

Sports Medicine & Athletic Related Trauma (SMART) Institute

USF Health

Concussion Assessment, Management, and Return to Play Guidelines

The following policy and procedures on assessment and management of concussions as well as return to play guidelines has been developed in accordance with the Sports Medicine & Athletic Related Trauma (SMART) Institute’s mission statement to provide quality healthcare services and assure the well-being of each athlete.

PURPOSE:

The SMART Institute recognizes that sport induced concussions pose a significant health risk for those individuals participating in athletics. With this in mind, the SMART Institute has implemented policies and procedures to assess and identify those athletes who have suffered a concussion. Baseline data, along with physical examination, and/or further diagnostic testing will be used in conjunction in determining when it is safe for an athlete to return to competition.

CONCUSSION DEFINITION:

A concussion is defined as a violent shaking or jarring action to brain, usually as a result of impact with an object or ground. This results in immediate partial or complete impairment of neurological function.

SIGNS AND SYMPTOMS OF CONCUSSION:

Certified athletic trainers and all other health care providers interacting with athletes need to be aware of the signs and symptoms of concussion to properly recognize and intervene.

Physical Symptoms

Headache
Vision Difficulty
Nausea
Dizziness
Balance Difficulties
Light sensitivity
Fatigue

Cognitive Symptoms

Memory Loss
Attention Disorders
Reasoning difficulty

Emotionality Symptoms

Irritability
Sadness
Nervousness
Sleep Disturbances

BASELINE ASSESSMENT

All athletes that have a previous history of concussions as identified by their health history will undergo a baseline assessment as determined by the certified athletic trainer and physician. Baseline assessment may include, but are not limited to, neurocognitive testing, memory tests, balance/coordination tests, and physical exertion tests.

CONCUSSION MANAGEMENT AND RETURN TO PLAY GUIDELINES

In any circumstance where a concussion is suspected in an athlete, the first priority is to remove the athlete from further competition until a thorough sideline assessment can be made. Furthermore, if there is a question about the state of mental clearing it is best to err in the direction of conservative assessment and withhold the athlete from further competition until a physician assessment can be arranged.

The recommendations in this document for the management of concussion are based on review of the medical literature including, but not limited to, statements by the American Academy of Neurology, Robert C. Cantu, MD, Colorado Medical Society and the NCAA Manual of Sports Medicine.

While there is no clear consensus regarding prognostic significance of many physical manifestations in the post-concussion setting, there is general agreement that these symptoms do assist in the grading of concussion severity. This grading is pivotal management of concussion.

Proposed Concussion Grading Scale:

Grade 1

- Transient Confusion
- No Loss of Consciousness
- Post-Concussive symptoms lasting < 15 min

Grade 2

- Transient Confusion
- No Loss of Consciousness
- Post-Concussive symptoms lasting > 15 min but < 60 min

Grade 3

- Any Loss of Consciousness
- Confusion or Concussive symptoms lasting > 60 min

SIDELINE MANAGEMENT OF CONCUSSIONS

Grade 1 Concussions

1. If all situations where a concussion is suspected the first step is to removed the athlete from competition.
2. The athlete should be assessed every 5 minutes until post-concussive confusion has cleared.
3. If the athlete has no confusion at 15 minutes and is free of the common signs and symptoms listed above, have the athlete perform exert ional sport specific drills
4. If the athlete remains free of symptoms and has a negative Rhomberg Exam, the athlete may return to competition that day.
5. In all circumstances document the player name, position, circumstance of injury, duration of confusion and any post-concussive symptoms. All athletes' who sustain a concussion should be referred for neurocognitive testing and evaluation with team physician within 24 hours.

Grade 2 Concussions

1. If all situations where a concussion is suspected the first step is to removed the athlete from competition.
2. Assess the athlete for post-concussive clearing of his/her confusion every 5 minutes for the first 30 minutes, then every 15 minutes until symptoms resolve.
3. Document the player name, position, circumstance of injury, duration of confusion and any post-concussive symptoms.
4. The athlete should **NOT** return to the current competition, even if symptoms completely clear.
5. The athlete should be referred for neurocognitive testing and evaluation by the team physician within 24 hours of the injury.

Grade 3 Concussions

1. All athlete's with documented loss of consciousness *or* post-concussive confusion lasting more than 60 minutes shall be considered to have a Grade 3 concussion.
2. If the athlete remains unconscious, he/she should undergo cervical spine immobilization and be transported by rescue squad to the nearest emergency department.
3. When the loss of consciousness is brief (<15 seconds) or the athlete has prolonged post-concussion confusion, evaluation should be conducted by the team physician (or his local equivalent in travel situations) or the Emergency department in an expedient manner.
4. Assess the athlete for post-concussive clearing of his/her confusion every 5 minutes for the first 30 minutes, then every 15 minutes until symptoms resolve.
5. Document the player name, position, circumstance of injury, duration of confusion and any post-concussive symptoms.
6. The athlete should **NOT** return to the current competition, even if symptoms completely clear.
7. The athlete should be referred for neurocognitive testing and evaluation by the team physician within 24 hours of the injury.

The SMART Institute recognizes that it may not be possible for neurocognitive testing to take place within a 24 hour time frame due to team travel, scheduling, and other difficulties. With that in mind, it is necessary to plan for neurocognitive testing and an evaluation with the team physician as soon as possible.

RETURN TO PLAY GUIDELINES:

Only under circumstances where an athlete sustains a Grade 1 concussion with no alteration, in mental state and complete resolution of all concussion signs and symptoms, should a certified athletic trainer allow an athlete to return to play without consultation with the team physician. The athlete still may still need to be referred for neurocognitive testing and an evaluation with the team physician within a 24 hour period of initial injury if symptoms warrant.

Neurocognitive testing in conjunction with the team physician physical exam and additional diagnostic tests as needed will determine when an athlete will return to activity. Neurocognitive testing will be scheduled and performed post-injury until the athlete scores at his/her baseline level, or an equivalent that is acceptable by the team physician.

Continued post-concussive symptoms, prior concussion history and any diagnostic testing results along with neurocognitive testing and physical exam, will be utilized by the team physician in establishing a timeline for an athletes return to activity. It is important to note that this timeline could last over a period of days to weeks or months, or potential medical disqualification from

participation in athletics. All cases will be handled on a case-by-case basis. The decision by the team physician for all cases of an athletes return to activity is final.

SUMMARY:

The SMART Institute is committed to providing quality health care services for all athletes. As such, the SMART Institute is very proactive in the assessment and management of concussions. To do so limits the risks of concussions associated with athletics, and the potential catastrophic and long-term complications from said concussions.

Modified with permission from James Madison University Department of Sports Medicine