

Concussion Management Protocol

Deerfield Academy

Although medical care and decision making always needs to be individualized, this Protocol describes our standard approach to managing a suspected or diagnosed concussion at Deerfield Academy.

1. A student suspected of sustaining a concussion will be evaluated as soon after the injury as is feasible by a healthcare professional. For students concussed during athletic events this typically occurs on the sideline by an athletic trainer. For students concussed outside of athletic events this typically occurs at the Health Center by a nurse.
 - a. If indicated, serial follow-up evaluation will occur over the next few hours.
 - b. Any student evaluated by the Health Center staff for a suspected concussion will call his/her parents to report what happened and their general status.
 - c. An athlete with a suspected concussion will be sent or transported to the Health Center for further evaluation during or soon after the conclusion of the game/practice.
2. An athlete with a suspected concussion shall not return to athletic activity until medically cleared by the athletic trainer or school physician covering the contest or practice. At away games, it may be the home team's trainer or physician. Athletes with suspected concussions may not be cleared to return to play by a coach, a parent or a spectator (even if the spectator is a trained healthcare professional).
3. The athletic trainer will notify the Health Center of any suspected concussion and an evaluation by the School Physician or Nurse Practitioner will be scheduled. If the diagnosis of concussion is made, medical clearance by the School Physician or Nurse Practitioner is required before the athlete can return to athletic activity.
4. If significant symptoms (e.g., headache, nausea, foginess) persist for more than a few hours after the injury, students are typically admitted to the Health Center for observation.
 - a. Headache and other symptoms may be treated with over-the-counter medications.
 - b. Vital signs and neurologic status are followed by nursing staff under the direction of the School Physician.
 - c. After the first night in the Health Center, students with mild post concussive symptoms may be discharged to the dorm.
 - d. Students with persistent mild symptoms will be assessed on an every-day to every-other-day basis by Health Center staff
 - e. Students with moderate to severe symptoms are generally kept in the Health Center for continued observation
5. At the time of the clinical evaluation by the School Physician or Nurse Practitioner:
 - a. A medical and neurological assessment will be made (this evaluation typically does not involve neuro-imaging, which is only obtained when specific criteria are met)
 - b. The clinician will communicate with the student's parents
 - c. The clinician will communicate with the relevant school personnel concerning the status of the student.
 - d. Arrangements for follow-up clinical evaluation will be made
6. A student who has sustained a concussion will report to the Health Center Monday, Wednesday and Friday for an evaluation which will typically include completion of the Concussion Symptom Checklist.
7. The cornerstone of concussion management is physical and cognitive rest.
 - a. OTC medications may be used for symptom control.

- b. If symptoms are mild, students may return to non-athletic school activities including classes and other academic pursuits to the extent such activities do not worsen symptoms. Any activity which worsens symptoms should be avoided.
 - c. If symptoms are moderate to severe, students should not participate in academic efforts and they will remain in the Health Center or return home for convalescence.
8. The School Physician will work with teachers, the Advisor and the Office of the Academic Dean to see that concussed students who experience difficulty with concentration and/or academic effort receive academic assistance and modifications until symptoms have resolved.
 9. During weekday co-curricular time, all concussed students who have not advanced to the Graduated Return to Play Protocol are required to attend a designated study hall to help them complete their academic work. If they are symptomatic during this time, they will come to the Health Center to rest.
 10. When the concussed student has been asymptomatic for at least 24 hours, a neurocognitive test will be administered.
 11. When the concussed student has neurocognitive testing that is comparable to their baseline, the athletic trainer may begin the Graduated Return to Play Protocol (see Table 1).
 - a. Generally each stage will take one day, so that an athlete would take approximately one week to proceed through the full rehabilitation protocol.
 - b. If the athlete develops symptoms during exercise, he/she will return to rest until again symptom-free for at least 24 hours; then he/she may begin the Graduated Return to Play Protocol again.
 12. The student may not return to athletic competition until medical clearance has been provided by the School Physician. This typically requires:
 - a. neurocognitive testing at baseline levels
 - b. successful completion of a graded exercise program without return of symptoms

Graduated Return To Play Protocol			
Rehabilitation stage		Functional exercise at each stage of rehabilitation	Objective of each stage
1.	Light aerobic exercise	Walking, swimming or stationary cycling keeping intensity <70% HR _{MAX} . No resistance training.	Increase HR
2.	Sport-specific exercise	Skating drills in ice hockey, running drills in soccer. No head impact activities.	Add movement
3.	Non-contact training drills	Progression to more complex training drills (e.g. passing drills in football and ice hockey). May start progressive resistance training).	Exercise, coordination, cognitive load
4.	Full contact practice	Following medical clearance, participate in normal training activities	Restore confidence, assessment of functional skills by coaching staff
5.	Return to play	Normal game play	