RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

Rutgers University Sports Medicine
Concussion Management Program

The following document will serve as Rutgers University's policy on concussion management. It is a living document and subject to change as the medical literature evolves. This document will be reviewed annually by the Athletic Director, the Chief Medical Officer, all athletic trainers and team physicians managing Rutgers athletes. Confirmation of this will be done by the Director of Athletic Training and Chief Medical Officer. This policy will also be reviewed annually with each head coach by their assigned athletic trainer.

➢ Administrative Issues

- ➢ Athletic healthcare providers (physician & certified athletic trainer) shall have the unchallenged authority to determine management and return to play of an ill or injured student-athlete, in all manners, especially with concussions.
- ➢ Emergency Action Plan (EAP) for all venues: EAP is on file in the policy and procedures and reviewed annually with sports medicine staff and coaches.
- ➢ Coaches education regarding concussion: Reviewed yearly by Rutgers University Athletic Department Coaches and Administrators via an online educational platform addressing topics such as, but not limited to: the NCAA/Sports Science Institute "Concussion Safety: What Coaches Need to Know" Fact Sheet, the return to learn protocol, and the return to play protocol.
- ➢ Student Athlete concussion education is reviewed annually each pre-season by each team assigned athletic trainer. First year/transfer student athletes watch the NCAA concussion education video.
- ➢ The Athletic Director and Chief Medical Officer will meet annually to review the concussion policy and updates. Each party provides a signed acknowledgement of having read and understood the concussion material.
- ➢ ATC's present/available as determined by the Director of Athletic Training in consultation with the Chief Medical Officer. A physician is on site/available for at risk home events.
    - Medical personnel with training in the diagnosis, treatment and initial management of acute concussion must be "present" at all NCAA Varsity contact/collision sport competitions (i.e., football, lacrosse, basketball, soccer, field hockey, and wrestling). To be present means to be on site at the campus or arena of the competition. Medical personnel may be from either team, or may be independently contracted for the event.
    - Medical personnel with training in the diagnosis, treatment and initial management of acute concussion must be "available" at all NCAA Varsity contact/collision sport practices (i.e., football, lacrosse, basketball, soccer, field hockey, and wrestling). To be available means that, at a minimum, medical personnel can be contacted at any time during the practice via telephone, messaging, email, or other immediate communication means.
- ➢ Documentation of baseline testing using various instruments for all varsity athletic teams.
- ➢ Documentation of initial injury evaluation (SCAT5 & other) as well as symptom scoring every 1-3 days while symptomatic. Documentation (ATC & team physician) of initial & subsequent evaluations, change in status regarding activities and final clearance to return to play. All documentation should follow standard medical charting and be kept in the athlete's file.

- Head injuries in sports cannot be prevented entirely, but we are able to reduce the risk of head trauma from playing contact and collision sports. Some preventative measures include; coaching and student-athlete education regarding safe play and proper technique, enforcement of the concussion and return to play/learn policies, proper equipment and inspection, and neck strengthening for high risk sports.
    - In regards to football, the medical staff will work with the coaches to educate and follow the *Adherence to Inter-Association Consensus: Year-Round Football Practice Contact Guidelines.*
    - The medical staff will follow the Big Ten policy regarding head impact exposure monitoring (i.e. having a "spotter" above the playing field for football games)
    - The medical staff and coaches will work together to reduce gratuitous contact during practice, and take a safety first approach to sport.

- **Rutgers Sports Medicine Pre-Participation Exam: 1st Year Student Athletes and Follow-ups**

    - Education of student athletes regarding concussion at pre-participation exam, including signs & symptoms and required NCAA video online. Concussion education is done annually during their pre-season to all of our student athletes by the team athletic trainer.
    - Academic support and the athletic healthcare providers annually review the Return to Learn Program (*see Appendix I*).
    - Pre-participation Physical Examinations (PPE) performed for all new NCAA athletes with focused history on concussion events. Returners flagged for potential follow-up by team physician or athletic trainer on a yearly basis.
    - PPE includes questions regarding modifiers: prior concussion history, learning disabilities requiring stimulant medications, migraines, seizure history and/or changes in mental health.
    - Baseline computerized neuropsychological (NP) testing and balance testing (e.g. "Immediate Post-Concussion Assessment and Cognitive Testing") are performed for all NCAA athletes at the time of initial starting in the program. High Risk sports **may** get further testing (FB, M&W Soccer, M&W Lacrosse, Field Hockey, Gymnastics, M&W Basketball, Baseball, Softball, Wrestling, Volleyball) and other sports or athletes as determined by the team physician and athletic trainers in consultation with the administration, including coaches.
    - If an athlete has a significant history of prior concussion(s), or significant other modifiers, the team physician may request that neuropsychological evaluation include computerized neuropsychological testing (e.g. ImPACT); additional paper & pencil (P & P) tests, and/or additional specialty consultation and/or testing.
    - Follow-up pre-participation exam forms will be used to monitor those with significant or multiple concussions. Re-evaluation with computerized neuropsychological testing, etc. will be considered
    - After a complete evaluation and review, the team physician will determine the final pre-participation clearance.

- **Emergency Situations**

    - In the event an athlete sustains a serious or potentially life-threatening head injury, prolonged loss of consciousness (LOC), the Emergency Action Plan (EAP) should be followed for the particular venue where the injury has occurred.
    - If an ATC is present, he / she shall assume control of the situation and manage all aspects of the EAP, and notifying the team physician of the injury as soon as safely possible.
    - If an ATC is not present, EMS should be notified immediately, followed by notification of the ATC for that particular sport, and notification of the team physician.

- **On-Field / Sideline Evaluation**

  - When an athlete has sustained a head injury and is displaying signs and symptoms of a concussion, he/she will be removed from play (practice or game) and not allowed to return until being examined by a healthcare professional with experience in evaluating and treating concussion (ATC, physician).
  - Any athlete diagnosed with a concussion WILL NOT RETURN TO PLAY FOR THE REMAINDER OF THAT DAY. A team physician or designee will examine any athlete that presents with concussion like symptoms. The physician may elect to clear the athlete for participation if the diagnosis is NOT a concussion.
  - If a concussion is suspected, the health care professional should err on the side of safety and assume there is a concussion until a diagnosis is made by a physician.
  - Any athlete with a spinal injury, associated neck pain, a Glasgow Coma Scale less than 13, prolonged loss of consciousness, focal neurological deficit suggesting intracranial trauma, repetitive emesis or persistently diminished/worsening mental status or other neurological signs/symptoms will follow the Emergency Action Plan (i.e. spine board immobilization, hospital transportation).
  - If an ATC is not present, and the athlete has minor symptoms (headache, mild dizziness), the ATC for the sport should be contacted to determine the next course of action.
  - If an ATC is present, an evaluation will be performed to determine the seriousness of the situation, and to determine whether or not an immediate physician consult is necessary. If a concussion is suspected, the athlete should not be allowed to return to play until being further examined by a physician.
  - ATC will use a standard evaluation, preferably SCAT 5. Initial suspected concussion evaluation includes:
    - Symptom assessment, physical and neurological exam, cognitive assessment, balance exam, and clinical assessment for cervical spine trauma, skull fracture, mental status changes and/or intracranial bleed.
  - If a physician consult is needed, but a physician is not readily available, the athlete should be transported to a hospital.
  - If at any point in time the athlete's symptoms worsen dramatically (extreme headache, nausea, vomiting, extreme sleepiness, increased dizziness, seizures or convulsions, and/or change of mental status) the athlete should be transported by EMS to a hospital.
  - The team athletic trainer and physician will arrange for continued evaluation and monitoring following injury.

- **Physician Evaluation**

  - Timing will be dependent upon assessment of ATC following injury, but preferably within 24-72 hours.
  - If physician evaluation is not immediately necessary, the athlete should be educated on recognizing any worsening symptoms and notifying the ATC as soon as possible. In addition, a roommate/teammate/parent should be educated on the potential risks (symptoms) associated with a concussion/head injury.
  - Physician evaluation should be performed at the earliest convenience. The athlete should not return to play until evaluated and cleared by a physician.
  - The ATC will adhere to the physician's advice as far as return to play, additional testing, and any necessary modifications to the athlete's academic obligations (class, exams, etc.), and update the coach regarding the athlete's condition.

- SCAT5 performed and documented in the medical record of the Student-Athlete.
- A detailed Concussion/Head Injury information sheet as needed/determined by the physician to the athlete.
- A summary sheet of restrictions and important telephone numbers, etc. given to athlete as determined by physician.
- A summary form letter to academics with diagnosis, potential prognosis and school modifications as needed.

- **Follow-up**

  - Monitoring of symptoms via SCAT5 or similar form/program, as determined by physician.
  - Testing as recommended by physician, cognitive function and balance such as SCAT5 and ImPACT. Any referral to specialist as recommended by team physician.
  - The physician will determine the appropriate timetable for additional follow-up evaluations. The sports medicine office and academic advisors will follow in general the *Return- To- Learn protocol* (*see Appendix I*) for the athlete's return to activity and academics. This will be individualized based on the presentation and facts of the case.
  - The physician follow-up evaluation will include evaluation for the possible consequences of post-concussion syndrome, sleep dysfunction, migraine or other headache disorders, mood disorders (i.e., anxiety, depression), and ocular or vestibular dysfunction as a result of the head injury/concussion.

- **Return to Learn Protocol**

  - After a concussion, the student athlete will begin a *Return-To-Learn Program (see Appendix I)*. Each case is individualized and based on the needs of the student-athlete and their recovery.
  - A designated concussion specialist or team physician will serve as the liaison to navigate the *Return-To-Learn* procedures with the student-athlete (*see Appendix I*).
  - The learning specialist, team athletic trainer, team physician, psychologist, academic counselor and coach will navigate the *Return-To-Learn* protocol with the student-athlete.
  - The team physician will re-evaluate the student-athlete if symptoms worsen with academic challenges.
  - For more complex cases with prolonged or worsening symptoms of more than 7 days, further accommodations may be required to further assist the welfare of the student-athlete. Additional members such as a Neuropsychologist consultant, Faculty Representative, course instructor, college administrators and the Office of Disability Services representative will work together to set appropriate accommodations, and follow American with Disabilities Act Amendments Act of 2008 (ADAAA) as required.
  - The team physician will continue to re-evaluate the student-athlete if his or her symptoms are prolonged.

- **Return to Play Decision**

  - Each concussion is evaluated independently. Individualized decisions will be made by the team physician in consultation with the athletic trainer, athlete, and neurocognitive/balance testing, as well as, additional outside consultation as appropriate.
    - Time athlete held out of activity, rate of progression, are all individualized, with final decision made by team physician.
    - Modifiers to consider;
      - Age
      - Prior history of concussion (#, specifics of injuries, severity of injuries, previous recent concussion)
      - Learning disabilities (e.g., ADHD)
      - Migraine history
      - Seizure history
      - Other (e.g., emotional readiness, parental concern)
  - Athlete must be asymptomatic within baseline prior to returning to full team activities.
  - An athlete with signs/symptoms of concussion at rest or exertion will not be able to return to play/activities.
  - Gradual progression in activity will include - step-wise gradual increments in physical exertion and the level of the risk of contact:
      - Cardiovascular challenge (15 – 20 minutes) such as the Balke and Bruce test
      - Unlimited cardiovascular activity, sport-specific activities
      - Non-contact drills
      - Full-contact drills
      - Return to game play
    - Rate of progression is determined by the team physician
    - Neurocognitive tests and balance tests will be used as a supplemental tool
    - Final clearance is determined by the team physician
  - If NP testing interpreted as abnormal, repeat NP testing as appropriate, with approximately 48 hours between repeat testing.
  - Progression steps should/could be advanced every 24 hours but may be modified by team physician based on the student-athletes presentation, symptom profile and improvement

- **Clearance & Final Follow Up**

  - Student Athlete will be given education regarding importance of reporting all symptoms/signs and risks for a concussion, a delay in recovery, and subsequent injury.
  - Repeat NP testing (computerized) will be considered each year to establish a new baseline after a head injury/concussion.

The Athletic Director, Chief Medical Officer, and Director of Athletic Training, Sports Medicine Services will meet annually to review and implement the concussion policy.

Yvette Rooks

Chief Medical Officer (Print)

Chief Medical Officer (Signature) 4/11/19 Date

Athletic Director (Print) 4/11/19

Patrick E. Hobbs 4/11/19

Athletic Director (Signature) Date

Date: _____ (Appendix I)

Student: _____ Sport: _____ Date of Concussion: _____

Please contact or set up an appointment with a staff member as noted below to help your return to academic work.

YOUR ACADEMIC ADVISOR	or	Kyle Brostrand (609) 330-2926 kbrostrand@scarletknights.com	or	Scott Walker (732) 406-6946 swalker@scarletknights.com

The clinician has determined the above student athlete has had a concussion and is most likely at the specific stage of the range of the return to learn protocol as noted below. Each concussion and recovery is different. Specific Return to Learn steps are subject to alteration based on the recommendation of the sports medicine staff.

RETURN TO LEARN PROTOCOL

____***Step 1:*** Complete Cognitive rest. Avoid anything that aggravates symptoms. Limit texting/social media, reading, computer work, TV, loud areas. **NO** school or homework, **NO** practice/game attendance unless approved. Usually will be for 48-72 hours.
Comments: _____

____***Step 2:*** Start short periods of cognitive activities for 5 to 15 minutes. It is acceptable to have mild symptoms but they should resolve in 30 minutes. These periods should be self-paced with 20-30 minute breaks in between, as needed. It is ok to add back some light computer work and reading (Enlarge Font/Decrease Brightness). The number of minutes you can read is how many minutes you should be using screens (Reading time=Screen Time).
Comments: _____

____***Step 3:*** Begin homework in longer increments (e.g. 20-30 min at a time) to increase cognitive stamina. Student can begin attending tutoring sessions. Once you can read for 30 minutes, the physician may begin to return you to class.
Comments: _____

____***Step 4:*** Gradual return to school; Accommodations may be needed during this time, such as preferential seating, note takers, tape recording of lectures, tutoring services and professor notes and/or outlines. Breaks may still be needed. Avoid non-essential work and makeup work. Work with Learning Specialist to develop an academic plan based on course load and schedule.
Comments: _____

____***Step 5***: Full return should occur when the student can tolerate 3-4 hours of homework and or classes per day. Accommodations should decrease as the athlete continues to improve. No testing should be done until they have caught up on all missed material, then consider possible accommodations for tests until fully recovered. The learning specialist should determine accommodations with input as needed from the medical staff.
Comments: _____

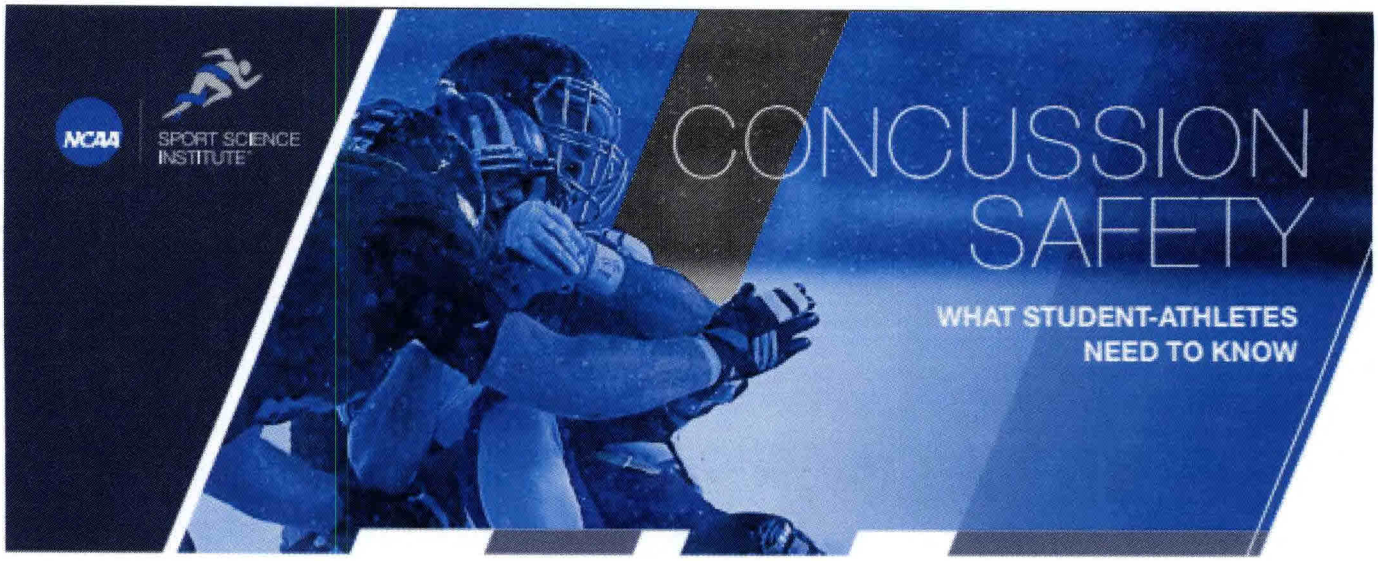
____***Step 6***: Full Return to learn when student has no remaining symptoms and is cleared by the medical staff.
Comments: _____

Return to Play:

____No Activity	**____Returned to Non-Contact/Supervised Drills**
____Light Bike/Treadmill (↑ as directed)	**____Returned to Full Contact/Supervised Practice**
____Sport-Specific Activity/Cleared for Exercise Testing	**____Cleared for All Activity & Lifting**

Comments: _____

You need to be seen for a follow-up examination on _____ at _____



What is a concussion?

A concussion is a type of traumatic brain injury. It follows a force to the head or body and leads to a change in brain function. It is not typically accompanied by loss of consciousness.

How can I keep myself safe?

1. Know the symptoms.

You may experience ...

- Headache or head pressure
- Nausea
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or foggy
- Confusion, concentration or memory problems

2. Speak up.

- If you think you have a concussion, stop playing and talk to your coach, athletic trainer or team physician immediately.

3. Take time to recover.

- Follow your team physician and athletic trainer's directions during concussion recovery. If left unmanaged, there may be serious consequences.
- Once you've recovered from a concussion, talk with your physician about the risks and benefits of continuing to participate in your sport.

How can I be a good teammate?

1. Know the symptoms.

You may notice that a teammate ...

- Appears dazed or stunned
- Forgets an instruction
- Is confused about an assignment or position
- Is unsure of the game, score or opponent
- Appears less coordinated
- Answers questions slowly
- Loses consciousness

2. Encourage teammates to be safe.

- If you think one of your teammates has a concussion, tell your coach, athletic trainer or team physician immediately.
- Help create a culture of safety by encouraging your teammates to report any concussion symptoms.

3. Support your injured teammates.

- If one of your teammates has a concussion, let him or her know you and the team support playing it safe and following medical advice during recovery.
- Being unable to practice or join team activities can be isolating. Make sure your teammates know they're not alone.

No two concussions are the same. New symptoms can appear hours or days after the initial impact.
If you are unsure if you have a concussion, talk to your athletic trainer or team physician immediately.

What happens if I get a concussion and keep practicing or competing?

- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
- Continuing to play after a concussion increases the chance of sustaining other injuries too, not just concussion.
- Athletes with concussion have reduced concentration and slowed reaction time. This means that you won't be performing at your best.
- Athletes who delay reporting concussion take longer to recover fully.

What are the long-term effects of a concussion?

- We don't fully understand the long-term effects of a concussion, but ongoing studies raise concerns.
- Athletes who have had multiple concussions *may* have an increased risk of degenerative brain disease and cognitive and emotional difficulties later in life.

What do I need to know about repetitive head impacts?

- Repetitive head impacts mean that an individual has been exposed to repeated impact forces to the head. These forces may or may not meet the threshold of a concussion.
- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

Did you know?

- NCAA rules require that team physicians and athletic trainers manage your concussion and injury recovery independent of coaching staff, or other non-medical, influence.
- We're learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit ncaa.org/concussion.

CONCUSSION TIMELINE

Baseline Testing
Balance, cognitive and neurological tests that help medical staff manage and diagnose a concussion.

Concussion
If you show signs of a concussion, NCAA rules require that you be removed from play and medically evaluated.

Recovery
Your school has a concussion management plan, and team physicians and athletic trainers are required to follow that plan during your recovery.

Return to Learn
Return to school should be done in a step-by-step progression in which adjustments are made as needed to manage your symptoms.

Return to Play
Return to play only happens after you have returned to your preconcussion baseline and you've gone through a step-by-step progression of increasing activity.

For more information, visit ncaa.org/concussion.

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What is a concussion?

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How can I tell if an athlete has a concussion?

You may notice the athlete ...

- Appears dazed or stunned
- Forgets an instruction
- Is confused about an assignment or position
- Is unsure of the game, score or opponent
- Appears less coordinated
- Answers questions slowly
- Loses consciousness

Note that no two concussions are the same. All possible concussions must be evaluated by an athletic trainer or team physician.

The athlete may tell you he or she is experiencing ...

- A headache, head pressure or that he or she doesn't feel right following a blow to the head
- Nausea
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or foggy
- Confusion, concentration or memory problems

What can I do to keep student-athletes safe?

	Preseason	In-Season	Time of Injury	Recovery
What can I do?	Create a culture in which concussion reporting is encouraged and promoted.	Know the signs and symptoms of concussions.	Remove athletes from play immediately if you think they have a concussion and refer them to the team physician or athletic trainer.	Follow the recovery and return-to-play protocol established by team physicians and athletic trainers.
Why does it matter?	Athletes who don't immediately seek care for a suspected concussion take longer to recover.	The more people who know what to look for in a concussed athlete, the more likely a concussion will be identified.	Early removal from play can mean a quicker recovery and help avoid serious consequences.	Team physicians and athletic trainers have the training to follow best practices related to the concussion recovery process.
Tips and strategies	Be present when your team physician or athletic trainer provides concussion education material to your team. Tell your team that this matters to you.	Check in with your team physician or athletic trainer if you want to learn more about concussion safety.	Provide positive reinforcement when an athlete reports a suspected concussion.	Tell athletes that decisions related to their return to play and health are entirely in the hands of the team physician and athletic trainer.

You play a powerful role in setting the tone for concussion safety on your team. Let your team know that you take concussion seriously and reporting the symptoms of a suspected concussion is an important part of your team's values.

What happens if an athlete gets a concussion and keeps practicing or competing?

- Due to brain vulnerability after a concussion, an athlete may be more likely to suffer another concussion while symptomatic from the first one.
- In rare cases, repeat head trauma can result in brain swelling, permanent brain damage or even death.
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- Research is ongoing but emerging data suggest that repetitive head impact also may be harmful and place a student-athlete at an increased risk of neurological complications later in life.

Did you know?

- Most contact or collision teams have at least one student-athlete diagnosed with a concussion every season.
- Your school has a concussion management plan, and team physicians and athletic trainers are expected to follow that plan during a student-athlete's recovery.
- NCAA rules require that team physicians and athletic trainers have the unchallengeable authority to make all medical management and return-to-play decisions for student-athletes.
- We're learning more about concussion every day. To find out more about the largest concussion study ever conducted, which is being led by the NCAA and U.S. Department of Defense, visit ncaa.org/concussion.

For more information, visit ncaa.org/concussion.

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Big Ten Coaches Concussion Acknowledgement Form

I, _____, acknowledge that as a member of the athletic department at, _____, I accept responsibility for supporting our sports medicine department's policy on concussion management.

I understand that my student-athletes may have a risk of head injury and/or concussion. I also understand the importance of them reporting any such symptoms of a head injury/concussion to the sports medicine staff (e.g., team physician, head 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 what a concussion is 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 of coach Date

_____ _____

Name of person obtaining acknowledgement Signature of such person