Gardner-Webb University Concussion Policy

1) All Gardner-Webb University student-athletes must read the NCAA Concussion Fact Sheet and sign the attached Student-Athlete Concussion Statement acknowledging that:
   a. they have read and understand the NCAA Concussion Fact Sheet
   b. they accept the responsibility for reporting their injuries and illnesses to the Athletic Training staff and Team Physicians, including signs and symptoms of concussions.

2) All Gardner-Webb University coaches (head coaches and assistant coaches), Athletic Directors, Certified Athletic Trainers and Team Physicians: must read and sign the attached Coaches Concussion Statement acknowledging that:
   a. they have read and understand the NCAA Concussion Fact Sheet
   b. they will encourage their student-athletes to report any suspected injuries and illnesses to the Athletic Training staff and Team Physicians, including signs and symptoms of concussions; and that they accept the responsibility for referring any student-athlete to the Athletic Training staff and Team Physicians suspected of sustaining a concussion.
   c. they have read and understand the Gardner-Webb University Concussion Management Protocol.

The Gardner-Webb University Athletic Training staff will be responsible for providing student-athletes with the NCAA Concussion Fact Sheet and will distribute the Student-Athlete Concussion Statement for each student-athlete to sign. Signed copies of the Student-Athlete Concussion Statement will be kept in the student-athletes medical file. Student-athletes will not be allowed to participate in athletically related activities until having completed and signed the Student-Athlete Concussions Statement along with all other required insurance and medical paperwork (including receiving a pre-participation physical).

The Assistant Athletic Director for NCAA Compliance will be responsible for providing head coaches, assistant coaches, Athletic Directors, Certified Athletic Trainers, and Team Physicians the NCAA Concussion Fact Sheet and will distribute the Coaches Concussion Statement for each individual to sign. Signed copies of the Coaches Concussion Statement will be kept in the Assistant Athletic Director for NCAA Compliance coaches’ file.

The Assistant Athletic Director for Athletic Training and Athletic Training staff (in consultation with Team Physicians) will review the Concussion Policy and Concussion Management Protocol annually and will be responsible for updating this policy and disseminating changes as necessary.
Gardner-Webb University Concussion Management Protocol

Concussions and other brain injuries can be serious and potentially life threatening injuries in sports. Research indicates that these injuries can also have serious consequences later in life if not managed properly. In an effort to combat this injury the following concussion management protocol will be used for Gardner-Webb University student-athletes suspected of sustaining a concussion.

A **concussion** occurs when there is a direct or indirect insult to the brain. As a result, transient impairment of mental functions such as memory, balance/equilibrium, and vision may occur. It is important to recognize that many sport-related concussions do not result in loss of consciousness and, therefore, all suspected head injuries should be taken seriously. Coaches and fellow teammates can be helpful in identifying those who may potentially have a concussion, because a concussed student-athlete may not be aware of their condition or potentially be trying to hide the injury to stay in the game or practice.

**Pre-Participation Assessment:** Concussion management begins with pre-participation physicals. All student-athletes are asked to report their history of head injuries and concussions as part of completing their medical history form, prior to receiving a physical by a Team Physician for medical clearance to participate. If necessary, the Team Physician may request additional testing or consultation prior to clearing a student-athlete for participation. **Pre-season baseline testing:** Every new (first-year or transfer) student-athlete (including cheerleaders) must receive a baseline assessment for concussion involving a symptom assessment / Graded Symptom Checklist (GSC), cognitive and balance evaluation / Sports Concussion Assessment Tool 3 (SCAT3), and an Impact Test. The respective team’s athletic trainers will conduct the GSC, SCAT 3 and Impact test (please note that Impact testing will not be done until after 3 hours of exertion activity) for all new student athletes. The respective team’s athletic trainer, will copy the GSC and SCAT 3 baselines scores and place them with the team’s emergency medical information so they can have easy access at practices, away contests and tournaments (Impact scores are accessible by internet).

**Recognition and Diagnosis of Concussion:** Medical personnel (ATC or ATC and Physician) with training in the diagnosis, treatment and initial management of acute concussion will be present at all NCAA competitions in the following contact collision NCAA sports: basketball, football, women’s lacrosse, pole vault, soccer and wrestling. Being present means being on-site at the campus or arena of competition. Medical personnel will be from Gardner-Webb but in rare circumstances may be provided by the host team or independently contracted to cover the event. In addition, medical personnel (ATC or ATC and Physician) with training in the diagnosis, treatment and initial management of acute concussion will be “available” at all practices for the following contact collision NCAA sports: basketball, football, women’s lacrosse, pole vault, soccer and wrestling. To be available means that, at a minimum medical personnel may be contacted at any time during a practice via telephone, messaging, email, beeper or other immediate communication means. Further, the case can be discussed through such communication, and immediate arrangements can be made for the athlete to be evaluated. Clinical assessment at the time of injury will include evaluation for possible cervical spine trauma, skull fracture or intracranial bleed. If any of these are suspected, the Emergency Action Plan will be activated and the student-athlete transported to the Emergency Room for evaluation. A student-athlete with signs, symptoms,
and/or behaviors consistent with concussion, must be removed from practice or competition and evaluated by an ATC (Certified Athletic Trainer) or a physician with concussion experience. A student-athlete suspected of sustaining a concussion will be evaluated by the team’s athletic trainer using Graded Symptom Checklist (GSC) and Sports Concussion Assessment Tool 3 (SCAT 3). The student-athlete will also complete a physical and neurologic exam as part of this initial assessment. Should the team’s physician not be present, the athletic trainer will notify a physician the day of the injury, or the next business day, to develop an evaluation and treatment plan. Arrangements will be made for an assessment of symptoms to be performed at the time of injury and then serially thereafter (i.e. 1-3 hours post injury, 24 hours, 48 hours, etc. until cleared by the physician). The presence or absence of symptoms will dictate the inclusion (referral for) additional neurocognitive and balance testing. (Graded Symptom Checklist (GSC) columns should be totaled for severity and duration as well as a combined score. All forms should be dated and signed by the person completing the form with time included.) A student-athlete will be sent to the Emergency Room if any of the following are noted...Glasgow Coma Scale <13, prolonged loss of consciousness, focal neurologic deficit suggesting intracranial trauma, repetitive vomiting/ emesis, persistently diminished or deteriorating mental status, spinal injury and, or progressive worsening symptoms or neurologic signs.

Any student-athlete diagnosed with a concussion shall not return to activity or classes for the remainder of the day. Final medical clearance will be determined by a physician or combination of physician and athletic trainers involved with the management of the concussion. Physicians determine referral options for student-athletes with prolonged recovery to consider additional diagnosis and best management options. Additional diagnoses to consider include, but are not limited to: Post-concussion syndrome, Sleep dysfunction, Migraine or other headache disorders, Mood disorders such as anxiety and depression, and Ocular or vestibular dysfunction.

All student-athletes diagnosed with a concussion, will receive a new baseline concussion assessment (Graded Symptom Checklist, SCAT3, and Impact Test) prior to the student-athlete beginning their next season of competition. Student-athletes with complicated or a multiple concussion history will be considered for a new baseline at 6 months post injury, if warranted, by the physician.

The following assessment and return to play plan will be used for all concussions:

**Concussion Assessment:**

*No student-athlete suspected of having a concussion is permitted to return to play or class the same day, and no student-athlete is permitted to return to play while symptomatic following a concussion.*

**Baseline testing:** conducted on each student-athlete upon entering as a first-year student, transfer, or for those student-athletes sustaining a concussion the previous season (re-baseline);

**Time of Injury:** clinical evaluation (including SCAT 3) and symptom checklist (GSC); a Standardized Assessment of Concussion (SAC) if available, can be completed if a SCAT 3 is not able to be performed at this time.

**1-3 hrs post-injury:** symptom checklist (GSC); referral if necessary; Contact roommate and/or parent and complete Concussion Home Care Instructions (Appendix B)
**Next Day:** Follow-up clinical evaluation (including SCAT 3); and symptom checklist (GSC);

**Schedule appointment with physician (same day or next possible business day);**

**Follow-up evaluations daily to track symptom recovery;**

**Once student-athlete becomes asymptomatic:**

1. **Determine where student-athlete is relative to baseline on the following measures.**
   a. **Symptom Assessment (GSC)**

2. **If the Symptom Assessment (GSC) is at least 95% of baseline scores and the student-athlete remains asymptomatic for 1 additional day (24 hours) following these tests, the physician can instruct the athletic trainer to begin a 5-step graduated exertional return to play (RTP) protocol (Appendix A) with the student-athlete to assess for increasing signs and symptoms. Symptoms should be reassessed immediately following exertional activities.**

3. **If the student-athlete remains asymptomatic on the day following the first step(s) of the graduated exertional RTP protocol, the student-athlete will be reassessed using the Graded Symptom Checklist (GSC) before each step and Sports Concussion Assessment Tool 3 (SCAT 3) after each step. The student-athlete will continue with the next step(s) on the graduated exertional RTP protocol as long as there is not an increase in reported symptoms or diminished scores on the SCAT 3.**

4. **All scores on the aforementioned assessments or exertional activities below will be recorded in the student-athlete’s medical record by the team’s athletic trainer, signed, and dated with time of completion.**

*If at any point during this process the student-athlete becomes symptomatic the student-athlete should stop all activity (RTP) and be reassessed daily until asymptomatic. Once asymptomatic, the student-athlete should then follow steps 1-4 above beginning with step 1 of the 5-step graduated exertional return to play (RTP) protocol.*
Appendix A: 5-Step Graduated Exertional Return to Play Protocol

This exertional return to play protocol allows a gradual increase in volume and intensity during the return to play process. The student-athlete is monitored for any concussion-like signs/symptoms during and after each exertional activity. Each concussion is different and some situations may warrant a change in the RTP timeline. The diagnosing physician is the only person with the authority to alter the RTP timeline.

The following steps are not to be performed on the same day. Ideally, it is recommended that 24 hours elapse before the next step is attempted. A copy of this protocol should be placed in the student-athlete’s medical file prior to beginning the RTP. Each step that is used should be dated and signed with the time of successful completion by the supervising Athletic Trainer.

**Exertion Step 1:** 20 minute stationary bike ride (10 – 14 MPH)

**Exertion Step 2:** Interval bike ride: 30 sec sprint (18 – 20 MPH / 10 – 14 MPH) / 30 sec recovery x 10; and bodyweight circuit: Squats / Pushups / Sit ups x 20 sec x3

**Exertion Step 3:** 60 yard shuttle run x 10 (40 sec rest); and plyometric workout: 10 yd bounding/ 10 medicine balls throws / 10 vertical jumps x 3; non-contact, sport-specific drills for approximately 15 minutes

**Exertion Step 4:** Limited, controlled return to full-contact practice and monitoring for symptoms

**Exertion Step 5:** Full sport participation in practice

**Alternate Steps**

_The following may be used as alternative workouts for Exertion Steps 3, 4, or 5. These are provided as an alternate when equipment, weather, and or regularly scheduled practices may be an issue (out-of-season or day before a game as examples)._

**Alt. Exertion Step 3:** 50 yd sprints x 8; and plyometric workout: 10 vertical jumps x 3/ 5-10-5 pro-agility x 5/30 second 2 leg hops side to side x 3/ 5 plyo pushups (pushups with a clap) x3 ...if not strong enough to perform plyo pushups flat they are to be performed on an incline; non-contact, sport-specific drills for approximately 15 minutes

**Alt. Exertion Step 4a:** Full Weight Room Workout combining upper body and lower body lifts of less than 50% weight/ resistance, lasting at least one hour ...followed by 10 – 15 minutes of Abdominal/ Core Exercises. This may be used when a full regular scheduled practice will not be conducted (such as out-of-season or the day before a contest).

**Alt. Exertion Step 4b:** Repeat Exertion Step 3 followed by 20 minutes of Cardio (Run, Bike, Elliptical or Swim). This may be used when a full regular scheduled practice will not be conducted (such as out-of-season or the day before a contest).

**Alt. Exertion Step 5:** Full Weight Room Workout combining upper body and lower body lifts, lasting at least one hour. This will be followed by 20 minutes of Cardio (Run, Bike, Elliptical or Swim). This may be
used when a full regular scheduled practice will not be conducted (such as out-of-season or the day before a contest).

No student-athlete can return to full activity or competitions until they are asymptomatic in limited, controlled, and full-contact activities. Upon completion the student-athlete must repeat an impact test. Copies of final SCAT 3 and Impact test will be sent to the physician to review for clearance unless the physician specifies that the athlete must schedule a return appointment upon completion.

Reducing Exposure to Head Trauma:

The Director of Athletic Training and Athletic Training staff (in consultation with Team Physicians) will review the Concussion Policy, Concussion Management Protocol and Return to Learn Protocol annually and will be responsible for updating this policy and disseminating changes as necessary. As part of this annual review, NCAA guidelines for allowable contact, published consensus statements, and Inter-Association guidelines and recommendations will be taken into consideration as "best known practices” become available.

Revised 4-19-17
Appendix B: Concussion Home Care Instructions

_________ is being evaluated and treated for a concussion which occurred on _____________.

Please report to the LYCC/Football Center (Circle one) for re-evaluation on _____________. You have a doctor’s appointment with ________________ on _____________.

If any of the following symptoms develop before your scheduled re-evaluation, please call ______________ at (____) _____ - ______ or contact the Cleveland Regional Medical Center Emergency Room at (704)487-3131. You can also contact Carolinas Health Care System Urgent Care-Shelby at (980)487-2900 between the hours of 8:00am and 8:00pm.

- Decreasing level of consciousness/loss of consciousness
- Increasing confusion
- Increasing irritability
- Numbness in arms/legs
- Pupils becoming unequal in size
- Repeated vomiting
- Seizures
- Slurred speech
- Inability to recognize people
- Worsening headaches

The most important part of concussion recovery at this point is rest. Please be sure to take advantage of as much rest time as possible. You need to practice both physical and mental rest in order to give yourself the best chance of recovery.

<table>
<thead>
<tr>
<th>Do</th>
<th>DO NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest</td>
<td>Participate in physical activity</td>
</tr>
<tr>
<td>Take Tylenol for pain</td>
<td>Take Ibuprofen or Aspirin for pain</td>
</tr>
<tr>
<td>Use ice pack as needed for pain</td>
<td>Drink Alcohol</td>
</tr>
<tr>
<td>Eat a well-balanced diet</td>
<td>Eat greasy or spicy foods</td>
</tr>
<tr>
<td>Hydrate</td>
<td>Drive</td>
</tr>
<tr>
<td>Sleep on a normal schedule</td>
<td>Text, play video/computer games, read</td>
</tr>
<tr>
<td>Limit mental activity, utilize academic accommodations</td>
<td>Put yourself in a situation that may make symptoms worse</td>
</tr>
</tbody>
</table>

If you have any other questions or concerns, please call your Athletic Trainer ________________ at (____) _____ - ______.

Student Signature________________________ Roommate/Parent Signature ___________________

ATC Signature__________________________
Gardner-Webb University Concussion Return-To-Learn Protocol

Rationale for Protocol

Return-to-learn (RTL) is a parallel concept to return-to-play, but has received less scientific coverage than its counterpart. The foundation of return-to-learn includes maintaining that both physical and cognitive activities require brain energy utilization, and they similarly assume that such brain energy is not available for physical and cognitive exertion because of the concussion-induced brain energy crisis. Recommendations for RTL are based on consensus statements, with a paucity of evidence-based data to correlate with such consensus recommendations. Return-to-learn should be managed in a stepwise program that fits the needs of the individual. Therefore, prescriptive recommendations for RTL can be difficult because the student-athlete may appear physically normal but is unable to perform at his/her expected baseline due to concussive symptomatology. Recommendations for RTL will be made within the context of a multi-disciplinary team including, but not limited to, physicians, athletic trainers (athletics point person), coaches, and administrators and will abide by the Americans with Disabilities Act Amendments Act (ADAAA). Furthermore, there are three appendixes within the policy (Academic Terminology (Appendix A), outline of RTL progression (Appendix B), and references (Appendix C). Appendix B, an outline of RTL progression, will then be modified as deemed appropriate.

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 means avoiding potential cognitive stressors such as school work, video games, reading, texting, and watching television. The rationale for cognitive rest is that the brain is experiencing an energy crisis, and providing both physical and cognitive rest allows the brain to heal more quickly. Data from small studies suggest a beneficial effect of cognitive rest on concussion recovery. For the college student-athlete, cognitive rest following concussion means avoiding the classroom the day a concussion occurs. The gradual return to cognitive activity is based on the return of concussion symptoms following cognitive exposure. If the student-athlete cannot tolerate light cognitive activity, he or she should remain at home or in the residence hall. Once the student-athlete can tolerate light cognitive activity without return of symptoms, he/she should return to the classroom in a step-wise manner. Any adjustment needed should be decided by a multi-disciplinary team that may include the team physician, athletic trainer, faculty athletic representative or other faculty representative, coach, individual teachers and psychologist. The level of multi-disciplinary involvement should be made on a case-by-case basis.
Gardner-Webb University: Return to Learn Procedures

1. A student-athlete suspected of sustaining a concussion will be evaluated by the team’s athletic trainer using Graded Symptom Checklist (GSC) and Sports Concussion Assessment Tool 3 (SCAT3). Should the team’s physician not be present, the athletic trainer will notify a physician ASAP (next business day) to develop an evaluation and treatment plan. Ideally, an assessment of symptoms will be performed at the time of injury and then serially thereafter (i.e. 1-3 hours post injury, 24 hours, 48 hours and will continue daily until cleared by the physician).

2. The athlete should not return to the classroom or field of play the day of the concussion.

3. The cornerstone of concussion management is rest, physically and mentally, until the acute symptoms resolve, followed by a graded mental and exertional activity prior to medical clearance and RTP.\textsuperscript{5-9} Attending classes may start if the individual is able to perform cognitive activity for 30-45 min before needing a rest.\textsuperscript{12} Cognitive activity tolerance should increase as recovery progresses.\textsuperscript{4} The student-athlete must return to full academic activities before the exertional return to play can start.\textsuperscript{2,4,5,7-9,12,13} If, at any point, the symptoms worsen as a result of academics, the individual will be reevaluated by the physician and multidisciplinary team, if appropriate, when symptoms are prolonged and remain after two weeks. This includes any academic accommodations adjustment.

4. The academic point person is the Director of Academic Support for Student Athletes (DASSA). School administrators (Assoc. Dean for Noel Center for Disability Resources, Faculty Athletics Representative, and Director of Counseling Services), coaches and athletic trainers will be made aware of the patient’s injury. The multidisciplinary team will make recommendations for academic accommodation during the recovery period. The DASSA will notify the appropriate professors.
   a. In the event that the concussion happens outside of business office hours where an appointment is not able to be scheduled, or the physician’s office is unable to see the athlete immediately after the concussive injury, temporary accommodations will be granted until the athlete can be seen by a physician and proper paperwork will then supersede the temporary accommodations given by the athletic trainer/Noel Program.

5. Outside campus resources will be used when appropriate when the individual needs modifications outside of schedule modifications or academic accommodations. Those resources could include, but are not limited to learning specialists, office of disability services, or an ADAAA office, which all meet the standards of ADAAA.

6. Athletes with a past medical history that includes multiple concussions, a developmental disorder (e.g. learning disabilities, attention-deficit hyperactivity disorder), or a psychiatric disorder (e.g. anxiety, depression) may benefit from referral to a neuropsychologist to administer and interpret neurocognitive assessments and determine readiness to return to scholastic and athletic activities; it should be noted that RTL and RTP take longer to complete when these pre-morbid factors are present.\textsuperscript{2,5-9,12}

Updated 4-19-17
Appendixes A: Academic Terminology

The procedures above form the core of the prevailing consensus for return-to-learn guidelines. The majority of student-athletes who are concussed do not need a detailed return-to-learn program because full recovery occurs within two weeks. Return-to-learn management becomes more difficult when the student-athlete has ongoing symptoms for greater than two weeks. Before discussing management of such student-athletes, it is helpful to discuss educational terminology that can provide the basis for more complicated return-to-learn cases.

**Academic adjustment** - a student-athlete’s academic schedule requires 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 meaningful curriculum or testing alterations.

**Academic accommodation** - 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. 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. It is important to verify, as best as possible, the diagnosis instead of assuming that the student-athlete has prolonged concussion symptoms. As discussed in *NCAA SSI Newsletter Volume 1, Issue 3*, post-concussion syndrome is not the same as prolonged recovery from concussion, and should be suspected in any student-athlete who has ongoing symptomatology two or more weeks following concussion. Post-concussion syndrome is a neuro-psychiatric condition that is best managed in a multi-disciplinary manner with active intervention. Passive management such as prolonged physical and cognitive rest is counter-productive in post-concussion syndrome.

**Academic modification** - a more difficult scenario in which the student-athlete suffers with prolonged cognitive difficulties, which thereby requires a more specialized educational plan, usually within the construct of an *individualized education plan*. An individualized education plan is a formal educational plan for an individual, and is protected under the Individuals with Disabilities Education Act. This plan is more prescriptive than a 504 plan, which refers to Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. A 504 plan covers students who are not eligible for an individualized education plan but who require academic modification because of a documented medical condition.
Appendix B: RTL Recommended Guidelines

A. Mental rest in dorm
   - No mental exertion - computer, texting, video games, or homework
   - Stay at home.
   - No driving
   - Progress to next level after 24-48 hours without worsening of symptoms

B. Dorm - Light Mental Activity
   - Up to 30 minutes mental exertion; no prolonged concentration.
   - Stay at home and no driving
   - Progress to next level when able to handle up to 30 minutes mental exertion without worsening of symptoms

C. Half-day attendance with accommodations
   - Symptoms have decreased to manageable levels. Symptoms may be exacerbated by certain mental activities that are complex, difficult and/or have a long duration
   - Balance rest with gradual re-introduction to school
   - Symptoms reported by student addressed with specific accommodations
   - Emphasis in this phase on in-school learning; rest is necessary once out of school; homework reduced or eliminated
   - No physical activity

D. Full -day attendance with accommodations
   - In this phase, symptoms have decreased in both number and severity. Symptoms may still be exacerbated by certain activities
   - As the student improves, gradually increase demands on the brain by increasing the amount of work, length of time spent on the work, and the type or difficulty of work. Gradually re-introduce known symptom triggers for short time periods.
   - Gradually increase amount of homework. Reported symptoms should be addressed by specific accommodations. Accommodations should be reduced or eliminated as symptoms wane and resolve.
   - No physical activity

E. Full-day attendance without accommodations
   - Routine tests
   - Continued decrease of extra time, help, and modification of assignments. May require more support in academically challenging subjects
   - Progress to next level when able to handle all class periods in succession without worsening of symptoms AND clearance for full return academics AND athletics

F. Full school and extracurricular involvement
   - No symptoms are present.
   - No accommodations are needed.
   - Before returning to gym class, weightlifting and/or sports, the student should complete the gradual return-to-play progression as indicated by the healthcare professional.
Items to remember

- If, at the time cognitive demands are increased, the athlete’s symptoms worsen, allow for 20 minutes of rest. If the symptoms decrease or resolve after the 20 min, try the activity again or return to the previous step. If symptoms come back or do not change after rest, stop the activity, return to the previous step for at least 24 hours and remain there until symptoms are more controlled. Increase demands when symptoms lessen.

- Progression is individualized; all concussions are different in nature. Students may start a step (symptom dependent) and remain at that step until it is no longer needed. If symptoms worsen, return to previous step.

- If symptoms last longer than three to four weeks, it may be necessary to discuss a 504 plan or Individualized Education Plan (IEP)
Appendix C: References

References

12. Hainline B. Concussions: Return to learn guidelines National College Athletic Association 2014