2A Evergreen Conference Athletics Concussion Management Protocol

This document outlines the procedure for managing and evaluating suspected concussion/mild traumatic brain injuries that may occur during practice or competitions. Brain injuries are caused by a direct hit, blow or jolt to the head, or by a blow to another part of the body with the force transmitted to the head. This protocol integrates the use of the Standardized Concussion Assessment Tool - 5th and 6th Edition (SCAT5/SCAT6) and/or the ImPACT Concussion Management tool. Recommendations are based on the *National Athletic Trainers' Association Position Statement: Management of Sport Concussion* (Broglio S, 2014) and the *Consensus Statement on Concussion in Sport-5th International Conference on Concussion in Sport Held in Berlin* (McCrory P, 2016) and the *Consensus Statement on Concussion in Sport-6th International Conference on Concussion in Sport Held in Amsterdam* (Patricios JS, 2023).

Washington State, with the help of the Brain Injury Association of Washington (BIAWA), passed the "Zackery Lystedt Law" in July 2009. The law "prohibits youth athletes suspected of sustaining a concussion from returning to play without a licensed health care provider's approval" (Youth Sports – Head Injury Policies, 2009). The health care provider must be trained in the evaluation and management of concussion and provide written consent before an athlete may return to play (RTP)" For more information on the "Zachary Lystedt Law", please refer to the appropriate section of the packet.

<u>These, and only these,</u> are the approved health care providers, according to Washington state law, that can provide appropriate evaluation and clearance for Return to Play from a concussion (this is not negotiable):

- Medical Doctor (MD)
- Doctor of Osteopathy (DO)
- Licensed/Certified Athletic Trainer (ATC/LAT)
- Advanced Registered Nurse Practitioner (ARNP)
- Physician's Assistant, Certified (PA-C)

If an athlete is suspected of having sustained a concussion or mild traumatic brain injury, or is symptomatic of either, the athlete will be removed from play, and will not return to play until the athlete is evaluated by an approved health care provider who is trained in evaluation and clearance in concussions. Due to conflict of interest, providers must not be related to the athlete. All suspected concussions will be assessed by using the SCAT5 and/or ImPACT concussion testing tools. The athlete and parent/guardian should receive an information sheet on concussion. If the parent/guardian is not on-site, the Licensed Athletic Trainer will attempt to call the parent-guardian to inform of the incident. A referral to an approved healthcare provider will be made on a case-by-case basis and will be dependent

on the health status and symptom scale, but parents reserve the right to take their student-athlete for further evaluation by an approved health care provider of their choice, according to the list above.

It has also been recommended by the National Athletic Trainers' Association Position Statement: Management of Sport Concussion (Broglio S, 2014), the Consensus Statement on Concussion in Sport-5th International Conference on Concussion in Sport Held in Berlin (McCrory P, 2016), and the Consensus Statement on Concussion in Sport-6th International Conference on Concussion in Sport Held in Amsterdam (Patricios JS, 2023), to incorporate a gradual RTS (Return To Sport) protocol, once the student-athlete is cleared to begin activity by an approved healthcare provider. This is separate from, but can be concurrent with, a graduated return to learn (RTL) strategy. The athletic department of each high school in the Evergreen League has taken steps (beginning in 2020) to incorporate the gradual RTS protocol into our management of concussions. The RTPS protocol should be supervised by the Licensed Athletic Trainer employed to work at your student-athletes' respective high school. The RTS protocol is included in this packet.

In the event that a student-athlete is referred to or seen by a physician, it is highly suggested that the student-athlete be cleared by that same physician to begin the gradual RTS protocol (Washington Interscholastic Activities Association, n.d.). This helps maintain continuity of care for the student-athlete. A clearance note from an approved healthcare provider does not clear for immediate and full participation in sport; the clearance note does, however, allow the student-athlete to begin the RTS protocol with the Licensed Athletic Trainer.

Per recent Washington State Legislation, starting with the 2020-21 school year, all public schools will be required to report all diagnosed concussions to the Department of Health for data analysis. Personal medical information will not be released. Please follow the link for House Bill 2371 for further information on what will be reported (Student Head Injury Information, 2020).

The "Zachary Lystedt" Law also requires school districts to work with the Washington Interscholastic Activities Association (WIAA) to develop information and policies on educating coaches, student-athlete and parents about the nature and risks of concussion, including the dangers of returning to practice or competition after a concussion or mild traumatic brain injury. Also, the WIAA requires athletes, and their parents/guardians to read and sign the Concussion Information Sheet and return it prior to the beginning of each sport season. You can visit WIAA.com for more information on coach and parent education. See the appropriate section of this packet for the parent/athlete Concussion Information Sheet.

As a Licensed Athletic Trainer in the high school setting, it is my duty and responsibility to keep your student-athletes safe to the best of my abilities. Therefore, I perform baseline testing prior to sport participation. Although it is not required by the WIAA or a provision of the "Zachary Lystedt" Law, it has been researched and proven to make RTS recommendations easier . Baseline testing can be as simple as the SCAT5/SCAT6, or as complex as ImPACT Testing. Currently, Black Hills High School is equipped to perform ImPACT baseline & post-injury testing, done every 2 years, at a minimum.

If you have any other questions regarding this protocol, please contact the Black Hills High School Athletic Trainer at the contact information listed below, or the Athletic Director, Nikki Nelson.

Concussion Home Care Instructions

Dear Parent(s) or Guardian,

Your student-athlete has been suspected of sustaining a concussion during practice or competition. Please use the following information to monitor your student-athlete's recovery.

The most important aspect of acute recovery following a concussion is not only physical rest, but cognitive rest as well. This means avoiding tasks and activities that require a lot of concentration or complex thinking i.e. school work, video games, computer/screen usage, texting, etc. Academic accommodations for school work can be arranged, with the physician's suggestion. Cognitive rest is very important for the first 24-48 hours following sustaining a concussion, but may be required for a longer period of time depending on the severity of the symptoms. Signs and symptoms can increase with physical and increased cognitive activity when not ready, and should be monitored daily. Your student should maintain a healthy and normal diet. The students should also avoid ingesting alcohol, illicit drugs or other substances that might interfere with cognitive function, which could include some prescription drugs. If you have any concerns consult your prescribing provider. Avoid taking ibuprofen and any other NSAID over-the-counter medication unless recommended by a physician or other approved healthcare provider.

Below is a table explaining home care Do's & Don'ts:

It is OK to:	**There is NO need to:**	**DO NOT:**
● Sleep ● Rest ● Use ice pack for comfort ● Eat a normal diet ● Use acetaminophen for headache ● Attend school unless directed otherwise	● Wake up every hour ● Check eyes with flashlight ● Stay in bed ● Test reflexes	● Drive while concussed ● Exercise (until cleared by ATC, MD, etc). ● Drink alcohol or caffeinated beverages ● Use drugs or medications that alter brain function ● Take aspirin or NSAIDs, unless directed to ● Eat spicy food (initially)

Please call or email the Black Hills High School athletic trainer for any questions. Please remember to communicate any academic/physical limitations with the students' teachers, nurse, and athletic trainer if seen by an approved healthcare provider.

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Frequently observed signs & symptoms following concussion/mild traumatic brain injury

Observed signs & symptoms	Reported signs & symptoms
● Vomiting **	● Nausea/Vomiting**
● Disorientation **	● Headache
● Slurred or incoherent speech (disjointed or incomprehensible statements) **	● Drowsiness
● Abnormal emotional outbursts, or not proportionate to the situation **	● Balance problems or dizziness
● Any period of loss of consciousness ** (not all concussions result in LOC)	● Vision changes/disturbances
● Vacant/blank stare	● Sensitivity to light or noise
● Delayed verbal & motor responses	● Feeling "slowed down"
● Inability to focus attention (easily distracted , unable to follow through with normal activities)	● Feeling "foggy" or "not sharp"
● Gross observable incoordination	● Change in sleeping patterns, or difficulty falling asleep
● Memory deficits (repeatedly asking same questions, inability to remember new info)	● Abnormal concentration difficulties
	● Memory issues
	● Irritability
	● Sadness
	● Feeling more emotional overall
	● Lightheadedness
	● Easily fatigued
	● Lack of awareness of surroundings

*Adapted from Kelly & Rosenberg (1997)

**Red flags that require immediate hospital/physician evaluation

A physician's visit may not be entirely necessary, but if you are concerned for your child's well-being, you are encouraged to schedule an appointment to see a physician trained in the evaluation and treatment of concussions. Keep in mind, whichever physician is seen, it is recommended the RTP clearance come from the same physician. Your child should follow up with the high school athletic trainer, if applicable, the following school day (or when they return to school) regardless if the student saw a physician first. Ultimately, the Licensed Athletic Trainer will be the healthcare professional to return the student-athlete to sport participation using the approved return to play protocol. If any signs or symptoms worsen following an incident, your child needs to be taken to the emergency room immediately for evaluation.

Concussion Return to Sport Protocol

The following is the protocol established for the management of concussions. This protocol features a gradual return to sport strategy and will be implemented only after the athlete is completely symptom free, at the discretion of the medical provider. The athlete MUST be asymptomatic for at least 24 hours with clearance from an approved healthcare provider before beginning the RTP protocol. Student-athletes will remain at each stage for 24 hours before progressing to the next stage of the protocol. as long as they remain asymptomatic during each stage. ALL stages are to be supervised by the Licensed Athletic Trainer, as applicable. ImPACT post-injury test (if equipped) must be completed before Stage 2 to allow student-athletes to continue with RTP.

Stage 1: Rest, Recovery, Symptom-limited Activity

This acute recovery stage involves the student-athlete relatively resting following an incident, both physically and cognitively. This may include staying home from school, not utilizing phones, computers, etc. The student-athlete is permitted to walk and do other activities of daily living that do not exacerbate symptoms, and that do not place the athlete at risk of a second impact.

Stage 2: Low aerobic activity for 15-20 minutes (up to 55% of max HR)

This stage may include walking, light jogging, light stationary bicycling, range of motion stretching, low level balance activities and light resistance training. These activities must not result in more than a 2/10 exacerbation of concussion symptoms, and any symptoms must last for less than 1 hour total.

Stage 3: Moderate aerobic activity for 20-30 minutes (up to 70% of Max HR)/Sport-specific activity (non-contact)

This stage may include moderate jogging for a longer period of time (up to 30 minutes), moderate-intensity stationary biking, moderate weight lifting (reduced time/weight), active stretching or low level balance activities.

Stage 4: High aerobic activity

This stage may include sprinting/running, high-intensity stationary biking, high-level changes in direction/agility, regular weightlifting activity, plyometric activity and challenging balance activities.

Stage 5: Non-contact Drills (Football = HELMET ONLY)

This stage may include sprinting/running, high-intensity stationary biking, regular weightlifting activity, non-contact team drills during practice, plyometric activity and challenging balance activities. Non-contact drills are defined by drills that do not elicit an increased risk of the athlete hitting their head.

Stage 6: Full contact practice (Football = fully padded practice, no game play)

This stage allows student-athletes to participate in full-contact team drills, no official competition

Stage 7: Full game/competition play:

This stage requires the student-athlete to be completely asymptomatic following full-contact participation and clearance by an approved healthcare professional prior to returning to full competition. If so, the student-athlete will be cleared of their concussion and will no longer be in concussion protocol.

****Ultimately, the student-athlete needs all three items listed below checked off by the Licensed Athletic Trainer (LAT) to be cleared of concussion and return to sport:**

- Documentation of Clearance
- Passing of necessary Post Concussive testing
- Complete RTP Protocol under supervision of LAT (or other concussion-trained medical professional)

“Zachary Lystedt Law”

(RCW 28A.600.190- Sec. 2)

Youth sports – Concussion and head injury guidelines – Injured athlete restrictions – Short title.

(1)(a) Concussions are one of the most commonly reported injuries in children and adolescents who participate in sports and recreational activities. The Centers for Disease Control and Prevention estimates that as many as three million nine hundred thousand sports-related and recreation-related concussions occur in the United States each year. A concussion is caused by a blow or motion to the head or body that causes the brain to move rapidly inside the skull. The risk of catastrophic injuries or death are significant when a concussion or head injury is not properly evaluated and managed.

(b) Concussions are a type of brain injury that can range from mild to severe and can disrupt the way the brain normally works. Concussions can occur in any organized or unorganized sport or recreational activity and can result from a fall or from players colliding with each other, the ground, or with obstacles. Concussions occur with or without loss of consciousness, but the vast majority occurs without loss of consciousness.

(c) Continuing to play with a concussion or symptoms of head injury leaves the young athlete especially vulnerable to greater injury and even death. The legislature recognizes that, despite having generally recognized return to play standards for concussion and head injury, some affected youth athletes are prematurely returned to play resulting in actual or potential physical injury or death to youth athletes in the state of Washington.

(2) Each school district's board of directors shall work in concert with the Washington interscholastic activities association to develop 8 the guidelines and other pertinent information and forms to inform and educate coaches, youth athletes, and their parents and/or guardians of the nature and risk of concussion and head injury including continuing to play after concussion or head injury. On a yearly basis, a concussion and head injury information sheet shall be signed and returned by the youth athlete and the athlete's parent and/or guardian prior to the youth athlete's initiating practice or competition.

(3) A youth athlete who is suspected of sustaining a concussion or head injury in a practice or game shall be removed from competition at that time.

(4) A youth athlete who has been removed from play may not return to play until the athlete is evaluated by a licensed health care provider trained in the evaluation and management of concussion and receives written clearance to return to play from that health care provider. The health care provider may be a volunteer. A volunteer who authorizes a youth athlete to return to play is not liable for civil damages resulting from any act or omission in the rendering of such care, other than acts or omissions constituting gross negligence or willful or wanton misconduct.

(5) This section may be known and cited as the Zackery Lystedt law.

ACKNOWLEDGEMENTS

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(Revisions were made in July 2023, based on the Consensus Statement on Concussion in Sport-6th International Conference on Concussion in Sport Held in Amsterdam (Patricios JS, 2023))

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