Indiana University Athletics

Concussion Management Policy

The Indiana University Department of Intercollegiate Athletics Concussion Management Policy follows the direction and guidance of the NCAA’s Concussion Safety Protocol Committee (Committee) and is compliant with a concussion management plan recommended by the Committee. It is a dynamic policy that will be reviewed and edited as necessary to remain consistent with the most recent best practices of concussion management as set forth by the Committee.

Introduction:

Concussion management is challenging due to the fact that concussion risk is highly individualized. A blow to the head with the exact same forces will yield different symptoms of differing severity depending on the individual concussed. Additionally, the brain is dynamic, especially in the developmental years of youth and adolescence, and is influenced by a multitude of other factors (i.e. sleep deprivation, dehydration, fatigue, depression, ADD/ADHD, headache disorders, drugs and supplements etc.).

International experts have convened at conferences on four occasions, most recently in Zurich in 2012, in attempts to form consensus statements on the management of sports-related concussion. What has resulted is a recommendation to abandon the concept of categorizing concussions by “grades” or labeling them as “simple” or “complex” based on signs, symptoms, and severity at presentation for the purpose of making “return-to-play” decisions. This supports the realization that sports concussion diagnosis and management needs to be individualized, and does not lend itself to a “cookbook” approach. Noting this premise, some fundamental principles apply to concussion management.

Definition:

Concussion is a complex pathophysiological process affecting brain function and induced by traumatic biomechanical forces. Concussion may or may not result in a loss of consciousness. It is most commonly characterized by the rapid onset of a constellation of physical, cognitive, emotional and sleep-related symptoms. Symptoms may last from several minutes to days, weeks, months or even longer in some cases. A working diagnosis of concussion includes two criteria: 1.) A mechanism of injury to the head or an “event” which can involve direct or indirect forces and 2.) That event results in one or more of the common symptoms associated with concussion and/or any sign of a concussion.

Pre-Season Education:

Treatment of concussion in sports is a team endeavor. Education of the student-athletes, coaches, team physicians, athletic trainers, Director of Athletics and other administrators and academic personnel about concussion and the potential for chronic or permanent injury is essential to their understanding and cooperation with treatment. Time will be allotted in a preseason team meeting for
education of the coaches and student-athletes about concussive injuries and the procedural guidelines for treatment of concussion are received by each player and coach.

Each student-athlete and coach has the responsibility to report events or behaviors that might indicate that a concussion has occurred. Student-athletes will sign a statement in which they accept the responsibility for reporting all of their injuries and illnesses to the medical staff, including signs and symptoms of concussions. All Indiana University student-athletes, coaches, team physicians, athletic trainers, and the Director of Athletics will annually be provided by the institution NCAA concussion fact sheets (or other applicable material) and will annually sign a statement to acknowledge they understand those fact sheets (and/or other concussion material provided), the concussion management policy, their role within the policy and that they have received education about concussions and have had an opportunity to ask questions. Each student-athlete and coach will receive a copy of the sequence of events that will occur at practice or on game day if a concussion is suspected or diagnosed (Appendix A). Recent guidelines from the Big Ten Conference and NCAA have emphasized that protocols are moving from best practices to regulatory standards by the conference, taking what were once recommendations by the NCAA and making them official policy with consequences for violation. Under the new standards the Big Ten Conference will issue penalties for failure to comply with reporting requirements, rules on removing players from the field and other aspects of the association’s concussion guidelines.

Pre-Participation Assessment:

Every student-athlete will receive at least one pre-participation baseline concussion assessment that addresses brain injury and concussion history, symptom evaluation, cognitive assessment and balance evaluation. The team physician will determine pre-participation clearance and/or the need for additional consultation or testing. Any student-athlete with a documented concussion, especially those with complicated or multiple concussion history, a new baseline concussion assessment will be considered six months or beyond the initial baseline concussion assessment. Additionally, any history of migraine/headache disorders, ADD/ADHD or other learning disabilities, psychiatric or sleep disorder and drug or alcohol abuse will be recorded and considered in the assessment. The baseline concussion assessment will be stored electronically and will be accessible at practices or competition. This comparison allows for a more accurate assessment of the injury (Appendix B). The pre-participation assessment will also include a more detailed baseline computerized neurocognitive testing of the student-athlete’s speed and memory function (ImPACT® test). Such testing aims to serve as an objective technique to assess neurocognitive function in an uninjured state.

Recognition and Diagnosis of Concussion:

If a student-athlete is diagnosed with or suspected of having experienced a concussion based on signs/symptoms/behaviors consistent with a concussion, they will be immediately removed from the activity (i.e. practice, competition and/or conditioning) and not allowed to return to activity that day if a concussion is confirmed. They will be evaluated by the Certified Athletic Trainer (ATC) and/or Team Physician with concussion experience. If the injury occurs in the sport of football, the student athlete is
taken to the training room for evaluation. If the injury occurs at a venue without an official designated training room, the evaluation will be made in the most appropriate setting as determined by the medical staff. As part of the evaluation, a history will be taken from the patient about their injury. A standardized “sideline” evaluation for concussion (SCAT-III) will be performed and compared to their baseline SCAT III. This evaluation will be part of an initial suspected concussion evaluation management plan which will also include a symptom assessment, physical and neurological exam, cognitive assessment, balance exam and clinical assessment or cervical spine trauma, skull fracture and intracranial bleed. Additionally, observation of the injury event by the medical staff, coaching staff and game officials can also provide valuable information in determining if a concussion injury has occurred. If it is determined that a concussion has occurred the student athlete will remain in the training room (in football and in other sports if possible) and not return to practice, competition or conditioning.

In the sport of football, a trained, unaffiliated certified athletic trainer with previous sideline experience will be stationed in the replay booth as an “eye in the sky” to observe players that might have sustained a concussive injury not witnessed by on-field personnel. This person will have the capability of communicating with the sideline medical staff of each team to alert them of a potentially injured player as well as having access to video replay to further evaluate the play where the player might have been concussed. Additionally, IU Athletics will have a neurosurgeon on the IU sideline at each home and away football game to assist in the diagnosis and evaluation of potential concussed players.

**Post-Concussion Management:**

The immediate evaluation of the head-injured athlete will include an assessment of airway, breathing and circulation (ABC’s), cervical spine, skull fracture as well as any signs of a more serious head injury to determine if a controlled, stabilized removal from the field and transportation to the nearest hospital is necessary. Conditions that would require transport to a designated hospital for further medical care are for any of the following: Glasgow Coma Scale score of <13, a prolonged loss of consciousness, focal neurological deficit suggesting intracranial trauma, repetitive vomiting, persistently diminishing/worsening mental status or other neurological signs/symptoms or a spine injury.

One of the medical personnel will observe/monitor the concussed student-athlete for any deterioration in their neurological status which might require further evaluation at a designated hospital. Prior to leaving the practice or competition venue, the athlete will be re-examined and if medically stable, will be discharged with a responsible adult (typically a roommate, friend or family member) and both are given oral and written care instructions to follow until they are seen for a follow-up medical appointment (Appendix C). The student-athlete is treated with both physical and cognitive rest at the direction of the team physician. As part of the treatment process, the team physician will evaluate a student-athlete with a prolonged recovery in order to consider best management options and additional diagnosis, such as post-concussion syndrome, sleep dysfunction, migraine or other headache disorders, mood disorders such as anxiety and depression, and ocular or vestibular dysfunction. Research has shown that determining the functional integrity of the concussed athlete’s brain also requires neurocognitive testing and this modality is being used as part of the standard of care for the diagnosis and treatment of concussion. All student-athletes receive a baseline computerized neurocognitive test (ImPACT®) prior to starting their collegiate athletics career. Following a concussion,
a repeat test will be performed and test performance must return to the baseline level prior to being fully cleared for return-to-play participation. Physical rest precludes exertional activity including sport specific drills, practices, games, weight lifting and conditioning.

**Return-to-Play:**

The final determination of return-to-play of a concussed student-athlete is from the team physician or medically qualified physician designee. In a concussed student-athlete with a complicated or prolonged course the team physician will make the final return-to-play decision after consultation with a concussion management team which may include one or more of the following: a neurosurgeon or other neurospecialist, a neuropsychologist, a vestibular/ocular motor therapist. The duration it takes to return to activity is completely individualized to the particular student-athlete and is not based on an arbitrary timeframe. Any student-athlete with a concussion must undergo a supervised stepwise progression management plan by a health care provider with expertise in concussions that specifies that the concussed student-athlete will have limited physical and cognitive activity until he/she has returned to baseline, then progresses with each of the following steps without worsening or new symptoms: (1) Progression starts with light aerobic exercise without resistance training (such as biking or jogging for 15-20 minutes), with gradual and steady increases in exertion if the athlete remains without symptoms. (2) Sport-specific exercise and activities are then introduced without contact or head impact. (3) Non-contact practice with progressive resistance training. (4) Unrestricted training. (5) Full, unrestricted return-to-competition. This progression can take anywhere from days to weeks and the speed with which the athlete moves through this progression and returns-to-play is dependent on multiple factors and is guided by the medical team. Some of these factors include the clinical signs and symptoms, prior concussion history (number, remoteness, and severity), history of ADD/ADHD, learning disability, psychiatric history, sleep disorder, history of migraine headaches, age, sport, position, and the athlete’s lack of hesitancy to return. It is essential that the athlete is completely asymptomatic before any final clearance to return-to-play.

**Return-to-Learn:**

In addition to physical symptoms, concussed student-athletes often experience cognitive symptoms and have difficulty performing at their normal academic level. Cognitive rest may necessitate not being able to attend classes and having to observe academic accommodations which reduce the workload on the brain. The timeframe and nature of the classes and assignments missed will be determined by the team physician. The team academic advisor will serve as the point person within IU Athletics to navigate return-to-learn with the student-athlete. Student-athletes may fall behind in their studies and may not be able to take tests until their brain recovers. Formal guidelines in the form of Academic Accommodations (Appendix D) and Return-to-Learn Guidelines (Appendix E) are expressly a part of this concussion management policy. The student-athlete’s concussion symptoms should guide the academic workload and weaning and eventual discontinuance of accommodations and restrictions. When the symptoms have resolved with activities of daily living including cognitive activities, the athlete
must undergo a sport-specific activity progression program without recurrence of symptoms as outlined in the Return-to-Learn Guidelines.

**Potential Complications or Sequelae of Concussions:**

Symptoms and signs of concussion in a small percentage of cases may be prolonged and a diagnosis of Post-Concussion Syndrome may be made requiring specialty consultation with a neuropsychologist or psychiatrist. Other symptoms or signs which include sleep dysfunction, migraine or other headache disorders, mood disorders such as anxiety and depression and ocular motor/vestibular dysfunction may be persistent and have to be individually addressed by a specialist or specific therapy. Those specialists have been identified and are part of the medical team.

**Role of Imaging:**

The role of imaging (CT scans and MRI) is very limited in the management of concussion and for most cases, not necessary. For most concussions, these studies are usually normal. These imaging studies do, however, have a role in evaluating the concussed athlete when a concern exists for associated injuries, such as skull or orbital fractures, intracranial bleeds and seizures, or if the athlete’s symptoms persist or neurological status deteriorates.

**Reducing Exposure to Head Trauma:**

The recognition and management of concussion will continue to evolve as the knowledge base of concussive brain injury is advanced. Emphasis must continue to be placed on ways to prevent this injury. Prevention is potentially the highest-yield opportunity in the lexicon of concussion risk reduction. Changes in the rules of collision sports will be a significant key to the prevention of concussions. Launching one’s body and using one’s helmet as a weapon must be eliminated. Rule changes and enforcement are beginning to reflect these priorities.

Sources for safety procedures are found on the websites or organizations committed to athlete safety such as USA Football and the CDC. Coaches and athletes must also favor an atmosphere of competitive, but non-combative, competition. Collegiate players, their teams and their institutions set the example for young people who are beginning to play athletics and brain immaturity puts them at greater risk to sustain injuries. Safe play in all sports should become the example.

Consistent with the foregoing, a reducing head trauma exposure management plan has been established, which includes the following: Adherence to Inter-Association Consensus: Year-Round Football Practice Contact Guidelines, adherence to Inter-Association Consensus: Independent Medical Care Guidelines, reducing gratuitous contact during practice, taking a "safety first" approach to sport, taking the head out of contact, and coaching and student-athlete education regarding safe play and proper technique.
Table 1: Signs and Symptoms of Concussion

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amnesia – prior to or after injury</td>
<td>Headache</td>
</tr>
<tr>
<td>Loss of consciousness (LOC)</td>
<td>Nausea and/or vomiting</td>
</tr>
<tr>
<td>Slurred/incoherent speech</td>
<td>Excessive drowsiness</td>
</tr>
<tr>
<td>Disoriented to time, place, person</td>
<td>Unable to focus, concentrate</td>
</tr>
<tr>
<td>Delayed verbal &amp; motor responses</td>
<td>Feeling hazy, foggy, groggy</td>
</tr>
<tr>
<td>Vacant stare</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Light sensitivity</td>
<td>Blurry/double vision</td>
</tr>
<tr>
<td>Loss of balance, feeling unsteady</td>
<td>Sensitivity to light/noise</td>
</tr>
<tr>
<td>Crying unexpectedly or inappropriate behavior</td>
<td>Confusion</td>
</tr>
<tr>
<td>Behavior or personality change</td>
<td>Not “feeling right”</td>
</tr>
<tr>
<td>Slow to get up</td>
<td>Feeling slowed down</td>
</tr>
<tr>
<td>Rubbing, squinting or blinking one’s eyes</td>
<td></td>
</tr>
<tr>
<td>Grabbing or shaking the head</td>
<td></td>
</tr>
<tr>
<td>Asking for ammonia capsule</td>
<td></td>
</tr>
<tr>
<td>Atypical response to initial questioning</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A

Guidelines for Suspected or Diagnosed Concussion During Practice or Game

1. The student-athlete will be immediately removed from the practice or game.
2. An initial brief assessment for concussion will be made.
3. If a concussion is suspected the student-athlete will be taken to the training room (in football and other sports if possible) and the SCAT III will be repeated and compared to the baseline.
4. If a concussion is diagnosed the student-athlete will remain in the training room (if possible) and not return to the field.
5. The concussed student-athlete will be monitored by one of the medical personnel for any deterioration of his neurological exam. If necessary the student-athlete will be taken to the emergency department for further diagnosis and treatment.
6. Before returning to their residence, the student-athlete will receive detailed instructions for him and his roommate or family to recognize if the situation is deteriorating.
7. An ImPACT® test will be done at the appropriate time and compared to the baseline (or normative data). Test performance must return to normal (as determined by the team physician) for return to play consideration.
8. Return to play is determined when all symptoms have resolved at rest, the neurologic examination is normal, the ImPACT® test has returned to baseline (or compares favorably to normative data) and the student-athlete has successfully passed a graded activity progression program without recurrence of concussion symptoms.
9. Documentation from the team doctor in consultation with other neurological specialists when applicable must be obtained.
Appendix B

(See next 2 pages)
SCAT3™
Sport Concussion Assessment Tool – 3rd Edition
For use by medical professionals only

What is the SCAT3?

The SCAT3 is a standardized tool for evaluating injured athletes for concussion and can be used in athletes aged from 13 years and older. It supersedes the original SCAT and the SCAT2 published in 2003 and 2009, respectively. For younger persons, ages 12 and under, please use the Child SCAT3. The SCAT3 is designed for use by medical professionals. If you are not qualified, please use the Sport Concussion Recognition Tool®. Preseason baseline testing with the SCAT3 can be helpful for interpreting post-injury test scores.

Specific instructions for use of the SCAT3 are provided on page 3. If you are not familiar with the SCAT3, please read through these instructions carefully. This tool may be freely copied in its current form for distribution to individuals, teams, groups and organizations. Any revision or any reproduction in a digital form requires approval by the Concussion in Sport Group.

NOTE: The diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. The SCAT3 should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. An athlete may have a concussion even if their SCAT3 is “normal”.

What is a concussion?

A concussion is a disturbance in brain function caused by a direct or indirect force to the head. It results in a variety of non-specific signs and/or symptoms. Some examples listed below and most often does not involve loss of consciousness. Concussion should be suspected in the presence of any one or more of the following:

- Symptoms (e.g., headache), or
- Physical signs (e.g., unsteadiness), or
- Impaired brain function (e.g., confusion) or
- Abnormal behavior (e.g., change in personality).

SIDELINE ASSESSMENT

Indications for Emergency Management

NOTE: A hit to the head can sometimes be associated with a more serious brain injury. Any of the following warrants consideration of activating emergency procedures and urgent transportation to the nearest hospital:

- Glasgow Coma Score less than 15
- Deteriorating mental status
- Potential spinal injury
- Progressive, worsening symptoms or new neurologic signs

Potential signs of concussion?

If any of the following signs are observed after a direct or indirect blow to the head, the athlete should stop participation, be evaluated by a medical professional and should not be permitted to return to sport the same day if a concussion is suspected.

- Any loss of consciousness?
  - Y  N
- "If so, how long?"?
  - Y  N
- Balance or motor incoordination (stumbles, slow/laboured movements, etc.)?
  - Y  N
- Disorientation or confusion (inability to respond appropriately to questions)?
  - Y  N
- Loss of memory:
  - "If so, how long?"
  - Y  N
- "Before or after the injury?"
  - Y  N
- Blank or vacant look?
  - Y  N
- Visible facial injury in combination with any of the above?
  - Y  N

1. Glasgow coma scale (GCS)

<table>
<thead>
<tr>
<th>Best eye response (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No eye opening</td>
</tr>
<tr>
<td>Eye opening in response to pain</td>
</tr>
<tr>
<td>Eye opening to speech</td>
</tr>
<tr>
<td>Eyes opening spontaneously</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best verbal response (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No verbal response</td>
</tr>
<tr>
<td>Incomprehensible sounds</td>
</tr>
<tr>
<td>Inappropriate words</td>
</tr>
<tr>
<td>Confused</td>
</tr>
<tr>
<td>Oriented</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best motor response (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No motor response</td>
</tr>
<tr>
<td>Extension to pain</td>
</tr>
<tr>
<td>Abnormal flexion to pain</td>
</tr>
<tr>
<td>Flexion/Withdrawal to pain</td>
</tr>
<tr>
<td>Localises to pain</td>
</tr>
<tr>
<td>Obey commands</td>
</tr>
</tbody>
</table>

Glasgow Coma score (E + V + M):

of 15

GCS should be recorded for all athletes in case of subsequent deterioration.

2. Maddocks Score

"I am going to ask you a few questions, please listen carefully and give your best effort."

Modified Maddocks question (1 point for each correct answer)

<table>
<thead>
<tr>
<th>What venue are we at today?</th>
<th>0 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which half is it now?</td>
<td>0 1</td>
</tr>
<tr>
<td>Who scored last in this match?</td>
<td>0 1</td>
</tr>
<tr>
<td>What team did you play last week/game?</td>
<td>0 1</td>
</tr>
<tr>
<td>Did your team win the last game?</td>
<td>0 1</td>
</tr>
</tbody>
</table>

Maddocks score:

of 5

Notes: Mechanism of injury ("tell me what happened"):

Any athlete with a suspected concussion should be REMOVED FROM PLAY, medically assessed, monitored for deterioration (i.e., should not be left alone) and should not drive a motor vehicle until cleared to do so by a medical professional. No athlete diagnosed with concussion should be returned to sports participation on the day of injury.
**BACKGROUND**

Name:  
Examiner:  
Sport/team/school:  
Date/time of injury:  
Age:  
Gender:  
Years of education completed:  
Dominant hand:  
How many concussions do you think you have had in the past?  
When was the most recent concussion?  
How long was your recovery from the most recent concussion?  
Have you ever been hospitalized or had medical imaging done for a head injury?  
Have you ever been diagnosed with headaches or migraines?  
Do you have a learning disability, dyslexia, ADHD?  
Have you ever been diagnosed with depression, anxiety, or other psychiatric disorder?  
Has anyone in your family ever been diagnosed with any of these problems?  
Are you on any medications? If yes, please list:  

SCAT3 to be done in resting state. Best done 10 or more minutes post exercise.

**SYMPTOM EVALUATION**

### How do you feel?

*You should score yourself on the following symptoms, based on how you feel now.*

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Pressure in head&quot;</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Neck pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nausea or vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Blurred vision</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Balance problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sensitivity to light</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sensitivity to noise</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling slowed down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling like &quot;in a fog&quot;</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>&quot;Don't feel right&quot;</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficultly concentrating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficultly remembering</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fatigue or low energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Confusion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trouble falling asleep</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>More emotional</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Irritability</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nervous or Anxious</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total number of symptoms** (Maximum possible: 22)

**Symptom severity score** (Maximum possible: 132)

Do the symptoms get worse with physical activity?  
Do the symptoms get worse with mental activity?  

<table>
<thead>
<tr>
<th>self rated</th>
<th>self rated and clinician monitored</th>
<th>clinician interview</th>
<th>self rated with parent input</th>
</tr>
</thead>
</table>

**Overall rating:** If you know the athlete well prior to the injury, how different is the athlete acting compared to his/her usual self?  
Please circle one response:  

<table>
<thead>
<tr>
<th>no different</th>
<th>very different</th>
<th>unsure</th>
<th>N/A</th>
</tr>
</thead>
</table>

**COGNITIVE & PHYSICAL EVALUATION**

### Cognitive assessment

**Standardized Assessment of Concussion (SAC)**

**Orientation** (1 point for each correct answer)

- Month of injury?
- Date today?
- Day of the week?
- Year is it?
- Time is it right now? (within 1 hour)

**Orientation score** of 5

**Immediate memory**

<table>
<thead>
<tr>
<th>List</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Alternative word list</th>
</tr>
</thead>
<tbody>
<tr>
<td>elbow</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>candle babyinger</td>
</tr>
<tr>
<td>apple</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>paper monkey penny</td>
</tr>
<tr>
<td>carpet</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>sugar perfume blanket</td>
</tr>
<tr>
<td>saddle</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>sandwich sunset brown</td>
</tr>
<tr>
<td>bubble</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>0 1 0 1</td>
<td>wagon iron insect</td>
</tr>
</tbody>
</table>

**Immediate memory score total** of 15

**Concentration**

- **Digits Backward**
  - List: 4-9-3, 3-8-1-4, 6-2-9-7, 7-1-8-4-6-2
  - Trial: 1, 2, 3
  - Alternative digit list: 1-2, 2-3, 3-1, 1-2, 2-3, 3-1
  - Total of 4

- **Month in Reverse Order** (1 pt. for entire sequence correct)
  - Concentration score of 5

### Neck Examination:

- Range of motion
- Tenderness
- Upper and lower limb sensation & strength

**Findings:**

### Balance examination

- Do one or both of the following tests:
  - Footwear (shoes, barefoot, braces, tape, etc.)
  - Modified Balance Error Scoring System (BESS) testing
    - Which foot was tested (i.e., which is the non-dominant foot)
    - Testing surface (hard floor, field, etc.)

**Condition**

- Double leg stance:
  - Errors

- Single leg stance (non-dominant foot):
  - Errors

- Tandem stance (non-dominant foot at back):
  - Errors

**And/or**

- Tandem gait²:
  - Time (best of 4 trials):  _______ seconds

### Coordination examination

- **Upper limb coordination**
  - Which arm was tested:
  - Coordination score of 1

### SAC Delayed Recall

**Delayed recall score** of 5

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Scoring on the SCAT3 should not be used as a stand-alone method to diagnose concussion, measure recovery or make decisions about an athlete's readiness to return to competition after concussion. Since signs and symptoms may evolve over time, it is important to consider repeat evaluation in the acute assessment of concussion.
You have been diagnosed with a concussion. The following are signs and symptoms to watch out for:

* Stiff neck
* Severe headache
* Unusual sleepiness
* Repeated vomiting
* Confusion that gets worse
* Difficulty walking, speaking or using your arms

Convulsions

Do not take any medication unless directed by your athletic trainer or team physician. If you demonstrate any of the above symptoms after leaving the sports medicine facility, please contact your athletic trainer or team physician immediately.

If you plan to take nap or sleep, have a roommate, friend or family member present who can wake you up every 3 hours for the first 24 period after your concussion.
Appendix D
Academic Accommodations Following Concussion
Indiana University Department of Athletics – Sports Medicine

Date: __________

Patient Name: ________________________________  Sport: ______________________

Students recovering from concussions (Mild Traumatic Brain Injuries) often exhibit cognitive symptoms that make attending school and learning difficult. They may not be able to attend classes or only partial classes. They often have light and nose sensitivity, headache, trouble focusing, concentrating and remembering. The accommodations listed below often help to lessen the symptoms and allow full participation sooner. Compliance with these accommodations allows the brain to recover more quickly. These students often do not appear ill, but they are.

The student is currently experiencing symptoms of mild traumatic brain injury. Current Symptoms list:

- ___ Headache
- ___ Visual problems
- ___ Sensitivity to noise
- ___ Memory problems
- ___ Nausea
- ___ Balance problems
- ___ Difficulty concentrating
- ___ Sensitivity to light
- ___ Dizziness
- ___ Feeling foggy
- ___ Irritability
- ___ Fatigue

Class Attendance:
- ___ Full attendance, no restrictions
- ___ Attendance, but may leave early or take short breaks
- ___ No attendance, 2-3 days

Visual Stimulus:
- ___ Allow student to wear sunglasses
- ___ Limited computer, TV, bright screen use
- ___ Allow use of pre-printed class notes
- ___ Change classroom seating as necessary

Testing:
- ___ Additional time to complete test/quiz
- ___ No more than one test per day
- ___ Allow for scribe, oral response and oral delivery of questions
- ___ Postpone exams/quizzes

Workload/Multi-tasking:
- ___ Reduce homework as possible
- ___ Provide more time to complete assignments
- ___ No note taking – listening only

Additional Comments/concerns: ________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________

We will continue to update you on the patient’s progress and recovery. We appreciate your support and assistance in helping this patient recover from their concussion. If you have any question, please feel free to contact us.

Dr. Andy Hipskind  Marni Mooney
Head Team Physician  Asst. Athletic Director
812.855.4509           812.856-4526
Appendix E

Guidelines for Return-to-Learn

1. Academic accommodations guidelines are given to the concussed student-athlete and a copy is given to their athletic department team academic advisor. No classroom activity will occur on the same day of the concussion.

2. The team academic advisor will serve as the point person to navigate academic adjustments/accommodations and return-to-learn aspects of the student-athlete.

3. Letter from head team physician documenting the injury and the recommendation of academic accommodations will be provided to course professors and instructors when necessary.

4. An individualized initial plan will be based on the student-athlete’s tolerance of cognitive activity and will include: remaining at home/dorm if student-athlete cannot tolerate light cognitive activity and a gradual return to classroom/studying as tolerated, modification of schedule/academic accommodations for up to two weeks, as indicated, with help from the identified point person, re-evaluation by team physician and member of the multi-disciplinary team, as appropriate, for student-athletes with symptoms greater than two weeks, engaging campus resources for cases that cannot be managed through schedule modification/academic accommodations. Such campus resources must be consistent with ADAAA, and include at least one of the following: learning specialists, office of disability services or ADAAA office.

5. Continued medical follow up until complete recovery, including a re-evaluation by the team physician if concussion symptoms worsen with academic challenges.

6. Involvement of a multi-disciplinary team when necessary for more complex or prolonged cases. The multi-disciplinary team may include, but is not limited to:
   a. Team physician
   b. Athletic trainer
   c. Psychologist/counselor
   d. Neuropsychologist and/or other mental health professionals
   e. Faculty athletic representative, appropriate campus administrators
   f. Academic course professors, counselors and instructors
   g. College administrators
   h. Disability Services for Students (in Office of Student Affairs) representative
   i. Coaches

7. Compliance with the ADAAA.
   a. Engagement of ADAAA compliant campus resources when typical academic accommodations do not suffice.

8. Notification of the team academic advisor when accommodations are weaned or discontinued.
Concussion Acknowledgement Form

I, ________________________________, acknowledge that as a member of the Indiana University Department of Intercollegiate Athletics, I accept responsibility for supporting our Sports Medicine Department’s policy on concussion management.

I understand that student-athletes may have a risk of head injury and/or concussion. I also understand the importance of reporting any such symptoms of a head injury/concussion to the sports medicine staff (i.e. team physician, athletic trainer). I also accept responsibility for reporting to the sports medicine staff any signs or symptoms that I may witness.

By signing below, I acknowledge that my institution has provided me with educational materials on concussion and given me an opportunity to ask questions about areas and issues that are not clear to me on this issue.

I have read the above and agree that the statements are accurate.

______________________________  ______________________________
Signature                              Date
Athletic Director’s Certification

I certify that Indiana University has met the requirements of NCAA Constitution 3.2.4.17.1 Concussion Safety Protocol. As required, Indiana University’s Concussion Management Policy (IUCMP) meets all necessary requirements including the following:

- The IUCMP is consistent with the Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines.
- The IUCMP includes policies and procedures that meet the requirements of Constitution 3.2.4.17.
- The IUCMP includes pre-participation baseline testing for all student-athletes.
- The IUCMP includes procedures for reducing exposure to head injuries.
- The IUCMP includes a plan for educating about concussion, including return-to-learn.
- The IUCMP procedures ensure that proper concussion management will be made available to any student-athlete who has suffered a concussion.
- The institution has, within the last calendar year, reviewed its procedures for identifying, removing from game or practice, and assessing student-athletes for possible concussion.

As best I can determine, the policies, procedures and practices of the Indiana University staff and representatives are in compliance with NCAA legislation. Indiana University intends to maintain compliance with NCAA legislation.

G. Frederick Glass  
Vice President & Director of Intercollegiate Athletics  
Indiana University

6/23/15  
Date