



ATHLETIC TRAINING SPORTS-RELATED CONCUSSION MANAGEMENT POLICY AND PROCEDURES

Tilton School strives to maintain the health and wellbeing of its student population. Tilton recognizes Sports Related Concussion (SRC) as a subset of a traumatic brain injury. When managed properly SRC will usually resolve itself over time. This policy was created in August 2018 and will be reviewed annually using the most recent research and best practice recommendations. Tilton School staff will follow this research and recommendations to ensure our students are receiving the best care. The documents that were reviewed to establish and update this policy and procedures were: "Consensus Statement on Concussion in Sport - the 5th International Conference on concussion in sport held in Berlin, October 2016", and "National Athletic Trainers' Association Position Statement: Management of Sport Concussion" updated in 2014, New Hampshire Musculoskeletal Institute concussion resources and New Hampshire Statutes.

To effectively and consistently manage SRC this policy will define/describe:

1. SRC and how to recognize a SRC
2. Common signs and symptoms of a SRC
3. Neuropsychological (NP) baseline testing at Tilton School
4. Sideline management and evaluation
5. Communication to the parents/guardians
6. Treatment for students
7. Academic support/expectations
8. Return to sport protocol
9. Resources

Sports Related Concussion and How to Recognize an SRC:

Sports Related Concussion is a traumatic brain injury induced by biomechanical forces. Several common features that may be utilized in clinically defining the nature of a concussive head injury include:

- SRC may be caused either by a direct blow to the head, face, neck or elsewhere on the body with an impulsive force transmitted to the head.
- SRC typically results in the rapid onset of short-lived impairment of neurological function that resolves spontaneously. However, in some cases, signs and symptoms evolve over a number of minutes to hours.
- SRC may result in neuropathological changes. But the acute clinical signs and symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.

- SRC results in a range of clinical signs and symptoms that may or may not involve loss of consciousness. Resolution of the clinical and cognitive features typically follows a sequential course. However, in some cases symptoms may be prolonged.

Common Signs and Symptoms of a SRC

SRC is often an evolving injury, which means signs and symptoms may be delayed. Erring on the side of caution is important for student athletes. Common signs and symptoms of a SRC may include but are not limited to:

- Loss of consciousness (LOC)
- Anterograde amnesia (unable to recall events following the injury)
- Retrograde amnesia (unable to recall events prior to the injury)
- Neck pain
- Disorientation
- Delayed verbal and/or motor responses
- Inability to focus
- Headache
- Nausea/vomiting
- Excessive drowsiness
- Visual disturbances
- Loss of balance
- Vacant stare
- Excessive emotional response
- Dizziness
- Feeling “foggy”
- Feeling slowed down
- Trouble falling asleep
- Sensitivity to light
- Sensitivity to noise
- Irritability
- Slowed reaction times

If any of the following signs and symptoms are present after a mechanism of injury, a SRC should be suspected and the student-athlete should be removed from play immediately.

New Hampshire Senate Bill section 200:50 states “a student-athlete who has been removed from play shall not return on the same day or until he or she is evaluated by a health care provider and receives medical clearance and written authorization from that health care provider to return to play. The student-athlete shall also present written permission from a parent or guardian to return to play.”

Neuropsychological (NP) Baseline Testing at Tilton School

All Tilton School student athletes are required to take a baseline neurocognitive test prior to the start of their athletic season. Tilton School uses **ImPact** testing which is a “web-based program designed to test multiple aspects of cognitive functioning like concentration, memory and

reaction time.” The baseline **ImPact** tests are administered by the the school’s athletic trainers and are valid for up to two years. **ImPact** tests are interpreted by a trained professional; Tilton School has partnered with neuropsychologists from Dartmouth-Hitchcock who give recommendations for students’ recovery.

Students who sustain a SRC are given post injury **ImPact** tests that are conducted in the health center monitored by the school nurse. Post injury testing is used to help assist the athletic trainers in the clinical decision making process. Occasionally, cognitive recovery may take longer than the student athlete’s symptom resolution, which is detected by differences and trends between the baseline test and post injury assessments.

Sideline Management and Evaluation

The sideline assessment should be performed by a licensed medical professional. The initial evaluation of a suspected SRC should include assessment of airway breathing and circulation followed by an assessment of the cervical spine and skull for injury. Any athlete with a witnessed LOC of any duration should be transported immediately to the nearest emergency department by an emergency vehicle. Any student athlete who has deteriorating symptoms or begins vomiting should be transported to the nearest emergency depart by emergency vehicle immediately.

If no LOC was reported and the medical professional does not suspect any spinal/skull injuries, the athletic trainer should begin a sideline evaluation and a SCAT 5 should be performed.

Sideline evaluation should include:

- Brief history of student athletes medical background
- Symptom evaluation
- Cognitive screening
 - Orientation
 - Immediate memory
 - Concentration
- Neurological screening
 - Balance assessment
 - Cranial nerves
 - Pupil reaction
- Delayed memory recall

Any student who has a suspected SRC must be removed from play and may not return to participation that day. If the student is stable, the athletic trainers will make the decision whether an immediate referral to a MD is needed or if the student athlete may return home, to their dorm or to the health center for further observation.

During this time, the student should avoid substances that will impair their neurocognitive function, as well as medications that include aspirin which can increase their risk of bleeding.

Communication to Parents, Guardians, and Tilton School Staff

When a SRC is suspected, the athletic trainer's will notify the student's parent and/or guardian by phone or email to inform them of the incident, and if an immediate referral is needed. If the SRC has occurred during an away contest the athletic trainer will call or email the parents and/or guardians when the student has arrived back to campus.

The Athletic Trainer's will notify the Administrator on Duty (AOD) of the suspected SRC by cell phone. The student's dorm parents, advisor, coaches and the health center will all be notified via "Tilton School Concussion Notification" document. The student's advisor is responsible for communicating the suspected SRC to their academic classroom teachers.

Treatment for Students

Within the first 24-48 hours physical and cognitive rest may ease discomfort during the acute recovery period. The student should avoid all electronics and mental stimulants. If a student is not symptomatic during this time, homework may be attempted but stopped if any symptoms arise.

The following morning of a suspected SRC the student should report to the Health Center to report their current status to the nurses. No student should remain in their dorm rooms during this time.

Any boarding student who is too symptomatic to attend their classes should remain in the health center for evaluation and observation during the academic school day. The health center will coordinate with the school nurse practitioner to schedule an examination. Following the completion of the academic school day, the student will follow up with the athletic trainers for daily evaluations. The athletic trainers will update parents/guardians, advisors, and dorm parents daily about the student's recovery.

Day students who are too symptomatic to attend classes should remain at home and parents/guardians should report their absence to the health center at (603) 286-1760. Parents/guardians should schedule a medical examination appointment with the student's primary care physician and provide the athletic trainers or the health center with the paperwork.

Within the first 24-72 hours, a post injury **ImPact** test will be conducted in the Tilton School Health Center by the athletic trainers. The post injury **ImPact** is read by the neuropsychologist who consults with the athletic trainers and gives recommendations to aid in student recovery management.

The athletic trainers and the health center will stay in constant contact and consult with the Academic Dean and Assistant Dean of Residential Life to determine if a boarding student should remain on campus if they do not seem to be recovering at school.

Academic Support/Expectations

Tilton School recognizes that all Tilton student-athletes are students first. As previously mentioned in the **Treatment for Students** portion of this document, the first 24-48 hours should involve complete physical and cognitive rest if symptoms are present. **Tilton School faculty will excuse missed assignments and assessments during this time, but it is an expectation that the student will make up and complete all work deemed necessary by the classroom teacher.**

Once symptoms have started to decrease (typically after 24-48 hours), Tilton School Athletic Trainers and Health Center will encourage the students to attempt academic activities. This includes working on homework or reading textbooks. If during this time symptoms start to increase, the student should take a break and try attempting work when symptoms return back to when they started.

When the student is able to complete school work, attending classes part time is recommended. The student may decide to focus on classes that do not require as much screen time or mental exertion. If class attendance exacerbates symptoms the student should take a break and rest in the health center.

Once attending classes part time without any symptoms is achieved the student may attempt returning to classes full time. The student should work with their advisor, classroom teachers, and the Academic Dean to schedule deadlines for make up assignments and assessments. **Until a student has returned to school full time, they should NOT be participating in the return to sport protocol.**

If a boarding student symptoms are still present and the student is unable to attempt attending classes 72 hours post injury, the athletic trainer and health center will consult with the Academic Dean to determine if the student should take a medical leave of absence from school to focus on their recovery.

Return to Sport Protocol

There has been a lot of debate over how helpful complete physical and cognitive rest is 48 hours post concussion. The athletic trainers may recommend some light activity if a student is symptomatic as long as symptoms do not worsen with activity. If this occurs, activity should be ceased.

When a student has been asymptomatic for **at least 24 hours**, the return to sport protocol may begin. The protocol consists of five steps; a minimum of 24 hours must past before a student may move to the next step. If a student becomes symptomatic during any of the steps, they will move down a step and remain there for 24 hours. Any student who has suffered an SRC must provide Tilton School Athletic Trainer's or Health Center with clearance forms from an MD. Parents and/or guardians must also provide the athletic trainers with return to sport consent following the completion of the protocol. The five steps of return to sport are:

1. **Light Aerobic Exercise**: 15-20 minutes walking on a treadmill or light cycling. The student should then follow up with the athletic trainers for a BESS balance

assessment. Student's should still attend practices after they check in with the athletic trainers'.

2. Moderate Aerobic Exercise and Body Weight Movements: 15-20 minutes jogging on the treadmill or 20 minutes on the elliptical. The student should then follow up with the athletic trainers and complete three sets of ten push-ups, sit-ups, and squats. Students should still attend practices after they check in with the athletic trainers.
3. Sports Specific Exercises: Dynamic warm ups with your team, followed by sport specific drills. Examples include: dribbling, running routes, skating, shooting, and agility type exercises. **No contact should be made during this time.**
4. Limited Non-Contact Skills and Drills Practice Followed by a Post-Injury ImPact Test: The student should participate in a shortened practice with the team, with **no contact**. Within two hours of the completion of practice and the student's blood pressure and heart rate has dropped, the student should complete a post-injury ImPact test to examine if physical exertion affects their neurocognitive function. *If a student's ImPact score is not within their baseline after exertion, the student will remain on step four for a minimum of three days before taking another post injury ImPact test.*
5. Full non-contact practice: The student will be allowed to complete a full practice without contact.
6. Full Contact Practice: No restrictions. **The student must complete a full contact practice before being cleared for competition.**

Tilton School Athletic Trainers reserve the right to extend a student's return to sport protocol given the severity of the SRC and a student's past medical history.

Resources

[Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016](#)

[National Athletic Trainers' Association Position Statement: Management of Sport Concussion](#)

[New Hampshire Musculoskeletal Institute Concussion Resources](#)