



## Head Impact Concussion Management Procedures

Any Bethel student is at risk of a possible head impact during the normal school day while at play on the playground, participating in an athletic event, falling, or even accidentally bumping heads. This Head Impact/Concussion Management Procedural Guidance has been developed as a basic guide for staff to follow in helping students receive the best possible health care and safe return to school after a head impact.

Knowledge around concussion treatment and returning to academics and activities has greatly advanced over the last decade. Healthcare providers recognize that without cognitive and physical rest concussion injury symptoms increase and recovery slows. Two Oregon Laws, Max's Law (2009) and Jenna's Law (2014), are intended to address proper concussion management in high school sports and in all youth sports leagues.

Bethel School District seeks to provide a safe return to academics and activities for all students after concussive injury. In order to effectively and consistently manage these injuries, district staff abide by the following procedures to help ensure that concussed students are identified, treated and referred appropriately, receive suitable follow-up medical care during the school day (including academic assistance,) and are fully recovered prior to returning to cognitive and physical activity.

The Bethel concussion management team may include a school nurse, a certified athletic trainer, counseling staff, a school psychologist, an administrator, a TBI (Traumatic Brain Injury) coordinator, and the student's teachers and parents/guardians.

A student who requires an individualized health plan and/or coordinated approach to managing a concussion at school will have the plan reviewed on a yearly basis by the school nurse and/or the certified athletic trainer. Any changes or modifications will be reviewed and given in writing to appropriate school personnel.

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## IMMEDIATE CARE FOLLOWING HEAD IMPACT

Bethel School District seeks to provide the best possible care and management of a student after a head impact. School staff are not expected to “diagnose” a concussion. Nurses and Health Assistants will conduct an initial assessment for signs and symptoms of a concussion in the health room or other areas of the school, when appropriate. The student will be observed for signs and symptoms of a concussion for a minimum of 30 minutes. During the time the student is being observed, staff will use the Bethel Checklist of Signs and Symptoms of Concussion and record the results. Parents/Guardians will be notified of all head impacts even if there are no immediate signs or symptoms. Parents will also be given verbal and written instructions about signs and symptoms of concussion. High school athletes will be removed from play, and will follow the Willamette High School Concussion Management Policy.

## RECOGNITION OF CONCUSSION

A concussion is a brain injury in which trauma to the head results in a temporary disruption or alteration of normal brain function. The injury occurs when a person’s brain is violently rocked back and forth or twisted inside the skull as a result of a direct or indirect force. A concussion disturbs brain activity and should be perceived and handled as a significant injury. Proper healing and recovery time following a concussion are crucial in preventing further injury.

### Common signs (observed by others)

### Common symptoms (reported by student)

<p><b><u>Physical</u></b>            Moves clumsily or balance problems            Loss of consciousness (even briefly)            Less energetic</p> <p><b><u>Cognitive</u></b>            Student appears dazed or stunned            Confusion and/or disoriented            Memory difficulties (cannot recall events before or after the injury)            Blank or vacant look            Responds slowly to questions</p> <p><b><u>Emotional</u></b>            Personality, mood, behavior changes</p>	<p><b><u>Physical</u></b>            Headache or “pressure in the head”            Nausea or vomiting            Vision disturbances (blurred or double vision)            Sensitivity to light and sound            Balance problems or dizziness            Numbness or tingling</p> <p><b><u>Cognitive</u></b>            Problems concentrating or remembering            Feels sluggish or “foggy”</p> <p><b><u>Emotional</u></b>            Not feeling right or feeling down</p> <p><b><u>Sleeping Problems</u></b>            Difficulty falling or staying asleep            Sleeping less/more than usual</p>
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These signs and symptoms (either singular or in combination) are indicative of a possible concussion. School personnel are encouraged to utilize evaluation methods appropriate to their scope of practice and level of training.

There is no one single indicator for a concussion. Rather, recognizing a concussion requires a symptom assessment. The signs and symptoms of a concussion may take time to appear and can become more noticeable during concentration and learning activities in the classroom. For this reason, it is important to watch for changes in how the student is acting or feeling, if symptoms become worse, or if the student just “doesn’t feel right.” One cannot see a concussion and some students may not experience or report symptoms until hours or days after the injury. Most young people with a concussion will recover quickly and fully. But, for some, concussion signs and symptoms can last for days, weeks, or longer.

### **STAFF MANAGEMENT AND REFERRAL GUIDELINES FOR STUDENTS WITH SYMPTOMS**

1. Call 911 if a student has experienced a loss of consciousness of any duration from an injury. Staff will also contact parent/guardian or the student’s emergency contact.
2. Any student who has symptoms of concussion and who is not stable (condition is changing or deteriorating) is to be transported immediately to the nearest emergency department via emergency vehicle. Staff will contact parent/guardian or the student’s emergency contact.
3. Any student who is symptomatic but stable may be transported by his/her parent/guardian or the student’s emergency contact. The parent should be advised to contact the student’s primary care physician or seek care at the nearest urgent care/emergency facility on the day of the injury.
  - a. Always give parents the option of emergency transportation even if you feel it is not necessary.
  - b. Parents/emergency contacts should be given home and follow-up care instructions at this time.
  - c. At the time of injury, staff should inform the parent/emergency contact that the parent/guardian is to inform the school nurse or front office staff and coach of the student’s condition and any medical restrictions or orders that exist upon return to school.
4. Initiate contact with the concussion management team to report the injury.

### **FOLLOW-UP CARE OF THE STUDENT DURING THE SCHOOL DAY**

1. Responsibilities of the school nurse after notification of student’s concussion
  - a. If needed, create an individual health care plan for the student based on the student’s current condition, initial injury information, and physician’s directions
  - b. For those students who have health care plans:
    - i. Send notification to the student’s teachers regarding the health care plan
    - ii. Facilitate communication with the concussion management team.
2. Responsibilities of the student’s school counselor
  - a. Monitor the student’s need for academic accommodations. Make recommendations if necessary. Implement accommodations requested by treating physician.
  - b. Communicate with concussion management team regarding academic status and progress.

## **RETURN TO ACADEMICS/ACTIVITIES**

1. Temporary academic accommodations may be implemented as soon as the student returns to school.
2. The concussion management team will work together to progress the student back to full-time school with no accommodations
3. Students in physical education courses should progress back to activity following the return-to-play protocol used in athletics

## **PROCEDURES FOR ATHLETICS**

### **A. IMPACT neuropsychological testing:**

The athletic training staff currently uses a software program called IMPACT to aid in managing concussions. IMPACT is currently the most widely utilized computerized concussion testing program in the world and has been implemented effectively for high school, collegiate, and professional athletes. It was developed through research by neuropsychologists, neurologists, and physicians at the University of Pittsburgh Medical Center (UPMC). IMPACT stands for **Immediate Post-concussion Assessment and Cognitive Test**. It was developed to help sports medicine clinicians evaluate recovery following concussion. IMPACT is a computer test that evaluates multiple aspects of neuro-cognitive functioning including memory, brain processing speed, reaction time and post-concussive symptoms.

Student-athletes who participate in collision and contact sports at Willamette High School are expected to take a “baseline” test prior to the start of their first athletic season and then every two years until graduated. This usually occurs during freshman and junior seasons but may occur another year depending on the student-athlete. The baseline test takes approximately 30 minutes and is conducted online with adult supervision. Taking the baseline is like “giving your brain a physical” as it establishes a normal level of performance. This is not an intelligence test and the information is only shared between the athletic trainer, team physician, and the student’s physician per request.

Post-injury testing should be completed 48 to 72 hours after the injury. If an athlete has not taken the baseline test, IMPACT has developed norms that can be used to evaluate the recovery process of a concussed student-athlete. While these norms can be used to monitor recovery, they do not replace the value of an athlete being compared to an individualized baseline test.

The athletic trainer will coordinate baseline IMPACT testing for registered athletes and administer post-concussion IMPACT testing.

Collision and contact sports include: Football, soccer, basketball, cheer, water polo, wrestling, volleyball, baseball, softball, and pole vault.

### **B. Responsibilities of Bethel School District coaches:**

Coaches are required to complete the NFHS Concussion in Sports Certification annually. Using skills gained in this training, coaches are expected to identify possible concussions during activity.

When a coach suspects that a player has a concussion, follow the “Heads Up” 4-step Action Plan.

1. Remove the athlete from play
  1. If a student-athlete exhibits any signs and/or symptoms that seem suspicious that he or she may have sustained a concussion, that student-athlete must be removed from all physical activity and not allowed to return to play until medically cleared by an appropriate healthcare professional. Coaches are not expected to be able to “diagnose” a concussion. **When in doubt, sit them out!**
2. Refer that athlete to appropriate health-care professional.
  1. Coaches should follow the “STAFF MANAGEMENT AND REFERRAL GUIDELINES” if an athletic trainer is unavailable or en-route to injury.
  2. Contact the athletic trainer as soon as possible for medical evaluation, management, and coordination of follow-up care. If unavailable, leave a detailed message regarding the injury situation.
  3. If at an away contest, coaches should seek assistance of the host school’s athletic trainer.
3. If an athletic trainer is unavailable, contact and inform the athlete’s parents or guardians about the possible concussion and give them information on concussion.
4. Keep the athlete out of activity the day of the injury and until medically cleared.
  1. No athlete who is still symptomatic, has not provided a signed medical release, or has not completed their return-to-play testing with the athletic trainer will participate in practices, events, or competitions.
  2. Assist the athletic trainer in monitoring the return-to-play.

The signs, symptoms, and behaviors associated with a concussion are not always apparent immediately after a bump, blow, or jolt to the head or body and may develop over a few hours or longer, up to 72 hours. An athlete should be closely watched following a suspected concussion and should never be left alone.

### C. Responsibilities of the Athletic Trainer

Willamette High School should have an on-site athletic trainer present for home athletic events and practices. If a coach or parent suspects a possible concussion, the athletic trainer should evaluate the student-athlete in a timely manner. If this is not possible, please have the student athlete evaluated by a physician. If the athletic trainer is at a practice or competition and suspects a concussion, he or she will ask to evaluate the student-athlete if the student-athlete is not sent to him or her. The athletic trainer will make emergency or immediate referrals as necessary. The athletic trainer will notify parents/guardians and the concussion management team for further management of the concussion as necessary. The athletic trainer will monitor the student-athlete during afterschool activities and communicate progress and recommendations to the concussion management team and treating physician. Once ready, the athletic trainer will coordinate the return to play protocol and give final clearance for back to activity participation.

## Return to Play Progression:

In order to begin a Return-to-Play progression a student-athlete must have the following:

- Full-time attendance at school with no temporary accommodations
- A medical release from an appropriate healthcare professional with a signature provided to the athletic trainer
- Asymptomatic unless otherwise directed by the team physician
- A normalized ImpACT score unless otherwise directed by the team physician

Return-to-play will occur in a step-by-step process. There is not a set duration for each step, and it will be monitored by the athletic trainer and coach. Rather, the athlete must be symptom-free at each step in order to progress to the next step. Even with a physician's release, the athlete must still be symptom-free before beginning any physical activity and still must participate in the gradual return to play. A physician's note alone is not sufficient for returning an athlete to play, but will allow them to begin the return-to-play progression shown in steps two through five.

**Step One:** Symptom-free day in class. Return to baseline function on GSC and a post-concussion ImpACT test. If a baseline score is not available for the athlete, a performance near normative baseline scores will suffice.

**Step Two:** Light exercise such as light jogging or riding an exercise bike. This could be while dribbling a ball, for example. This needs to be light and will be limited to 15 minutes. The goal is to simply to increase the heart rate and see if this recreates symptoms.

**Step Three:** Running full-speed in the gym or on the field. Examples are sprints and more sport-specific exercises with the athletic trainer, limited to 45 minutes.

**Step Four:** Non-contact practice. The athlete is allowed to participate in drills with as little contact as possible. Weight training can resume at this point, limited to 60 minutes.

**Step Five:** Full Contact Practice

**Step Six:** Return to game/competition

## References:

1. [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion)
2. [www.orcasinc.com](http://www.orcasinc.com)
3. <http://cbirt.org/concussion-faq>
4. [www.brainsteps.net](http://www.brainsteps.net)
5. *Safety of School Sports-Concussion Oregon Administrative Rule 581-022-0421 Guidance Document*
6. Glang A, McCart M, Koester MC, Kracke D, Chesnutt J, et al. (2016) *The Oregon Concussion Awareness and Management Program: Interdisciplinary State Level Guidance in Concussion Management. Ann Sports Med Res 3(1): 1058.*