



Chapter 2: Injury Management and Emergency Medical Concerns



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Section 1: 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(s)/guardian(s). When the parent(s)/guardian(s) are 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 chapter 4, Communicable Diseases and Infection Control).

After an emergency 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 the parent(s)/guardian(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

General Appearance	Assess overall impression of health, level of distress, emotional response and physical symptoms. Provide calm reassurance, safety of the area for the first responder and others in the area.
Airway	While completing the Airway Assessment, stabilize the head/neck if there is concern for a neck injury. Do this by instructing the youth to lie still and by instructing an assistant to place hands on both sides of the youth’s head to prevent movement of the head and neck. Assess patency, ability to cry or talk, position, airway sounds and color. Open the airway, and perform obstructed airway maneuvers if needed.

Breathing	Assess work of breathing, rate, nasal flaring, retractions, difficulty speaking and breath sounds. Position for open airway, assist ventilations if needed.
Circulation	Assess perfusion of vital organs, skin color and temperature, active bleeding capillary refill peripheral pulses. Initiate CPR if needed, and 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 the youth’s clothing to prevent personal exposure to their blood). Position to maintain perfusion (legs elevated if shock symptoms).
Disability	Assess level of consciousness (alert or unresponsive), awareness of injury or illness, activity level, and level of pain. Provide reassurance; orient to time, place and person as needed. Position to maintain comfort.
Expose/Examine	Open clothing as needed to observe breathing. Examine injuries, rashes as appropriate.
Fahrenheit	Check temperature, maintain temperature in a normal range using blankets (or undressing, sponging, fanning if hyperthermia is a concern).
Get Vital Signs	Obtain baseline heart rate, blood pressure, respiratory rate (if possible), check capillary refill.
Head-to-Toe Assessment	Can be focused or complete, depending on the youth’s health status, mechanism of injury and school policy.
Isolate	Provide isolation measures according to public health and school policy.

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



Triage

Triage 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/guardians

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

- 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 parents/guardians immediately

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

- 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
- Persistent diarrhea/vomiting
- Febrile illness with temperature greater than 100.4 degrees Fahrenheit
- 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

Non-Urgent: Notify parents/guardians, 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 low blood sugar requiring treatment

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



Reporting Accidents

If there is no parent/guardian present and the youth is being taken to the emergency room by ambulance, it is helpful for school personnel to communicate directly with the emergency department either by calling the hospital or by sending a written description with as much detail as is known. Specifics of the incident will aid emergency personnel in quick diagnosis and treatment. Provide your name and number in case the emergency department physician needs further information.

If the student is going by ambulance to a Children’s Healthcare of Atlanta facility, the Children’s Transfer Center will arrange for the acceptance and admission with just one call.

- Phone: 404-785-7778 or 888-785-7778
- Fax: 404-785-7779

If you live outside of the Metro Atlanta area or the youth is being transferred to a different hospital, find out the hospital’s preferred method of communication.

A sample report of accident/incident form is at the end of this chapter. Completed documentation with as much information as possible is helpful if a witness or adult who is first on the scene is unable to verbally communicate with the receiving facility. Follow your district specific guidelines for reporting and documenting incidents.

Suggested First Aid Procedures

- Have a written plan for emergencies, with someone designated to call 911 and/or to call the parent(s)/guardian(s) while the school nurse cares for the youth. Do not 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 them 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).
- You 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 to 15 minutes, and reapply every 30 to 60 minutes as needed to decrease pain and swelling.
- Keep the youth 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 youth.
- Use judgment regarding the decision to move the youth. With possible neck or extremity injury, it will be advisable, at times, to not move the youth until EMS arrives.

Pediatric Vital Signs

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



- In an otherwise healthy, well-appearing older child or teen, bradycardia may be their physiologic normal (i.e., in an athletic child or teen with a low resting heart rate).
- Bradypnea (slow respiratory rate) is an ominous sign and is usually a sign of either respiratory fatigue or extreme obstruction. Act quickly.

Age Group	Respiratory Rate	Heart Rate	Systolic Blood Pressure	Weight in Pounds
Newborn	30-50	120-160	60-70	4.5-7
Infant (ages 1 to 12 months)	30-50	80-140	70-100	9-22
Toddler (ages 1 to 3)	24-40	80-130	80-110	22-31
Preschooler (ages 3 to 5)	22-34	80-120	80-110	31-40
School-Age (ages 6 to 12)	22-34	80-120	80-120	41-109
Adolescent (ages 13 and older)	12-20	80-105	110-120	>120

Wong-Baker FACES Pain Rating Scale

All youth may experience some pain from time to time, whether it is from a headache, injury or cancer treatment. Only the youth knows how much pain they have. 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 they have no pain (hurt) or sad because they have some or a lot of pain.

Face 0 is very happy because they do not 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 they are feeling.

Source: Wong, DL, Hockenberry-Eaton M, Wilson D, Winkelstein ML, Schwartz P: Wong’s Essentials of Pediatric Nursing, 6th Ed., St.



Source: Louis: Mosby, Inc., 2001: 1301. Copyrighted by Mosby, Inc. Reprinted by permission.



Section 2: 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 or other organ injury.
- Place the youth supine with their 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 the parent(s)/guardian(s) 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 lackluster and may seem to stare (sometimes the pupils are dilated).
 - The youth is unconscious, or if conscious, the person feels faint or is very weak or confused. Shock also sometimes causes youth to become overly excited and anxious.

Abdominal Open Wounds

- Call 911 and notify the parent(s)/guardian(s).
- 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 the youth'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

- Wearing gloves, control bleeding with clean bandage. Elevate extremity. Remain calm. Observe for shock (see shock).
- Stay with the youth. Have other school personnel call 911 and the parent(s)/guardian(s), 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 the youth.
- Do not put amputated part directly on ice.
- Keep the student NPO (nothing by mouth).

Bites (Animal)

Bites from many animals may transmit rabies and need medical attention (dog, ferret, bat, raccoon, opossum, skunk, fox, coyote and cat). Information on snake bites can be found later in this chapter.

- 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 is broken. The longer the delay in proper cleansing/debridement of the wound, the greater the risk of infection.
 - Contact the parent(s)/guardian(s) to seek medical attention.
 - Supply the parent(s)/guardian(s) 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 youth 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 youth 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 their 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 the parent(s)/guardian(s) 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 the parent(s)/guardian(s) 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, the student should have the booster within 48 hours of the injury.

Bleeding

- Wearing gloves, press firmly over wound with clean bandage or gauze.
- 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 the parent(s)/guardian(s).
- Call 911 immediately if blood is spurting out with each pulse beat or 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 to 20 minutes.
- Follow recommendations for thermal burns (see below).
- Notify the parent(s)/guardian(s) to seek medical attention.



Note: For chemical burns to the eye, refer to the 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 the power is off.
- Treat any burns (see thermal burns below).
- Notify the parent(s)/guardian(s).

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 the parent(s)/guardian(s).
 - 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 the burn is large or deep or involves the eye.
 - If the burn is on the face, hands or feet (unless small or superficial; first degree).
 - If the student is unconscious or having difficulty breathing or is in substantial pain not managed with cool compresses.

Cuts, Scrapes and 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 the parent(s)/guardian(s) per school policy.

Note: There is much controversy about applying Neosporin to minor cuts, scrapes, etc. The current recommendation by most dermatologists is that it is not necessary; 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 the parent(s)/guardian(s) of need for medical attention.
- Consider 911 if the parent(s)/guardian(s) cannot transport the student 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 the parent(s)/guardian(s) 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 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, they should gently pull the upper eyelid down over the top of the lower eyelid. This should cause tearing and flush the object out. They may need to repeat this several times.
- If they can see the object, they 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, impaired movement of the eye globe (i.e., unable to look in a certain direction), nausea or discoloration (black eye), prompt transport to an emergency room 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 the parent(s)/guardian(s), have the student rest with their eyes closed.

Penetrating Eye Injury

- Keep student lying down flat. Remain calm.
- Do not attempt to remove object.
- Call 911 and the parent(s)/guardian(s).
- 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 alkali. Call 911 if substance is known to be alkaline and call Poison Control Center at 800-222-1222.



- Irrigate the 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 the 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 the parent(s)/guardian(s) and send to the emergency room.
- While waiting for the parent(s)/guardian(s) and/or EMS, have the student rest with eyes closed and keep the room darkened.

Fractures, Sprains and 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 the student unnecessarily.
- Apply ice to minimize swelling (unless the 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 the parent(s)/guardian(s) 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 the parent(s)/guardian(s) to seek immediate medical attention.
- Allow the student to lie down.
- Keep student NPO (nothing by mouth).
- Notify the parent(s)/guardian(s) to arrange very prompt transport to the emergency room. If treatment is delayed for just a few hours, the testicle may become non-viable and will need to be removed.

Head Injuries/Concussions

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 the lacerations section).



For all head injuries:

- Get a description of the accident from a witness.
- Use the below guide in responding to the student with a head injury.
- Document the incident with the following:
 - CDC Heads Up: Concussion Signs and Symptoms Checklist (included at the end of this chapter)
 - Guardian Concussion Notification form (found in Children’s Healthcare of Atlanta’s Concussion Reference Guide:) choa.org/medical-services/concussion/community-and-school
 - Any other school-required documentation
- Notify the parent(s)/guardian(s) and give them the Mild Head Injury and Concussion Teaching Sheet (included in chapter 11 in the section for families).
- Instruct the parent(s)/guardian(s) to follow up with their child’s primary care doctor.

Guide for Response to Head Injury

- Allow the student to rest.
- Apply cold pack to injured area, if tolerated.
- If student experiences vomiting or a severe headache, call 911.
- If student experiences persistent headache or has a history of lack of consciousness, call the parent(s)/guardian(s) promptly and plan for prompt medical evaluation.
- Allow the student to return to class if there are no other symptoms or findings, and make sure they return in one to two hours or before leaving school for recheck.
- Advise teacher and the parent(s)/guardian(s) of the injury and the need for follow-up with their primary care doctor in 24 to 48 hours.

- Provide the family with a fact sheet on concussions: choa.org/-/media/Files/Childrens/medical-services/concussion/concussion-fact-sheet.pdf?la=en&hash=2CCA5C18BF7DC19BF5813DA39A6ED599BDD3B844

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 the parent(s)/guardian(s).
- Observe and document any of the following symptoms:
 - Vomiting more than once
 - Confusion, being dazed, not able to recognize people or places
 - 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 the lacerations section).



For the unconscious student:

- Stabilize the spine and maintain open airway, using jaw thrust maneuver if spinal or neck injury is suspected.
- Call 911 and notify the parent(s)/guardian(s).
- Treat bleeding.
- Observe for shock or vomiting (log roll entire body to side if student is 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 mostly symptom-free. We encourage returning 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. It is often best to work in conjunction with the teachers, school counselors and the parent(s)/guardian(s) on a flexible plan for the student. For example, perhaps starting with half day of school or providing a place to rest/nap in the middle of the day.

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.

Additional Resources

- Children’s Healthcare of Atlanta Concussion Video Series and Toolkit: <https://choa.org/medical-professionals/referrals-and-transfers/directory-of-services/concussion-resources/video-series>
- Concussion Signs and Symptoms from the CDC: [cdc.gov/headsup/basics/concussion_symptoms.html](https://www.cdc.gov/headsup/basics/concussion_symptoms.html)
- When Your Child Gets a Concussion from Children’s Healthcare of Atlanta: choa.org/concussion
- Heads Up to Schools from the CDC: [cdc.gov/headsup/schools/](https://www.cdc.gov/headsup/schools/)

- Incidence of Brain Injury in Children from the Brain Injury Association of America: [biausa.org/children-what-to-expect/incidence-of-brain-injury-in-children](https://www.biausa.org/children-what-to-expect/incidence-of-brain-injury-in-children)

Lacerations

- Wearing gloves, control bleeding with direct pressure (may take seven to 10 minutes).
- Call 911 if pulses further away from the heart than the laceration are absent or if bleeding cannot be controlled.
- Clean laceration with soap and water, dry laceration and cover with a clean bandage.
- Notify the parent(s)/guardian(s) to have the student evaluated for possible stitches (should be seen same day, within four hours):
 - If the wound is gaping open or longer than 1/2 inch.
 - If the wound is significantly contaminated.
 - If the wound is on the face, hand or foot.
 - If the wound has tissue protruding.
 - There is a crush injury.
 - If the student is un/under-vaccinated.
- Keep student NPO (nothing by mouth) if stitches are a possibility.
- Do not apply ointment of any kind.

Puncture Wounds

- Deep puncture wounds, especially of the foot, 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.



Chapter 2: Injury Management and Emergency Medical Concerns

- 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 the parent(s)/guardian(s) to seek medical advice regarding injury and tetanus immunization status.

Snake Bites

- Snake bites should receive medical attention, whether from poisonous or non-poisonous snakes.
- Call 911 and Georgia Poison Control Center at 404-616-9000.
- Keep the student quiet and calm, lying down.
- Immobilize the bitten extremity, at or below the level of the heart. Remove jewelry at the site of injury, as swelling may progress rapidly.
- Wash the area with soap and water.
- If snake is killed, bring with the student to hospital.
- Note characteristics of the snake (color, shape of head, pits, etc.).

Spinal Injury, Suspected

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

Sports Injuries

Safe Kids USA estimates 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%), rather than games.
- From 2001 through 2009, it is estimated that there are 1,770,000 emergency department visits, 6% 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 emergency department visits include bicycling, football, playground activities, basketball and soccer. Source: CDC Concussion in Sports and Play: Get the Facts, Fact Sheet; From [cdc.gov/traumaticbraininjury/get_the_facts.html](https://www.cdc.gov/traumaticbraininjury/get_the_facts.html). Retrieved on 8/17/2015.
- 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 1,000 athlete exposures) and girls' soccer (29,167; 0.36 per 1,000 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 AAP recommends that before beginning a formal strength-training program, a medical evaluation should be performed by a pediatrician or family physician.

Source: American Academy of Pediatrics Policy Statement from the Council on Sports Medicine and Fitness; Strength Training by Children and Adolescents. *Pediatrics*, 121, no. 4 (2008): 835-840.



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 P.E. 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 the Preparticipation Physical Evaluation Form in the prevention and preparedness section of this chapter.

See also resources from the Sports Medicine Program at Children’s Healthcare of Atlanta: choa.org/medical-services/orthopedics

Acute Orthopedic Sports Injuries

See fractures, sprains and strains section 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 (pulses, capillary refill, skin color, temperature, sensation and motor function) 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 youth 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 age group of 8- to 15-year-olds. 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 Disease (OSD)** 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 results below the knee.
- **Sinding-Larsen-Johansson Syndrome (SLJ)** is an overuse injury causing anterior knee pain at the inferior pole of patella at the proximal patella tendon attachment; very similar to OSD, as both are overuse injuries. The location of pain is due to the insertion of the patellar tendon at the inferior pole of the patella in SLJ or at the tibial tuberosity in OSD.
- **Sever’s Disease** is an inflammation of the growth center of the heel bone (calcaneus), which occurs from both repetitive activities, such as running and jumping, as well as pulling of the Achilles tendon at its attachment point on the growth plate.

Treatment of overuse injuries is aimed at reducing symptoms. Ice can be used for 20 to 30 minutes after activities and again in the evening. The parent(s)/guardian(s) 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,” “gym candy,” “andro,” “stackers,” “pumpers” 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 anabolic steroids include liver damage, testicular atrophy and impotence in males, amenorrhea and breast atrophy in females, severe 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. Perhaps most effective in the teen population is that anabolic steroids will cause a premature halt in physical growth (height). [healthychildren.org/English/ages-stages/teen/substance-abuse/Pages/Anabolic-Steroids.aspx](https://www.healthychildren.org/English/ages-stages/teen/substance-abuse/Pages/Anabolic-Steroids.aspx)

Exercise-induced asthma is often seen, and exercise may be the only time these youth 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. The parent(s)/guardian(s) should be encouraged to consult their youth’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, are also potential situations when 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 during the hottest times of year.

Recommendations for proper hydration during sports and activities: “Sufficient, sanitary, and appropriate fluid should be readily accessible and consumed at regular intervals before, during, and

after all sports participation and other physical activities to offset sweat loss and maintain adequate hydration while avoiding overdrinking. Generally, 100 to 250 mL (approximately 3 to 8 ounces) every 20 minutes for 9- to 12-year-olds and up to 1.0 to 1.5 L (approximately 34 to 50 ounces) per hour for teen boys and girls is enough to sufficiently minimize sweating-induced body-water deficits during exercise and other physical activity, as long as their pre-activity hydration status is good. Pre-activity to post-activity body-weight changes can provide more specific insight to a person’s hydration status and rehydration needs.

Although water is often sufficient to maintain adequate hydration, long-duration (e.g., one hour) or repeated same-day sessions of strenuous exercise, sport participation or other physical activity might warrant including electrolyte-supplemented beverages that emphasize sodium to more effectively optimize rehydration. This is especially justified in warm-to hot-weather conditions, when sweat loss is extensive.” (Pediatrics, September 2011, Vol. 128, Issue 3)

Eye Injuries, including corneal abrasions, detached retinas and bleeding in the eye chamber, can occur in any sport and require immediate medical attention. Keep head elevated at 45 degrees from the bed/ground. Keep the youth calm and relaxed. If there is any suggestion that the globe is ruptured, do not put anything into the eye. Do not rub the eye. If there was a chemical contamination or spill into the eye, call the Georgia Poison Center at 404-616-9000 or 1-800-222-1222. Irrigate the eye with water.

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 athlete 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 the 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. Youth with known diabetes should check their blood sugar prior to participating in and every hour of physical activity (see the hyperglycemia and hypoglycemia charts and the diabetes section in 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 the allergic reactions section.

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 (Anaphylaxis)

Whether previous allergy known or not.

Symptoms: Facial swelling, respiratory distress, wheezing, persistent cough, severe hives, dizziness

Note: The youth does not have to have all of these symptoms to have a severe allergic reaction. If two of more body systems are involved, or the youth has low blood pressure after a known exposure, treat for anaphylaxis.

- Administer EPIPEN and call 911 (use anaphylaxis action plan).

- Notify the parent(s)/guardian(s).
- 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 the student flat on their back (in supine position) and elevate their 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, raspy or hoarse voice) would warrant 911 and EPIPEN use.



Section 3: Emergency Medical Concerns

Abdominal Pain

- Allow the student to rest in a position of comfort.
- Check the youth’s temperature.
- Notify the parent(s)/guardian(s) 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 possible appendicitis, ectopic pregnancy, ovarian/testicular torsion or ovarian cyst.
- Ask if the youth has eaten or if they need to go to the bathroom.
- Do not give anything by mouth unless pain is minimal and the youth states they 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 youth 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, refer to “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 youth, especially those 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 a food allergy, an insect sting allergy can be cured by insect-allergy shots that are given in an allergy physician’s office on a regular basis. If the youth has had a systemic allergic or severe reaction to an insect sting, the parent(s)/guardian(s) and the student should be told to ask their physician for a referral to an allergist for further evaluation and treatment to cure the life-threatening condition of an insect sting allergy.
- The Asthma and Allergy Foundation states that more than 50 million Americans suffer from allergies. They are the sixth 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 (2015 data).

Allergic Reaction, Severe

An emergency 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 1 to 2% 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 the parent(s)/guardian(s). 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/guardians or students. This information should be discussed with parents/guardians and repeated for staff at the beginning of each school year. Appropriate school staff and faculty should receive annual training/in-service on this information for students who are in your school setting.

If emergency medication is prescribed, it should be clearly labeled with the student’s name and classroom. 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 the parent(s)/guardian(s) 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.

3 Rs for Handling Severe Allergic Reactions (Anaphylaxis)

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/EPIPEN JR.
- Call 911 and the parent(s)/guardian(s), as symptoms may recur in 10 to 20 minutes, even if EPIPEN/EPIPEN JR was used.
- All people who receive epinephrine should then be made to lay flat on their back on the floor, with their legs elevated, unless respiratory status does not tolerate this position. Epinephrine can be injected into the thigh while the person is standing, seated or lying down.
- Look for a medical alert bracelet and/or check health information card to determine the possible trigger.
- Keep student NPO (nothing by mouth).
- Encourage the student to sit quietly, and breathe slowly if the primary problem is respiratory. If there are signs of shock, keep the student supine with their legs elevated.
- Maintain their airway with head tilt, chin lift. Initiate CPR if needed.
- Give a second dose of epinephrine using another auto injector in 5 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 youth weighing between approximately 30 to 65 pounds. In an emergency, 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 youth weighs less than 65 pounds. It is preferable to give the 0.3 mg dose rather than withholding epinephrine. The reason is that 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 pounds, and it could save their 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, which should be identified ahead of time, usually includes 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 the parent(s)/guardian(s). 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 to 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 the parent(s)/guardian(s)?



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 three strengths, depending on the manufacturer.

- EPIPEN and EPIPEN JR are auto-injectors about the size of a marker. Auvi-Q is approximately the size of a deck of cards. There are other epinephrine auto-injectors that deliver the same epinephrine doses, though Auvi-Q is the only device that delivers a mg dose, but the devices are not identical. Therefore, anyone who thinks they might give an epinephrine 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 the parent(s)/guardian(s) may be notified in a timely manner if it is expiring soon.
- Emergency epinephrine is designed to be administered into the thigh muscle (through clothing if necessary).

Instructions for EPIPEN

- Pull off the blue cap.
- Place the orange tip against the student’s upper outer thigh.
- Press hard into the outer thigh until the pen clicks.

- Hold in place 3 seconds, and then remove. Someone else may need to help the student hold still.
- Send the used EPIPEN or EPIPEN JR 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 5 to 20 minutes.
- The student should never be left alone until further medical attention is available.
- See 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 who have difficulty swallowing pills, there are some antihistamines now in melt-away tabs.

For more information on epinephrine, refer to the administration of medications section in chapter 3.

The Anaphylaxis Emergency Action Plan is included at the end of this chapter.

Resources

- American Academy of Allergy, Asthma and Immunology: aaaai.org/conditions-and-treatments/allergies/anaphylaxis.aspx

Asthma, Wheezing, Difficulty Breathing

See also the asthma section in 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



(see the asthma action plan in chapter 5) developed and available at all times.

Early symptoms include coughing with exertion, recurring cough or 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 or inability to speak a full sentence without stopping.

- Evaluate the status of the youth.
- Follow the asthma action plan. Remain calm.
- Administer rescue inhaler or nebulization if available (6 puffs with spacer every 20 minutes up to 3 times or 5 mg nebulized albuterol).
- Check pulse oximetry if available to you. Record saturations pre- and post-treatment.
- Contact the parent(s)/guardian(s) (especially if medication is not available).
- Observe the student continuously.
- Call 911 if unable to reach parents or guardians and/or breathing difficulty is getting worse.
- Keep student NPO (nothing by mouth).
- Always allow a student the use of their medication (albuterol) if they feel the need to use it; contact the parent(s)/guardian(s) after allowing the student to use their medication if you have concerns.

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

Breathing Stops

- Have another staff member call 911 and call the parent(s)/guardian(s).
- Open the airway (head tilt, chin lift), and check for breathing.
- If a spinal injury is suspected, use jaw-thrust maneuver.
- Begin CPR if needed.

Chest Pain

Assess the following:

- Level of pain
- History of trauma
- Illness
- Asthma (many youth 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
- Asymmetrical chest movement or abnormal appearance of chest

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

Severe Chest Pain

If pain is associated with any of the following symptoms, call 911 and notify the parent(s)/guardian(s).

While waiting, have student rest in a 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 the student describe, if possible, their level of pain by using a scale of one to 10, one 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 the student to breathe slowly for one minute. Chest pain can be commonly associated with hyperventilation, especially in adolescents.
- Do not have the student breathe into a paper bag.
- Monitor and support the airway, breathing, circulation and pulse oximetry if possible.
- Have the student describe, if possible, their level of pain by using a scale of one to 10, one being the least amount of pain and 10 being the most pain.
- Pediatric chest pain is most commonly caused by musculoskeletal pain (costochondritis). With permission, you can give Motrin 10 mg/kg with a maximum dosage of 800 mg PO.
- Have the student rest in a 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 the parent(s)/guardian(s).
- If the student has a history of sickle cell or increased work of breathing, assess their temperature and notify the parent(s)/guardian(s) 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 the parent(s)/guardian(s).
- Continue to monitor level of pain for any of the signs above under severe pain.

See also information about 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 a brief outline:

- Ask, “Are you choking?” If the student is able to cough and talk, do nothing except observe and encourage coughing.
- If the student is unable to cough, breathe, speak or is 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.



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 the student is unconscious, then begin CPR.

AHA Method of Rescue

- Omit the back blows (except for infants).
- Just do Heimlich maneuver (abdominal thrusts).
- Have someone call 911.
- Continue with Heimlich (abdominal thrusts) until the object is expelled or the student becomes unconscious.
- If unconscious, 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 your arms around their 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 (1/2 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 the parent(s)/guardian(s) to consult their dentist as soon as possible.

- Poor oral hygiene can cause inflamed, bleeding gum tissue. Direct the parent(s)/guardian(s) 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.
- 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-by-2-inch square) to apply direct pressure to the injured area. Give pain reliever with parental 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 local warmth, swelling and pain.
- Rinse with warm salt water (1/2 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.
- With parental permission, you can give Motrin (10 mg/kg max of 800 mg PO) or Tylenol (15 mg/kg max of 650 mg PO). Avoid benzocaine and Orajel.



Cold Sores and Fever Blisters

These 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, as the lesion may be contagious.
- 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.
- Have the parent(s)/guardian(s) contact physician for recommended over-the-counter or prescription medications.

Toothache

Contact the parent(s)/guardian(s) if a student has a toothache or other apparent dental emergency, and direct the parent(s)/guardian(s) to see their dentist as soon as possible.

- Check temperature
- Call and direct the parent(s)/guardian(s) to take the youth to the dentist as soon as possible.
- Rinse mouth vigorously with warm salt water to keep it clean.
- Use dental floss and a toothbrush to remove any food trapped between teeth.
- If swelling is present, apply a cold compress to outside of cheek. This warrants urgent dental attention.
- Give pain reliever with parental permission only (10 mg/kg max of 800 mg of Motrin or 15 mg/kg max of 650 mg of Tylenol).

Prolonged or Recurrent Bleeding after Tooth Extraction

These activities create suction and can dislodge the blood clot in the extraction site.

- For the 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. 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 youth bite down firmly on a sterile 2-by-2-inch gauze.
- Replace the gauze every 15 minutes for one hour.
- Encourage the youth not to chew on the gauze.
- If the bleeding cannot be controlled within 30 minutes, contact and direct the parent(s)/guardian(s) 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 Teeth

- Try to clean the soil, blood and other debris from the injured area by having the youth rinse their mouth with warm water.
- 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 the youth gently bite teeth together.
- Do not try to realign a tooth as this may cause more harm.
- If the 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-by-2-inch gauze moistened with warm water around the tooth if it is sensitive to air when inhaling.
- Have the youth see their dentist.



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 that have been knocked out cannot be replaced.

- Contact the youth's parent(s)/guardian(s) to take them to their dentist immediately (within 30 to 60 minutes).
- Wearing gloves, control bleeding if needed with direct pressure.
- 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 the tooth is found within one hour, many times it can be re-implanted and saved. Time is extremely important.
- 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.
 - If you are unable to put the tooth in the socket and the youth is compliant and older, they can keep the tooth in their mouth (in their cheek) until they can be seen in the emergency room or at their dentist.
 - If not current with their tetanus immunization, the youth should receive a booster injection within 24 hours. Tetanus (lockjaw) can cause serious health problems.
 - If the youth 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.
- If the tooth is broken off at the gumline, a root canal or possible extraction are the only options.

Lacerated Lip or Tongue

- Have the youth rinse their 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-by-2-inch gauze square for 15 to 30 minutes.
- If the lip is lacerated on the vermillion border (where it goes from the skin to the lip), then they need sutures.
- Most tongue lacerations do not require any repair and heal quickly.
- Assess the 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 in the traumatic avulsion section.
- If the injury is severe:
 - Assess the youth for possible head injury. Watch for nausea/vomiting, change in pupils, headache, dizziness or change in level of consciousness.
 - Call 911, and contact the youth's parent(s)/guardian(s) to take them to the emergency room—especially if bleeding does not stop after 15 minutes.

Possible Jaw Dislocation or Fractures

Contact the youth's parent(s)/guardian(s) to take them 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 that may be impacted.
- A cold compress or a piece of ice wrapped in a sterile 2-by-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 dental floss. 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 youth's parent(s)/guardian(s) to have them 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 youth usually has), a piece of gauze, or a small cotton ball to stop the irritation, and have the parent(s)/guardian(s) take their child to the dentist/orthodontist.
- If a wire or appliance becomes loose or broken and cannot be removed easily, contact the parent(s)/guardian(s) to take their child to the dentist/orthodontist immediately.
- Do not attempt to remove any wire that is embedded in the cheek, gum or tongue.
- 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(s)/guardian(s) to take the youth to a dentist or physician immediately if they present 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 their hands thoroughly before touching jewelry.

Supplies for Dental Emergencies

Your school first aid kit should contain these items for dental emergencies:

- Salt
- Milk
- Hank's Balanced Salt Solution
- Non-latex exam gloves (vinyl or nitrile)**
- Petroleum jelly (Vaseline)
- 2-by-2-inch sterile cotton gauze squares
- Sterile cotton swabs



- Gauze pads
- Dental floss
- Tea bags
- Flashlight
- Tongue blades
- Ice pack or wet frozen washcloth
- Toothbrushes
- Toothpicks
- Paraffin, candle or orthodontic wax
- Tweezers

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

Important Notes

- Written permission from the parent(s)/guardian(s) is required for any medications given to students in school. Medications may be given only if there is written parental permission.
- Do not use any product with benzocaine.
- Aspirin should be avoided.

For more information on this subject, routine care of the mouth and gums, or more emergency information, visit dph.georgia.gov/oralhealthprogramga.

Source: Adapted and approved by the Georgia Department of Public Health for submission into the Georgia School Health Resource Manual.

Diabetes

See also the diabetes section in 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 (hypoglycemia) and high blood sugar (hyperglycemia) with moderate to large ketones, which may be indicative of diabetic ketoacidosis. It is necessary to distinguish between the two because each condition requires completely different but immediate actions. The target blood sugar level is individualized; youth generally are treated for hypoglycemia when the blood sugar level is below 70 or 80mg/dL; hyperglycemia with blood sugar level >300mg/dL (if receiving insulin shots) or >250mg/dL (if on an insulin pump) may warrant treatment as well.

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(s)/guardian(s) need 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 the parent(s)/guardian(s) bring 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(s)/guardian(s) 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. Also use the hypoglycemia and hyperglycemia charts as a guideline for the signs and symptoms as well as treatment of low blood sugar and high blood sugar levels.

Resources

- Hypoglycemia from the American Diabetes Association: diabetes.org/living-with-diabetes/treatment-care/hypoglycemia
- Treating Low Blood Sugar video from Children's Healthcare of Atlanta: <https://www.youtube.com/watch?v=-Jk98DexGF8&list=PL5D4F88C136E168EB&feature=plcp>



Hypoglycemia

Treatment: Check blood sugar level. Treat if blood sugar is below 70/80 or symptoms of low blood sugar are present as outlined in the student's diabetes management plan.

If the student does not have a plan or supplies and the student is having symptoms, treat as outlined below.

If the student is able to swallow, give 15 grams of fast-acting carbohydrates, such as three to four glucose tablets, 4-ounce 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.

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

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

If the student is taking insulin by injections, follow the diabetes management plan carefully.

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(s)/guardian(s) as the student needs medical attention. Call the doctor if the parent(s)/guardian(s) cannot be reached.
- If any ketones are present, students should refrain from any physical activity.

- Notify the parent(s)/guardian(s) if hyperglycemia does not respond to treatment as outlined in the diabetes management plan.

If student is taking insulin using an insulin pump, follow the diabetes management plan carefully.

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

- Check site and have the 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 1 to 1 1/2 hours; if blood sugars have not decreased, give a second bolus by injection of fast-acting insulin using a syringe per the 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(s)/guardian(s).
- Give a bolus by injection of fast-acting insulin using a syringe per the 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 the parent(s)/guardian(s) arrive.

Dysmenorrhea (Menstrual Cramps)

- Allow the student to rest in a position of comfort.
- Give analgesic if medication authorized and provided by the parent(s)/guardian(s). Typically, nonsteroidal anti-inflammatory drugs such as ibuprofen are effective for menstrual cramps.



- Applying a heating pad for 10 to 15 minutes can sometimes help alleviate mild to moderate cramping.
- Notify the parent(s)/guardian(s) if the student is not better after 20 to 30 minutes and treatment is ineffective.
- Urge medical care if cramps are disabling or heavy bleeding occurs.

Fainting, Dizziness or Threatened Faint

- Have the student lie down with their feet elevated 10 to 12 inches and loosen tight clothing.
- Maintain an open airway.
- Do not give anything by mouth until the student is alert. Then give juice or regular soda.
- If the student vomits, turn to one side.
- Bathe their face gently with cool water.
- Notify the parent(s)/guardian(s) of the episode.
- Call 911 if the student is not fully alert in two to three minutes.
- Do not allow the student to return to physical activity.
- Obtain a heart rate, blood pressure and saturations if you have the capacity, and record them.

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

Headaches

- Let the student rest.
- Assess headache history, quality of pain, location, radiation, duration and provoking factors.
- Headaches accompanied by the following require immediate medical attention:
 - Vomiting
 - Fever (greater than 100.4 degrees Fahrenheit)
 - Neck stiffness
 - Convulsions or seizure-like activity
 - Decreased level of consciousness or confusion
 - Increasing severity of pain
 - Sudden visual changes
 - Headache following a moderate to severe head injury
- May give analgesic if authorized and provided by the parent(s)/guardian(s).
- If the student has diabetes, check their blood sugar to determine if treatment is required as directed by the diabetes management plan.
- Offer juice or crackers if student is hungry.



Heat Illness

Assess for:		
<ul style="list-style-type: none"> • Temperature • Mental status/orientation 	<ul style="list-style-type: none"> • Skin color • Sweating 	<ul style="list-style-type: none"> • Dizziness, lack of coordination
Types of Heat Illness	Symptoms	First Aid
Heat Cramps	Mild cramping of legs, muscle spasms, normal body temperature, awake and alert	Allow rest in a cool environment. Encourage fluid replacement with water or electrolyte drinks. Gently stretch the cramping muscles. Notify the parent(s)/guardian(s). Monitor for worsening symptoms.
Heat Exhaustion	Body temperature elevated to 101 degrees Fahrenheit or above, skin is flushed not pale, moist, unusual fatigue, nausea/vomiting, headache, dilated pupils, cramping muscle spasms	Remove from activity. Allow rest in a cool environment (at least two hours). Loosen clothing, remove equipment such as pads and other excessive clothing, fan student and elevate legs. Rehydrate with water or electrolyte drinks if not vomiting (at least 4 ounces every 15 minutes). Apply cool, wet cloths to face, chest, armpits. Monitor for worsening symptoms. Notify the parent(s)/guardian(s) if not completely back to normal in 30 minutes. Seek medical care if fever over 102 degrees Fahrenheit, fainting, confusion or seizures occur. May not return to hot environment or any physical activity that day. Avoid exposure to high temperatures for several days.
Heat Stroke (Medical Emergency)	Skin is red, hot and dry, decreased level of consciousness, extremely high body temperature (104 degrees Fahrenheit), incoordination, disoriented, twitching, seizures, diminished respirations	Call 911 and notify the parent(s)/guardian(s). Transport to an air-conditioned room. Remove equipment and as much clothing as possible. Sponge or spray with cool water, apply cool packs to head, armpits, groin and replace as necessary; fan student. Keep student NPO (nothing by mouth) because of altered level of consciousness. Keep from physical activity until medically cleared. Avoid exposure to high temperatures until approved by a doctor.



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
- Certain medications (e.g., diuretics)
- Dehydration
- Some chronic diseases (i.e., diabetes)
- High-intensity exercise
- Alcohol consumption
- Use of heavy equipment or clothing
- Other substance abuse
- Short-term illness, fever
- Recent move to hot, humid environment
- Deconditioning
- 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 archive.nytimes.com/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 hydrating fluids, and insist that students drink frequently. Ideally, body weight should be measured before and after practice. Student athletes should drink:
 - At least 16 ounces two hours before exercise.
 - Approximately 4 to 8 ounces every 10 to 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 to 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 or individuals who have not been eating regular meals and are therefore at risk for electrolyte imbalances.



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

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: nfhslearn.com/courses/heat-illness-prevention-2
- How to Acclimate Student Athletes to Heat: athleticbusiness.com/athlete-safety/how-to-acclimate-student-athletes-to-heat.html
- National Weather Service Forecast Office: weather.gov/srh/nws/offices
- Preseason Heat-Acclimatization Guidelines for Secondary School Athletics: ncbi.nlm.nih.gov/pmc/articles/PMC2681206/

Hyperventilation

- Hyperventilation is often associated with numbness of hands.
- Be calm and reassuring with the student.
- Have the student sit down, and “coach” him to take slower breaths of normal depth.
- Tell the student you will stay with them and distract their attention if possible.
- Obtain a heart rate and saturations (pulse ox) if you have the capacity.
- Do not have student breathe into a paper bag.

Nosebleeds (Epistaxis)

- Wear gloves, and encourage mouth breathing.
- Place the student in a sitting position, head forward. Do not let the student put their head back. This is to avoid swallowing blood.



- Apply constant, uninterrupted pressure by compressing nostrils together or affected nostril against bony cartilage (ideally, right under the nasal bridge) for at least 10 minutes. Most youth cannot apply enough pressure for a long enough time without assistance. Apply ice pack to the nose or to the bridge of the nose or cheek, if tolerated. Icepacks help stop the bleeding by constricting the blood vessels.
- Avoid peeking 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 the student quiet, and notify the parent(s)/guardian(s) if bleeding is not easily stopped.
- Do not let the student blow their nose.
- Do not stick packing into the nose, as the removal of this can cause the clot to be dislodged, allowing another bleeding.
- Prolonged or recurrent nosebleeds may need medical attention.

Seizures/Convulsions

See also the seizures section in 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 the student from hurting themselves and lower them to the floor.
- Check the time to monitor duration of the seizure.
- Check their airway and monitor breathing.
- Do not put anything in the student’s mouth and do not restrain the student.
- Consult and follow the seizure action plan.
- Loosen constricting clothing; turn to side if vomiting occurs.
- If student has known seizure disorder and has Diastat, record seizure and give Diastat rectally after five minutes of seizure activity.

- Call 911 if:
 - First known seizure.
 - Repeated seizures without regaining consciousness.
 - Clustered seizures more than three in an hour.
 - 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 the youth has diabetes and is seizing, administer glucagon.
- Notify the parent(s)/guardian(s).
- Assist to side-lying position after the seizure.
- Allow the student to rest and monitor them continuously after seizure.

Additional resources can be found from the Epilepsy Foundation at [epilepsy.com/recognition](https://www.epilepsy.com/recognition).

Shock

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 their head flat and feet elevated.
- Cover enough to keep the student warm, but do not bundle or overheat the student.
- If student is on the ground, place a blanket under the student.
- Call 911, and notify the parent(s)/guardian(s).
- Do not give student anything by mouth.
- Obtain heart rate, blood pressure, temperature and saturations if possible and record them.



Section 4: Prevention and Preparedness

Automated External Defibrillator (AED) Programs in Schools

On average, 900 to 1,000 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 House Bill 1031, requiring all public high schools with interscholastic athletic programs to have an AED onsite. Many Georgia school districts have deployed AEDs in all schools in their district.

A scientific statement was issued by the American Heart Association, AAP, NASN and others in 2016, titled “Cardiac Emergency Response Planning for Schools.” This document recommends that a medical emergency response plan include:

- 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).

Source: journals.sagepub.com/doi/abs/10.1177/1942602X16655839

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. More than 1,450 Georgia schools have already been recognized through this program. Project S.A.V.E. is the state affiliate of Project ADAM (Automated Defibrillators in Adam’s Memory) at Children’s Hospital of Wisconsin. Visit choa.org/projectsave for contact information.

Resources

- Importance and Implementation of Training in CPR and AED in Schools: ahajournals.org/doi/full/10.1161/CIR.0b013e31820b5328
- Project Adam from Children’s Hospital of Wisconsin (sign up for quarterly newsletter and watch video): projectadam.com
- Parent Heart Watch – Protecting Youth from Sudden Cardiac Arrest: parentheartwatch.org
- Sudden Cardiac Arrest Coalition: stopcardiacarrest.org
- Sudden Arrhythmia Death Syndromes (SADS) Foundation: sads.org/
- Sudden Cardiac Arrest Foundation You Can Save a Life at School: sca-aware.org/campus
- The Louis J. Acompora Memorial Foundation: la12.org

Emergency Care for Students With Special Needs

Youth considered to have special (healthcare) needs are those youth who 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 youth have end up requiring emergency care for



acute life-threatening episodes at some time during their school career. Sadly, to this day, these youth often lack good health records concerning their history, treatments and medications. It is even more important for these youth 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’s 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. As is always good nursing practice, adhere to confidentiality at all times; keep the records secure yet readily available in an emergency.

For more information on this subject, including a completed example form, review the article, “Emergency Information Forms and Emergency Preparedness for Children with Special Healthcare Needs.” *Pediatrics*. Vol. 125, No. 4, April 1, 2010, pp. 829 -837 (doi: 10.1542/peds.2010-0186), publications.aap.org/pediatrics/article/125/4/829/73164/Emergency-Information-Forms-and-Emergency?autologincheck=redirected.

Emergency Preparedness in Schools

The possibility of an emergency occurring in schools can happen at any time, and school personnel, including school nurses and the School Health Team, should be prepared to handle them safely and effectively and to implement recovery efforts. School administrators, school nurses, school police, staff, parents/guardians and local emergency organizations should work together to educate, address and promote school-wide safety and to plan for emergencies. Emergencies can vary from natural disasters to school shootings to individual student accidental emergencies. After all, safety is everyone’s responsibility.

Example of an Emergency Preparedness Checklist for School Nurses from Fulton County Schools

Establish list of individuals trained in CPR/AED and Stop the Bleed.

- Include school nurses, clinic assistant (CA) and other school staff who have been trained and are affiliated with your school.

- Keep a copy of this list in the emergency bag/cart of supplies.

Establish a designated location to store the emergency bag/cart of supplies.

- Ensure the bag/cart can be easily transported to the evacuation site. The easier the bag/cart is to carry, push or roll, the better.
- Ensure there are at least two school staff designated to get the bag/cart (one should be the clinic aid or clinic nurse and another back-up staff person) in the event of an emergency evacuation.
- See the list of recommended school clinic emergency supplies.
- Conduct monthly checks of the bag/cart to ensure items are not expired, etc.

Review the schools emergency management protocol on first aid team duties and checklist.

- Ensure a copy of the protocol is placed in the bag/cart, along with several copies of the emergency first aid station medical treatment log.

Maintain a medical alert list of students with chronic illnesses, emergency medications, etc.

- Keep a medical alert list updated and current in the bag/cart.
- Ensure emergency medications are readily available in case of an emergency.

School administrators should include in their safety plan any special accommodations for any student and/or staff who require additional assistance or consideration during an emergency.

Georgia law requires every public school to prepare a school safety plan to help curb the growing incidence of violence in schools, to respond effectively to such incidents, and to provide a safe learning environment for Georgia’s children, teachers and other school personnel. The law also states that school safety plans must include the following strategy areas at a minimum:

1. Training school administrators, teachers and support staff, including, but not limited to, school resource officers, security officers, secretaries, custodians and bus drivers, on school violence prevention, school security, school threat assessment, mental health awareness and school emergency planning best practices.



2. Evaluating and refining school security measures.
3. Updating and exercising school emergency preparedness plans.
4. Strengthening partnerships with public safety officials.
5. Creating enhanced crisis communications plans and social media strategies.

School safety plans of private schools may be prepared with input from students enrolled in that school, parents/guardians of such students, teachers in that school, other school employees and local law enforcement, fire service, public safety and emergency management agencies. Such plans shall be reviewed and, if necessary, updated annually.

Such plans of public schools shall be submitted to the local emergency management agency and the local law enforcement agency for approval.

According to FEMA, the first step in the emergency planning process for schools is to form a collaborative planning team.

The school nurse brings valuable knowledge and expertise in first aid, triage techniques and the medical needs of the students in the school (FEMA, 2018). NASN also promotes the inclusion of the school nurse as a leader in all aspects of emergency preparedness and disaster planning. There is training provided on NASN's website on School Emergency Triage Training. As the primary connection between the medical and public health community and often the only healthcare provider in the school building, school nurses are in a unique position to provide input in the development of the school safety/emergency-preparedness plan.

It is therefore important for school nurses to understand the roles and responsibilities of the district and local school-level staff responsible for emergency preparedness and school safety plans. School nurses should lead the discussions regarding the expectations of their role in the plan and ensure that they are familiar with the resources available to contribute meaningfully to the planning and evaluation processes.

Emergency Preparedness Resources

NASN Position Statement on Emergency Preparedness and Response in the School Setting, The Role of the School Nurse: <https://www.nasn.org/nasn-resources/professional-practice-documents/position-statements/ps-emergency-preparedness>

School Planning

- Caring for Children in a Disaster: Schools and Child Care Centers Resources from the CDC (helps schools plan, prepare and respond to disasters): [cdc.gov/childrenindisasters/schools.html](https://www.cdc.gov/childrenindisasters/schools.html)
- Guide for Developing High-Quality Emergency Operations Plans (a guide for schools and school districts from the U.S. Department of Education and other agencies): [rem.ed.gov/docs/rem_s_k-12_guide_508.pdf](https://www.rems.ed.gov/docs/rem_s_k-12_guide_508.pdf)
- Prepare Your School from The American Red Cross: [redcross.org/get-help/how-to-prepare-for-emergencies/teaching-kids-about-emergency-preparedness/how-schools-can-prepare-for-emergencies.html](https://www.redcross.org/get-help/how-to-prepare-for-emergencies/teaching-kids-about-emergency-preparedness/how-schools-can-prepare-for-emergencies.html)
- School Emergency Triage Training from NASN: [nasn.org/education-events/sett](https://www.nasn.org/education-events/sett)

Community Planning

- Are You Ready? (in-depth guide to citizen preparedness from FEMA): [ready.gov](https://www.ready.gov)
- Department of Homeland Security: [dhs.gov](https://www.dhs.gov)
- Disaster Behavioral Health Information Series (collections from the Substance Abuse and Mental Health Services Administration): [samhsa.gov/dtac/dbhis-collections](https://www.samhsa.gov/dtac/dbhis-collections)
- Medical Reserve Corps (national network of local groups of volunteers committed to improving the public health, emergency response and resiliency of their communities): [aspr.hhs.gov/MRC/Pages/index.aspx](https://www.aspr.hhs.gov/MRC/Pages/index.aspx)
- EMSC Innovation and Improvement Center: [emscimprovement.center](https://www.emscimprovement.center)
- Emergency Preparedness and Response, Health and Safety Concerns for All Disasters (a CDC resource that addresses types of natural disasters and health and safety concerns for all disasters): [emergency.cdc.gov/disasters/alldisasters.asp](https://www.emergency.cdc.gov/disasters/alldisasters.asp)



- Disasters and Emergencies (information from FEMA on how you can plan and prepare to protect your family, property and community from natural and human-made disasters): ready.gov/be-informed
- National Center for Disaster Medicine and Public Health (the nation’s academic center of excellence for education, training and educational research in disaster medicine and public health preparedness, including resources related to youth and schools): ncdmp.usuhs.edu/

Planning and Coping for Children/General

- Be a Hero! (interactive website for children, parents/guardians and educators): ready.gov/kids
- Helping youth manage distress in the aftermath of a shooting from the American Psychological Association: apa.org/helpcenter/aftermath.aspx
- Resolution on The Psychological Needs of Children Exposed to Disasters from the American Psychological Association: apa.org/about/policy/children-disasters
- Let’s Get Ready! (toolkits from Sesame Street, including guides and videos): sesameworkshop.org/topics/emergencies/
- Unaccounted For: A National Report Card on Protecting Children in Disasters from Save the Children: savethechildren.org/content/dam/global/reports/emergency-humanitarian-response/disaster-report-13-.pdf
- Protecting Children in Disasters: A Guide for Parks and Recreation Professionals from Save the Children: <https://www.savethechildren.org/content/dam/usa/reports/emergency-prep/GRGS-PARKS-REC-GUIDE.PDF>

Additional Resources

- Emergency Preparedness and Response resources from the Georgia Department of Education: gadoe.org/wholechild/Pages/Emergency-Preparedness-and-Response.aspx
- Disasters and Children from the AAP: aap.org/en/patient-care/disasters-and-children/

- Disaster Planning for Schools from the AAP: pediatrics.aappublications.org/content/122/4/895.full.pdf+html
- Disaster preparedness links from NASN: nasn.org/nasn/nasn-resources/practice-topics/disaster-preparedness
- School Emergency Triage Training from NASN: nasn.org/nasn/programs/conferences/sett
- Before, During, and After School Emergencies from the CDC: cdc.gov/orr/school-preparedness/emergency_preparedness.html
- School Safety Training from the Georgia Emergency Management and Homeland Security Agency: gema.georgia.gov/school-safety-training
- School Safety from the Department of Homeland Security: dhs.gov/school-safety
- National Nurse Emergency Preparedness Initiative: nnepi.org/
- Ready Rating Program from the American Red Cross: readyrating.org

References

- O.C.G.A. 20-2-1185 (2010). School safety plans
- Federal Emergency Management Agency. (2018). Multihazard Emergency Planning for Schools: training.fema.gov/programs/emischool/el361toolkit/siteindex.htm
[documents/position-statements/ps-emergency-preparedness](https://training.fema.gov/programs/emischool/el361toolkit/documents/position-statements/ps-emergency-preparedness)

“Go Bag” Suggested Emergency Supplies for the School Setting

For your school’s go bag, choose a sturdy supply bag with several pockets, or consider a larger plastic container. You may need two or more for a large campus. Keep the go bag near entrances and in the clinic.

- Personal protective equipment: Gloves, goggles, gown, pocket face mask
- Band-Aids; triangular bandages; roller type bandages 2 inch, 3 inch, 4 inch; 4-by-4 inches; occlusive dressings (Vaseline gauze); tape; nonadherent 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 the bag must be taken away from the clinic in an evacuation situation, take emergency medications (EPIPEN, asthma inhalers, glucagon kit and other supplies for treating a low blood sugar).

Adapted from NASN's 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.

Falls are the most common playground injuries, accounting for more than 75% of all playground-related injuries.

Supervision

All playgrounds present some challenge, and youth will use equipment in unintended and unanticipated ways. Therefore, adult supervision is always necessary. Lack of supervision is associated with approximately 45% of playground-related injuries.

- Youth should dress appropriately for the playground. Necklaces, purses, strings or clothing with drawstrings can be caught on equipment and pose a strangulation hazard. Even helmets can be dangerous on a playground.
- Teach youth that pushing, shoving and crowding while on the playground can be dangerous.
- Monitor the injuries for patterns that indicate a problem with particular equipment or lack of needed supervision. The school nurse should also assess the need for further training of playground supervisors by monitoring first aid rendered on the playground.

Equipment

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

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% of injuries. Hard surfaces, such as asphalt, blacktop, concrete, grass and packed dirt, should not be used. Acceptable surfaces depend upon potential fall height and may include loose-fill surfaces such as sand, pea gravel, crumb rubber and wood products, and unitary surfaces such as rubber tile and poured-in-place. 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, and playground surfacing material must be adequately maintained and its performance periodically verified.



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 incidences 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 youth). Openings on playground equipment should be less than 3 1/2 inches or greater than 9 inches to prevent entrapment of heads or bodies.
- Children younger than 8 do not typically have the upper body strength to successfully do monkey bars and should be directly supervised. Consider posting an age recommendation or requirement for monkey bars.
- 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.
 - Surrounded with appropriate surfacing, which extends twice the height of the suspending bar. For example, if the top of the swing is 10 feet high, the surface should extend 20 feet.
- 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. Strangulation is the leading cause of playground fatalities. Metal slides should be shaded or covered to prevent burns in hot sun. Slides should be surrounded by guardrails and barriers. The minimum recommended length of the exit zone at the bottom slide is 6 feet for slides less than 6 feet high or equal to the height of the slide up to a maximum of 8 feet, and should not overlap with the use zone of any other equipment.

- Seesaws should have secure handles sized so youth 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 youth 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 and the Public Playground Safety Handbook 2010, [cpsc.gov/s3fs-public/325.pdf](https://www.cpsc.gov/s3fs-public/325.pdf).

Playground Report Card: playgroundsafety.org/research/state-report-cards

Special Considerations for Field Day and 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/guardians 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 the school year, 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. Identify and designate shaded areas for scheduled breaks in case of excessive heat. Discuss this with the principal. Refer to a heat index chart, which 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. Send reminders home with students the day before for parents/guardians to provide hats, sunglasses and sunscreen, if possible. Prior to field day would be a good time to consider sun-safety health education classes.
- Review the section about preventing heat illness in 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 to 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 supervise 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

- Heat-related illness information from Children’s Healthcare of Atlanta: choa.org/parent-resources/sports-medicine/heat-related-illness
- Playtime safety information from Children’s Healthcare of Atlanta: choa.org/parent-resources/orthopedics/playtime-safety
- Extreme Heat: A Prevention Guide to Promote Your Personal Health and Safety from the CDC: cdc.gov/disasters/extremeheat/index.html
- Extreme Heat Media Toolkit Print Materials from the CDC: cdc.gov/disasters/extremeheat/index.html
- Playground Safety Tips from Safe Kids Worldwide: safekids.org/tip/playground-safety-tips



Section 5: Chapter 2 Appendix



Anaphylaxis Emergency Action Plan

Patient Name: _____ Age: _____

Allergies: _____

Asthma Yes (*high risk for severe reaction*) No

Additional health problems besides anaphylaxis: _____

Concurrent medications: _____

	Symptoms of Anaphylaxis
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!

Emergency Action Steps - DO NOT HESITATE TO GIVE EPINEPHRINE!

1. Inject epinephrine in thigh using (check one): Adrenaclick (0.15 mg) Adrenaclick (0.3 mg)
- Auvi-Q (0.15 mg) Auvi-Q (0.3 mg)
- EpiPen Jr (0.15 mg) EpiPen (0.3 mg)
- Epinephrine Injection, USP Auto-injector- authorized generic
- (0.15 mg) (0.3 mg)
- Other (0.15 mg) Other (0.3 mg)

Specify others: _____

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

2. Call 911 or rescue squad (before calling contact)

3. Emergency contact #1: home _____ work _____ cell _____

Emergency contact #2: home _____ work _____ cell _____

Emergency contact #3: home _____ work _____ cell _____

Comments: _____

Doctor's Signature/Date/Phone Number

Parent's Signature (for individuals under age 18 yrs)/Date

This information is for general purposes and is not intended to replace the advice of a qualified health professional. For more information, visit
www.aaaai.org. © 2017 American Academy of Allergy, Asthma & Immunology 4/2017



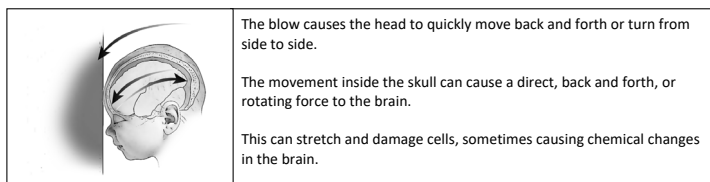
Caring for your child with a concussion Age 4 years and younger



What is a concussion?

A concussion:

- Is a type of traumatic brain injury (TBI) caused by a blow to the head or another part of the body.
- **Affects how the brain functions and processes** information at the neurochemical level.
- **Is not a structural injury** to the brain, so imaging tests such as a CT scan or MRI will most often look normal.



Concussions are rarely life-threatening. Despite sometimes being referred to as a “mild” TBI, a concussion is still a TBI and can have serious effects, especially if not recognized and treated. Multiple concussions are especially dangerous.

What are the common symptoms of a concussion?

Symptoms of concussion can occur right away or up to 2 days after the injury. They may include:

Physical	Thinking and remembering	Social and emotional	Sleep
Headache	Trouble thinking clearly	Being irritable or fussier than normal	Sleeping less than normal
Sensitivity to noise and light	Hard time remembering	Feeling more emotional	Sleeping more than normal
Loss of balance	Feeling slower	Feeling sad or nervous	Trouble falling asleep
Trouble walking		Being aggressive	
Being really tired or drowsy		Hard to console	
Nausea or vomiting			
Vision changes			

What to watch for after your young child's concussion

1. Symptoms may worsen or new ones may appear over the first 48 hours.
2. Your child may not know they have symptoms until they try to do their normal activities.
3. Most children feel better within about 2 weeks. If your child does not, they may need to see a specialist.

What to do in the first few days

1. **Have your child take it easy in a quiet environment. When symptoms are more severe:**
 - Limit cognitive (thinking or remembering) and physical activities to allow the brain to heal.
 - Avoid excessive screen time (watching TV or looking at a cell phone or computer screen). Find relaxing activities at home, such as drawing and playing with toys.
 - Slowly resume normal activity, as long as symptoms do not get worse.
2. **Your child may slowly return to regular (nonstrenuous) activities as they start to feel better. During this time, encourage them to:**
 - Spend time outside, such as taking short walks.
 - Get as much sleep as possible at night.
 - Take fewer daytime naps or return to their daytime nap schedule (as appropriate for their age).

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3. As symptoms improve, you may:

- Encourage outside time.
- Return your child to their regular schedule.
- Have your child take breaks if their symptoms worsen. If you notice any changes, call your child's doctor.

Important tips

1. **Make an appointment with your child's primary care doctor (PCP) as soon as possible.** Keep the appointment even if your child starts to feel better. Your child's doctor will track their recovery and advise you on their safe return to school and sports or play activities.
2. **Avoid waking up your child at night to check on them.** Your child's brain needs to rest and get as much sleep as possible in the first few days after a concussion.
3. **Have your child eat a healthy diet and drink more clear fluids (like water) than normal.** Even though your child may not feel like eating, offer small amounts of food and fluids every 3 to 4 hours and before bed.
4. **Give acetaminophen (Tylenol) or ibuprofen (Motrin or Advil) for pain if advised by your child's doctor.**

Helping your child safely return to day care or school

Your child may:

- Need to take a short time off from day care or school right after the concussion, but it is not necessary for a child to be 100 percent symptom-free before returning to school. Multiple absences from school and prolonged inactivity after a concussion are discouraged.
- Return to day care or school with accommodations even if they still have symptoms. Accommodations are changes to your child's normal schedule and activities that are supported by the school. For most children, only short-term changes are needed.

Please note: returning to day care or school does not mean returning to play. Your child should not return to play outside or go to PE or recess until their doctor says it is OK.

Helping your child safely return to sports and play

1. Your child should **not** return to sports and play on the same day of the injury.
2. Your child's doctor will let you know when it is OK for your child to **return to sports**.
3. The Children's Healthcare of Atlanta Sports Medicine team has **return to play (RTP) instructions** for 11 sports on choa.org. The stages vary depending on the sport.

See the separate [return to play](#) instructions for more information.

When to seek help right away

If you cannot reach your doctor right away, return to the emergency department if your child:

- Has more headaches or neck pain
- Is hard to wake up
- Vomits more than 2 times in 24 hours
- Has unusual behavior or seems confused, restless or agitated
- Cannot think clearly or remember things
- Has slurred speech, weakness, or numbness, or does not move like normal
- Cannot recognize people or places
- Has convulsions or seizures
- Passes out

Have questions? Call the Children's Concussion Program nurse

Speak with our Concussion Program nurse for advice and help if you cannot reach your doctor. Our nurses can also help you schedule an appointment if your child needs to see a Children's concussion specialist.

1. Call **404-785-KIDS (5437) Monday through Friday from 8 a.m. to 4 p.m.**
2. Visit choa.org/concussion for more education and return to learn/play instructions.
3. You can also find information at cdc.gov/headsup (Centers for Disease Control and Prevention).

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child. **In case of an urgent concern or emergency, call 911.**



Cuidado de su hijo con una conmoción cerebral
Edad - 4 años o menos
Caring for your child with a concussion
Age 4 years and younger

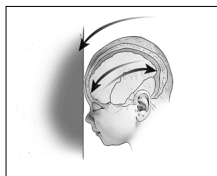


Children's
Healthcare of Atlanta

¿Qué es una conmoción cerebral?

Una conmoción cerebral:

- Es un tipo de lesión cerebral traumática (TBI, por sus siglas en inglés), ocasionada por un golpe en la cabeza o en cualquier otra parte del cuerpo.
- **Afecta la manera en la que el cerebro funciona y procesa** información a nivel neuroquímico.
- **No es una lesión estructural** del cerebro, por lo que los exámenes de imágenes, como las tomografías computarizadas (CT, por sus siglas en inglés) o las resonancias magnéticas (MRI, por sus siglas en inglés) tienden a presentar resultados normales.



El golpe hace que la cabeza se mueva con mucha rapidez hacia atrás y hacia adelante, o que comience a girar de un lado al otro.

El movimiento que se produce dentro del cráneo puede generar una fuerza directa de desplazamiento hacia adelante y hacia atrás, o una fuerza de rotación en el cerebro.

Este movimiento brusco puede estirar y dañar las células cerebrales, lo que, en algunos casos, puede generar cambios químicos en el cerebro.

Por lo general, las conmociones cerebrales no ponen en peligro la vida del paciente. Aun cuando en ocasiones se describe como una lesión cerebral traumática (TBI) leve, una conmoción cerebral no deja de ser una lesión cerebral traumática que puede tener efectos graves, sobre todo si no se detecta o no se trata. Las conmociones cerebrales múltiples son especialmente peligrosas.

¿Cuáles son los síntomas más comunes de la conmoción cerebral?

Los síntomas de la conmoción cerebral pueden aparecer de inmediato o hasta 2 días después de la lesión y pueden incluir los siguientes:

Físicos	Capacidad para pensar y recordar	Sociales y emotivos	Patrones del Sueño
Dolor de cabeza	Dificultad para pensar con claridad	Estar más irritable o quisquilloso de lo normal	Dormir menos de lo normal
Sensibilidad al ruido y a la luz	Dificultad para recordar	Sentirse más sensible	Dormir más de lo normal
Pérdida del equilibrio	Sensación de lentitud	Sentirse triste o nervioso	Tener dificultades para quedarse dormido
Dificultad para caminar		Actuar con agresividad	
Sensación profunda de cansancio o mareo		Ser difícil consolar	
Náuseas o vómitos			
Alteraciones de la visión			

Aspectos a vigilar si su hijo sufrió una conmoción cerebral

1. Los síntomas pueden empeorar o pueden aparecer otros nuevos durante las primeras 48 horas.
2. Es probable que su hijo no se dé cuenta de que tiene algún síntoma hasta que intente realizar sus actividades normales.
3. La mayoría de los niños se sienten bien después de 2 semanas. Si esto no le sucede a su hijo, puede ser necesario que lo vea un especialista.

Qué hacer durante los primeros días

1. **Asegúrese de que su hijo tome las cosas con calma y esté en un ambiente tranquilo.** Si los síntomas son más graves:
 - Limite las actividades cognitivas (capacidad para pensar o recordar) y físicas para permitir que su cerebro se recupere.
 - Evite que pase mucho tiempo frente a pantallas (viendo TV o jugando con su celular o la computadora). Organice actividades relajantes en casa, como dibujar o distraerse con sus juguetes.
 - Retome las actividades normales lentamente, siempre y cuando los síntomas no empeoren.
2. **A medida que empiece a sentirse mejor, su hijo puede retomar sus actividades normales (no extenuantes), lentamente.** Durante este tiempo, **ánimelo a:**
 - Pasar tiempo al aire libre con actividades como caminatas cortas.

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- Dormir todo lo que pueda durante la noche.
 - Tomar menos siestas de día o volver a su horario normal de siestas (adecuado para su edad).
3. **A medida que los síntomas van mejorando, puede:**
 - Animarlo a pasar más tiempo al aire libre.
 - Permitir que retome su rutina normal de actividades.
 - Dejarlo descansar si nota que los síntomas empeoran. Si observa algún cambio, llame al médico de su hijo.

Consejos importantes

1. **Haga una cita con el médico de atención primaria (PCP, por sus siglas en inglés) de su hijo lo antes posible.** Conserve la cita, aunque su hijo empiece a sentirse mejor. El médico de su hijo controlará su recuperación y le indicará cuando sea seguro para su hijo retomar a sus actividades escolares, deportivas o de recreación.
2. **Evite despertarlo de noche para ver cómo está.** El cerebro de su hijo necesita descansar y dormir lo más posible durante los primeros días después de una conmoción cerebral.
3. **Asegúrese de que su hijo tenga una dieta saludable y que beba más líquidos claros (como agua) de lo normal.** Aunque su hijo no tenga muchas ganas de comer, ofrézcale porciones pequeñas de alimentos y líquidos cada 3 o 4 horas y antes de acostarse.
4. **Dele acetaminofén (Tylenol) o ibuprofeno (Motrin o Advil) para el dolor, si así lo indicó el médico.**

Ayudar a su hijo a regresar a la guardería o a la escuela, sin poner en peligro su seguridad

Es posible que su hijo:

- Tenga que dejar de ir a la guardería o a la escuela durante un tiempo después de la conmoción cerebral, pero no necesita que los síntomas hayan desaparecido por completo antes de regresar. No se recomiendan las ausencias continuas a la escuela ni periodos prolongados de inactividad después de una conmoción cerebral.
- Vuelva a la guardería o escuela con ciertos ajustes, incluso si aún tiene síntomas. Los ajustes son simples cambios en la rutina normal y las actividades de su hijo con el apoyo de la escuela. Para la mayoría de los niños, estos ajustes sólo son necesarios a corto plazo.

Tomar en cuenta que regresar a la guardería o a la escuela no significa que su hijo pueda participar en todos los juegos. Su hijo no puede jugar al aire libre, participar en clases de Educación Física (PE, por sus siglas en inglés), ni salir al recreo hasta que su médico lo autorice.

Ayudar a su hijo a retomar a sus actividades deportivas y recreativas

Su hijo **no** debe retomar sus actividades deportivas y recreativas el mismo día de la lesión.

1. El médico de su hijo le informará cuándo puede reiniciar sus **actividades deportivas.**
2. El equipo de Medicina Deportiva del Children's Healthcare of Atlanta tiene **instrucciones para el regreso al juego (RTP, por sus siglas en inglés) de 11 deportes.** Puede encontrarlas en deportes (*sports*) en choa.org. Las etapas varían según el deporte.

Para información adicional, lea las instrucciones para el [regreso al juego](#).

Cuándo buscar ayuda de inmediato

Si no logra comunicarse de inmediato con el médico, regrese a la Sala de Urgencias si su hijo:

- Tiene más dolores de cabeza o cuello
- Tiene dificultad para despertarse
- Vomita más de 2 veces en 24 horas
- Tiene un comportamiento poco usual o parece confundido, intranquilo o agitado
- No puede pensar con claridad ni recordar cosas
- Arrastra las palabras al hablar, siente debilidad, entumecimiento o se mueve de manera inusual
- No reconoce personas o lugares
- Tiene convulsiones o ataques
- Se desmaya

¿Tiene alguna pregunta? Llame a la enfermera del Programa de Conmoción Cerebral del Children's

Si no puede contactar a su médico, hable con la enfermera de nuestro Programa de Conmoción Cerebral para que le ayude y asesore. Nuestras enfermeras también pueden ayudarlo a programar una cita si su hijo necesita consultar con un especialista en conmoción cerebral en Children's.

1. Llame al **404-785-KIDS (5437), de lunes a viernes, de 8 a.m. a 4 p.m.**
2. Visite choa.org/concussion para más información e instrucciones sobre el regreso a las actividades de estudio y juego.
3. También puede encontrar información adicional en cdc.gov/headsup (Centers for Disease Control and Prevention - Centros de Control y Prevención de Enfermedades).

Esta hoja educativa solo contiene información general. Hable con el médico de su niño o con uno de los miembros de su equipo de atención médica sobre los cuidados específicos. **En caso de emergencia o de un problema urgente, llame al 911.**



Caring for your child with a concussion Ages 5 to 21 years

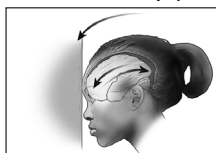


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What is a concussion?

A concussion:

- Is a type of traumatic brain injury (TBI) caused by a blow to the head or another part of the body.
- **Affects how the brain functions and processes** information at the neurochemical level.
- **Is not a structural injury** to the brain, so imaging tests such as a CT scan or MRI will most often look normal.



The blow causes the head to quickly move back and forth or turn from side to side.

The movement inside the skull can cause a direct, back and forth, or rotating force to the brain.

This can stretch and damage cells, sometimes causing chemical changes in the brain.

Concussions are rarely life-threatening. Despite sometimes being referred to as a “mild” TBI, a concussion is still a TBI and can have serious effects, especially if not recognized and treated. Multiple concussions are especially dangerous.

What are the common symptoms of a concussion?

Symptoms of concussion can occur right away or up to 2 days after the injury. They may include:

<u>Physical</u>	<u>Thinking and remembering</u>	<u>Social and emotional</u>	<u>Sleep</u>
Headache	Trouble thinking clearly	Being irritable or fussier than normal	Sleeping less than normal
Sensitivity to noise and light	Hard time remembering	Feeling more emotional	Sleeping more than normal
Loss of balance	Feeling slower	Feeling sad or nervous	Trouble falling asleep
Trouble walking		Being aggressive	
Being really tired or drowsy		Hard to console	
Nausea or vomiting			
Vision changes			

What to watch for after your child's concussion

1. Symptoms may worsen or new ones may appear over the first 48 hours.
2. Your child may not know they have symptoms until they try to do their normal activities.
3. Most people feel better within about 2 weeks. If your child does not, they may need to see a specialist.

What to do in the first few days

1. **Take it easy in a quiet environment. When symptoms are more severe:**
 - Limit cognitive (thinking or remembering) and physical activities to allow the brain to heal.
 - Avoid excessive screen time (watching TV or looking at a cell phone or computer screen). Find relaxing activities at home, such as drawing and playing with toys.
 - Slowly resume normal activity, as long as symptoms do not get worse.
2. **Your child may slowly return to regular (nonstrenuous) activities as they start to feel better. During this time, encourage them to:**
 - Spend time outside, such as taking short walks.
 - Get as much sleep as possible at night.
 - Take fewer daytime naps or return to their daytime nap schedule (as appropriate for their age).
 - Do homework for 10 to 15 minutes at a time, as long as symptoms do not get worse.
 - At this point, your child may check their cell phone, watch TV, play video games and visit with friends for short periods of time, as long as symptoms do not get worse.

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3. As symptoms improve, you may:

- Encourage outside time.
- Return your child to their regular schedule.
- Have your child take breaks if their symptoms worsen. If you notice any changes, call your child's doctor.

Important tips

1. **Make an appointment with your child's primary care doctor (PCP) as soon as possible.** Keep the appointment even if your child starts to feel better. Your child's doctor will track their recovery and advise on their safe return to school and sports or play activities.
2. **Avoid waking up your child at night to check on them.** Your child's brain needs to rest and get as much sleep as possible in the first few days after a concussion.
3. **Have your child eat a healthy diet and drink more clear fluids (like water) than normal.** Even though your child may not feel like eating, offer small amounts of food and fluids every 3 to 4 hours. Limit soft drinks and caffeine.
4. **Give acetaminophen (Tylenol) or ibuprofen (Motrin or Advil) for pain if advised by your child's doctor.**

Helping your child safely return to school

Your child may:

- Need to take a short time off from school right after the concussion, but it is not necessary for a child to be 100 percent symptom-free before returning to school. Multiple absences from school and prolonged inactivity after a concussion are discouraged.
- Return to school with accommodations even if they still have symptoms. Accommodations are changes to your child's normal schedule and activities. Most schools require written accommodations from your child's doctor. For most children, only short-term changes are needed.

Please note: returning to school does not mean returning to sports and play. Your child should not return to PE, recess, sports or workouts until their doctor says it is OK.

Helping your child safely return to sports and play

1. Your child should **not** return to sports and play on the same day of the injury.
2. Your child must return to **normal schoolwork and studies before** returning to game play.
3. Your child's doctor will let you know when it is OK for your child to **return to sports**.
4. The Children's Healthcare of Atlanta Sports Medicine team has **return to play (RTP) instructions** for 11 sports on choa.org. The stages vary depending on the sport.
5. If your child is a student athlete, it is **very important that their school is aware** of their concussion. Returning to sports too early may slow healing and increase risk of a second concussion, which has serious effects (e.g., second impact syndrome).

See the separate [return to learn](#) and [return to play](#) instructions for more information.

When to seek help right away

If you cannot reach your doctor right away, return to the emergency department if your child:

- Has more headaches or neck pain
- Is hard to wake up
- Vomits more than 2 times in 24 hours
- Has unusual behavior, or seems confused, restless or agitated
- Cannot think clearly or remember things
- Has slurred speech, weakness or numbness, or does not move like normal
- Cannot recognize people or places
- Has convulsions or seizures
- Passes out

Have questions? Call the Children's Concussion Program nurse

Speak with our Concussion Program nurse for advice and help if you cannot reach your doctor. Our nurses can also help you schedule an appointment if your child needs to see a Children's concussion specialist.

1. Call **404-785-KIDS (5437) Monday through Friday from 8 a.m. to 4 p.m.**
2. Visit choa.org/concussion for more education and return to learn/play instructions.
3. You can also find information at cdc.gov/headsup (Centers for Disease Control and Prevention).

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child. **In case of an urgent concern or emergency, call 911.**



Cuidado de su hijo con una conmoción cerebral

Edad - entre los 5 y los 21 años

Caring for your child with a concussion

Ages 5 to 21 years

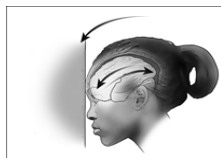


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¿Qué es la conmoción cerebral?

La conmoción cerebral:

- Es un tipo de lesión cerebral traumática (TBI, por sus siglas en inglés) ocasionada por un golpe en la cabeza o en cualquier otra parte del cuerpo.
- **Afecta la manera en que el cerebro funciona y procesa** información a nivel neuroquímico.
- **No es una lesión estructural** del cerebro, por lo que los exámenes de imágenes, como las tomografías computarizadas (CT, por sus siglas en inglés) o las resonancias magnéticas (MRI, por sus siglas en inglés) tienden a mostrar resultados normales.



El golpe hace que la cabeza se mueva con mucha rapidez hacia atrás y hacia adelante, o que comience a girar de un lado al otro.

El movimiento que se produce dentro del cráneo puede generar una fuerza directa de desplazamiento hacia adelante y hacia atrás, o una fuerza de rotación en el cerebro.

Este movimiento brusco puede estirar y dañar las células cerebrales, lo que, en algunos casos, genera cambios químicos en el cerebro.

Por lo general, las conmociones cerebrales no ponen en peligro la vida del paciente. Aun cuando en ocasiones se describe como una lesión cerebral traumática (TBI) leve, una conmoción cerebral no deja de ser una lesión cerebral traumática que puede tener efectos graves, sobre todo si no se detecta o no se trata. Las conmociones cerebrales múltiples son especialmente peligrosas.

¿Cuáles son los síntomas más comunes de una conmoción cerebral?

Los síntomas de una conmoción cerebral pueden aparecer de inmediato o hasta 2 días después de la lesión y pueden incluir los siguientes:

Físicos

Dolor de cabeza
Sensibilidad al ruido y a la luz
Pérdida del equilibrio
Dificultad para caminar
Sensación profunda de cansancio o mareo
Náuseas o vómitos
Alteraciones de la visión

Capacidad para pensar y recordar

Dificultad para pensar con claridad
Dificultad para recordar
Sensación de lentitud

Sociales y emotivos

Estar más irritable o quisquilloso de lo normal
Sentirse emocionalmente más sensible
Sentirse triste o nervioso
Actuar con agresividad
Ser difícil de consolar

Patrones del sueño

Dormir menos de lo normal
Dormir más de lo normal
Tener dificultades para quedarse dormido

Aspectos a vigilar si su hijo sufrió una conmoción cerebral

1. Los síntomas pueden empeorar o pueden aparecer otros nuevos, durante las primeras 48 horas.
2. Es probable que su hijo no se dé cuenta de que tiene algún síntoma sino hasta que intente realizar sus actividades normales.
3. La mayoría de los niños se sienten bien después de 2 semanas. Si esto no le sucede a su hijo, puede ser necesario que lo vea un especialista.

Qué hacer durante los primeros días

1. **Asegúrese de que su hijo tome las cosas con calma y esté en un ambiente tranquilo. Si los síntomas son más graves:**
 - Limite las actividades cognitivas (la capacidad para pensar o recordar) y físicas para permitir que su cerebro se recupere.
 - Evite que pase mucho tiempo frente a pantallas (viendo TV, el celular o la computadora). Organice actividades relajantes en casa, como dibujar o distraerse con sus juguetes.
 - Retome las actividades normales lentamente, siempre y cuando los síntomas no empeoren.
2. **A medida que empiece a sentirse mejor, su hijo puede retomar sus actividades normales (no extenuantes), lentamente. Durante este tiempo, anime a:**
 - Pasar tiempo al aire libre con actividades como caminatas cortas.
 - Dormir todo lo que pueda durante la noche.
 - Tomar menos siestas de día o volver a su horario normal de siestas (adecuado para su edad).
 - Hacer las tareas escolares en periodos de 10 a 15 minutos, siempre y cuando los síntomas no empeoren.

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- En esta etapa, su hijo podrá revisar su celular, ver TV, jugar video juegos y recibir visitas de amigos durante periodos cortos, siempre y cuando los síntomas no empeoren.
3. **A medida que los síntomas van mejorando, puede:**
 - Animarlo a pasar más tiempo al aire libre.
 - Permitir que retome su rutina normal de actividades.
 - Dejarlo descansar si nota que los síntomas empeoran. Si observa algún cambio, llame al médico de su hijo.

Consejos importantes

1. **Haga una cita con el médico de atención primaria (PCP, por sus siglas en inglés) de su hijo lo antes posible.** Conserve la cita, aunque su hijo empiece a sentirse mejor. El médico de su hijo controlará su recuperación y le indicará cuando sea seguro para su hijo retomar a sus actividades escolares, deportivas o de recreación.
2. **Evite despertarlo de noche para ver cómo está.** El cerebro de su hijo necesita descansar y dormir lo más posible durante los primeros días después de una conmoción cerebral.
3. **Asegúrese de que su hijo tenga una dieta saludable y que beba más líquidos claros (como agua) de lo normal.** Aunque su hijo no tenga muchas ganas de comer, ofrézcale porciones pequeñas de alimentos y líquidos cada 3 o 4 horas y antes de acostarse.
4. **Dele acetaminofén (Tylenol) o ibuprofeno (Motrin o Advil) para el dolor, si así lo indicó el médico.**

Ayudar a su hijo a regresar a la escuela sin poner en peligro su seguridad

Es posible que su hijo:

- Tenga que dejar de ir a la escuela durante un tiempo después de una conmoción cerebral, pero no necesita que los síntomas hayan desaparecido por completo antes de regresar. No se recomiendan las ausencias continuas a la escuela ni periodos prolongados de inactividad después de una conmoción cerebral.
- Vuelva a la escuela con ciertos ajustes, incluso si aún tiene síntomas. Los ajustes son simples cambios en la rutina normal y las actividades de su hijo. La mayoría de las escuelas requieren que estos ajustes por escrito provengan del médico del hijo. Para la mayoría de los niños, estos ajustes sólo son necesarios a corto plazo.

Tome en cuenta que el regreso a la escuela no significa que su hijo puede participar en deportes y juegos. Su hijo no puede participar en clases de educación física (PE, por sus siglas en inglés), salir al recreo, practicar deportes o hacer rutinas de ejercicio físico, hasta que su médico lo autorice.

Ayudar a su hijo a retomar sus actividades deportivas y recreativas

1. Su hijo **no** debe retomar sus actividades deportivas y recreativas el mismo día de la lesión.
2. Su hijo debe retomar sus **actividades escolares normales y sus estudios antes** de volver a practicar actividades deportivas.
3. El médico de su hijo le informará cuándo puede reiniciar sus **actividades deportivas**.
4. El equipo de Medicina Deportiva de Children's Healthcare of Atlanta tiene las **instrucciones para el regreso al juego (RTP)**, por sus siglas en inglés de 11 deportes, que puede encontrar en deportes (*sports*) en choa.org. Las etapas varían según el deporte.
5. Si su hijo es un estudiante que practica deporte, es **muy importante que su escuela esté al tanto** de la conmoción cerebral. Si retoma sus prácticas deportivas demasiado pronto, el proceso de sanación puede retrasarse y aumentar el riesgo de sufrir una segunda conmoción, lo que tendría efectos graves (como el síndrome del segundo impacto).

Para información adicional, lea las instrucciones de **regreso al estudio** y de **regreso al juego**.

Cuándo buscar ayuda de inmediato

Si no logra comunicarse de inmediato con el médico, regrese a la Sala de Urgencias si su hijo:

- Tiene más dolores de cabeza o cuello
- Tiene dificultad para despertarse
- Vomita más de 2 veces en 24 horas
- Tiene un comportamiento poco usual o parece confundido, intranquilo o agitado
- No puede pensar con claridad ni recordar cosas
- Arrastra las palabras al hablar, siente debilidad, entumecimiento o se mueve de manera inusual
- No reconoce personas o lugares
- Tiene convulsiones o ataques
- Se desmaya

¿Tiene alguna pregunta? Llame a la enfermera del Programa de Conmoción Cerebral de Children's

Si no puede contactar a su médico, hable con la enfermera de nuestro Programa de Conmoción Cerebral para que le ayude y asesore. Nuestras enfermeras también pueden ayudarlo a programar una cita si su hijo necesita consultar con un especialista en conmoción cerebral de Children's.

1. Llame al **404-785-KIDS (5437)**, de **lunes a viernes, de 8 a.m. a 4 p.m.**
2. Visite choa.org/concussion para más información e instrucciones sobre el regreso a las actividades de estudio y juego.
3. También puede encontrar información adicional en cdc.gov/headsup (Centers for Disease Control and Prevention - Centros de Control y Prevención de Enfermedades).

Esta hoja educativa contiene solo información general. Hable con el médico de su niño o con uno de los integrantes de su equipo de atención médica sobre el cuidado específico para él. **En caso de emergencia o de un problema urgente, llame al 911.**



A FACT SHEET FOR School Nurses

This fact sheet will help school nurses protect students from concussion or other serious brain injury; know how to recognize a concussion and what to do if one occurs; support students who return to school while recovering from a concussion; and provide steps to prevent concussion in school.

The facts:

- All concussions are serious.
- Concussions can have a more serious effect on a young, developing brain.
- Most people who have concussions do not lose consciousness after the injury.
- Quick and correct response to concussions can help recovery and prevent further injury.

What is a concussion?

A concussion is a type of traumatic brain injury caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move quickly back and forth. This fast movement can cause the brain to bounce or twist within the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells.

In schools, concussions most commonly happen during activities like physical education (PE) class, playground time, or school-based sports activities. Students may also get a concussion when doing activities outside of school. For example, a student may get a concussion from a fall at home or a motor vehicle crash. No matter where a concussion occurs, it is important to properly recognize and respond to a concussion to prevent further injury and to help with recovery.

cdc.gov/HEADSUP



Recognizing a concussion

Ask the injured student or people who saw the injury whether there:

1. Was a bump, blow, or jolt to the head or body, and
 2. Were any of the concussion signs or symptoms listed below.
- Some students may not experience or report symptoms until hours or days after the injury. School nurses should check in with the student and their teachers at least once during the school day for the first two weeks back at school to see how the student is feeling.

Multiple concussions

Athletes who have had a concussion have a higher chance of getting another concussion. A repeat concussion can lead to more severe symptoms and a longer recovery.

Possible signs and symptoms

Signs (things observed by you)

- Seems confused
- Answers questions slowly
- Repeats questions
- Can't remember events before or after the hit, bump, or fall
- Loses consciousness (even for a moment)
- Has behavior or personality changes

Symptoms (things reported by the student or a witness to the injury)



Thinking/Remembering:

- Trouble thinking clearly
- Trouble concentrating
- Problems with short- or long-term memory
- Feeling slowed down
- Feeling foggy or groggy



Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous or anxious



Physical:

- Headache
- Nausea or vomiting
- Dizziness or balance problems
- Feeling tired
- Vision problems
- Bothered by light or noise
- Numbness or tingling
- Does not "feel right"



Sleep*:

- Sleeps less than usual
- Sleeps more than usual
- Trouble falling asleep

**Ask about sleep symptoms only if the injury happened the day before.*

Signs of a more serious brain injury

In rare cases, a concussion can lead to edema (brain swelling), permanent brain damage, and even death. Call 9-1-1 or take the student to an emergency department right away if a student develops:

- A headache that gets worse and does not go away;
- Significant nausea or repeated vomiting;
- Unusual behavior, increased confusion, restlessness, or agitation;
- Drowsiness or inability to wake up;
- Slurred speech, weakness, numbness, or decreased coordination;
- Convulsions or seizures (shaking or twitching); or
- Loss of consciousness (passing out)



**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, 15 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 healthcare professional with experience in evaluating for concussion. For those instances when a parent is coming to take the student to a healthcare 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 healthcare professional to review.

To download this checklist in Spanish, please visit cdc.gov/HEADSUP. Para obtener una copia electrónica de esta lista de síntomas en español, por favor visite cdc.gov/HEADSUP.

	0 MINUTES	15 MINUTES	30 MINUTES	<input type="checkbox"/> MINUTES JUST PRIOR TO LEAVING
OBSERVED SIGNS				
Appears dazed or stunned				
Is confused about events				
Repeats questions				
Answers questions slowly				
Can't recall events <i>prior</i> to the hit, bump, or fall				
Can't recall events <i>after</i> the hit, bump, or fall				
Loses consciousness (even briefly)				
Shows behavior or personality changes				
Forgets class schedule or assignments				
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 than usual				
Feeling sluggish, hazy, foggy, or groggy				
EMOTIONAL SYMPTOMS				
Irritable				
Sad				
More emotional than usual				
Nervous				

→ More

Danger signs:

Be alert for symptoms that worsen over time. The student should be seen in an emergency department right away if she or he has one or more of these danger signs:

- 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 for use only by appropriate school professionals, healthcare professionals, and the student's parent(s) or guardian(s).

Resolution of injury:

- Student returned to class
- Student sent home
- Student referred to healthcare professional with experience in evaluating for concussion

SIGNATURE OF SCHOOL PROFESSIONAL COMPLETING THIS FORM: _____

TITLE: _____

COMMENTS:

Revised August 2019

To learn more,
go to cdc.gov/HEADSUP





Cognitive Rest for Concussion

Concussion is a brain injury. Limit brain activity to keep concussion signs from coming back or getting worse. Keep screen time to no more than two hours a day. This includes TV, video games, computers and cell phones. Stop activity and rest if signs get worse.



Do not have your child:	Your child may:
- Read difficult books or word puzzles.	- Read easy books.
- Do things that need focus.	- Rest in a quiet room without bright lights.
- Play loud music.	- Listen to music at a low volume.
- Send or read text messages.	- Do simple arts and crafts.
- Have too many visitors.	- Have short visits with one or two friends.
- Play handheld video games.	- Play card games or easy board games, such as UNO or Go Fish, that do not need much focus.
- Play loud video games with action and flashing lights.	- Play video games that are easy and do not need physical activity.
- Use a computer for more than 30 minutes at a time.	- Use the computer for a short time to check social media sites, such as Facebook.
- Watch TV with action, loud noise or that needs your child to focus.	- Watch TV shows that do not need much focus, such as cartoons or comedy. Watching sports on TV is OK as long as it is not too noisy or with a large crowd.



Emergency Information Form for Children With Special Needs

American College of Emergency Physicians*	American Academy of Pediatrics	Date form completed By Whom	Revised Revised	Initials Initials
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Name:	Birth date:	Nickname:
Home Address:	Home/Work Phone:	
Parent/Guardian:	Emergency Contact Names & Relationship:	
Signature/Consent*:		
Primary Language:	Phone Number(s):	
Physicians:		
Primary care physician:	Emergency Phone:	
	Fax:	
Current Specialty physician:	Emergency Phone:	
Specialty:	Fax:	
Current Specialty physician:	Emergency Phone:	
Specialty:	Fax:	
Anticipated Primary ED:	Pharmacy:	
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

Last name:

Diagnoses/Past Procedures/Physical Exam continued:	
Medications:	Significant baseline ancillary findings (lab, x-ray, ECG):
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	Prostheses/Appliances/Advanced Technology Devices:
5. _____	_____
6. _____	_____

Last name:

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)									
Dates						Dates			
DPT						Hep B			
OPV						Varicella			
MMR						TB status			
HIB						Other			

Antibiotic prophylaxis: _____ Indication: _____ Medication and dose: _____

Common Presenting Problems/Findings With Specific Suggested Managements		
Problem	Suggested Diagnostic Studies	Treatment Considerations

Comments on child, family, or other specific medical issues:	
Physician/Provider Signature:	Print Name:

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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 _____

Parent/Guardian's Signature

Phone #: _____ (work)

Phone #: _____ (cell)

Date

Phone #: _____ (home)

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.

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

- Classroom or Auditorium
- Cafeteria
- Corridor
- Commons Area
- Stairs (inside)
- Bathroom
- Showers or dressing room
- Parking area
- Driveway
- Shops
- Labs
- Homemaking
- Playground
- Street, Highway
- Athletic Field
- Other: _____

Type of Injury

- Abrasion
 - Bite
 - Blister
 - Bruise
 - Burn
 - Cut/Laceration
 - Poisoning
 - Puncture
 - Scratch
 - Sprain
 - Tooth Damage
 - Other: _____
- Possible Injury:
- Concussion
 - Dislocation
 - Fracture or Break
 - Internal Injury
 - Strain or Sprain

Body Part Injured

- Head
- Eye R L B
- Ear R L B
- Mouth
- Teeth
- Neck
- Chest
- Shoulder R L B
- Arm R L B
- Elbow R L B
- Wrist R L B
- Hand R L B
- Abdomen
- Hip R L B
- Leg R L B
- Knee R L B
- Ankle R L B
- Foot R L B
- Toe(s) R/L: _____
- 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)



■ PREPARTICIPATION PHYSICAL EVALUATION

HISTORY FORM

Note: Complete and sign this form (with your parents if younger than 18) before your appointment.

Name: _____ Date of birth: _____

Date of examination: _____ Sport(s): _____

Sex assigned at birth: _____

List past and current medical conditions. _____

Have you ever had surgery? If yes, list all past surgical procedures. _____

Medicines and supplements: List all current prescriptions, over-the-counter medicines, and supplements (herbal and nutritional). _____

Do you have any allergies? If yes, please list all your allergies (ie, medicines, pollens, food, stinging insects). _____

Patient Health Questionnaire Version 4 (PHQ-4)

Over the last 2 weeks, how often have you been bothered by any of the following problems? (check box next to appropriate number)

	Not at all	Several days	Over half the days	Nearly every day
Feeling nervous, anxious, or on edge	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Not being able to stop or control worrying	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Little interest or pleasure in doing things	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Feeling down, depressed, or hopeless	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

(A sum of ≥ 3 is considered positive on either subscale [questions 1 and 2, or questions 3 and 4] for screening purposes.)

(First Name)

GENERAL QUESTIONS (Explain "Yes" answers at the end of this form. Circle questions if you don't know the answer.)	Yes	No
1. Do you have any concerns that you would like to discuss with your provider?	<input type="checkbox"/>	<input type="checkbox"/>
2. Has a provider ever denied or restricted your participation in sports for any reason?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you have any ongoing medical issues or recent illness?	<input type="checkbox"/>	<input type="checkbox"/>
HEART HEALTH QUESTIONS ABOUT YOU	Yes	No
4. Have you ever passed out or nearly passed out during or after exercise?	<input type="checkbox"/>	<input type="checkbox"/>
5. Have you ever had discomfort, pain, tightness, or pressure in your chest during exercise?	<input type="checkbox"/>	<input type="checkbox"/>
6. Does your heart ever race, flutter in your chest, or skip beats (irregular beats) during exercise?	<input type="checkbox"/>	<input type="checkbox"/>
7. Has a doctor ever told you that you have any heart problems?	<input type="checkbox"/>	<input type="checkbox"/>
8. Has a doctor ever requested a test for your heart? For example, electrocardiography (ECG) or echocardiography.	<input type="checkbox"/>	<input type="checkbox"/>

(Last Name)

HEART HEALTH QUESTIONS ABOUT YOU (CONTINUED)	Yes	No
9. Do you get light-headed or feel shorter of breath than your friends during exercise?	<input type="checkbox"/>	<input type="checkbox"/>
10. Have you ever had a seizure?	<input type="checkbox"/>	<input type="checkbox"/>
HEART HEALTH QUESTIONS ABOUT YOUR FAMILY	Yes	No
11. Has any family member or relative died of heart problems or had an unexpected or unexplained sudden death before age 35 years (including drowning or unexplained car crash)?	<input type="checkbox"/>	<input type="checkbox"/>
12. Does anyone in your family have a genetic heart problem such as hypertrophic cardiomyopathy (HCM), Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy (ARVC), long QT syndrome (LQTS), short QT syndrome (SQTS), Brugada syndrome, or catecholaminergic polymorphic ventricular tachycardia (CPVT)?	<input type="checkbox"/>	<input type="checkbox"/>
13. Has anyone in your family had a pacemaker or an implanted defibrillator before age 35?	<input type="checkbox"/>	<input type="checkbox"/>

BONE AND JOINT QUESTIONS	Yes	No
14. Have you ever had a stress fracture or an injury to a bone, muscle, ligament, joint, or tendon that caused you to miss a practice or game?	<input type="checkbox"/>	<input type="checkbox"/>
15. Do you have a bone, muscle, ligament, or joint injury that bothers you?	<input type="checkbox"/>	<input type="checkbox"/>
MEDICAL QUESTIONS	Yes	No
16. Do you cough, wheeze, or have difficulty breathing during or after exercise?	<input type="checkbox"/>	<input type="checkbox"/>
17. Are you missing a kidney, an eye, a testicle (males), your spleen, or any other organ?	<input type="checkbox"/>	<input type="checkbox"/>
18. Do you have groin or testicle pain or a painful bulge or hernia in the groin area?	<input type="checkbox"/>	<input type="checkbox"/>
19. Do you have any recurring skin rashes or rashes that come and go, including herpes or methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)?	<input type="checkbox"/>	<input type="checkbox"/>
20. Have you had a concussion or head injury that caused confusion, a prolonged headache, or memory problems?	<input type="checkbox"/>	<input type="checkbox"/>
21. Have you ever had numbness, had tingling, had weakness in your arms or legs, or been unable to move your arms or legs after being hit or falling?	<input type="checkbox"/>	<input type="checkbox"/>
22. Have you ever become ill while exercising in the heat?	<input type="checkbox"/>	<input type="checkbox"/>
23. Do you or does someone in your family have sickle cell trait or disease?	<input type="checkbox"/>	<input type="checkbox"/>
24. Have you ever had or do you have any problems with your eyes or vision?	<input type="checkbox"/>	<input type="checkbox"/>

MEDICAL QUESTIONS (CONTINUED)	Yes	No
25. Do you worry about your weight?	<input type="checkbox"/>	<input type="checkbox"/>
26. Are you trying to or has anyone recommended that you gain or lose weight?	<input type="checkbox"/>	<input type="checkbox"/>
27. Are you on a special diet or do you avoid certain types of foods or food groups?	<input type="checkbox"/>	<input type="checkbox"/>
28. Have you ever had an eating disorder?	<input type="checkbox"/>	<input type="checkbox"/>
FEMALES ONLY	Yes	No
29. Have you ever had a menstrual period?	<input type="checkbox"/>	<input type="checkbox"/>
30. How old were you when you had your first menstrual period?		
31. When was your most recent menstrual period?		
32. How many periods have you had in the past 12 months?		

Explain "Yes" answers here.

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

Signature of athlete: _____

Signature of parent or guardian: _____

Date: _____

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2022 This form has been modified for use by the GHSA



PREPARTICIPATION PHYSICAL EVALUATION

PHYSICAL EXAMINATION FORM

Name: _____ (First Name) _____ (Last Name) Date of birth: _____

PHYSICIAN REMINDERS

- 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, e-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-enhancing 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?
- Consider reviewing questions on cardiovascular symptoms (Q4-Q13 of History Form).

EXAMINATION		
Height: _____	Weight: _____	
BP: _____ / _____ (/)	Pulse: _____	Vision: R 20/____ L 20/____ Corrected: <input type="checkbox"/> Y <input type="checkbox"/> N
MEDICAL	NORMAL	ABNORMAL FINDINGS
Appearance • Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, hyperlaxity, myopia, mitral valve prolapse [MVP], and aortic insufficiency)	<input type="checkbox"/>	
Eyes, ears, nose, and throat • Pupils equal • Hearing	<input type="checkbox"/>	
Lymph nodes	<input type="checkbox"/>	
Heart* • Murmurs (auscultation standing, auscultation supine, and ± Valsalva maneuver)	<input type="checkbox"/>	
Lungs	<input type="checkbox"/>	
Abdomen	<input type="checkbox"/>	
Skin • Herpes simplex virus (HSV), lesions suggestive of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA), or linea corporis	<input type="checkbox"/>	
Neurological	<input type="checkbox"/>	
MUSCULOSKELETAL	NORMAL	ABNORMAL FINDINGS
Neck	<input type="checkbox"/>	
Back	<input type="checkbox"/>	
Shoulder and arm	<input type="checkbox"/>	
Elbow and forearm	<input type="checkbox"/>	
Wrist, hand, and fingers	<input type="checkbox"/>	
Hip and thigh	<input type="checkbox"/>	
Knee	<input type="checkbox"/>	
Leg and ankle	<input type="checkbox"/>	
Foot and toes	<input type="checkbox"/>	
Functional • Double-leg squat test, single-leg squat test, and box drop or step drop test	<input type="checkbox"/>	

* Consider electrocardiography (ECG), echocardiography, referral to a cardiologist for abnormal cardiac history or examination findings, or a combination of those.

Name of health care professional (print or type): _____ Date: _____
Address: _____ Phone: _____
Signature of health care professional: _____, MD, DO, NP, or PA

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PREPARTICIPATION PHYSICAL EVALUATION

MEDICAL ELIGIBILITY FORM

Name: _____ Date of birth: _____

- Medically eligible for all sports without restriction
 Medically eligible for all sports without restriction with recommendations for further evaluation or treatment of

- Medically eligible for certain sports

- Not medically eligible pending further evaluation

- Not medically eligible for any sports

Recommendations: _____

I have examined the student named on this form and completed the preparticipation physical evaluation. The athlete does not have apparent clinical contraindications to practice and can participate in the sport(s) as outlined on this form. A copy of the physical examination findings are 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 medical eligibility until the problem is resolved and the potential consequences are completely explained to the athlete (and parents or guardians).

Name of health care professional (print or type): _____ Date: _____

Address: _____ Phone: _____

Signature of health care professional: _____, MD, DO, NP, or PA

SHARED EMERGENCY INFORMATION

Allergies: _____

Medications: _____

Other information: _____

Emergency contacts: _____

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EVALUACIÓN FÍSICA PREVIA A LA PARTICIPACIÓN

FORMULARIO DE HISTORIAL CLÍNICO

Nota: Complete y firme este formulario (con la supervisión de sus padres si es menor de 18 años) antes de acudir a su cita.

Nombre: _____ Fecha de nacimiento: _____
(Primer Nombre) (Apellido)
 Fecha del examen médico: _____ Deporte(s): _____
 Sexo que se le asignó al nacer: _____

Mencione los padecimientos médicos pasados y actuales que haya tenido. _____

¿Alguna vez se le practicó una cirugía? Si la respuesta es afirmativa, haga una lista de todas sus cirugías previas. _____

Medicamentos y suplementos: Enumere todos los medicamentos recetados, medicamentos de venta libre y suplementos (herbolarios y nutricionales) que consume. _____

¿Sufrir de algún tipo de alergia? Si la respuesta es afirmativa, haga una lista de todas sus alergias (por ejemplo, a algún medicamento, al polen, a los alimentos, a las picaduras de insectos). _____

Cuestionario sobre la salud del paciente versión 4 (PHQ-4)
 Durante las últimas dos semanas, ¿con qué frecuencia experimentó alguno de los siguientes problemas de salud? (Encierre en un círculo la respuesta)

	Ningún día	Varios días	Más de la mitad de los días	Casi todos los días
Se siente nervioso, ansioso o inquieto	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
No es capaz de detener o controlar la preocupación	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Siente poco interés o satisfacción por hacer cosas	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Se siente triste, deprimido o desesperado	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

(Una suma ≥ 3 se considera positiva en cualquiera de las subescalas, [preguntas 1 y 2 o preguntas 3 y 4] a fin de obtener un diagnóstico).

PREGUNTAS GENERALES		Sí	No
<small>(Dé una explicación para las preguntas en las que contestó "Sí", en la parte final de este formulario. Encierre en un círculo las preguntas si no sabe la respuesta).</small>			
1. ¿Tiene alguna preocupación que le gustaría discutir con su proveedor de servicios médicos?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ¿Alguna vez un proveedor de servicios médicos le prohibió o restringió practicar deportes por algún motivo?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. ¿Padece algún problema médico o enfermedad reciente?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREGUNTAS SOBRE SU SALUD CARDIOVASCULAR		Sí	No
4. ¿Alguna vez se desmayó o estuvo a punto de desmayarse mientras hacía, o después de hacer, ejercicio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREGUNTAS SOBRE SU SALUD CARDIOVASCULAR (CONTINUACIÓN)		Sí	No
5. ¿Alguna vez sintió molestias, dolor, compresión o presión en el pecho mientras hacía ejercicio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. ¿Alguna vez sintió que su corazón se aceleraba, palpataba en su pecho o latía intermitentemente (con latidos irregulares) mientras hacía ejercicio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ¿Alguna vez un médico le dijo que tiene problemas cardíacos?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. ¿Alguna vez un médico le pidió que se hiciera un examen del corazón? Por ejemplo, electrocardiografía (ECG) o ecocardiografía.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Cuando hace ejercicio, ¿se siente mareado o siente que le falta el aire más que a sus amigos?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. ¿Alguna vez tuvo convulsiones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREGUNTAS SOBRE LA SALUD CARDIOVASCULAR DE SU FAMILIA		Sí	No
11. ¿Alguna de los miembros de su familia o pariente murió debido a problemas cardíacos o tuvo una muerte súbita e inesperada o inexplicable antes de los 35 años de edad (incluyendo muerte por ahogamiento o un accidente automovilístico inexplicable)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. ¿Alguna de los miembros de su familia padece un problema cardíaco genético como la miocardiopatía hipertrofica (HCM), el síndrome de Marfan, la miocardiopatía arritmogénica del ventrículo derecho (ARVC), el síndrome del QT largo (LQTS), el síndrome del QT corto (SQTS), el síndrome de Brugada o la taquicardia ventricular polimórfica catecolaminérgica (CPVT)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. ¿Alguna de los miembros de su familia utilizó un marcapasos o se le implantó un desfibrilador antes de los 35 años?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREGUNTAS SOBRE LOS HUESOS Y LAS ARTICULACIONES		Sí	No
14. ¿Alguna vez sufrió una fractura por estrés o una lesión en un hueso, músculo, ligamento, articulación o tendón que le hizo faltar a una práctica o juego?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. ¿Sufrir alguna lesión ósea, muscular, de los ligamentos o de las articulaciones que le causa molestia?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREGUNTAS SOBRE CONDICIONES MÉDICAS		Sí	No
16. ¿Tose, sibila o experimenta alguna dificultad para respirar durante o después de hacer ejercicio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. ¿Le falta un riñón, un ojo, un testículo (en el caso de los hombres), el bazo o cualquier otro órgano?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. ¿Sufrir dolor en la ingle o en los testículos, o tiene alguna protuberancia o hernia dolorosa en la zona inguinal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. ¿Padece erupciones cutáneas recurrentes o que aparecen y desaparecen, incluyendo el herpes o Staphylococcus aureus resistente a la metilicina (MRSA)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PREGUNTAS SOBRE CONDICIONES MÉDICAS (CONTINUACIÓN)		Sí	No
20. ¿Alguna vez sufrió un traumatismo craneoencefálico o una lesión en la cabeza que le causó confusión, un dolor de cabeza prolongado o problemas de memoria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. ¿Alguna vez sintió adormecimiento, hormigueo, debilidad en los brazos o piernas, o fue incapaz de mover los brazos o las piernas después de sufrir un golpe o una caída?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. ¿Alguna vez se enfermó al realizar ejercicio cuando hacía calor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. ¿Usted o algún miembro de su familia tiene el rasgo drepanocítico o padece una enfermedad drepanocítica?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. ¿Alguna vez tuvo o tiene algún problema con sus ojos o su visión?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. ¿Le preocupa su peso?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. ¿Está tratando de bajar o subir de peso, o alguien le recomendó que baje o suba de peso?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. ¿Sigue alguna dieta especial o evita ciertos tipos o grupos de alimentos?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. ¿Alguna vez sufrió un desorden alimenticio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ÚNICAMENTE MUJERES		Sí	No
29. ¿Ha tenido al menos un periodo menstrual?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. ¿A los cuántos años tuvo su primer periodo menstrual?	<input type="text"/>	<input type="text"/>	<input type="text"/>
31. ¿Cuándo fue su periodo menstrual más reciente?	<input type="text"/>	<input type="text"/>	<input type="text"/>
32. ¿Cuántos periodos menstruales ha tenido en los últimos 12 meses?	<input type="text"/>	<input type="text"/>	<input type="text"/>

Proporcione una explicación aquí para las preguntas en las que contestó "Sí".

Por la presente declaro que, según mis conocimientos, mis respuestas a las preguntas de este formulario están completas y son correctas.

Firma del atleta: _____

Firma del padre o tutor: _____

Fecha: _____

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2022 Este formulario ha sido modificado para uso de la GHSA



■ PREPARTICIPATION PHYSICAL EVALUATION

PHYSICAL EXAMINATION FORM

Name: _____ (Primer Number) _____ (Apellido) Date of birth: _____

PHYSICIAN REMINDERS

- 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, e-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-enhancing 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?
- Consider reviewing questions on cardiovascular symptoms (Q4-Q13 of History Form).

EXAMINATION		
Height: _____	Weight: _____	
BP: _____ / _____ (/)	Pulse: _____	Vision: R 20/____ L 20/____ Corrected: <input type="checkbox"/> Y <input type="checkbox"/> N
MEDICAL	NORMAL	ABNORMAL FINDINGS
Appearance • Marfan stigmata (kyphoscoliosis, high-arched palate, pectus excavatum, arachnodactyly, hyperlaxity, myopia, mitral valve prolapse [MVP], and aortic insufficiency)	<input type="checkbox"/>	
Eyes, ears, nose, and throat • Pupils equal • Hearing	<input type="checkbox"/>	
Lymph nodes	<input type="checkbox"/>	
Heart* • Murmurs (auscultation standing, auscultation supine, and ± Valsalva maneuver)	<input type="checkbox"/>	
Lungs	<input type="checkbox"/>	
Abdomen	<input type="checkbox"/>	
Skin • Herpes simplex virus (HSV), lesions suggestive of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA), or linea corporis	<input type="checkbox"/>	
Neurological	<input type="checkbox"/>	
MUSCULOSKELETAL	NORMAL	ABNORMAL FINDINGS
Neck	<input type="checkbox"/>	
Back	<input type="checkbox"/>	
Shoulder and arm	<input type="checkbox"/>	
Elbow and forearm	<input type="checkbox"/>	
Wrist, hand, and fingers	<input type="checkbox"/>	
Hip and thigh	<input type="checkbox"/>	
Knee	<input type="checkbox"/>	
Leg and ankle	<input type="checkbox"/>	
Foot and toes	<input type="checkbox"/>	
Functional • Double-leg squat test, single-leg squat test, and box drop or step drop test	<input type="checkbox"/>	

* Consider electrocardiography (ECG), echocardiography, referral to a cardiologist for abnormal cardiac history or examination findings, or a combination of those.
Name of health care professional (print or type): _____ Date: _____
Address: _____ Phone: _____
Signature of health care professional: _____, MD, DO, NP, or PA

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■ PREPARTICIPATION PHYSICAL EVALUATION

MEDICAL ELIGIBILITY FORM

Name: _____ Date of birth: _____

- Medically eligible for all sports without restriction
 Medically eligible for all sports without restriction with recommendations for further evaluation or treatment of

Medically eligible for certain sports

Not medically eligible pending further evaluation

Not medically eligible for any sports

Recommendations: _____

I have examined the student named on this form and completed the preparticipation physical evaluation. The athlete does not have apparent clinical contraindications to practice and can participate in the sport(s) as outlined on this form. A copy of the physical examination findings are 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 medical eligibility until the problem is resolved and the potential consequences are completely explained to the athlete (and parents or guardians).

Name of health care professional (print or type): _____ Date: _____

Address: _____ Phone: _____

Signature of health care professional: _____, MD, DO, NP, or PA

SHARED EMERGENCY INFORMATION

Allergies: _____

Medications: _____

Other information: _____

Emergency contacts: _____

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Mild head injury and concussion

Return-to-Learn Guidelines



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Stage of healing	Home activity	School activity	Physical activity
Stage 1 —Your child still has many symptoms and problems	<ul style="list-style-type: none"> Limited or minimal stimulation Allow as much sleep as possible Limit things that require your child to think, focus, reason or remember Remove any electronics and computers from your child's room Remove any activity planners and to-do lists from your child's room Give your child plenty of fluids to drink Feed small, frequent meals during the day and at bedtime Give your child plenty of carbohydrates to eat, such as whole grain breads and cereals, pasta and rice 	<ul style="list-style-type: none"> Your child may not go to school. It is typical to rest for 24 to 48 hours and monitor if symptoms improve 	See Stage 1 in RTP Guidelines
Stage 2 —Your child still has some symptoms and problems	<ul style="list-style-type: none"> Slowly increase cognitive activity (thinking and remembering) as symptoms improve Allow for enough sleep—at least 8 hours Allow your child to use TV, video games, texting, tweeting and email for a short time—less than 2 hours a day; for example, they might have 20 minutes of brain work followed by a 1-hour brain break Help your child not to stress over missed schoolwork Continue with fluids, small frequent meals and carbohydrates, as in Stage 1 As your child has less symptoms, begin adding homework in short sittings to avoid falling behind 	<ul style="list-style-type: none"> Return to school for half days Attend core classes only or have shortened class time Rest in the nurse's office between classes as needed Your child may not take tests or quizzes Use pre-printed class notes Complete short homework assignments—work 20 minutes at a time with rest breaks in between Talk with the school nurse or teacher about academic accommodations from your doctor and create a plan Avoid very loud noises, like music and noise in cafeterias, at PE and recess 	See Stages 2 and 3 in RTP Guidelines
Stage 3 —Your child's symptoms and problems have gone away	<ul style="list-style-type: none"> Slowly return to watching TV, playing video games and texting Allow family interactions again Continue with fluids, small frequent meals and carbohydrates, as in Stage 1 	<ul style="list-style-type: none"> Your child may gradually return to a full day of classes They may need to schedule make-up work, tests and quizzes They may take one test or quiz a day with extra time, as needed, to complete Tell the school nurse or teacher if any symptoms or problems return 	See Stages 2 to 4 in RTP Guidelines
Stage 4 —Your child seems back to normal	<ul style="list-style-type: none"> Your child may have near-normal home and social interactions 	<ul style="list-style-type: none"> Your child may begin to complete past assignments and become caught up 	See Stages 5 and 6 in RTP Guidelines
Stage 5 —Your child may return to full activities	<ul style="list-style-type: none"> Your child may return to normal home and school interactions with 5 days of no symptoms 	<ul style="list-style-type: none"> Your child may return to normal school function without the need for extra accommodations or restrictions 	See Stage 7 in RTP Guidelines

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child. In case of an urgent concern or emergency, call 911.

Lesión leve de la cabeza y conmoción cerebral



Children's
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Pautas para el regreso al aprendizaje

Etapas de curación	Actividades para hacer en casa	Actividades para hacer en la escuela	Actividades físicas
Etapas 1 —Su niño aún tiene muchos síntomas y problemas	<ul style="list-style-type: none"> Estimulación limitada o mínima Permitale dormir, tanto como sea posible Limite actividades en las que tenga que pensar, concentrarse, razonar o recordar Saque de la habitación del niño cualquier aparato electrónico y computadoras Saque de la habitación del niño cualquier programador de actividades y listas de "cosas por hacer" Dele de beber abundantes líquidos Dele comidas pequeñas con frecuencia durante el día y a la hora de acostarse Dele de comer muchos carbohidratos, como panes y cereales de granos integrales, pasta y arroz 	<ul style="list-style-type: none"> Su niño no puede ir a la escuela. Es común descansar de 24 a 48 horas y vigilar si los síntomas mejoran 	Ver la Etapa 1 para las Pautas el Regreso al Juego
Etapas 2 —Su niño aún tiene algunos síntomas y problemas	<ul style="list-style-type: none"> Aumentar lentamente la actividad cognitiva (pensar y recordar) a medida que los síntomas mejoran. Permitale dormir lo suficiente (por lo menos 8 horas) Permitale ver TV, jugar videojuegos, enviar mensajes de texto, entrar a twitter y enviar mensajes electrónicos por poco tiempo— menos de 2 horas al día. Por ejemplo, puede utilizar el cerebro por 20 minutos, seguido por un descanso de 1 hora Dígale que no se angustie por no haber podido hacer su trabajo escolar Siga dándole líquidos, comidas pequeñas con frecuencia y carbohidratos como en la Etapa 1 A medida que su niño tenga menos síntomas, comience a agregar tareas por periodos cortos para evitar que se atrase 	<ul style="list-style-type: none"> Su niño puede regresar a la escuela por medio día Asistir solamente a las clases básicas, o que el horario de las clases sea más corto Descansar en la enfermería de la escuela entre clases y cuando sea necesario Su niño no puede presentar exámenes ni pruebas Usar notas de clase ya impresas Hacer tareas cortas - trabajar en periodos de 20 minutos, haciendo pausas para descansar Hable con el enfermero o el maestro de la escuela sobre las Adaptaciones Académicas sugeridos por el médico Evite los ruidos muy altos (como la música y aquellos en las cafeterías, en la clase de educación física y el recreo) 	Ver la Etapa 2 para las Pautas el Regreso al Juego
Etapas 3 —Los síntomas y problemas de su niño desaparecieron	<ul style="list-style-type: none"> Regrese poco a poco a ver TV, videojuegos y a enviar mensajes de texto Permitale relacionarse nuevamente con la familia Siga dándole líquidos, comidas pequeñas con frecuencia y carbohidratos como en la Etapa 1 	<ul style="list-style-type: none"> Su niño gradualmente puede asistir todo el día a clases Podría ser que tenga que programar cuando reponer las tareas, exámenes y pruebas Puede tomar 1 examen o prueba por día con tiempo adicional para terminar, si se necesita Informe al enfermero o maestro de la escuela si le regresa cualquier síntoma o problema 	Ver la Etapas 4 para las Pautas el Regreso al Juego
Etapas 4 —Parece que su niño volvió a la normalidad	<ul style="list-style-type: none"> Si ya ha pasado 5 días sin síntomas, su niño puede regresar a relaciones sociales y familiares normales 	<ul style="list-style-type: none"> Su niño puede comenzar a reponer las tareas escolares para ponerse al día Complete las tareas atrasadas requeridas 	Ver las etapas 5-6 para las Pautas el Regreso al Juego
Etapas 5 —Su niño puede regresar a todas sus actividades	<ul style="list-style-type: none"> Si ya ha pasado 5 días sin síntomas, su niño puede regresar a relaciones sociales y familiares normales 	<ul style="list-style-type: none"> Su niño puede regresar a las funciones escolares normales sin necesidad de servicios adicionales ni restricciones 	Ver la etapas 7 para las Pautas el Regreso al Juego

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Mild head injury and concussion

Return-to-Play and Sports Guidelines



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Stage of healing	Activity allowed	Examples of sports	Examples of other activities	Goal
1	<ul style="list-style-type: none"> No activity Complete cognitive and physical rest 	<ul style="list-style-type: none"> Complete physical rest 	<ul style="list-style-type: none"> Quiet time with rest Avoid groups, videos, reading, computers, video games, cellphones, noisy places 	<ul style="list-style-type: none"> Brain rest and healing BE FREE OF SYMPTOMS
2	<ul style="list-style-type: none"> Light aerobic activity 	<ul style="list-style-type: none"> 10 to 15 minutes of walking or stationary bike Light sweat on the brow Slight increase in breathing rate 	<ul style="list-style-type: none"> Walk in park or neighborhood Avoid group activities 	<ul style="list-style-type: none"> Increase heart rate to 30-40% at most
3	<ul style="list-style-type: none"> Moderate aerobic activity Light resistance training 	<ul style="list-style-type: none"> 20 to 30 minutes of jogging or stationary bike Arm curls, shoulder raises, or leg lifts with weights that can be comfortably lifted One set of 10 repetitions for each activity 	<ul style="list-style-type: none"> Supervised play Low risk activities, such as dribbling a ball, playing catch, changing directions, jumping, side-to-side slides, chasing a ball or catching a ball on the run 	<ul style="list-style-type: none"> Increase heart rate to 40-60% at most Add resistance Use eyes to track objects
4	<ul style="list-style-type: none"> Intense aerobic activity Moderate resistance training Sport-specific exercise 	<ul style="list-style-type: none"> 40 to 60 minutes of running or stationary bike Same resistance exercises with weight for three sets of 10 reps Pre-competition warm-ups, such as passing a soccer ball, throwing a football or doing ladder drills 	<ul style="list-style-type: none"> Supervised play Moderate risk activities, such as balance and agility drills No head contact activities Can sweat and breathe heavy 	<ul style="list-style-type: none"> Increase heart rate to 60 to 80% at most Increase resistance Mimic the sport
5	<ul style="list-style-type: none"> Controlled-contact training drills 	<ul style="list-style-type: none"> 60 to 90 minutes of time on the field, court or mat for specific drills Take part in normal practice session Contact that is normally part of the sport—only use items that do not hit back, such as a sled in football Recheck for symptoms or problems often 	<ul style="list-style-type: none"> Free play Run and jump as able Full return to PE Recheck for symptoms or problems often 	<ul style="list-style-type: none"> Mimic the sport or free play without the risk of head injury
6	<ul style="list-style-type: none"> Full-contact practice 	<ul style="list-style-type: none"> After OK from the doctor, may take part in normal training activities 	<ul style="list-style-type: none"> With parent or adult supervision, may take part in normal activities 	<ul style="list-style-type: none"> Build confidence Assess skills
7	<ul style="list-style-type: none"> Return to play 	<ul style="list-style-type: none"> Normal game play 	<ul style="list-style-type: none"> Normal playtime and activities 	<ul style="list-style-type: none"> No restrictions

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Lesión leve de la cabeza y conmoción cerebral



Children's
Healthcare of Atlanta

Pautas para el regreso a los deportes y el juego

Etapade curación	Actividad permitida	Ejemplos de deportes	Ejemplos de otras actividades	Objetivo
1	<ul style="list-style-type: none"> Ninguna actividad Descanso cognitivo y físico totales 	<ul style="list-style-type: none"> Descanso físico total 	<ul style="list-style-type: none"> Tiempo en silencio, descansando Evitar grupos, videos, lectura, computadoras, videojuegos, teléfonos celulares y lugares ruidosos 	<ul style="list-style-type: none"> Descanso y curación del cerebro NOTENER SÍNTOMAS
2	<ul style="list-style-type: none"> Ejercicio aeróbico suave 	<ul style="list-style-type: none"> Caminar o montar en una bicicleta estacionaria de 10 a 15 minutos Un poco de sudor en la frente Aumento leve de la frecuencia respiratoria 	<ul style="list-style-type: none"> Caminar en un parque o vecindario Evitar actividades en grupo 	<ul style="list-style-type: none"> Aumentar el ritmo cardíaco de 30 a 40 por ciento, como máximo
3	<ul style="list-style-type: none"> Ejercicio aeróbico moderado Entrenamiento de resistencia suave 	<ul style="list-style-type: none"> Trotar o montar en la bicicleta estacionaria de 20 a 30 minutos Flexionar los brazos, levantar los hombros o elevar las piernas con pesas fáciles de levantar 1 serie de 10 repeticiones con cada actividad 	<ul style="list-style-type: none"> Juegos supervisados Actividades de bajo riesgo como driblar con un balón, lanzar y recibir una pelota, cambiar de dirección, saltar, deslizarse de lado a lado, perseguir una pelota o atraparla mientras corre 	<ul style="list-style-type: none"> Aumentar el ritmo cardíaco en un 40 a 60 por ciento, como máximo Ganar resistencia Seguir objetos con la mirada
4	<ul style="list-style-type: none"> Ejercicio aeróbico intenso Entrenamiento de resistencia moderado Ejercicio específico a deportes 	<ul style="list-style-type: none"> Correr o montar en una bicicleta estacionaria de 40 a 60 minutos Los mismos ejercicios de resistencia con pesas. Hacer 3 series de 10 repeticiones Calentamiento antes de una competencia como hacer pases con un balón de fútbol, lanzar una pelota de fútbol americano o hacer ejercicios de escalera 	<ul style="list-style-type: none"> Juegos supervisados Actividades de riesgo moderado, como prácticas de equilibrio y agilidad No hacer actividades de contacto con la cabeza Puede sudar abundantemente y respirar pesadamente 	<ul style="list-style-type: none"> Aumentar el ritmo cardíaco de 60 a 80 por ciento, como máximo Aumentar la resistencia Imitar un deporte
5	<ul style="list-style-type: none"> Prácticas de entrenamiento de deportes de contacto - controladas 	<ul style="list-style-type: none"> 60 a 90 minutos en el campo, la cancha o colchoneta, haciendo ejercicios específicos Participar en una sesión normal de práctica Contactos que sean normales para un deporte - no usar artículos que "reboten" como los empleados en entrenamientos de fútbol americano Continúa vigilancia de síntomas o problemas 	<ul style="list-style-type: none"> Juego libre Correr y saltar, lo que pueda Regresar completamente a clases de educación física (PE, según sus siglas en inglés) Continúa vigilancia de síntomas o problemas 	<ul style="list-style-type: none"> Imitar el deporte o juego libre, evitando el riesgo de lesionarse la cabeza
6	<ul style="list-style-type: none"> Práctica completa de deportes de contacto 	<ul style="list-style-type: none"> Cuando el médico lo autorice puede participar en actividades normales de entrenamiento 	<ul style="list-style-type: none"> Puede participar en actividades normales con la supervisión de un padre o un adulto 	<ul style="list-style-type: none"> Adquirir confi Evaluar destrezas
7	<ul style="list-style-type: none"> Regresar al juego 	<ul style="list-style-type: none"> Juego normal 	<ul style="list-style-type: none"> Juego y actividades de costumbre 	<ul style="list-style-type: none"> Ninguna restricción

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