

BCS CONCUSSION MANAGEMENT PROTOCOL

A concussion is a disturbance in the function of the brain caused by a direct or indirect force to the head. It results in a variety of symptoms and may, or may not, involve memory problems or loss of consciousness. There is a wide variability in the symptoms of concussion that an athlete can experience. Therefore, each athlete should be treated on a case-by-case basis by medical personnel who are trained in diagnosis and management of sport-related concussion. This document provides a protocol for concussion management.

1. Preseason Assessment

Prior to any sliding training and competition, all athletes must undergo:

- Pre-season medical assessment which includes review of past concussion history (including any instances of lost consciousness, memory problems, feeling dinged or dazed, length of time of recovery etc.)
- Yearly baseline-testing utilizing a web-based neuropsychological testing system (IMPACT)

A BCS team physician must conduct the pre-season assessment and supervise the neuropsychological testing and determine if the athlete is cleared to participate.

2. Injury Protocol

A BCS team physician, chiropractor or physiotherapist (hereafter, BCS medical team) should be onsite during sliding training and competition. This individual must be trained in assessment and management of acute concussion.

In the event of a crash or a hit to the head:

- The athlete must report to the BCS medical team for assessment.
- The BCS medical team should also seek out the athlete.
- Coaches should report any suspicion of a concussion to the BCS medical team
- In the event that the concussion is assessed by the BCS team chiropractor or physiotherapist, the BCS team physician should also be notified and assist in the follow-up assessment.
- In the event that no members of the BCS medical team are available, the athlete must be assessed by a physician as soon as a concussion is suspected. Athletes with suspected concussion should be escorted by a team-mate, coach, etc to the physician. Subsequent follow-up should then be arranged with the BCS team physician.
- In the case where athletes are competing out-of-country, follow-up with team may be conducted by telephone, Skype, etc., where available. The BCS team physician should also be contacted **PRIOR** to making travel arrangements to return home.
- **Athletes CANNOT be cleared to return to training/competition by paramedical track staff or BCS team coaches**
- The diagnosis and management should follow the guidelines laid out in the Summary and Agreement Statement of the Second International Symposium on Concussion in Sport-Prague 2004 (1).

3. Post Injury Period

The cornerstone of concussion management is **REST**. Rest includes:

- Physical rest (no physical activity include sport-specific training/competition, cross training, weight-lifting, moving sleds, etc.)
- Cognitive rest (no excessive mental tasks, driving, studying etc.)
- Quiet environment
- Removal from stressful situations (media attention, team meetings, etc.)
- Avoid exposure to visual and auditory stimulation (television, video games, night clubs, etc.)

Other aspects of concussion management that are also important to consider include:

- Avoiding alcohol or any recreational drug use after concussion
- Napping when tired, but avoid excessive sleep
- Maintain “normal” aspects of life like regular meals, being outdoors, etc. providing they do not produce physical or mental stress.
- Analgesics (pain killers) or anti-inflammatories can be used, as directed by a physician, but it must be recognized that these can mask some of the symptoms of concussion (like headache, etc.). Other medications or supplements may be appropriate to use, but only after review and approval by a physician.
- Chiropractic, physiotherapy or massage therapy may be considered for associated problems such as neck injuries or balance problems
- Psychological support and counseling should be considered when appropriate

The athlete should be serially assessed by the BCS Medical Team until the post-concussion symptoms have completely resolved. The duration of being symptom-free varies case-to-case but is at a minimum 24-48 hours. Repeat neuropsychological testing can then be done. A supervised return-to-training protocol can be started once neuropsychological testing scores have returned to baseline.

4. Return to Competition

Athletes can begin return to training and competition only after the athlete has been symptom free for a period of time and neuropsychological testing scores have returned to baseline. The following progressive symptom-limited program is recommended:

Stage One: Low intensity aerobic exercise (e.g. stationary cycle) x 15 minutes

Stage Two: Aerobic exercise with intervals x 30 minutes

Stage Three: Sport-specific training drills – low intensity (light weight training, ½ speed sprinting)

Stage Four: Sport-specific training drills - high intensity (heavy weight training, full speed sprinting, sled pushing/starts without sliding)

Stage Five: Resume sliding

- There should be approximately 24 hours (or longer) for each stage and the athlete should return to full rest if symptoms recur at any stage of the progression
- Final clearance to participate in competition must be given by the team physician or chiropractor or physiotherapist (?BCS Medical Team)

Reference:

1) “Summary and Agreement Statement of the Second International Symposium on Concussion in Sport” in the April, 2005 Clinical Journal of Sport Medicine (Vol 15).