

HEAD TRAUMA

Concussions / Unconsciousness

By

Eric Deleon, MD...Joe Hershey, Athletic Trainer...Jim Vreeland, OHSA Official

Situation: Both **wrestler A** and **wrestler B** shoot simultaneously for a double leg takedown. In the process, heads collide with a resounding thud heard by everyone involved in the match. While **wrestler B** rolls over, sits, and has no issues, **wrestler A** is still laying flat on his back and has not moved. The official stops the match, starts the injury clock, and calls for medical assistance at mat side. What is a concussion? Let us examine how a referee, an athletic trainer and/or a physician shall assess this situation to make the proper determination as to whether **wrestler A** should continue to compete in this match.

From a medical perspective, **what is a concussion?** A simplified definition for a concussion is a brain bruise. Concussions classifications based upon loss of consciousness, severity of symptoms, and the length of time of symptoms are in existence. We as officials, coaches, and parents should view any concussions with grave concern. A concussion, brain bruise, is so much more serious than a simple pulled muscle or bone bruise. A recurrent pulled leg muscle will heal with proper therapy and time. A brain cell seriously damaged may never heal and can result in serious and or permanent loss of brain function. After a concussion the athlete may appear totally normal in respect to their physical and cognitive function but may be harboring an area in the brain that is extremely sensitive to another concussive episode. A subsequent head trauma may be catastrophic. The most serious, a medical occurrence acknowledged by some medical associations is Second Impact Syndrome, SIS. SIS is a term utilized to categorize an episode of internal brain swelling, resulting from a second concussive episode occurring prior to the proper healing of a previous concussion. This swelling can result in permanent brain damage or death. Research on recurrent concussions have led the medical community to give warnings of patients developing lifelong symptoms of headaches, loss of memory abilities (immediate and long term), depression, and or loss of cognitive functions. At present the medical community is unsure of the exact treatment for concussions. It is recommended for athletes with even a tentative history of a concussion to be evaluated by a physician prior to being allowed to participate in any athletic event (practice or game). After proper medical evaluation, the current treatment is most often conservative; time and rest. Medical experts in the field are uncertain as to what is the proper amount of time and rest for concussions but recommendations are based upon severity and duration of symptoms.

The NFHS rules of wrestling are specific concerning a possible concussion. Rule 8-2-4 states "...Any contestant 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 match and shall not return to competition until cleared by an appropriate health-care professional." If a physician is immediately available he/she has full authority in any matter of possible head trauma. If an athletic trainer (AT) makes an assessment that a concussion has occurred, the match will end in a medical default.

The **official** should maintain his/her position on the mat near **wrestler A**. Prior to the arrival of any medical personnel, the official should be present to watch and communicate with the wrestler. Without moving the wrestler, the official should be evaluating the wrestler for consciousness, disorientation, body movement and position. With the arrival of medical personnel, allow him/her the space and opportunity to assess the situation. As the official, you may need to recap the wrestling event so the physician/AT has an idea how and what occurred. Once in the hands of the physician/AT allow him/her to work uninterrupted, as is

done at our Ohio State Championships. Pay attention and listen, they may need your help and ask you questions. When asked the official should, in a concise manner, communicate how the injury occurred; what part of the head was struck; was there any time of unresponsiveness; did the wrestler respond to appropriate questions of time, date, name, and was there any unusual body movements suggestive of a possible seizure.

Most Ohio wrestling tournaments provide medical care that is overseen by a licensed athletic trainer. Make sure the AT is aware of the injury time clock running, and the rules regarding injury and recovery time. The responsibility of the athletic trainer is first emergency management and the evaluation of the injury. Use of an onsite screening method like SCAT2 format, may help identify a concussion, but obviously an obstacle will be how well the AT knows the athlete. The athlete's prior medical and psychological history will most likely be unknown to the AT. SCAT2, "Sport Concussion Assessment Tool", is a screening tool that has been validated and can help in the evaluation of a concussion. Initially the appropriate life saving measures must be taken including c-spine evaluation and immobilization. Once the evaluation of a concussion is completed, the attending AT must make the final assessment.

At the conclusion of the examination by the attending medical staff, physician or athletic trainer, it is important for the official to communicate the amount of injury time or recovery time remaining. The official will need to get an answer to a couple of questions; was the wrestler unconscious, and in the opinion of the onsite medical personnel is it safe for the injured wrestler to continue in the competition?

If in the opinion of the physician/AT a concussion did not occur, and injury or recovery time has not expired, wrestling may resume. Guidelines dictate that a concussed athlete should not return to competition that same day. The immediate care of the athlete is our foremost concern. A problem does exist. Athletes have returned to competition without proper medical clearance or documentation of that clearance. Most states do not have the capacity to follow an athlete's medical record within one season let alone his entire high school sports career. The time is near when physicians, trainers, coaches' and officials' associations all proactively cooperate in communication about the seriousness of this issue. Quite possibly the development of a medical form to track and give clearance to previously concussed athletes, similar to the medical form for contagious skin problems, will be sanctioned and created by the state or national governing associations.

The topic of any head trauma, especially repeated concussive episodes is a present day prominent and serious issue. Concussions in all sports and the long term effects on our young athletes are being studied, researched, and discussed by many different medical and non-medical associations.

Official's Summary: Safety is paramount. Start the appropriate clock, request medical assistance, and pay attention to the wrestler's responsiveness. Evaluate the wrestler's mental status; are they dizzy, ask their name, their birthday, the date, and the name of the competition site. Evaluate their physical ability; is their grip strength bilaterally equal, can they stand without assistance, and with their eyes closed can they stand with arm out stretched. The assessment decision first goes to the medical professional in charge, and not the coach, parent, or any number of other people at mat side. Remember, the physician /AT will want your help with the athlete's assessment. There is no event so important where the safety of the wrestler is in any way jeopardized in the event that the athlete is deemed to have a concussion. Lastly, without any medical assistance, the decision will rest with the official. If the wrestler fails any of your questions or physical ability assessments, the match should be stopped due to the athlete's likelihood of having sustained a concussion. **Safety is paramount.**