

## HEAD INJURIES AND CONCUSSION

### Background

A concussion is a type of brain injury that changes the way the brain normally works. A concussion is caused by a bump, blow, or jolt to the head. Concussions can also occur from a fall or blow to the body that causes the head and brain to move rapidly back and forth. Even what seems to be a mild bump to the head can be serious. All concussions are serious. Most concussions occur without loss of consciousness. Recognition and proper response to concussions when they first occur can help aid recovery and prevent further injury, or even death.

Children and adolescents are at greatest risk of concussions with the greatest risks occurring during activities where collisions may occur. This can happen in or outside of school. Concussions can have more serious effects on a young, developing brain and need to be addressed correctly to prevent further injury and help with recovery. It is important to note that subsequent concussions can be much more threatening than a single concussion.



### Head Injuries at School

Head injuries may occur at school if a student's head comes into contact with a hard object such as a desk or the floor or during potential collisions in physical education classes, school based activities or recess times. These incidents are significant because students must be screened and staff must understand that concussion symptoms can be delayed or progressive.

### Athletic Head Injuries

Head injuries related to athletics are common and increasing in number year to year. The communication of sports related injuries to school is crucial.

### Head Injuries Not Associated with School or School Sponsored Activities

Head injuries, whether related to school and school sponsored events or occurring outside of school are still significant as it relates to student health status, academic function and physical participation in class and activities.

## Procedures for Head injuries at school

### Any head injury occurring at school:

1. Notify parent/guardian
2. Provide standard first aid

### Any student that sustains a forceful blow to the head or body, resulting in rapid movement of the head:

1. Parents should be notified immediately by school staff
2. The student should be screened with the *Concussion Checklist* for symptoms consistent with concussion following the injury.
  - a. Student positive for symptoms compatible with concussion should be dismissed to parent/guardian.
  - b. Caution should be taken with students who are developmentally unable to identify or articulate symptoms.
  - c. Students who report no symptoms and have no observable symptoms should continue to be monitored for 30 minutes following forceful head injury.
    - i. Symptomatic students should be dismissed to home.
    - ii. If parents are unable to be reached, the incident should be thoroughly documented, along with a minimum of 3 attempts made to call parents.
    - iii. If the student exhibits symptoms and the parents cannot be reached, all efforts should be made to dismiss the student to emergency contacts.
    - iv. If neither emergency contacts nor parents can be reached, contact RN.
    - v. If parents and emergency contacts cannot be reached and the RN is unavailable for assessment and the student is symptomatic, EMS (9-1-1) should be called.
3. Students who have no symptoms may return to class if parents are in agreement but must be advised to return if symptoms develop as symptoms are not always present immediately. (This is an important consideration in the 48 hours following a concussion as well.)
4. Any students dismissed should be provided a *Head Injury Form* that itemizes symptoms to watch for. The national recommendation advises ALL students sustaining a forceful head injury seek medical attention.
5. EMS should always be contacted in the event that significant symptoms are apparent following a head injury. This includes student who:
  - have one pupil- the black part of the eye- that's larger than the other
  - are drowsy or cannot be awakened
  - have a significant headache that continues and does not go away
  - have weakness or numbness in extremities with or without decreased coordination
  - exhibits repeated vomiting or nausea
  - exhibit slurred speech

- have convulsions or seizures
- cannot recognize people or places
- becomes increasingly confused, restless, or agitated
- has unusual behavior
- loses consciousness (even a brief loss of consciousness should be taken seriously following a head injury)

In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull. Student's exhibiting such symptoms should receive medical attention and provide documentation from the provider before returning to school.

6. Complete *Incident Report* and *Concussion Checklist*.
  - a. When a student sustains a head injury and is dismissed from school to parents or EMS, the incident should always be appropriately documented with an *Incident Report*. As noted above, student's with forceful head injuries should have a *Concussion Checklist* completed.
    - i. If contact to parents was problematic, this should be included in the incident report.
    - ii. If parents refused to pick student up, this should also be documented in the incident report.
    - iii. If the student delayed reporting injuries to staff this should also be documented.
  - b. If the nurse assesses the student an *Incident Report* should still be completed; the *Nurse's Summary* can be included as an addendum.
7. All concussions should be reported to the RN for the purposes of concussion tracking.

### Special Considerations

1. Students with underlying neurological conditions, specifically hydrocephalus with ventriculoperitoneal (VP) shunts or vagus nerve stimulators (VNS) should be dismissed to home if any forceful blow occurs.
2. Students with significant underlying cognitive impairments that are difficult to assess, or students that developmentally unable to articulate symptoms should be deferred to medical care immediately rather than observed at school.
3. Students who have sustained a recent TBI or are recovering from prior concussion should be dismissed to home and must see a provider before returning to school and activities.

### OSAA Athletes

1. If the student is in a school sponsored sport the student must take an [OSAA Return to Participate Medical Release](#) to their provider before they may return to athletics.
2. Students should meet with the district RN prior to the release date noted on their medical form to ensure symptoms have resolved.
3. Any students who remain symptomatic past the return to play date will be referred back to their provider.

### Sports Related Head Injuries

1. Students sustaining head injuries during school related sports must be reported to the Athletic Director or Athletic Secretary, the District RN and the High School Attendance Secretary.
2. *Concussion Screens* and *Incident Reports* should be forwarded as well. Concussions impact academics and school activity as well as athletic activity and a collaborative approach should be taken.
3. Athletes must be released by their provider and symptomatic before their coaches may allow participation.

### Non-School Related Concussions

1. Concussions that occur outside of school should be reported to the school, this is the parent's responsibility as the school is not automatically privileged to health information.
2. Due to the nature of delayed symptom onset of concussions, symptomatic students reporting head injuries outside of school the prior 72 hours should have a concussion screen performed.
3. All documentation related to concussions must be forwarded to the district RN for clinical documentation and concussion tracking and to the school counselor if the student will require accommodations.

### Medical Documentation

1. Students are deferred to medical care from concussions sustained at school or during athletic events parents must provide documentation from their provider. Ensure parents are informed of this when student is dismissed.
2. Medical documentation is required relative to attendance, restrictions or accommodations.
3. OSAA documents are required for athletes.

### Long-Term Recovery

Most young people with a concussion will recover quickly and fully. But for some, concussion signs and symptoms can last for days, weeks, or longer.

When a student returns to school after a concussion, they may require specific accommodations or adjustments to their schedule or class work. Concussed students often experience a range of symptoms during recovery:

- Becoming easily fatigued
- Memory/retention issues
- Becoming easily over stimulated
- Decreased attention span
- Light sensitivity
- Decreased tolerance to physical exertion
- Headaches
- Processing issues
- Difficulty multitasking

Accommodations for concussed students returning to school should focus on the issues specific to their presentation and can change based on the individual recovery of the student. Accommodations should be outlined by the provider in written format to the school when the student is released to return to school. It is important to note that trying to push through symptoms can sometimes prolong the recovery period. Common accommodations include:

- Workload reduction
- Academic tools (such as alternatives to screen time, provision of notes)
- Changes in activity level at school or activity restrictions
- Schedule changes, sometimes including time off of school or reduced hours

### Concussion Related Symptoms

#### Observable Symptoms:

##### Physical:

- Confusion, appears dazed or stunned
- Slow response
- Repeats questions
- Unable to recall event
- Loss of consciousness
- Personality changes
- Changes in walking

##### Emotional:

- Irritable
- Sad
- More emotional than usual
- Nervous

#### Symptoms the student may report:

##### Thinking/Remembering:

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

##### Sleep Related:

- Drowsy
- Sleep disturbance (more or less than usual)
- Has trouble falling asleep

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

##### Physical:

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Fatigue or feeling tired

- Numbness or tingling
- Does not “feel right”
- Sensitivity to light or noise
- Blurry or double vision

**Strategies for Addressing Significant Adolescent Concussion Symptoms at School**  
 ( Adapted from CDC's *Returning to School After a Concussion* )

**COGNITIVE**

<p>Focus first on the student’s general cognition and cognitive skills such as flexible thinking and organization rather than academic content</p> <p>Focused on what the student does well and expand curriculum to more challenging content as concussion symptoms subside</p> <p>Adjust the student’s schedule as needed to avoid fatigue. Allow for rests and breaks as needed and reduce course load as needed. Allow for most challenging coursework when student is most alert and rested.</p> <p>Adjust the learning environment as needed such as bright light or loud distractions.</p> <p>Use self-paced, computer assisted, or audio learning systems for the student having reading or comprehension problems.</p>	<p>Allow extra time for testing and in-class assignment completion</p> <p>Assist the student in creating a task list or organizing the day.</p> <p>Assign a peer to share notes or provide teachers notes</p> <p>Permit student to record classes.</p> <p>Increase repetition on assignments to reinforce learning</p> <p>Break assignments in chunks and offer recognition cues.</p> <p>Provide alternative methods of the student to demonstrate mastery such as multiple choice or allowing spoken responses.</p>
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**Behavioral/Social/ Emotional**

<p>If the student shows frustration with failure in one area, redirect him or her to another element of curriculum associated with success.</p> <p>Provide reinforcement for positive behaviors and academic achievements</p> <p>Acknowledge and empathize with the student’s sense of frustration, anger or emotion related to cognitive changes following a significant injury. Allow them to voice their frustrations.</p> <p>Provide structure consistency. Ensure all teachers are using similar strategies and accommodations with the affected student.</p>	<p>Remove the student from a problem situation but avoid characterizing it as a punishment when the behavior change is related to the brain injury.</p> <p>Establish a cooperative relationship with the student and keep them engaged in decision making regarding progression of academics and task prioritizing.</p> <p>Set reasonable expectations.</p> <p>Arrange preferential seating, such as moving student away from bright lights or distractions.</p>
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CONCUSSION RECOVERY			
STAGE	STATUS/GOALS	ACADEMIC ACTIONS	ACCOMMODATIONS
I	Complete Rest	Notification of concussion to appropriate staff Team: Counselor, Nurse, Teacher, Parent, Student , Principal, Athletic Director	Out of school Out of sports
II	Significant deficits in processing and concentration. Cognitive activity as tolerated	Develop list of 3 categories for assignments in order for student to makeup work: 1. <b>Excused:</b> Not to be made up 2. <b>Accountable:</b> Responsible for content, not process 3. <b>Responsible:</b> Must be completed by student and will be graded. <b>Modified Work:</b> Student does work using listed accommodation. Team: Counselor, Nurse, Teacher, Parent, Student	<ul style="list-style-type: none"> <li>- In school as tolerated</li> <li>- Breaks/rest as needed</li> <li>- Limited computer use. Provide hard copies of assignments when available</li> <li>- No cell phone/tablet</li> <li>- Homework and classwork as tolerated-extended deadlines</li> <li>- Copies of notes, in advance if feasible.</li> <li>- Reduce workload with appropriate modifications *Reduce length of essays *Every other problem *Highlight key concept *Audio books, if available</li> <li>- No tests/quizzes</li> <li>- No physical activity /sports</li> </ul>
III	Gradual increase of time and energy, slowly resumes full work load	<ul style="list-style-type: none"> <li>- Continue to modify and categorize assignments until work is completed.</li> <li>-Prioritize assignments, makeup work and new work.</li> <li>-Assist with timeline and completion goals</li> </ul> Team: Counselor, Teacher, Parent, Student	-In class/school full time <b>-Reduction of workload using appropriate modifications:</b> <b>-Testing allowed with appropriate modifications:</b> * Eliminate tests when possible * Break tests down into several sessions * Extra time to complete tests * Reduce lengths of tests * Reformat tests from free response to multiple choice; cue cards for formulas * Test in a quiet environment * Allow breaks *No more than 1 test per day -No Physical/Sport Activity
IV	Complete resumption of normal activity	<ul style="list-style-type: none"> <li>-Monitor completion of assignments</li> <li>-Communicate with parents and counselor as needed.</li> </ul>	<ul style="list-style-type: none"> <li>- Resume normal classroom activities</li> <li>- Return to PE</li> <li>- Work with athletic department to follow return to play protocol</li> </ul>

Stages should be based on medical assessment and documentation, a 504 should be considered if accommodations will last longer than 2 months. The RN should be notified if physical symptoms persist beyond what the provider has indicated in medical documentation.



CONCUSSION CHECKLIST							
Name of Student :				DOB:			
Date/Time of Injury:		<b>0</b>	<b>15</b>	<b>30</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Off School grounds, previous 48 hours		minutes	minutes	minutes	minutes	hours	days
Date/Time of observation:							
<b>OBSERVABLE SIGNS</b>	Confusion						
	Appears Dazed or Stunned						
	Repeats questions						
	Answers questions slowly						
	Unable to recall events or forgetfulness						
	ANY loss of consciousness (even just briefly)						
	Personality and behavior changes						
<b>PHYSICAL COMPLAINTS</b>	<b>REPORTED SYMPTOMS</b>						
	Headache or pressure in the head						
	Nausea or vomiting						
	Balance problems or dizziness						
	Fatigue						
	Sensitivity to noise						
	Numbness or tingling						
	Doesn't "feel right"						
<b>COGNITIVE SIGNS</b>	Difficulty Thinking						
	Unable to concentrate						
	Unable to remember, forgetfulness						
	Feeling slow, sluggish, hazy, foggy or groggy						
<b>EMOTIONAL SYMPTOMS</b>	Irritable						
	Sad						
	Nervous, anxious or agitated						
	More emotional than usual						
<b>EMERGENCY</b>	Seizure						
	Unequal pupils						
	Unable to be roused, awaken						
	Changes in personality						
	Unaware of surroundings, place, time						
	Increased confusion, agitation						
	Unusual or unexplained behavior						
	Weakness, numbness, unusual coordination						

## Head Injury Parent Information

Concussions are important conditions to consider following a head injury. Concussions may be difficult to detect initially, as symptoms may be delayed hours or days from the initial head injury. It is also important to note that increased risk of complications exists with subsequent concussions. Meaning, greater attention to onset concussion symptoms or complications should be made if a prior head injury or concussion has been sustained.

Common signs and symptoms of a concussion may include:

- Headache or a feeling of pressure in the head
- Temporary loss of consciousness
- Confusion or feeling as if in a fog
- Amnesia surrounding the traumatic event
- Dizziness or "seeing stars"
- Ringing in the ears
- Nausea
- Vomiting
- Slurred speech
- Delayed response to questions
- Appearing dazed
- Fatigue

Some symptoms of concussions may occur immediately. Others may develop over days:

- Concentration and memory complaints
- Irritability and other personality changes
- Sensitivity to light and noise
- Sleep disturbances
- Psychological adjustment problems and depression
- Disorders of taste and smell

In younger children, symptoms may be more difficult to identify, rather than self-reporting symptoms, those around them may notice:

- Loss of balance and unsteady walking
- Irritability or changes in behavior
- Change in eating or sleeping patterns
- Lack of interest in favorite toys
- Consistent or worsening headache

The American Academy of Pediatrics recommends that you call your child's doctor for anything more than a light bump on your child's head. If there are no obvious signs or symptoms and you/your child remain alert and move normally, it is unlikely further assessment will be required. If signs and symptoms advance or change, it is important to contact your doctor again.

Seek emergency care anyone who experiences a head injury and symptoms such as:

- Repeated vomiting
- A loss of consciousness lasting longer than 30 seconds
- A headache that gets worse over time
- Changes in his or her behavior, such as irritability
- Changes in physical coordination, such as stumbling or clumsiness
- Confusion or disorientation, such as difficulty recognizing people or places
- Slurred speech or other changes in speech
- Seizures
- Vision or eye disturbances, such as pupils that are bigger than normal (dilated pupils) or pupils of unequal sizes
- Lasting or recurrent dizziness
- Obvious difficulty with mental function or physical coordination
- Symptoms that worsen over time
- Large head bumps or bruises on areas other than the forehead in children, especially in infants under 12 months of age

Athletes sustaining a head injury must have documentation from their doctor in order to return to athletic activities. Individuals may not participate in sports or PE when concussion symptoms are apparent and must be able to remain symptom free for 24 hours after activity to be released for activity.