

Head Injuries In Sports

Concussion & Return to Play Guidelines

On Field Evaluation

- Airway, Breathing, Circulation
- Don't forget to assess the condition of the cervical spine
- Assess for alertness, pain evaluation (where, intensity), amnesia (person, place time, score, last play)
- Don't rush evaluation
- When in doubt, be conservative with athlete's future

Sideline Evaluation

Mental Status Testing

- Orientation: Time, place, person, and situation (circumstances of injury)
- Concentration: Digits backward (i.e. 3-1-7, 4-6-8-2, 5-3-0-7-4) or Months of year in reverse order
- Memory: Names of teams in prior contest, Recall of 3 words and 3 objects at 0 and 5 minutes; recall newsworthy events; details of the contest (plays, moves, strategies, etc.)

Exertional Provocative Tests: 40 yard sprint; 5 push-ups; 5 sit-ups; 5 knee-bends. Any return of symptoms requires further medical evaluation.

Neurological Tests: Strength: coordination and agility, sensation

Note: Any appearance of associated symptoms is abnormal, e.g. headaches, dizziness, nausea, unsteadiness, photophobia, blurred or double vision, emotional lability, or mental status changes.

Grades of Concussions

Grade 1:

- Transient confusion (inattention, inability to maintain coherent stream of thought and carry out goal-directed movements)
- No loss of consciousness
- Concussion symptoms or mental status abnormalities on examination resolve in less than 15 minutes

Grade 2:

- Transient confusion
- No loss of consciousness
- Concussion symptoms or mental status abnormalities (including amnesia) on examination last more than 15 minutes

Grade 3:

- Any loss of consciousness
 - A. Brief (seconds)
 - B. Prolonged (minutes)

Return to Play Recommendations

Concussion Severity	First Concussion	Subsequent Concussions
Grade 1 (mild): Transient confusion; no loss of consciousness; symptoms disappear in less than 15 minutes.	Remove from the game and examine immediately, both at rest and after exertion, for the development of symptoms. Continue examinations at five- minute intervals. Player may return to the game if symptoms clear up within 15 minutes.	Remove player from game. Allow a return to play only after normal neurological assessments and one symptom-free week.
Grade 2 (moderate): Transient confusion; no loss of consciousness; symptoms last more than 15 minutes	Remove from the game and do not return that day; examine on-site frequently. A trained person should examine the athlete the next day. Before a return to play is allowed, the athlete must: a) have one week free of symptoms, both at rest and after exertion, and b) receive a neurological examination and clearance to play note from a physician.	The athlete can return to play only after two symptom free weeks.
Grade 3 (severe): Any loss of consciousness either brief (seconds) or prolonged (minutes).	Transport athlete to nearest emergency room by ambulance if still unconscious or if other worrisome signs are detected. A thorough neurological evaluation should be performed, and hospital admission may be necessary. After a brief loss of consciousness, the athlete may return to play only after one symptom-free week. After a prolonged loss of consciousness, the athlete may return to play only after two symptom-free weeks.	Player may return only after a month or longer of being symptom-free base on the decision of the evaluating physician.

Sources: Colorado Medical Society & American Academy of Neurology

*Compliments of Maryland Brain & Spine, Dr. Brian Sullivan
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