: The school nurse is knowledgeable about her or his role in responding to an emergency, which may include triage, training of first aid response teams, and direct physical and mental health care for all victims of an emergency, including linking them to medical and public health resources. The school nurse also serves a vital role in reuniting families during and after a crisis (RWJ, 2012). NASN’s School Emergency Triage Training (SETT) program, (NASN, 2012) provides school nurses with the knowledge, skills and resources to perform as leaders of First-Aid teams in response to mass casualty events occurring in the school setting.

Recovery: After a disaster, the school nurse assists students, parents, and school personnel, providing direct support and serving as the liaison between community resources and those in need. This includes
both short and long-term recovery, and may include maintenance of student and staff health status, as well as mental health issues and psychological response.

Children with Special Health Needs

Schools are responsible for the emergency management planning and response efforts to assist students with special health care needs. This includes conducting an evaluation, providing housing, and caring for these students during an emergency event (Robert Wood Johnson [RWJ], 2012). If students are required to be sheltered in school for extended periods, the school nurse plans and prepares to support and care for children with chronic health conditions, including diabetes, asthma, and allergies/anaphylaxis. These plans may include:

- Healthcare provider orders for 72-hour lockdown or disaster.
- A system for retrieving and transporting medications to areas of lockdown or evacuation.
- Provision of necessary supplies and food in the classroom or carried with the child or teacher in an evacuation or a 3-day supply in case of a lock down.
- Education of all staff members/substitutes responsible for the child with a special health needs during an emergency.
- An alarm system for students with auditory and/or visual needs.
- Back-up power source for specialized equipment.
- Emergency evacuation plan for students with physical, mental or communication limitations (e.g. visually and/or hearing impaired, students with autism, and “English as a second language” students).

Emergency Equipment

A primary role of the school nurse is to ensure a system is in place to provide triage and immediate first aid care to ill and injured students, staff and community volunteers. This is accomplished by the school nurse, or through his/her direction of others (Doyle, 2011). The availability of essential emergency supplies is an integral component of being able to render appropriate on-site care and manage the emergency condition (Doyle, 2013). The type of equipment is primarily contingent on portability for use as a first-aid kit or for use by the school nurse in the health office (Illinois Emergency Medical Services for Children, 2010). NASN’s Emergency Resources, Equipment and Supplies – With/Without A School Nurse (NASN, 2014) provides emergency equipment recommendations as a resource to schools and school nurses.

CONCLUSION

The school nurse is a leader and integral partner in developing plans for first aid, facilitating an evacuation, caring for special needs students, performing triage responsibilities, educating and training staff, providing surveillance, and reporting. The school nurse is an effective communicator and educator, responsible for sharing information about health risks and connecting students and families to providers who can offer immediate crisis care and support, and refer to appropriate mental health services for long-term support. He/she provides a unique and critical perspective in the evaluation and revision of school emergency plans. The school nurse is the primary connection to the medical/public health community (Doyle, 2013). In order to optimize positive outcomes in all phases of emergency management, it is of the utmost importance that the school team include a school nurse for emergency preparedness and response planning.

REFERENCES


**Acknowledgement of Authors:**
Christine M. Tuck, MS, BSN, RN, NCSN
Kathey Haynie, MSN, RN
Catherine Davis, BSN, RN, NCSN

Adopted: 2011
Revised: June 2014

This document also replaces the Issue Brief “Emergency Equipment and Supplies in the School Setting” (2012).

Acknowledgement of 2011 Authors:
Joan B. Cagginello, MS, BSN, RN
Sandra Clark, ADN, RN
Linda Compton, MS, RN
Catherine Davis, BSN, RN, NCSN
Marilyn Healy, BSN, PNP, RN, NCSN
Susan Hoffmann, MSN, BSN, RN, NCSN
Christine M. Tuck, MS, BSN, RN, NCSN

All position statements from the National Association of School Nurses will automatically expire five years after publication unless reaffirmed, revised, or retired at or before that time.
“Go Bag”
Suggested Emergency Supplies for the School Setting

- Supply bag, sturdy with several pockets (may need two or more for a large campus, keep near entrances and in clinic); or may want to consider larger plastic container
- Personal protective equipment—gloves, goggles, gown, pocket face mask
- Band-Aids; triangular bandages; roller type bandages 2”, 3”, 4”; 4x4’s; occlusive dressings (Vaseline gauze); tape; non-adherent dressings; absorbent dressings (ABD pads); Steri-Strips
- Eye pads and eye shield, eye wash (sterile saline/contact lens solution)
- Emesis basins
- Antiseptic solution, cleansing wipes, waterless hand cleaner
- Sterile water/saline
- Instant ice gel pack
- Small splints, tongue blades, sling
- Sugar cubes or glucose gel
- Bandage scissors, tweezers
- Stethoscope, blood pressure unit with child and adult cuffs
- Documentation forms, clipboard, pen and pencils, permanent markers, stick-on labels
- Penlight or flashlight
- Medical waste bag, paper bags
- School-approved emergency guidelines
- Communication device (cell phone may be best) with list of school and emergency phone numbers
- List of students and staff with known health concerns and individual emergency plans (keep a separate set in the bag)
- Small blanket
- Cooler with spigot and paper cups
- If bag must be taken away from the clinic in an evacuation situation, take emergency meds (Epipen®, asthma inhalers, glucagon kit and other supplies for treating a low blood sugar).

(Adapted from the National Association of School Nurses’ module, “Preparing a Response to Emergency Problems” by Lisa Marie Bernardo, PhD, RN and Lucretia Anderson, MN, RN, CRNP; “Development Coordination” by Keeta DeStefano Lewis, PhD, RN, 1999, available from NASN.)
Preventing Playground Injuries

Since many accidental injuries at school occur on the playground, the school nurse or another staff member should observe the area in use several times during the year.

Visual inspection of the equipment and the environment can prevent many injuries:

• Survey the area for immediate hazards such as unwanted objects on the ground, fencing between the play area and the street or parking lot and metal equipment in the sun or without protective surfaces to prevent injuries and burns.

• The playground surface is responsible for more than 70 percent of injuries. Hard surfaces such as asphalt, blacktop, concrete, grass and packed dirt should not be used. Acceptable surfaces include hardwood fiber or mulch, pea gravel, sand, rubber tiles, mats and poured surfaces. The standard is 12 inches of loose fill, such as mulch or sand, for equipment up to eight feet in height. Manufacturers’ recommendations for synthetic surfaces should be followed. Cushioned surfacing should be under all equipment and extend at least six feet out in all directions.

• Examine equipment such as ladders, platforms and steps. Climbing equipment and monkey bars have the highest incidence of injury and need to be closely supervised. Steps and handrails should be kept in good condition and sized appropriately for a child’s grip. Platforms should be surrounded by a guardrail or other protective barrier (29 inches high for preschoolers, and at least 38 inches high for school-aged children). Openings on playground equipment should be less than 3.5 inches or greater than 9 inches to prevent entrapment of heads or bodies.

• Swings are the moving equipment most likely to cause injuries. Swings should be:
  – at least 24 inches apart, and 30 inches from the frame
  – no more than two to each well-anchored frame
  – made with soft seats, not metal or wood
  – not attached to other equipment
  – the “fall zone” surfacing should extend out twice the height of the swing’s maximum movement front and back and six feet to each side of the frame.

• Slides should be well-anchored and have firm handrails and steps with good traction. Steps should have drainage holes to prevent slipping. There should be no spaces between the slide platform and the downhill surface which could catch strings from clothing and cause strangulation. Metal slides should be shaded or covered to prevent burns in hot sun. Slides should be surrounded by guardrails and barriers.

• Seesaws should have secure handles sized so children can grip easily. There should be a soft bumper under the bottom of the seat and covered pivot points to prevent pinched fingers.

• Merry-go-rounds should be firmly anchored into the ground and have easy-to-grasp handles. The surface under the bed should be positioned so that children cannot slide underneath. There should be a mechanism to control the speed of the unit.

Adapted from the National Program for Playground Safety-2000 guidelines, Playground Report Card available on Website at playgroundsafety.org/research/state-report-cards.

All playgrounds present some challenge, and children will use equipment in unintended and unanticipated ways. Therefore adult supervision is always necessary.

Not all equipment is appropriate for all children, especially if your school has preschoolers. Signs should be posted near equipment indicating the appropriate age of the users. Supervisors should direct children to equipment appropriate for their age.

Another way the school nurse can help with prevention of playground injuries is to monitor the injuries themselves, looking for patterns that indicate a problem with particular equipment or lack of needed supervision.

The nurse can also assess the need for further training of playground supervisors by monitoring first aid rendered on the playground. Make the principal aware of any equipment problems noticed or patterns of injuries.
Special Considerations for Field Day & Other Outdoor Activities

Field days may require special considerations from clinic personnel. You may want to take first aid equipment to the field area or recruit volunteer parents to help. If there are volunteers, consider leaving the most experienced first aid provider in the clinic, perhaps with a walkie-talkie or cell phone for better communication:

• Since field days are usually held in a high spirit of competition and near the end of school, heat and smog alerts will be factors to consider.
• Prepare yourself by checking the predicted temperature and humidity for the day. If the heat index is too high, activities may need to be held early in the day or in a covered play area. Discuss this with the principal. A “Heat Index” chart is included on page 77. This chart can be used as a guideline for discussion with administrators and other staff members. You can also go online to weather.com and set up a daily alert to your computer.
• Remind teachers ahead of time, and again that day, to make provision for drinking water and ice on the field. Make a flyer with signs of heat-related illnesses available to teachers, as well see CDC Resources below. Send reminders home with students the day before for parents to provide hats and sunscreen, if possible. Prior to field day would be a good time to consider sun-safety health education classes.
• Review the Preventing Heat Illness section of this chapter.
• Remind students that drinking water frequently is the best prevention for heat-related illness. Drinking plenty of water the day before also helps with hydration. Provide breaks every 15-30 minutes (depending upon the heat index) and instruct students to drink during these breaks.
• Have water, ice and sports drinks available to replace fluids if a student has problems. Have a fan and towels available to assist with cooling. Consider using the covered play area for some activities for protection from direct sun.
• Make sure you have ice packs, splinting and dressing materials, and plenty of soap and water available. Volunteers may be used as extra observers, to provide transportation to first aid stations, and to “man” water stations. Field day should be fun for everyone and a great way to end the school year. Being prepared for any occurrence will help you relax and be a part of the fun.

Resources

Children’s Healthcare of Atlanta
choa.org/Child-Health-Glossary/Summer-Safety/Heat-Safety

Children’s Healthcare of Atlanta – Playgroung Safety
choa.org/Child-Health-Glossary/P/PL/Playground-Safety_KH_Parent

Extreme Heat: A Prevention Guide to Promote Your Personal Health and Safety - CDC
bt.cdc.gov/disasters/extremeheat/heat_guide.asp

Extreme Heat Media Toolkit, Print Materials
cdc.gov/extremeheat/materials.html

Safe Kids Worldwide – Playground Safety Tips
safekids.org/tip/playground-safety-ti
Emergency Transportation/Treatment Release

Student’s Legal Name:                      DOB: ____________________

Last: ____________________________________

First: ____________________________________, Middle Initial: _____________

In the event that I cannot be reached in an emergency situation, I give permission for this student to be transported to:

☐ the closest local hospital or
☐ a specific hospital (name) _______________________,

and authorize the hospital to provide emergency medical or surgical treatment. I will assume full responsibility for all charges related to the above, and release the hospital, the school and school system, its agents, employees, administrators and assigns from any and all liability, claims and causes of action arising in connection with the transportation and/or treatment of the student named hereon.

Current health insurance information:

Company ___________________________  ID Number _______________________

Name of insured _______________________________________________________


______________________________________        Phone #: _______________ (work)

Parent/Guardian’s Signature

Phone #: _______________ (cell)

 ______________________________________

Phone #: _______________ (home)

Date

This form may be part of your Student Health Form, and its specifics need to be approved by local school district administration and sometimes the attorney for your school district.
Accident/Incident Report Form
(Please print clearly)

Injured Person Information: □ Visitor □ Employee □ Student
Name: _______________________________ Age: ____________ Sex: □ Male □ Female
Address: _____________________________ Grade: __________ Teacher: ________________________________
Phone #’s: __________________________________________________________

School: _____________________________ Date of Accident: ____________ Time of Accident: _____________
(Mo. Day Year) (Hr. Min. AM or PM)

Location  Type of Injury  Body Part Injured
☐ Classroom or Auditorium  ☐ Abrasion  □ Head
☐ Cafeteria  ☐ Bite  □ Eye R L B
☐ Corridor  ☐ Blister  □ Ear R L B
☐ Commons Area  ☐ Bruise  □ Mouth
☐ Stairs (inside)  ☐ Burn  □ Teeth
☐ Bathroom  ☐ Cut/Laceration  □ Neck
☐ Showers or dressing room  ☐ Poisoning  □ Chest
☐ Parking area  ☐ Puncture  □ Shoulder R L B
☐ Driveway  ☐ Scratch  □ Arm R L B
☐ Shops  ☐ Sprain  □ Elbow R L B
☐ Labs  ☐ Tooth Damage  □ Wrist R L B
☐ Homemaking  □ Other: _______________  □ Hand R L B
☐ Playground
☐ Street, Highway  Possible Injury:
☐ Athletic Field  ☐ Concussion  □ Abdomen
☐ Other: _______________  ☐ Dislocation
☐ Playground  ☐ Fracture or Break
☐ Street, Highway  ☐ Internal Injury  □ Hip R L B
☐ Athletic Field  ☐ Strain or Sprain  □ Leg R L B
☐ Other: _______________  □ Knee R L B
☐ Playground  ☐ Other: ___________________________
☐ Street, Highway  ☐ Other: ___________________________

Degree of Injury
☐ Non-disabling
☐ Temporary (lost time from school)
☐ Permanent disability
☐ Death

Accident / Incident Description (include cause):
________________________________________________________
________________________________________________________
________________________________________________________

Witness(es): _____________________________________________ Who gave First Aid, if any? _____________________

Describe aid given: ___________________________________________________________________________________
______________________________________________________________________________________________

Parent(s) notified? □ Yes □ No  MD notified: □ Yes □ No  MD name: ________________________________
Principal notified? □ Yes □ No  MD phone: ________________________________
Released to: □ Parent □ EMS/Hospital □ Back to class  Accompanied by: ________________________________

Report Prepared by: __________________________________________  Title: __________________________  Date: ____________

# Days Lost From School: ____________  (Continue on back of page as needed)
Accident Incident Report Form to Parent

School ___________________________ Date: ______________________

Student Name: ___________________________ Teacher: ____________

Date of Accident _______________ Time of Accident ___________ AM/PM

Your child was seen in the clinic today for: __________________________________________
________________________________________________________________________
________________________________________________________________________

We noticed the following: ______________________________________________________
________________________________________________________________________
________________________________________________________________________

First aid or treatment given: _________________________________________________
________________________________________________________________________
________________________________________________________________________

☐ Your child returned to class and reported no further problems.

☐ We attempted to call you at ________________________________ Time: ________

Please help us assist your child further by doing the following:

☐ Continue to observe at home.

☐ Watch for signs of infection (pain, swelling, redness, heat).

☐ Recommend healthcare provider follow-up for further recommendations or treatment.

☐ Other: __________________________________________________________________________

________________________________________________________________________

Please feel free to call the school if you have any further questions or concerns relating to
this visit. I can be reached at: ___________________________ (Phone #)

Sincerely,

__________________________________________  Title: ____________________________

(Reported by)