



# Northwest UNIVERSITY

## Concussion Management and Consolidated Return to Play/Learn Protocol

### Glossary of Terms:

- Concussion: A concussion is a type of traumatic brain injury—or TBI—caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells. (Source: CDC.gov)
- SCAT 5\*: Sports Concussion Assessment Tool – 5<sup>th</sup> edition is a series of evaluation criteria including: Symptoms (i.e. headache, sensitivity to light); Cognitive Screening (i.e. orientation, immediate memory); Concentration (i.e. digits backward, months reverse order); Neurological screen (i.e. passive cervical spine movement, balance tests)

A concussion should be suspected, and a student be immediately removed from academic and athletic participation in the presence of any ONE or more of the following signs/symptoms, or any other signs/symptoms raising suspicion of impaired brain function or abnormal behavior following a relevant mechanism of injury.

headache	drowsiness	feeling "slow" or "foggy"
"pressure" in head	blurred vision	inappropriate fatigue
neck pain	sensitive to light	anxiety
nausea	sensitive to sound	agitation or depression
vomiting	ringing in ears	irritability
dizziness	unsteadiness/poor balance	confusion

**Protocol for Concussion Management:** Should an NU student be suspected of a concussion, the following protocol will be utilized:

- The student will be removed from activity after a concussion has been identified by either a Certified Athletic Trainer or medical professional. Standard emergency management principles will be followed, with particular attention to excluding any suspicion of cervical spine injury. Once immediate first aid concerns are addressed, the concussive injury will be assessed, using the SCAT 5 criteria. If a concussion is suspected when a Certified Athletic Trainer or medical professional is not present, it is the *NU employee's responsibility* to immediately remove the student from participation in classroom or athletic activity and refer the student for appropriate medical evaluation.

- If a concussion is suspected, the student will not be returned to classroom or athletic activity that day.
- During the symptomatic period, the student will report to the Wellness Center and if the student is an athlete to the Certified Athletic Trainer on a daily basis or as often as is medically necessary for assessment. Utilizing SCAT 5 criteria, the student's condition will be monitored and defined by the appropriate "Stage" of recovery (see table below) with implementation of the appropriate stage of activity recommended by the NU Return to Learn/Play protocol.
- As symptoms diminish, the student will be evaluated periodically (following SCAT 5 by the Wellness Center and if necessary the Certified Athletic Trainer) and advanced to the next stage of recovery if appropriate. If the student does not meet SCAT 5 criteria for the next stage, he/she will remain at the current stage and be reevaluated a minimum of 24 hours later.
- Students who do not comply with the instructions in the Return to Learn/Play Protocol stages may be subject to disciplinary action.

**Return to Learn/Play Protocol:**

The following stages will be followed to ensure a safe return to the classroom and activity. Advancement between stages requires the following:

- Following the initial concussion diagnosis there is a minimum of 24 - 48 hours before beginning the Return to Learn/Play Protocol. This provides time for proper medical assessment, proper documentation, proper communication to all involved parties, and time for concussion plan development.
- Minimum of 24 hours between stages.
- Medical oversight of each stage is required. A healthcare provider must provide a medical release note prior to the student's clearance to advance to stage 6 and return full-time to the classroom and athletic activity. In addition, if the student is an athlete, a note from the Certified Athletic Trainer is required prior to advancement to stage 6.
- If any concussion-related symptoms occur during the following Return to Learn/Play Protocol, the student will drop back to the previous asymptomatic stage and attempt to progress again after being free of concussion-related symptoms for a further 24-hour period at the lower stage.
- The student will have a support team that includes the Wellness Center medical staff or Certified Athletic Trainer, Academic Success, his/her professors, and Student Development.
- Documentation of the following stages will be maintained by the Wellness Center or the Certified Athletic Trainer and passed on to Academic Success on a daily basis who will inform professors and Student Development on a need to know basis.
- The Wellness Center medical provider (ARNP) may provide a medical release note for non-athletes prior to the student's clearance to return to full-time classroom activity (stage 6). The Certified Athletic Trainer or team physician shall provide the medical release note prior to the athlete's clearance to return to athletic activity (stage 6).

## NU Return to Learn/Play Protocol\*\*

Recovery Stages	Classroom Activity	Physical/Sports Activity
<p style="text-align: center;"><b>Stage 1—Quiet</b></p> <p>Quiet brain Quiet body</p>	<p><b>None</b></p> <p>No classes or activity No television, video games, computer use, phone, texting, or loud music</p>	<p><b>None</b></p> <p>No exercise or sports participation (game, practice, strength, or conditioning)</p>
<p style="text-align: center;"><b>Stage 2—Gentle</b></p> <p>Gently active brain Gently active body</p>	<p><b>Maximum Adjustment</b></p> <p>Up to 3 hours of class per day Continue limits on technology use No homework or testing</p>	<p><b>Light Aerobic Activity</b></p> <p>Gentle mobility exercise No resistance training No sports participation</p> <ul style="list-style-type: none"> <li>• Walk, stationary bike, rower</li> <li>• Stretch: mobility and flexibility exercises, Tai Chi</li> <li>• No resistance training</li> <li>• Sports participation: Team warmup activities only. No contact.</li> </ul>
<p style="text-align: center;"><b>Stage 3—Moderate</b></p> <p>Moderately active brain Moderately active body</p>	<p><b>Moderate Adjustment</b></p> <p>Up to 4.5 hours of class per day No homework or testing</p>	<p><b>Moderate Aerobic Activity</b></p> <p>Mobility exercise Introduce resistance training Introduce sports participation</p> <ul style="list-style-type: none"> <li>• Increased aerobic exercise (~50% time and intensity)</li> <li>• Increase mobility exercise</li> <li>• Introduction of light resistance training (no greater than 50%, 1 RPM)</li> <li>• No plyometric exercises.</li> <li>• Return to sports practice: warm-up, 50% sprint effort, agility drills, non-contact drills</li> </ul>

<p><b>Stage 4—Active</b> Active brain Active body</p>	<p><b>Minor Adjustment</b> Up to full day of classes Homework and testing allowed on an individual basis</p>	<p><b>Moderate Aerobic Exercise</b> Full mobility exercise Moderate resistance training Practice only Sports participation without full contact</p> <ul style="list-style-type: none"> <li>• Increased aerobic exercise (~75% time and intensity)</li> <li>• Full mobility exercise</li> <li>• Moderate resistance training ~75%</li> <li>• Easy Plyometric exercises allowed</li> <li>• Return to sports practice: warm-up, skill drills, simulated game drills, gentle contact (no heading in soccer, no tackling in football/rugby, no checking in ice hockey)</li> </ul>
<p><b>Stage 5—Vigorous</b> Vigorously active mind Vigorously active body</p>	<p><b>No Adjustment</b> Full day of classes Homework and testing allowed</p>	<p><b>Vigorous Aerobic Activity</b> Vigorous resistance training Full sports practice participation</p> <ul style="list-style-type: none"> <li>• Increased aerobic exercise (~75-100% time and intensity)</li> <li>• Moderate resistance training ~75-100%</li> <li>• Plyometric exercises allowed ~75-100%</li> <li>• Return to sports practice: warm-up, skill drills, simulated game drills, full contact</li> </ul>
<p><b>Stage 6—Full Return to Learn and Play</b></p>	<p><b>Full Return to Learn</b> Full day of classes Homework and testing allowed Healthcare provider note required</p>	<p><b>Full Return to Sports</b> Return to full sport practice and games. Healthcare provider note required</p>

\*SCAT 5 <https://bjsm.bmj.com/content/51/11/851>

\*\*Adapted from Return to Learn (RTL) and Return to Sport (RTS) Protocols for Youth Athletes and Our Proposed Coordinated Return Protocol Horwitz, et. al.