Oklahoma State University Policy and Procedures

HEAD INJURY AND CONCUSSION SAFETY PORTOCOL	Athletic Training Department April 2019

TITLE:

Head Injury and Concussion Safety Protocol

PURPOSE: Provide a stepwise process in the evaluation and management of sports-related head injuries from an athletic trainer's and team physician's perspective.

PRE-SEASON EDUCATION:

1. Oklahoma State University has provided to student-athletes, coaches, team physicians, athletic trainers, and athletic directors (Form 5 & 6) the NCAA concussion fact sheet as well as a consent form stating that the material has been read and understood. The above parties will provide a signed acknowledgement of having read and understood the concussion educational and management material.

PRE-PARTICIPATION ASSESSMENT:

1. Every student-athlete will be required to have a pre-season baseline assessment for head injury/concussion as it pertains to prior history of head injury/concussion.
    a. Baseline assessments will include;
        i. Brain injury and concussion history.
        ii. A Digital graded concussion symptom scale checklist (GSC) (Form 1), in which the student athlete will rate a series of symptoms based on a 0-6 scale.
        iii. A Digital Balance Error Scoring System (BESS) (Form 2), used to assess the student-athletes balance, which will be compared pre: vs. post injury.
        iv. A Digital Standardized Assessment of Concussion (SAC) (Form 3), used to measure immediate neuro-cognitive effects of the head injury, which includes orientation, immediate memory, concentration and delayed memory.
        v. C3Logix neuropsychological test will be administered to obtain baseline measures of memory, reaction time, etc., in order to assist in the evaluation of a head injury/concussion, and tracking for a safe return to play.
2. Baseline testing will be conducted for all new athletes (including transfers) by the respective athletic trainers, with test scores being filed in the student-athlete's medical chart, and kept with the athletic trainer for easy access at home and away practices/competition.
3. All baselines will be reviewed by the Team Physician as part of their PPE, and the Team Physician will subsequently clear each individual student-athlete for participation.

RECOGNITION OF CONCUSSION:

1. Medical personnel/Athletic Training staff with training in the diagnosis, treatment, and initial management of acute concussion will be confirmed present at all NCAA varsity competitions and practices in the following contact/collision sports that Oklahoma State University offers: Men's and Women's Basketball, Equestrian, Football, Track- Pole Vault, Women's Soccer and Wrestling.
2. Medical personnel/Athletic Training staff with training in the diagnosis, treatment, and initial management of acute concussion will be available at all NCAA varsity competitions and practices in the following sports that Oklahoma State University offers: Men's and Women's Cross Country and Track, Men's and Women's Golf, Baseball and Softball. To be available means that, at minimum, medical personnel/athletic training staff can be contacted at any time during the practice via telephone, text messaging, email or other immediate communications means. Further, the case can be discussed through such communication, and immediate arrangements can be made for the athlete to be evaluated.

DIAGNOSIS OF CONCUSSION: In the case of a known head injury, or a suspected concussion based on the athlete exhibiting and/or reporting concussion-like symptoms, the student-athlete will immediately be administered a post-concussion GSC, SAC and BESS test using C3 Logix along with Cranial nerve testing (Table 1).

1. If the student-athlete is within 90% of his/her baseline values on the SAC, BESS and GSC, the student-athlete will be considered for return to play only if they remain asymptomatic after a reasonable time of complete assessment and inactivity. However, prior to returning to activity/sport the student-athlete is required to partake in some type of exertional exercises (Table 2).
    a. If symptoms **do not** return, the student-athlete is allowed to return to play.
    b. If symptoms **do** return, the student-athlete is **not** allowed to return and further testing/evaluation will be administered.
2. If the student-athlete is not within 90% of his/her baseline values directly after the suspected injury, and does not reach those values after a reasonable time of being monitored during inactivity, the student-athlete will not be allowed to return to competition. If the student-athlete has any loss of consciousness the student-athlete will not be allowed to return to competition for the reminder of that day, independent of what their scores indicate.
3. Consideration of all variables during the recognition/ diagnostic component of the policy will be considered by the examining ATC and/or physician. All components of the injury should be acknowledged and taken into consideration such as environmental conditions, sports related fatigue, language barriers etc. As a result, the clinical assessment of the student –athlete by the ATC or physician is the most important component of the evaluation.

POST-CONCUSSION MANAGEMENT:

1. Any student-athlete diagnosed with a concussion **shall not return** to activity for the remainder of that day. Final medical clearance and any return to activity will be determined by the Team Physician, Dr. Val Gene Iven, in conjunction with the certified

athletic trainer involved with the management of his/her concussion. Upon initial evaluation of an injured student-athlete, Oklahoma State University's Emergency Action Plan (EAP) will be instituted for any of the following conditions: Glasgow Coma Scale <13; prolonged loss of consciousness; focal neurological deficit suggesting intracranial trauma; repetitive emesis; persistently diminished worsening mental status or other neurological signs/symptoms; spine injury. This EAP is a coordinated effort with Oklahoma State University Sports Medicine staff, paramedics, and Stillwater Medical Center emergency medicine personnel. Notification of parents/guardians of such injury will occur as deemed necessary.

a. If the student-athlete is unable to return to competition, he/she will be administered the post-concussion symptom checklist prior to going home. Student-athlete and any individuals that live with that student-athlete will also be given specific instructions for the care of the student athlete's injury (Form 4 & 5).
    i. If the student-athlete lives alone, a staff athletic trainer, graduate assistant athletic trainer, student athletic trainer, and/or another teammate will be assigned to the athlete to monitor his/her status overnight. Student-athlete will be provided with contact information for both his/her Athletic Trainer and/or Team Physician.
b. The first day following the injury, the student-athlete will be re-evaluated by certified athletic trainer, as well as the Team Physician if travel and schedule circumstances allow. The athlete will be administered the symptom checklist and entire C3 Logix neurocognitive testing. If the student-athlete is symptom free, within 90% of baseline values of all concussion tests, and has a visual acuity score within .4 LogMAR lines or below 2.2 LogMAR lines, the student-athlete is allowed to start the return to play exertional testing protocol (Table 2). If the student-athlete is not within 90% of the baseline values or has a visual acuity above 2.2 LogMAR lines or more than .4 LogMAR lines of baseline value, he/she is not allowed to initiate the exercise component of the return to play protocol.
    i. If the student athlete is unable to take the neuropsychological testing the next day due to a road game, the certified athletic trainer will test him/her using non-computer tests (i.e. GSC, BESS, and SAC adjusted to match C3 Logix) to determine his/her return to play status.
    ii. When the student-athlete's scores of a particular test are within 90% of baseline scores, they will not be required to repeat that particular test on a daily basis.
c. The second day post-injury, and each subsequent day, the student-athlete will only be administered the symptom checklist. The student-athlete will not be administered any additional tests until the symptom checklist has returned to baseline values. If the student-athlete has returned to baseline values, they will be administered the entire C3Logix assessment battery. Each of these tests will be administered every day until the values are within 90% of baseline or meet the visual acuity requirements. If the student-athlete has no significant changes on C3Logix testing from baseline values as interpreted by the Team Physician and certified athletic trainer, they will be allowed to start the return to play protocol. If values have not returned to anticipated levels as expected the student-athlete is not

allowed to start return to play protocol and will be re-tested each day until scores return to normal.

d. All recorded values and test scores are recorded and stored in the C3Logix database and schools EMR/EHR.
e. If student athlete fails to show signs of expected, progressive recovery – the Team Physician will determine need for further management. Such cases may include further imaging studies, and/or referral to Neurologist, or referral to specific therapist

RETURN TO PLAY:

1. Classifying the injury with reference to any of the many established concussion diagnostic guidelines will allow the Team Physician and Athletic Trainer to optimally manage a return to play protocol more effectively. Again, guidelines are only guidelines and clinical experience by the Team Physician or certified athletic trainer will be considered foremost when making a return to play decision. The Team Physician if present and/or Certified Athletic Trainer will be the only individuals responsible for making the return to play decision.
2. Head trauma suspected concussive event without loss of consciousness
    a. Remove student-athlete from contest. Examine immediately for abnormal cranial nerve function, impaired cognition, incoordination or other post-concussive symptoms at rest and with exertion. May return to contest if examination is normal and asymptomatic for a reasonable time frame. If any symptoms reoccur, return that day is not permitted
    b. If the student-athlete is removed from contest/practice and develops symptoms during the sideline evaluation, daily evaluations are necessary. Student-athlete may begin return to activity assessment when asymptomatic at rest and after successful completion of tests. Unrestricted participation is allowed if asymptomatic during exertional testing and neuropsychological and balance testing normal.
    c. Each student athlete with a concussion must undergo a supervised stepwise progression management plan by the medical personnel/athletic training staff with expertise in concussion management. See progression plan in Table 2.
3. Head trauma suspected concussive event with loss of consciousness
    a. Remove the student-athlete from contest and prohibit return that day. Examine immediately and regularly thereafter for evolving intracranial pathology. Further diagnostic tests for suspected intracranial pathology will then be considered. Reexamine daily. May return to restricted participation when Athletic Trainer and Team Physician are assured the student-athlete has been asymptomatic at rest and with prescribed and supervised exertional testing. Unrestricted participation if remains asymptomatic and performing restricted activities normally and comfortably. All neuropsychological assessment and balance testing have returned to normal.
4. The goal in managing an athlete with a concussion should be to prevent further injury including potential catastrophic outcome, to return the athlete to safe, unrestricted competition in a manner that minimizes both the possibility of second-impact syndrome

and/or a more severe head injury leading to lingering symptomology and further time away from training/competition.

5. The potential of long term effects of repetitive head injury will be discussed with any student athlete sustaining any such head injury by the Team Physician.

REDUCING EXPOSURE TO HEAD TRAUMA:

1. Oklahoma State University is committed to reducing exposure by the following:
    a. Adhering to reducing the number of contact practices as Big 12 and NCAA guidelines dictate.
    b. Providing coaches, athletic training staff and student athletes with education regarding safe play and proper technique
    c. Recognition of unchallengeable autonomy of medical staff in determining medical management and return to play decisions of student-athletes.

RETURN TO LEARN:

1. Provide guidelines for initiating cognitive rest following sports-related concussion and establishing a process to guide the transition of return to the academic classroom/setting. "Return-to-learn" is a parallel concept to "return-to-play." The foundation of return-to-learn includes: a stepwise program that fits the needs of the individual. Return-to-learn guidelines acknowledges that both physical and cognitive activities require brain energy utilization, and such brain energy is not available or may be limited for physical and cognitive exertion due to the concussion-induced brain energy crisis. The "hallmark" of return-to-learn is cognitive rest immediately following concussion, just as the "hallmark" of return-to-play is physical rest. Cognitive rest refers to avoiding potential cognitive stressors such as school work, video games, reading, texting and watching television, as well as team meetings and instruction. Current evidence suggests that providing both physical and cognitive rest allows the brain to recover more quickly, providing the beneficial effect of cognitive rest on ultimate concussion recovery.
    a. When a student athlete sustains a head injury/concussion and cognitive rest is suggested either by the team physician and/or athletic trainer, the associate athletic director in Academic Affairs, Marilyn Middlebrook or her designee, will be notified. Academics will then notify appropriate instructors and the Office of Disability Services on campus.
    b. Cognitive rest and/or modification of schedule/academic accommodations following a concussion may involve avoiding the classroom for at least 24 hours or more. The following descriptive models will be referred to when assessing concussive injury and outlining a "return-to-learn" plan.
        i. <u>Academic Adjustment</u> - a student-athlete's academic schedule may require some modification in the first one to two weeks following concussion. In this case, full recovery is anticipated, and the student-athlete will not require any long-term curriculum or testing alterations.
        ii. <u>Academic Accommodation</u> - the student-athlete has persistent symptoms for more than two weeks following concussion. Because the student-athlete has not recovered in the anticipated period of time, he or she may require a change in the class schedule and special arrangements may be required for tests, term papers and projects. At this point, the student-

athlete, under the guidance of the Team Physician and Director of Academic Affairs will meet with the Office of Disability Services to develop a University approved plan. Although there is no fixed timeline for academic accommodation, this generally applies to student-athletes who have more prolonged concussion symptoms, or who may be suffering with post-concussion syndrome.

iii. Academic Modification - a more difficult scenario in which the student-athlete suffers prolonged cognitive difficulties, which thereby requires a more specialized educational plan constructed by the multidisciplinary team, including the potential of withdrawing from classes for that given semester.

c. If the student-athlete cannot tolerate the amount of time required to participate in a class requiring light cognitive activity, he or she should remain at home or in the residence hall. If at any time concussion symptoms worsen with academic challenges, the student-athlete will be re-evaluated by the team physician.

i. For example, once the student-athlete can tolerate 30-45 minutes of cognitive activity without return of symptoms, he/she should return to the classroom in a step-wise manner. Such return may include no more than 30-45 minutes of cognitive activity at one time, followed by at least 15 minutes of rest.

2. Return-to-learn recommendations are based on consensus statements, with a paucity of evidence-based data to correlate with such consensus recommendations.
3. Return-to-learn recommendations should be made within the context of a multi-disciplinary team that includes both Sports Medicine and Academic Student Services personnel.
    a. The levels of adjustment needed should be decided by a multi-disciplinary team that includes sports medicine and academic students services' personnel, including but not limited to the Team Physician-Dr. Val Gene Iven, Director of Athletic Training- John Stemm, athletic trainer of respective sport, Associate Athletic Director of Academic Affairs-Marilyn Middlebrook, Faculty Athletic Representative-Stephen Clarke, Licensed Clinical Psychologist-Trevor Richardson, and any individual professors deemed appropriate. The level of multi-disciplinary involvement should be made on a case-by-case basis. Re-evaluation of affected student-athlete is an ongoing process that continues until full clearance.
4. A process that ensures the gradual return to cognitive activity is based on the absence of concussion symptoms following cognitive exposure.

References

McCrory P et al: Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012. Br J Sports Med 2013; 47:250-258.
Harmon KG et al: American Medical Society for Sports Medicine position statement: concussion in sport. Br J Sports Med 2013: 47:15-26.
Schneider KJ et al: The effects of rest and treatment following sport-related concussion: a systematic review of the literature. Br J Sports med 2013; 47:304-307.

Table 1. Cranial Nerve Testing

Cranial Nerve	Test
I	Sense of smell
III,IV,V	Eye tracking and pupil reactivity
V	Biting down
VII	Facial expressions
X	Swallowing
XI	Shoulder shrug
XII	Protrusion of the tongue

Table 2. Exertional Testing Protocol

Student-athlete reports to athletic trainer **symptom free**

↓

Step 1

Student-athlete performs a 20 minute cardiovascular workout with interval sprinting or cardiovascular equivalent, stopping if symptoms return. If no symptoms:

↓

Step 2

Student-athlete performs individual sport skills without threat of contact. If symptoms return, student-athlete must stop and revert to step 1 the following day. If no symptoms:

↓

Step 3

Student-athlete may return to practice with limited contact. Level of involvement depends on the sport and position of the student-athlete. If symptoms return, student-athlete must stop.

If no symptoms, student-athlete should be seen by physician if available for clearance to participate in all activities the following day

- In some cases, steps 1 and 2 could be completed on the same day between AM and PM sessions
- No student-athlete can return to full activity until they are asymptomatic with controlled exertion, limited and full contact activities and cleared by the team physician if present. If Team Physician is not physically able to evaluate the student athlete, the respected sport Athletic Trainer will be in communication with the Team Physician to complete the evaluation as to obtain full clearance.

Form 4:

OKLAHOMA STATE UNIVERSITY ATHLETIC TRAINING ROOM HEAD INJURY PROTOCOL

This is a medical follow-up sheet regarding concussion management for your health and safety. Often times signs of a traumatic head injury do not appear immediately after the injury itself. The purpose of this fact sheet is to alert you to the symptoms of significant head trauma that may occur several hours after you leave the training room.

It is important that the injured student-athlete go home and rest. This includes:

No TV / Movies
No video games
No loud music
No alcohol
No medications that are not approved by the athletic trainer or team physician

If you experience one or more of the following symptoms following a head injury, seek medical attention

1. Difficulty remembering recent or meaningful events.
2. Severe headache, particularly at a specific location.
3. Extreme stiffening of the neck.
4. Bleeding or clear fluid dripping from the ears or nose.
5. Mental confusion, strangeness or irritability.
6. Nausea or vomiting.
7. Dizziness, poor balance or unsteadiness.
8. Weakness in either arm or leg.
9. Abnormal drowsiness or sleepiness.
10. Convulsions/twitching.
11. Unequal pupils.
12. Loss of appetite.
13. Persistent ringing of the ears.
14. Slurring of speech.
15. Unable to be aroused.
16. Change in respiration / difficulty breathing.

The appearance of any of the above symptoms should not be taken lightly and are signs/symptoms that are consistent with a significant head injury that **requires immediate medical attention**. If any of the symptoms appear, immediately contact your Team Physician (Dr. Val Gene Iven), Certified Athletic Trainer, or John Stemm, Head Athletic Trainer at 405-742-7463(cell), 405-332-4035 (home), or go to Stillwater Medical Center's Emergency Room.

Oklahoma State University Athletic Training Staff

Form 5:

CONCUSSION

A FACT SHEET FOR STUDENT-ATHLETES

WHAT IS A CONCUSSION?

A concussion is a brain injury that:

- Is caused by a blow to the head or body.
  - From contact with another player, hitting a hard surface such as the ground, ice or floor, or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.
- Can change the way your brain normally works.
- Can range from mild to severe.
- Presents itself differently for each athlete.
- Can occur during practice or competition in ANY sport.
- Can happen even if you do not lose consciousness.

HOW CAN I PREVENT A CONCUSSION?

Basic steps you can take to protect yourself from concussion:

- Do not initiate contact with your head or helmet. You can still get a concussion if you are wearing a helmet.
- Avoid striking an opponent in the head. Undercutting, flying elbows, stepping on a head, checking an unprotected opponent, and sticks to the head all cause concussions.
- Follow your athletics department's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.
- Practice and perfect the skills of the sport.

WHAT ARE THE SYMPTOMS OF A CONCUSSION?

You can't see a concussion, but you might notice some of the symptoms right away. Other symptoms can show up hours or days after the injury. Concussion symptoms include:

- Amnesia.
- Confusion.
- Headache.
- Loss of consciousness.
- Balance problems or dizziness.
- Double or fuzzy vision.
- Sensitivity to light or noise.
- Nausea (feeling that you might vomit).
- Feeling sluggish, foggy or groggy.
- Feeling unusually irritable.
- Concentration or memory problems (forgetting game plays, facts, meeting times).
- Slowed reaction time.

Exercise or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games may cause concussion symptoms (such as headache or tiredness) to reappear or get worse.

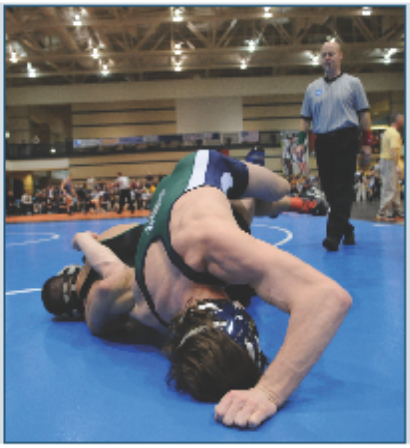
WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?

Don't hide it. Tell your athletic trainer and coach. Never ignore a blow to the head. Also, tell your athletic trainer and coach if one of your teammates might have a concussion. Sports have injury timeouts and player substitutions so that you can get checked out.

Report it. Do not return to participation in a game, practice or other activity with symptoms. The sooner you get checked out, the sooner you may be able to return to play.

Get checked out. Your team physician, athletic trainer, or health care professional can tell you if you have had a concussion and when you are cleared to return to play. A concussion can affect your ability to perform everyday activities, your reaction time, balance, sleep and classroom performance.

Take time to recover. If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have a repeat concussion. In rare cases, repeat concussions can cause permanent brain damage, and even death. Severe brain injury can change your whole life.



IT'S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON. WHEN IN DOUBT, GET CHECKED OUT.

For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.

Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.

Form 6:

OSU Student-Athlete Injury & Illness Responsibility Statement

I, the undersigned athlete at Oklahoma State University, acknowledge the NCAA requirement that student-athletes at OSU accept the responsibility for reporting their personal injuries and illness to the OSU Athletic Training Staff, which may include, but is not limited to, signs and symptoms of concussions. Furthermore, I acknowledge that I have received the NCAA concussion education materials.

Concussion symptoms may include one or more of the following:	Concussion signs observed by teammates, parents and coaches include:
• Headaches • "Pressure in head" • Nausea or vomiting • Neck pain • Balance problems or dizziness • Blurred, double, or fuzzy vision • Sensitivity to light or noise • Feeling sluggish or slowed down • Feeling foggy or groggy • Drowsiness • Change in sleep patterns • Amnesia • "Don't feel right" • Fatigue or low energy • Sadness • Nervousness or anxiety • Irritability • More emotional • Confusion • Concentration or memory problems (forgetting game plays) • Repeating the same question/comment If you notice any symptoms of concussion: • Tell your athletic trainer and/or coach	• Appears dazed • Vacant facial expression • Confused about assignment • Forgets plays • Is unsure of game, score, or opponent • Moves clumsily or displays incoordination • Answers questions slowly • Slurred speech • Shows behavior or personality changes • Can't recall events prior to hit • Can't recall events after hit • Seizures or convulsions • Any change in typical behavior or personality • Loses consciousness

- Do not return to participation in a game, practice, or other activity until you have been cleared to return to activity by a medical professional.

- If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have a repeat concussion which may result in a severe brain injury and can change your life.

I have received and reviewed the concussion fact sheet; I accept the responsibility for reporting my injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions

Printed Name: _____Sport: _____

Date: _____
Signature _____ Date: _____
Signature of parent or guardian if student athlete is under age 18.

Form 1

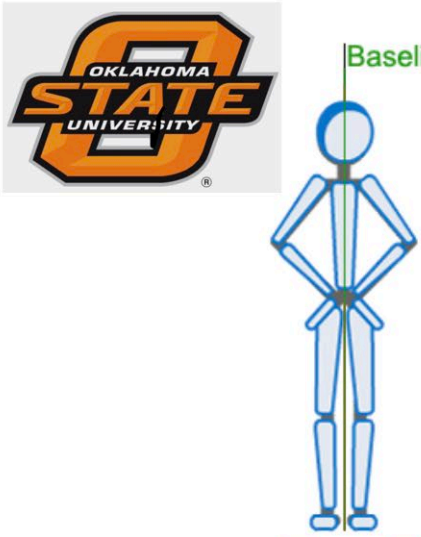
GSC Symptom Scores (Incomplete)							
	NONE	MILD		MODERATE		SEVERE	
Key							
Headache	0	1	2	3	4	5	6
'Pressure in head'	0	1	2	3	4	5	6
Neck Pain	0	1	2	3	4	5	6
Nausea or vomiting	0	1	2	3	4	5	6
dizziness	0	1	2	3	4	5	6
Blurred vision	0	1	2	3	4	5	6
Balance Problems	0	1	2	3	4	5	6
Sensitivity to light	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feeling slowed down	0	1	2	3	4	5	6
Feeling like 'in a fog'	0	1	2	3	4	5	6
'Don't feel right'	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Difficulty remembering	0	1	2	3	4	5	6
Fatigue or low energy	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep(if applicable)	0	1	2	3	4	5	6
More emotional	0	1	2	3	4	5	6
Irritability	0	1	2	3	4	5	6
Sadness	0	1	2	3	4	5	6
Nervous or anxious	0	1	2	3	4	5	6
Sleeping more than usual	0	1	2	3	4	5	6
Sleeping less than usual	0	1	2	3	4	5	6
Difficulty sleeping soundly	0	1	2	3	4	5	6
Ringing in the ears	0	1	2	3	4	5	6
Numbness or tingling	0	1	2	3	4	5	6

c3Logix
Comprehensive Concussion Care

Graded Symptom Checklist

OKLAHOMA STATE UNIVERSITY

Form 2



C3 Balance Evaluation vs Baseline	Visualizer	
STANCE	ERROR COUNT	
	ASSESSMENT	BASELI
Double Leg Eyes Closed	0	0
Single Leg Eyes Closed	8	3
Tandem Eyes Closed	4	2
Double Leg On Pad Eyes Closed	1	0
Single Leg On Pad Eyes Closed	10	4
Tandem On Pad Eyes Closed	6	4

C3 Balance Evaluation Volume Images

ASSESSMENT						
12-17-2013 FOLLOW-UP	**0** Errors Vol. Percentile: **1**	**8** Errors Vol. Percentile: **1**	**4** Errors Vol. Percentile: **1**	**1** Error Vol. Percentile: **5**	**10** Errors Vol. Percentile: **5**	**6** Errors Vol. Percentile:
12-13-2013 BASELINE	**0** Errors Vol. Percentile: **90**	**3** Errors Vol. Percentile: **18**	**2** Errors Vol. Percentile: **13**	**0** Errors Vol. Percentile: **90**	**4** Errors Vol. Percentile: **27**	**4** Errors Vol. Percentile:

Form 3 — Standard Assessment of Concussion

Immediate Memory | Orientation | Concentration | Delayed Recall | **Summary**

Total	**19/50**
Immediate Memory	**8/30**
Orientation	**5/5**
Concentration	**0/5**
Delayed Recall	**6/10**