



MANAGEMENT OF CONCUSSION IN EVENTING

Grades of Concussion



• GRADE 1 (Yellow Light to Green Light)

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

MANAGEMENT RECOMMENDATIONS

• **Grade 1:** call a medical hold from competition (Yellow Light). EMS and medical officer examine immediately and at 5 minute intervals for the development of mental status abnormalities or post-concussive symptoms. Return to play if mental abnormalities or post concussive symptoms clear within 15 minutes (Green Light).

• **Grade 2:** Remove from competition for the remainder of the day (Red Light). EMS examine On-sight for signs of evolving intracranial pathology. The rider will be given the pin-to-the-shirt paperwork. A trained person should reexamine the rider the following day. A physician should perform a neurological examination to clear the rider for return to play after the rider has been sign and symptom free for 5 to 7 days.

• **Grade 3:** Transport rider to the emergency facility by ambulance (Red Light). Examine on-site if still unconscious or if worrisome signs are detected (with cervical spine immobilized if indicated). A thorough neurological evaluation should be performed emergently, including appropriate neuroimaging procedures were indicated. Hospital admission is indicated if any signs of pathology are detected, or if mental status remains abnormal.

• GRADE 2 (Yellow Light to Red Light)

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

• GRADE 3 (Red Light)

- 1) Any loss of consciousness.
 - a. brief (seconds)
 - b. prolonged (minutes)



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FEATURES OF CONCUSSION FREQUENTLY OBSERVED

- 1) Vacant stare (befuddled facial expression)
- 2) Delayed verbal and motor response (slow to answer questions or follow directions).
- 3) Confusion and inability to focus attention (easily distracted unable to follow through with normal activity).
- 4) Disorientation (walking in the wrong direction, unaware of time, date place).
- 5) Slurred or incoherent speech (making disjointed or incomprehensible statements).
- 6) Gross observable incoordination (stumbling, inability to walk straight line).
- 7) Emotions out of proportion to circumstances (distraught, crying for no apparent reason).
- 8) Memory deficits (rider repeatedly asks same question which has already been answered, or inability to memorize and recall 3 of 3 words or objects in 5 minutes)
- 9) Any period of loss of consciousness (paralytic coma, unresponsive to arousal).

MENTAL STATUS TESTING

• **Orientation:** Time, place, person and situation (circumstances of injury).

• **Concentration:** Months of the year backward, description of course & location on it.

• **Memory:** Where did you last compete, where will you compete next, describe the last fence you jumped & the one that comes next, what was your start time, who are you stabled next to, recent newsworthy events.

Exertional Provocative tests and neurological tests of strength, coordination and agility, or Sensation may be informative.

The appearance of any associated symptom including headache, dizziness, nausea, unsteadiness, photophobia, blurred or double vision, emotional lability or mental status change.

Each rider is different and has a unique medical history. The information presented here is ONLY a guide, diagnosis can only be made by a medical professional.

For more information about the management of concussion in sports, contact the Brain Injury Association (703) 236-600 or the American Academy of Neurology (612)623-8115.

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