



## IMPLEMENTATION OF NFHS PLAYING RULES CHANGES RELATED TO CONCUSSION AND CONCUSSED ATHLETES



In its various sports playing rules, the National Federation of High Schools (NFHS) has implemented a standard rule change in all sports dealing with concussions in student-athletes:

*Any athlete who exhibits signs, symptoms, or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health-care professional. (Please see NFHS Suggested Guidelines for Management of Concussion included in this document or in the Appendix, located in the back of each NFHS Rules Book).*

The NIAA has adopted these guidelines and defined the following parameters to guide NIAA registered officials and member school representatives in implementing this change:

### **What is the role of contest officials in administering the new rule?**

- Officials are to review and know the signs and symptoms of concussion and to direct immediate removal of any athlete who displays these signs or symptoms.
- Officials have no other role in dealing with this rules change.

### **Who decides if an athlete has been concussed (has had a concussion)?**

- An MD (Medical Doctor), DO (Doctor of Osteopathy), PA (Physician's Assistant), ARNP (Advanced Registered Nurse Practitioner) or LAT (Licensed Athletic Trainer), Paramedic or School Nurse is empowered to make the on-site determination that an athlete has received a concussion.
- If any one of these individuals has answered "yes" and determined that there has been a concussion, that decision is final.

### **Can an athlete return to play on the same day as he/she receives a concussion?**

- No, under no circumstances can that athlete return to play in that event that day.

### **Once the day has been completed, who can issue authorization to return to practice / competition in the sport?**

- Once a concussion has been diagnosed by one of the above listed on-site providers, only an MD or DO can authorize subsequent return to play, and such shall be in writing to the administration of the school.
- School administration shall then notify the coach as to the permission to return to practice or play.

### **Fundamental Reminders about this change**

- It has always been the ultimate responsibility of the coaching staff, in all sports, to ensure that players are only put into practice or contests if they are physically capable of performing.
- If an athlete has been removed from play by an official who suspects a concussion has occurred and no appropriate healthcare professional is available to evaluate his/her condition, the player may not return to play that day.

### ***NFHS Suggested Concussion Management by Health Care Professionals*** *(Once it has been determined that a player has been concussed)*

1. No athlete should return to play (RTP) or practice on the same day of a concussion.
2. Any athlete suspected of having a concussion should be evaluated by an appropriate health-care professional that day.
3. Any athlete with a concussion should be medically cleared by an appropriate health-care professional prior to resuming participation in any practice or competition.
4. After medical clearance, return to play should follow a step-wise protocol with provisions for delayed return to play based upon the return of any signs or symptoms.

### **Other Resources**

- The NFHS has developed a new 20-minute online coach education course – *Concussion in Sports – What You Need to Know*, the NFHS *Suggested Guidelines for Management of Concussion in Sports* brochure, the NFHS *Sports Medicine Handbook*, materials from the CDC Heads Up program and other materials should all be made available to officials, parents, athletes and schools.



## **NIAA Adopts the NFHS Guidelines for Management of Concussions in Sports**

The guidelines regarding concussion management as published by the National Federation of State High School Associations have been adopted as **minimum mandatory standards** to be utilized by all NIAA member schools. Member Schools / Districts may adopt more restrictive guidelines or protocols but under no circumstances can the NIAA guidelines be diluted especially where specific actions are mandated. Specifically, schools must minimally follow items 1 and 2 under "Sideline Decision Making" found in the "Management of Concussions and Return to Play" section of this document. All individuals involved in interscholastic athletics are encouraged to carefully study and make themselves aware of these guidelines.

### **SUGGESTED GUIDELINES FOR MANAGEMENT OF CONCUSSION IN SPORTS**

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#### **INTRODUCTION**

Concussions are a common problem in sports and have the potential for serious complications if not managed correctly. Even what appears to be a "minor ding or bell ringer" has the real risk of catastrophic results when an athlete is returned to action too soon. The medical literature and lay press are reporting instances of death from "second impact syndrome" when a second concussion occurs before the brain has recovered from the first one regardless of how mild both injuries may seem.

At many athletic contests across the country, trained and knowledgeable individuals are not available to make the decision to return concussed athletes to play. Frequently, there is undo pressure from various sources (parents, player and coach) to return a valuable athlete to action. In addition, often there is unwillingness by the athlete to report headaches and other findings because the individual knows it would prevent his or her return to play.

Outlined below are some guidelines that may be helpful for parents, coaches and others dealing with possible concussions. Please bear in mind that these are general guidelines and must not be used in place of the central role that physicians and athletic trainers must play in protecting the health and safety of student-athletes.

#### **SIDELINE MANAGEMENT OF CONCUSSION**

1. Did a concussion or mild brain injury take place? Based on mechanism of injury, observation, history and unusual behavior and reactions of the athlete, even without loss of consciousness, assume a concussion or mild brain injury has occurred if the head was hit and even the mildest of symptoms occur. (See Signs and Symptoms)
2. Does the athlete need immediate referral for emergency care? If confusion, unusual behavior or responsiveness, deteriorating condition, loss of consciousness, or concern about neck and spine injury exists, the athlete should be referred at once for emergency care.
3. If no emergency is apparent, how should the athlete be monitored? Every 5- 10 minutes, mental status, attention, balance, behavior, speech and memory should be examined until stable over a few hours. If appropriate medical care is not available, an athlete even with mild symptoms should be sent for medical evaluation.
4. No athlete suspected of having a concussion should return to the same practice or contest even if symptoms clear.

## **MANAGEMENT OF CONCUSSIONS AND RETURN TO PLAY**

*(See "Sideline Decision-Making")*

Increasing evidence is suggesting that initial signs and symptoms, including loss of consciousness and amnesia, may not be very predictive of the true severity of the injury and the prognosis or outcome. More importance is being assigned to the duration of such symptoms and this, along with data showing symptoms may worsen some time after the head injury, has shifted focus to continued monitoring of the athlete. This is one reason why these guidelines no longer include an option to return an athlete to play even if clear in 15 minutes and why there is no discussion about the "Grade" of the concussion.

Any athlete who is removed from play because of a concussion should have medical clearance from an appropriate health care professional before being allowed to return to play or practice. The Second International Conference on Concussion held in Prague recommends an athlete should not return to practice or competition in sport until he or she is asymptomatic including after exercise.

Recent information suggests that mental exertion, as well as physical exertion, should be avoided until concussion symptoms have cleared. Premature mental or physical exertion may lead to more severe and more prolonged post concussion period. Therefore, the athlete should not study, play video games, do computer work or phone texting until his or her symptoms have cleared. Once symptoms are clear, the student-athlete should try reading for short periods of time. When 1-2 hours of studying can be done without symptoms developing, the athlete may return to school for short periods, gradually increasing until a full day of school is tolerated without return of symptoms.

Once the athlete is able to complete a full day of school work, without PE or other exertion, the athlete can begin the gradual return to play protocol as outlined below. Each step increases the intensity and duration of the physical exertion until all skills required by the specific sport can be accomplished without symptoms. These recommendations have been based on the awareness of the increased vulnerability of the brain to concussions occurring close together and of the cumulative effects of multiple concussions on long-term brain function. Research is now revealing some fairly objective and relatively easy-to-use tests which appear to identify subtle residual deficits that may not be obvious from the traditional evaluation. These identifiable abnormalities frequently persist after the obvious signs of concussion are gone and appear to have relevance to whether an athlete can return to play in relative safety. The significance of these deficits is still under study and the evaluation instruments represent a work in progress. They may be helpful to the professional determining return to play in conjunction with consideration of the severity and nature of the injury; the interval since the last head injury; the duration of symptoms before clearing; and the level of play.

### **SIDELINE DECISION-MAKING**

1. No athlete should return to play (RTP) on the same day of concussion.
2. Any athlete removed from play because of a concussion must have medical clearance from an appropriate health care professional before he or she can resume practice or competition.
3. Close observation of athlete should continue for a few hours.
4. After medical clearance, RTP should follow a step-wise protocol with provisions for delayed RTP based on return of any signs or symptoms.

### **MEDICAL CLEARANCE / RTP (Return to Play) PROTOCOL**

1. No exertional activity until asymptomatic.
2. When the athlete appears clear, begin low-impact activity such as walking, stationary bike, etc.
3. Initiate aerobic activity fundamental to specific sport such as skating or running, and may also begin progressive strength training.
4. Begin non-contact skill drills specific to sport such as dribbling, fielding, batting, etc.
5. Full contact in practice setting.
6. If athlete remains asymptomatic, he or she may return to game/play.

- ✓ **ATHLETE MUST REMAIN ASYMPTOMATIC TO PROGRESS TO THE NEXT LEVEL.**
- ✓ **IF SYMPTOMS RECUR, ATHLETE MUST RETURN TO PREVIOUS LEVEL.**
- ✓ **MEDICAL CHECK SHOULD OCCUR BEFORE CONTACT.**

## **SIGNS AND SYMPTOMS OF CONCUSSION**

Concussions can appear in many different ways. Listed below are some of the signs and symptoms frequently associated with concussions. Most signs, symptoms and abnormalities after a concussion fall into the four categories listed below. A coach, parent or other person who knows the athlete well can often detect these problems by observing the athlete and/or by asking a few relevant questions of the athlete, official or a teammate who was on the field or court at the time of the concussion. Below are some suggested observations and questions a non-medical individual can use to help determine whether an athlete has suffered a concussion and how urgently he or she should be sent for appropriate medical care.

### **1. PROBLEMS IN BRAIN FUNCTION:**

- a. Confused state - dazed look, vacant stare or confusion about what happened or is happening.
- b. Memory problems - can't remember assignment on play, opponent, score of game, or period of the game; can't remember how or with whom he or she traveled to the game, what he or she was wearing, what was eaten for breakfast, etc.
- c. Symptoms reported by athlete - Headache, nausea or vomiting; blurred or double vision; oversensitivity to sound, light or touch; ringing in ears; feeling foggy or groggy; dizziness.
- d. Lack of sustained attention - difficulty sustaining focus adequately to complete a task, a coherent thought or a conversation.

**2. SPEED OF BRAIN FUNCTION:** Slow response to questions, slow slurred speech, incoherent speech, slow body movements and slow reaction time.

**3. UNUSUAL BEHAVIORS:** Behaving in a combative, aggressive or very silly manner; atypical behavior for the individual; repeatedly asking the same question over and over; restless and irritable behavior with constant motion and attempts to return to play; reactions that seem out of proportion and inappropriate; and having trouble resting or "finding a comfortable position."

**4. PROBLEMS WITH BALANCE AND COORDINATION:** Dizziness, slow clumsy movements, inability to walk a straight line or balance on one foot with eyes closed.

**IMPORTANT NOTE: IF NO MEDICAL PERSONNEL ARE ON HAND AND AN INJURED ATHLETE HAS ANY OF THE ABOVE SYMPTOMS, HE OR SHE SHOULD BE SENT FOR APPROPRIATE MEDICAL CARE.**

## **CHECKING FOR CONCUSSION**

The presence of any of the signs or symptoms that are listed in this document suggest a concussion has most likely occurred. In addition to observation and direct questioning for symptoms, medical professionals have a number of other instruments to evaluate attention, processing speed, memory, balance, reaction time, and ability to think and analyze information (called executive brain function). These are the brain functions that are most likely to be adversely affected by a concussion and most likely to persist during the post concussion period.

If an athlete seems "clear" he or she should be exercised enough to increase the heart rate and then evaluate if any symptoms return before allowing that athlete to practice or play.

Computerized tests that can evaluate brain function are now being used by some medical professionals at all levels of sports from youth to professional and elite teams. They provide an additional tool to assist physicians in determining when a concussed athlete appears to have healed enough to return to school and play. This is especially helpful when dealing with those athletes denying symptoms in order to play sooner.

For non-medical personnel, the Centers for Disease Control and Prevention (CDC) has also developed a tool kit ("Heads Up: Concussion in High School Sports"), which has been made available to all high schools, and has information for coaches, athletes and parents. The NFHS is proud to be a co-sponsor of this initiative.

## **PREVENTION**

Although all concussions cannot be prevented, many can be minimized or avoided. Proper coaching techniques, good officiating of the existing rules and use of properly fitted equipment can minimize the risk of head injury. Although the NFHS advocates the use of mouth-guards in nearly all sports and mandates them in some, there is no convincing scientific data that their use will prevent concussions.



# NFHS Suggested Guidelines



## Concussion Management

A concussion is a traumatic brain injury that interferes with normal brain function. An athlete does not have to lose consciousness (be "knocked out") to have suffered a concussion.

### **Common Symptoms of Concussion Include:**

- headache
- fogginess
- difficulty concentrating
- easily confused
- slowed thought processes
- difficulty with memory
- nausea
- lack of energy, tiredness
- dizziness, poor balance
- blurred vision
- sensitive to light and sounds
- mood changes- irritable, anxious, or tearful

### **Suggested Concussion Management:**

1. No athlete should return to play (RTP) or practice on the same day of a concussion.
2. Any athlete suspected of having a concussion should be evaluated by an appropriate health-care professional that day.
3. Any athlete with a concussion should be medically cleared by an appropriate healthcare professional prior to resuming participation in any practice or competition.
4. After medical clearance, RTP should follow a step-wise protocol with provisions for delayed RTP based upon return of any signs or symptoms.

For more information please see the "NFHS Suggested Guidelines for Management of Concussion" at [www.nfhs.org](http://www.nfhs.org).

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**PLEASE NOTE:** NFHS Website offers FREE COURSE on Concussion Education

**Concussion in Sports - What You Need To Know** – [Click here to go to Course](#)

All coaches and officials are strongly encouraged to take this course. (Est. Time 25-30 minutes)