Perkiomen Concussion Protocol and Return to Play

Student athletes who are exhibiting any of the signs or symptoms of a sports-related concussion or other head injuries during practice or competition shall be immediately removed from play and may not return to play until he/she is evaluated and cleared for return to participation by an appropriate medical professional.

Signs of Concussion:

(Could be observed by Coaches, Athletic Trainer, School Nurse, Parent/Guardian) The signs of a concussion include:

1. Appears dazed, stunned, or disoriented, demonstrates decreased alertness
2. Forgets plays, or demonstrates short term memory difficulty
3. Slurs words
4. Exhibits difficulties with balance or coordination.
5. Answers questions slowly or inaccurately.
6. Exhibits seizures or vomiting
7. Changes in level of consciousness. (Estimates are that <10% of concussions result in the loss of consciousness)

Symptoms of Concussion:

(Reported by the student athlete to Coaches, Athletic Trainer, School Nurse, Parent/ Guardian)

The symptoms of a concussion include:

1. Headache
2. Nausea
3. Balance problems or dizziness

4. Double vision or changes in vision

5. Sensitivity to light or sound/noise

6. Feeling sluggish or foggy

7. Difficulty with concentration and short-term memory

8. Sleep disturbance

9. Irritability or changes in personality and behavior

• If the athlete is experiencing one or more signs or symptoms following a head injury or whiplash mechanism, a concussion is suspected.

• A player with suspected/diagnosed concussion is not allowed to return to play on the same day of injury.

• Once a student athlete has been removed from competition or practice because of signs or symptoms of a concussion, the following must be followed:

Concussion Management Protocol:

1. Contact the Athletic Trainer if a concussion is suspected and an initial evaluation will be completed.

2. Emergency medical treatment should be pursued immediately if there is a deterioration of symptoms including seizure, altered level of consciousness, vomiting, altered pupillary findings, or direct neck pain associated with the injury.

3. The Athletic Trainer must notify the health center. The Athletic Trainer or health center must make contact with the student athlete's parent/guardian and inform him/her of the suspected sports-related concussion or head injury.

4. Signs and symptoms can arise and progress within 24 hours of a head injury. Therefore, if there is suspicion of a concussion, the athlete may not return to play within the first 24 hours. The Athletic Trainer will complete an initial symptom checklist as well as cognitive and vestibular testing.

BOARDING STUDENTS:
5. Continued testing will be completed the next day by the Athletic Trainer to diagnose or rule out a concussion.
6. The Athletic Trainer will track concussion symptoms daily.
7. The Athletic Trainer will facilitate the return to play protocol with the athlete.

8. The Athletic Trainer will review the concussion case with a medical physician if necessary and will follow the physician's recommendations.
9. The Athletic Trainer may clear the athlete following completion of return to sport and case review with the team physician.

DAY STUDENTS:
5. Day Students must obtain written diagnosis from an outside physician, typically primary care physician.
6. The Athletic Trainer will track concussion symptoms daily to ensure the student is returning to baseline.
7. The student **must obtain written clearance from their** physician.
8. Athletes must complete the return-to-play protocol with the athletic trainer before returning to play at Perkiomen School grounds.

Any questions regarding the concussion protocol or return to sport please contact:
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Return to Classroom:

• Temporary learning support accommodations may be needed for student athletes with Sports-Related Head Injuries to return to the classroom. The concussed brain is affected in many functional aspects as a result of the injury. Memory, attention span, concentration and speed of processing significantly impact learning. Accordingly, consideration of the cognitive effects in returning to the classroom is also an important part of the treatment of sports-related concussions and head injuries.

For any questions regarding return to the classroom please contact:

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Students who return to school after a concussion may need to:

1. Create an Academic Recovery Plan to manage the completion of work.

2. Take rest breaks as needed

3. Spend fewer hours at school (have a shortened school day)

4. Be given more time to take tests or complete assignments. (All courses should be considered)

5. Receive help with schoolwork (e.g., pre-teaching, outlines, note taker).
6. Reduce time spent on the computer, reading, and writing.
7. No standardized testing (e.g., PSSA, SAT) until full return to school.
8. Must return to school full time prior to return to sport clearance.

Table 1

Return-to-learn (RTL) strategy

Step	Mental activity	Activity at each step	Goal
1	Daily activities that do not result in more than a mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (eg, reading) while minimising screen time. Start with 5–15 min at a time and increase gradually.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part time	Gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.	Increase academic activities
4	Return to school full time	Gradually progress in school activities until a full day can be tolerated without more than mild* symptom exacerbation.	Return to full academic activities and catch up on missed work

- Following an initial period of relative rest (24–48 hours following an injury at Step 1), athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation.
- *Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10 point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared with the baseline value reported prior to cognitive activity.

Return to Sport

- Athlete can begin return to play protocol steps 1-3 while symptomatic
- Steps 4-6 should begin after the resolution of symptoms
- Return to sport strategy attached below

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Table 2

Return-to-sport (RTS) strategy—each step typically takes a minimum of 24 hours

Step	Exercise strategy	Activity at each step	Goal
1	Symptom-limited activity	Daily activities that do not exacerbate symptoms (eg, walking).	Gradual reintroduction of work/school
2	Aerobic exercise **2A—Light** (up to approximately 55% maxHR) **then** **2B—Moderate** (up to approximately 70% maxHR)	Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.	Increase heart rate
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3	Sport-specific training away from the team environment (eg, running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact.	Add movement, change of direction
Steps 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.			
4	Non-contact training drills	Exercise to high intensity including more challenging training drills (eg, passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	Full contact practice	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play.	

- ***Mild and brief exacerbation of symptoms (ie, an increase of no more than 2 points on a 0–10 point scale for less than an hour when compared with the baseline value reported prior to physical activity). Athletes may begin Step 1 (ie, symptom-limited activity) within 24 hours of injury, with progression through each subsequent step typically taking a minimum of 24 hours. If more than mild exacerbation of symptoms (ie, more than 2 points on a 0–10 scale) occurs during Steps 1–3, the athlete should stop and attempt to exercise the next day. Athletes experiencing concussion-related symptoms during Steps 4–6 should return to Step 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of readiness to RTS should be provided by an HCP before unrestricted RTS as directed by local laws and/or sporting regulations.**
- **HCP, healthcare professional; maxHR, predicted maximal heart rate according to age (ie, 220-age).**

Reference:

Patricios JS, Schneider KJ, Dvorak J, et al. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport-Amsterdam, October 2022. *Br J Sports Med*. 2023;57(11):695-711. doi:10.1136/bjsports-2023-106898