General Concussion Information and Testing

A concussion is frequently defined as a head injury with a temporary loss or alteration to brain functions. The changes can exhibit a variety of physical, cognitive, and emotional symptoms, which may not be recognized if subtle. The terms mild brain injury, mild traumatic brain injury (MTBI), mild head injury (MHI), minor head trauma, and concussion may be used interchangeably. A concussion is commonly thought to be caused by impact forces, in which the head strikes or is struck by something, or secondary forces, in which the head moves without itself being subject to blunt trauma (for example, a hard blow to the body which jars the brain inside the skull). A concussion can range from mild to very severe symptoms depending on the individual and the amount of damage caused.

Concussions are recognized as being a potentially very serious condition that if managed improperly, can lead to catastrophic consequences. At Lincoln University, we take great pride in providing optimal health care to all student-athletes. By managing concussions individually, and considering the athlete's medical history, it allows the physicians and athletic trainers on staff to ensure the safety for each student athlete.

A concussion is, like many other injuries, not exclusive to sports participation. Any concussion, sports related or not, will be subject to the requirements for return to play outlined in the rest of this policy. This policy includes, but is not limited to the management principles mandated by the NCAA and NATA.

Education

Student-athletes and coaches will be educated about how to recognize the signs and symptoms of concussions. At Lincoln University, this will be done with every athlete and coach annually at the beginning of the fall semester. Informational sheets and a presentation will provide education defining concussion, listing symptoms, and explain the recovery process. One of the sheets they will keep for their own reference, the other one they will sign and return to the athletic training staff acknowledging that they have received education on and understand the concussion information that they are presented with. Every athlete and coach has the right to review the policy with a member of the athletic training staff upon request.

Signs and Symptoms

Signs and symptoms of a concussion may include, but are not limited to the following:

- Amnesia
- Sensitivity to light or noise
- Confusion
- Nausea (feeling that you might vomit)
- Headache

- Feeling sluggish, foggy or groggy
- Loss of consciousness
- Feeling unusually irritable
- Balance problems or dizziness
- Difficulty getting to sleep or disrupted sleep
- Double or fuzzy vision
- Slowed reaction time
- Concentration or memory problems (forgetting game plays, facts, meeting times)

Exercise or activities that require a lot of concentration may cause symptoms to reappear or worsen, thus increasing the time one needs to recover from a concussion.

Baseline Testing

Each athlete at Lincoln University, as part of a comprehensive pre-participation physical exam, will be tested with Vestibular/Ocular-Motor Screening, BESS Test, and/or Manual Concussion Assessment tool at the beginning of their Freshman, Junior, or initial transfer year. These tests provide a baseline of the neurocognitive functioning of each athlete's brain at a time where a concussion is not present. This baseline can then be used to identify any cognitive deficiencies after an athlete sustains a concussion.

Return-To-Academics Progression

The Sports Medicine Department recognizes that the education of student-athletes is the highest priority. In some cases a concussion can impair a student-athlete's academic abilities. The Sports Medicine Department aims to work with professors to allow student-athletes to return to their normal studies as quickly as possible following injury.

Following diagnosis of concussion, the Sports Medicine Department in conjunction with Student Disabilities Services will navigate a return-to-learn progression for student-athletes whose symptoms are worsened by cognitive activity. A Student-athlete will contact services for students with disabilities representative notifying them of the incident and any individualized recommended limitations. No student-athlete should participate in classroom activity the same day as a concussion. An individualized initial plan will be made for each student-athlete by a multi-disciplinary team that may include, but not limited to: Team Physician, Attending Athletic Trainer, Academic Counselor, and Office of Disability Services Representative.

A gradual return to classroom/studying is outlined below; this progression will be modified to accommodate the individualized needs of each student-athlete based on the student-athlete's symptoms. Student-athletes should complete the return-to-academics progression before they are returned to full athletic participation. Student-athletes are not required to be symptom free

before starting the return-to-learn progression; however, symptoms should not increase in intensity or number in order to move forward in the progression. While completing this progression students may require various accommodations specific to their symptoms including but not limited to: shortened days, breaks when needed, written instructions, increased time for tests/assignments, dimmed lighting, and wearing sunglasses indoors, Re-evaluation by the Team Physician and members of the multidisciplinary team will be conducted for the student-athlete whose symptoms last more than two academic weeks. Campus services may be contacted, as appropriate, for cases that cannot be managed through modified academic accommodations.

Return-To-Academics Progression
1. 24 Hour Rest Period
2. Re-introduction to limited screen time (15-20 min) in controlled environment as symptoms allow
3. Re-introduction of school work in controlled environment as symptoms allow
4. Partial days of school as symptoms allow (i.e. alternate days of morning and afternoon classes)
5. Full return to academic activities

Return-to-Participation Decision Making

After a student-athlete is diagnosed with a concussion, the return-to-play (RTP) progression should not start until he or she no longer reports concussion-related symptoms, has a normal clinical examination, and performs at or above pre-injury levels of functioning on all objective concussion assessments. The exertion progression should follow the pattern outlined in the NATA Position Statement: Management of Sport Concussion (2014), and the 2017 . The typical time frame consists of 24 hours between levels. However, if activity at any stage results in a return of symptoms or a decline in test performance, then the activity should be immediately halted and restarted 24 hours later. The RTP timing is case dependent, but most patients diagnosed with a concussion can expect to be withheld from competition for at least 1 week. The athletic trainer can lengthen the sequence if symptoms return during recovery or the patient has other comorbidities that may affect recovery. The directing physician can shorten the timeline when appropriate. Regardless, no patient diagnosed with concussion should return to physical activity on the day of injury. A student-athlete will be cleared to return to participation after they have completed the RTP progression, have been cleared by the Team Physician, and all objective concussion assessments have returned to baseline measurement. Athletes will not complete the RTP prior to completion of the return-to-learn progression.

Return-To-Play Progression
1. A 24-hour symptom-free period
2. Light aerobic exercise (walking, bike, no weight training)
3. Sport-specific exercise (running drills, no impact activities)
4. Non-contact training drills (more difficult drills, passing activities, begin weight training again).
5. ImPACT test, non-contact practice
6. Full contact practice
7. Resume full participation

Persistent Symptoms

Student-athletes typically experience symptom resolution after 10-14 days. An Athlete suffering from concussion symptoms for a period of time greater than 14 days should be re-evaluated by the team physician for coexisting/co-founding conditions and the development of an individualized treatment plan.