

X. Appendix

Wenatchee High School Sports-Related Concussion Head Injury Fact Sheet and Parent/Guardian Acknowledgement Form

A concussion is a brain injury that can be caused by a blow to the head or body that disrupts normal functioning of the brain. Concussions are a type of Traumatic Brain Injury (TBI), which can range from mild to severe and can disrupt the way the brain normally functions. Concussions can cause significant and sustained neuropsychological impairment affecting problem solving, planning, memory, attention, concentration, and behavior.

The Centers for Disease Control and Prevention estimates that 300,000 concussions are sustained during sports related activities nationwide, and more than 62,000 concussions are sustained each year in high school contact sports. Second-impact syndrome occurs when a person sustains a second concussion while still experiencing symptoms of a previous concussion. It can lead to severe impairment and even death of the victim.

Quick Facts

- Most concussions do not involve loss of consciousness
- You can sustain a concussion even if you do not hit your head
- A blow elsewhere on the body can transmit an “impulsive” force to the brain and cause a concussion

Signs of Concussions (Observed by Coach, Athletic Trainer, Parent/Guardian)

- Appears dazed or stunned
- Forgets plays or demonstrates short term memory difficulties (e.g. unsure of game, opponent)
- Exhibits difficulties with balance, coordination, concentration, and attention
- Answers questions slowly or inaccurately
- Demonstrates behavior or personality changes
- Is unable to recall events prior to or after the hit or fall
- Increased difficulty multi-tasking
- Irritability

Symptoms of Concussion (Reported by Student-Athlete)

- Headache
- Nausea/vomiting
- Balance problems or dizziness
- Double vision or changes in vision
- Sensitivity to light/sound
- Feeling of sluggishness or foginess
- Difficulty with concentration, short term memory, and/or confusion
- Fatigue
- Sleep disturbance (trouble falling asleep or sleeping more than usual)
- Feeling more emotional
- Easily distracted

What Should a Student-Athlete do if they think they have a concussion?

- **Don't hide it.** Tell your Athletic Trainer, Coach, School Nurse, or Parent/Guardian.

- **Report it.** Don't return to competition or practice with symptoms of a concussion or head injury. The sooner you report it, the sooner you may return-to-play.
- **Take time to recover.** If you have a concussion your brain needs time to heal. While your brain is healing you are much more likely to sustain a second concussion. Repeat concussions can cause permanent brain injury.

What can happen if a student-athlete continues to play with a concussion or returns to play to soon?

- Continuing to play with the signs and symptoms of a concussion leaves the student-athlete vulnerable to second impact syndrome.
- Second impact syndrome is when a student-athlete sustains a second concussion while still having symptoms from a previous concussion or head injury.
- Second impact syndrome can lead to severe impairment and even death in extreme cases.

Should there be any temporary academic accommodations made for Student-Athletes who have suffered a concussion?

- To recover cognitive rest is just as important as physical rest. Reading, texting, testing, even watching movies can slow down a student-athletes recovery.
- Stay home from school with minimal mental and social stimulation until all symptoms have resolved.
- Students may need to take rest breaks, spend fewer hours at school, be given extra time to complete assignments, as well as being offered other instructional strategies and classroom accommodations.

Student-Athletes who have sustained a concussion should complete a graduated return-to-play before they may resume competition or practice, according to the following protocol (a minimum of 24 hours is required at each stage):

- **Stage 1:** Concussion symptoms progressing to the completion of a full day of normal cognitive activities (school day, studying for tests, watching practice, interacting with peers) without reemergence of any signs or symptoms. This stage may take a single day or may last days/weeks/months depending upon the severity of the concussion symptoms. If no return of symptoms, next day advance to Stage 2.
- **Stage 2:** Light Aerobic exercise, which includes walking, swimming, and stationary cycling, keeping the intensity below 70% maximum heart rate. No resistance training. The objective of this step is increased heart rate.
- **Stage 3:** Sport-specific exercise including running: no head impact activities. The objective of this step is to add movement. Resistance training can be started at this stage.
- **Stage 4:** Non-contact training drills (e.g. agility drills)
- **Stage 5:** Following medical clearance (student-athlete's medical practitioner and/or Wenatchee School District's licensed athletic trainers), participation in normal training activities. The objective of this step is to restore confidence and assess functional skills by coaching and medical staff.
- **Stage 6:** Return to play involving normal exertion or game activity.

Signature of Student-Athlete

Print Student-Athlete's Name

Date

Signature of Parent/Guardian

Print Parent/Guardian's Name Name

Date

Wenatchee School District Head Injury Protocols

The Wenatchee School District has adopted the recommendations of the 4th International Conference on Concussion in Sport, Zurich 2012 as a guideline to the management of concussions. (McCory P, Meeuwisse WH, Aubry M, et al. Br J Sports Med 2013;47:250-258—Consensus Statement on Concussion in Sport: The 4th International Conference on Concussion in Sport held in Zurich, November 2012)

Summary of Zurich 2012 recommendations (when an athlete shows concussive signs):

- The player should be medically evaluated onsite using standard emergency management principles and particular attention should be given to excluding a cervical spine injury.
- The appropriate disposition of the player must be determined by the treating healthcare provider in a timely manner (at WHS, licensed/certified athletic trainer). If no healthcare provider is available, the player should be safely removed from practice or play (by coach) and referral to a physician arranged.
- Once the first aid issues are addressed, then an assessment of the concussive injury should be made using the SCAT3 or other similar tool.
- The player should not be left alone following the injury and serial monitoring for deterioration is essential over the initial few hours following injury.
- A player with diagnosed concussion should not be allowed to return to play on the day of injury. A step-by-step return-to-play protocol will be utilized. During this period of recovery in the first few days after an injury, it is important to emphasize to the athlete that physical and cognitive rest is required. Activities that require concentration and attention may exacerbate the symptoms and as a result delay recovery.

The following is an example of a progression:

- (1) No activity, complete rest
- (2) Light aerobic exercise (walking, stationary cycling, etc.), no resistance training
- (3) Sport-specific exercise, progressive resistance training
- (4) Non-contact training drills, progressive resistance training
- (5) Full contact training after medical clearance
- (6) Game play

- There should be approximately 24 hours (or longer) for each stage and the athlete should return to previous asymptomatic level if symptoms recur.
- The Zurich Committee also found that "The application of neuropsychological testing in concussion has been shown to be of value and continues to contribute significant information in concussion evaluation."
- The Wenatchee School District has adopted the imPACT concussion testing program (the most widely used program in the United States) to perform neuropsychological pre-testing/post-testing on athletes in selected collision and contact sports to serve as one tool in determining the recovery following a concussion.
- NOTE: In the evaluation of concussions, the Wenatchee School District policy is that the most conservative opinion will prevail in determining return to play.

_____ My recommendation is to follow the 2012 Zurich guidelines
(with neuropsychological testing, when appropriate)

_____ Return only after my follow-up evaluation scheduled
for: _____

Practitioner's signature

Wenatchee School District Post Concussion Return to Academics Guidelines

A student's best chance of full recovery from a concussion involves two critical components: cognitive and physical rest. Continued research has focused on the fact that cognitive rest is essential to the quick resolution of concussion symptoms. Cognitive stimulation includes: driving, video games, computers, text messaging, cell phone use, loud and/or bright environments, television, reading and studying; these must be limited, and in most cases, completely avoided. Physical activity such as physical education, sports activities, and strength or cardiovascular conditioning must be regulated or avoided while recovering from a concussion.

Points of Emphasis:

It is important to note that the recovery from a concussion is a very individualized process. Caution must be taken not to compare students with concussions as they progress through the recovery process. The information below is provided to teachers, parents and students as a guide to assist with concussion recovery.

- For the academic protocol to be initiated the student must be evaluated by a health care professional and documentation must be provided to the school.
- For every day the student is within Stages 1-3, it is recommended that they be granted the same number of days to complete missed academic work.
- The student should be granted adequate time to complete missed academic work based on the amount of time needed for complete recovery.
- The teacher has the right to assign the student a grade of incomplete (I) for the semester.
- It is important that once the student has returned to school that they report to the athletic trainer or school nurse daily in order to monitor symptoms as well as to determine progression to the next stage within the return to academics guidelines.
- As the student's recovery progresses through Stages 1-3, teachers should be prepared to apply "mastery learning" criteria within their subject matter. By identifying essential academic work, the student's recovery will be aided by reducing anxiety levels related to the perceived volume of work that will be required once they are medically cleared to resume a full academic load.

Suggested Four Stage Progression to Full Return to Activity

Stage 1: No school attendance, emphasize cognitive and physical rest

- Characteristics

√ Severe symptoms at rest

√ Abnormal ImPACT results

√ Symptoms may include but are not limited to: Headache, dizziness, nausea, photosensitivity, phonosensitivity

- No tests, quizzes or homework
- Students may be sensitive to light and noise
- Students may complain of intense and continuous/frequent headaches
- Students may not be able to read for more than 10 minutes without an increase in symptoms
- Provide student with copies of class notes (teacher or student generated)

****Progress to stage 2 when:***

- Decreased sensitivity to light or noise
- Decreased intensity and frequency of headaches
- Ability to do light reading for 10 minutes without increased symptoms

*If the student remains in Stage 1 longer than 2 weeks it may be necessary to schedule a conference with all teachers, the counselor, and the student's parents in order to discuss impact on school performance

It is important that once the student has returned to school that they report to the athletic trainer or school nurse daily in order to monitor symptoms as well as to determine progression to the next stage within the return to academics guidelines.

Stage 2: Option for modified daily class schedule

• Characteristics

√ Mild symptoms at rest, increasing with physical and mental activity

√ Abnormal ImPACT scores

• Example: First day may be afternoon classes and the next day morning classes, repeat as symptoms warrant

Option: Reduce weight of backpack or provide second set of textbooks: arranged by counselor

Option: Obtain a "five minute pass" from the school nurse in order to avoid noisy, crowded hallways between class periods: arranged by school nurse

• No tests, quizzes, daily work or homework

- Provide student with copies of class notes (teacher or student generated)
- Excused from physical education classes and/or sports activities
- Report daily to athletic trainer or school nurse

****Progress to stage 3 when:***

- Each of the student's classes have been attended at least once
- School activity does not increase symptoms
- Overall symptoms continue to decrease

Stage 3: Full day of school

• Characteristics

√ Symptom free at rest

√ Mild to moderate symptoms with mental and physical activity

- No tests, homework, or quizzes
- Student may be given in class assignments/daily work but they should not be graded
- Provide student with copies of class notes (teacher or student generated)
- Option: Reduce weight of pack back or provide second set of textbooks: arranged by counselor
- Option: Obtain a "five minute pass" from the school nurse in order to avoid noisy, crowded hallways between class periods: arranged by school nurse
- Excused from physical education classes and/or sports activities
- Report daily to athletic trainer or school nurse

****Progress to stage 4 when:***

- Symptom free with mental and physical activity

√ Student should report any return of symptoms with mental or physical activity

- ImPACT scores have normalized and/or symptoms have resolved completely

√ The ImPACT Test is a computerized neurocognitive test which, along with a variety of other tests, is used to help determine neurocognitive function

√ ImPACT testing will be used to help monitor the recovery process for student-athletes when appropriate

**If the student is not able to progress past stage 3 after an extended period of time, where it is unlikely the student will be able to make up required work, the counselor and teachers may discuss with the student*

and their parents, possible class withdrawal, home bound, class load modification, and/or Section 504 plan

Stage 4: Full academic load and Return to Play protocol

- Resumption of current academic responsibilities once ImPACT scores have normalized and/or symptoms have resolved completely as determined by the appropriate health care professional
- In cooperation with guidance counselor and teachers, create plan for possible modification and the gradual completion of missed tests, quizzes, and homework
- Teacher has the discretion to apply “mastery learning” criteria for their subject matter
- Students are not required to makeup missed Physical Education classes due to a concussion
- Gradual resumption of physical activity
- Students will return to Physical Education classes and will spend a minimum of 2 days with modified activity directed by the nurse and/or athletic trainer
- WSD athletes will follow the Return to Play under the direction of the athletic trainer

If you have additional questions please contact the student’s counselor, the school nurse or the athletic trainers.