



# CONCUSSION MANAGEMENT RESOURCE GUIDE



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## Concussion Management Resource Guide

The Maine Department of Education provides this Concussion Management Resource Guide in accordance with Maine Revised Statutes Title 20-A section 6403-A (5) which directs the Commissioner of Education to issue guidelines on the provision of school health services and health-related activities. In addition, the following resources are offered in order to fully comply with the requirements of [Maine Revised Statutes Title 20-A section 254 \(17\)](#) as a result [Public Law 2012 Chapter 688](#), An Act to direct the Commissioner of Education to Adopt a Model Policy Regarding Management of Head Injuries in School Activities and Athletics, in the 125<sup>th</sup> Maine Legislature. Nothing in this document replaces clinical judgement of healthcare professionals within the local school. School staff are responsible for complying with all federal, state, and local laws, rules, regulations, and ordinances as well as relevant standards of practice.

Components required by this law include a [model policy](#), training, student and parental acknowledgment, protocols and forms, immediate removal and evaluation, and medical clearance. The model policy, as directed by [Public Law 2012, Chapter 688](#), includes the following requirements:

1. Training for staff- Annual training must be completed by extracurricular and athletics-related school personnel (including volunteers) identified by the Concussion Management Team (CMT). They must be made aware of policy and protocols related to the management of concussive injuries and must participate in concussion awareness training that includes (1) recognizing signs and symptoms that may suggest a concussion and (2) including instruction in the use of graduated school and activity reentry protocols.
2. Student and Parent/guardian acknowledgement of local policy- all students as well as parents/guardians will be provided information including:
  - The risk of concussion and the dangers associated with continuing to participate when a concussion is suspected.
  - The signs, symptoms and behaviors associated with concussion.
  - The school administrative unit's protocols for removal of the student from the activity when the student is suspected of having sustained a concussion, evaluation, referral and medical clearance, and graduated school and activity reentry protocols.
3. Management of Concussion plan that includes recognition, evaluation, and a graduated return to school and return to activity protocol, and medical clearance. This Resource Guide is created to provide evidence-based best practices for this purpose.
4. Concussion Management Team

The Resource Guide and its strategies are consistent with the recommendations by the International Conference on Concussion in Sport (Patricios JS, 2023). Since approved trainings, protocols, and sample forms including acknowledgement forms are not contained within the model policy, the following resources have been compiled to fully satisfy the law.

The Concussion Management Resource Guide, model policy, and resources have been compiled, reviewed, and approved by the Concussion Workgroup which consists of representatives from the following:

Maine Association of School Nurses  
Maine Athletic Trainer's Association  
Maine Department of Education  
Maine Principals' Association

## **Background**

Concussion is a type of traumatic brain injury. The effects of any injury to the brain can be serious. They are caused by a bump, blow or jolt to the head, or by a blow to another part of the body with the force transmitted to the head. These injuries can disrupt the way the brain normally works. Reported symptoms may include one or more of the following:

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems, dizziness, double or blurry vision
- Light or noise sensitivity
- Sluggish, hazy, foggy, or groggy feelings
- Confusion, concentration or memory problems
- Just not “feeling right” or “feeling down” (U.S. Centers for Disease Control and Prevention, 2024)

Sometimes a person may not report their symptoms, but others may recognize signs that there is something wrong. Observable signs of a concussion may include:

- Not recalling events *prior to or after* a hit or fall
- Appearing dazed or stunned
- Forgetting an instruction, is confused about an assignment or position, or is unsure of the game, score, or opponent
- Moving clumsily
- Answering questions slowly
- Losing consciousness (even briefly)
- Showing mood, behavior, or personality changes (U.S. Centers for Disease Control and Prevention, 2024)

Students who experience a concussion generally recover completely within two weeks. A full recovery can be assisted with school staff who understand the symptoms and who provide the necessary accommodations and support (U.S. Centers for Disease Control and Prevention, 2021). Concussion management begins with education of students, parents, staff, coaches, and healthcare professionals (Patricios JS, 2023).

## Training & Education

There are many free trainings available for various audiences. The following is a non-exhaustive list of reputable educational offerings:

- U.S. Center for Disease Control and Prevention HEADS UP
  - [For School Professionals](#)
  - [For Athletic Trainers](#)
  - [For Healthcare Providers](#)
- National Federation of State High School Associations
  - [For Coaches and School Personnel](#)
  - [For Students](#)
- Brain Injury Association of America Training for Health Professionals
  - [Understanding Concussion: Symptoms, Diagnosis, and Treatment Approaches Certificate Course](#)

## Prevention Tips



Buckle Up Every Ride--wear a seatbelt every time you drive or ride in a motor vehicle



Never drive while under the influence of alcohol or drugs or ride as a passenger with a driver who is



Play in athletic programs that enforce safety rules



Wear a helmet with any high risk/contact activity

(U.S. Center Disease Control and Prevention, 2024)

## When an Injury Occurs

Any student suspected of having sustained a concussion should be removed from the activity immediately (Patricios JS, 2023). No student may return to the activity after a suspected concussion regardless of how mild it seems or how quickly symptoms clear, without being evaluated by school health personnel trained in concussion recognition (Patricios JS, 2023). Close

observation of the student should continue for several hours. Continuing to participate with the signs and symptoms of concussion leaves the young brain especially vulnerable to greater injury. There is an increased risk of significant damage following a concussion, particularly if the individual suffers another concussion before completely recovering from the first one (U.S. Centers for Disease Control and Prevention, 2024). This can lead to prolonged recovery, or even, in rare cases, to severe consequences. It is well known that adolescents will often minimize or under-report symptoms of injuries, and concussions are no different. As a result, education of all school personnel and students is the key for student safety.

## **Evaluation**

Recognition of a potential brain injury is the first step. Trained school personnel, coaches, and other volunteers are usually the first to recognize that there was an injury. It is their duty to remove the student from the activity. Students exhibiting any signs of concussion should not return to the activity that day (Patricios JS, 2023).

Healthcare professionals should conduct an assessment based on their scope of practice. Documenting the history of the injury, including the activity in which they were participating at the time is important to assist in monitoring for local trends and to inform possible safety improvements over time. Some clinical assessment tools that may be used are the following:

- [SCAT6](#) may be used as baseline assessment or post-injury assessment within 3 days of injury for individuals 13 years of age and older (Echemendia, 2023)
- [Child SCAT6](#) may be used for children 8-12 years of age post-injury up to 7 days (Davis, 2023)
- [SCOAT6](#) may be used for ongoing assessment after 3 days post-injury, for individuals 13 years of age and older (Patricios, 2023)

If referral to a licensed health care provider is necessary, as determined by the school health personnel, the student will need written medical clearance from a licensed health care provider who is-qualified and trained in concussion management. The student is also required to complete the “graduated return to school” and “return to activity” protocol as determined by the local school policy and procedure.

## **Communication and Returning to School**

It is important to establish communication channels among families, students, and the educational team. Parents/guardians are encouraged to inform school health personnel if they think their child has a concussion (U.S. Centers for Disease Control and Prevention, 2024). Once the student has been diagnosed with a concussion and is returning to school it is important to maintain clear communication between school personnel.

A graduated school reentry plan is developed by the CMT in collaboration with school personnel, such as the concussed student’s teachers, school counselor, school nurse, athletic

trainer, neuropsychologist (if available), parent(s)/caregivers and medical provider. This plan supports the student's return to academic activities and eases the stress of making up past work while engaged in their present work. The plan may include:

1. Environmental modifications, for example, rest breaks, or limits on electronic devices
2. Physical modifications such as avoiding activities with risk of contact or falls
3. Curriculum modifications such as time extensions for assignments
4. Testing modifications such as extra time or delaying tests/quizzes (Patricios JS, 2023)

An individualized, flexible, and graduated school reentry plan is strongly recommended because symptoms vary between individuals and often change in type and severity throughout recovery. Frequency of assessments by the school nurse, school physician, neuropsychologist, or athletic trainer until full return to the classroom and extracurricular activities should be communicated as well as a plan for coordination among school personnel, parents/caregivers, and the student's medical provider.

Considerations for Graduated School Reentry:

- Designate a point person to lead the school concussion management team and coordinate and facilitate communication among teachers, students, medical providers, school counselors, and parents until a student is recovered and able to return fully to their pre-injury academic and extracurricular programming.
- Establish and clearly communicate what temporary accommodations and supports the student will use.
- Gradually reduce accommodations and return to normal school schedules or gradually return to normal school schedules without accommodations.
- Allow returning students to complete work in small increments at first until they can work for longer periods of time.
- Establish and clearly communicate a plan for making up missed work to reassure the student and reduce stress.
- Allow the student access to the school nurse as needed to manage symptoms.
- No student should return to full participation in extracurricular school activities (e.g., competition, games, performances) until they have fully returned to their academic program and have completed the graduated return to school and return to activity protocol. Each phase in the progression of this protocol takes at least 24 hours. Return to learn and return to play may occur at the same time.

### **Student and Parental Information Sheet and Acknowledgement Form**

Prior to participating in a school athletic activity, all students and the student's legal parent or guardian must be informed of signs and symptoms of concussion, the risk of continuing to participate when a concussion is suspected, and the school's policy for the management of concussive and other head injuries and must sign a statement acknowledging that review. Since

a concussion may occur during routine daily activities, play, and other extracurricular activities, it is recommended that this information be shared with all parents/guardians within the school community.

[A Fact Sheet for Parents](#) (U.S. Centers for Disease Control and Prevention, 2021)

Sample Acknowledgement Form Language: *I understand that a concussion may occur from an injury in any setting. I have read the school policy and understand that there is a protocol in place for graduated school re-entry following a concussion and medical clearance.*

Provide parents/guardians with concussion information sheet.

Provide parents/guardians with local policy/protocol.

Have parent/guardian sign acknowledgement form annually.

### Sample Language that can be included in the Student Handbook

A concussion is a brain injury. All brain injuries are serious. They are caused by a bump, blow, or jolt to the head or by a blow to another part of the body with the force transmitted to the head. These injuries can disrupt the way the brain normally works. Even though most concussions are mild, **all concussions are potentially serious and may result in complications including prolonged symptoms and/or recovery if not recognized and managed properly.** In other words, even a “ding” or a bump on the head can be serious. You cannot **see** a concussion and most concussions occur without loss of consciousness. [Signs and symptoms of concussion](#) may show up right after the injury or can take hours or days to fully appear. If your student reports any symptoms of concussion, or if you notice the symptoms or signs of concussion yourself, seek medical attention right away. Our school has a policy (*provide your link*) that states any student who has concussion symptoms and is referred to a health care provider must be evaluated by a health care provider licensed to diagnose a concussion before they can return to full activities within school. For more information on concussions, you can go to <https://www.cdc.gov/headsup/index.html>. By signing that I have read the student handbook, *I understand that a concussion may occur from an injury in any setting. I have read the school policy and understand that there is a protocol in place for graduated school re-entry following a concussion and medical clearance.*



**Concussion Management Team**

The Concussion Management Team (CMT) should have a few core members that have a solid understanding of the concussion policy and graduated school reentry protocol (U.S. Centers for Disease Control and Prevention, 2021). The work of this team may be incorporated into another, such as a Student Support Team. The academic monitor role should shift as the team manages different student reentry plans.

Concussion Management Team		
Title	Suggested Individual	Responsibilities
<b>Point Person</b>	School nurse Athletic trainer Administrator School counselor	<ul style="list-style-type: none"> <li>Coordinate CMT.</li> <li>Advocate for the students' needs.</li> <li>Serve as the primary point of contact with the student, family, medical provider and all members of the team.</li> </ul>
<b>Symptom Monitor</b>	School nurse Athletic trainer Physician assistant Nurse practitioner Physician	<ul style="list-style-type: none"> <li>Assess the student for concussion symptoms regularly for the first two weeks or longer as necessary.</li> <li>Report assessment result to the CMT or point person</li> </ul>
<b>Academic Monitor</b>	Teacher(s) School counselor Other school staff person familiar with the student	<ul style="list-style-type: none"> <li>Collect teacher reports about academic performance.</li> <li>Monitor and report behavior and academic progress to the CMT.</li> </ul>
<b>Other Members as necessary</b>	Athletic director Neuropsychologist School psychologist Coach Physical therapist Athletic trainer School counselor Student Parent Pediatrician or primary care provider	<ul style="list-style-type: none"> <li>Provide context to the student's symptoms, behavior, and academic progress.</li> <li>Consistent communication.</li> <li>Identify upcoming needs and challenges facing the student.</li> </ul>

**Return-to-Learn Strategy**

Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022 (Patricios JS, 2023). [Download a full-page version of this table from the Concussion Management Resources website.](#)

Return-to-Learn Strategy			
Step	Mental Activity	Activity at Each Step	Goal
1	<b>Daily activities</b> that do not result in more than mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (e.g. reading) while minimizing screen time. Start with 5-15 min at a time and increase gradually.	Gradual return to typical activities
2	<b>School activities</b>	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	<b>Return to school part time</b>	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	<b>Return to school full time</b>	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.

This content was duplicated from Table 1 and Table 2 that were published within the Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022 (Patricios JS, 2023). Used with permission.

**Return-to-Sport Strategy**

*Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022 (Patricios JS, 2023).*

Return-to-Sport Strategy			
Step	Exercise Strategy	Activity at Each Step	Goal
1	<b>Symptom-limited activity</b>	Daily activities that do not exacerbate symptoms (e.g., walking).	Gradual reintroduction of work/school
2	<b>Aerobic exercise</b> 2A- Light (up to approximately 55% maxHR), then 2B- Moderate (up to approximately 70% maxHR)	Stationary cycling or walking at a 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	<b>Individual sport-specific exercise</b> 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 (e.g., 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	<b>Non-contact training drills</b>	Exercise to high intensity including more challenging training drills (e.g., passing drills, multiplayer training) can integrate into a team environment.	Resume usual intensity of exercise, coordination and increased thinking
5	<b>Full contact practice</b>	Participate in normal training activities.	Restore confidence and assess functional skills by coaching staff
6	<b>Return to Sport</b>	Normal game play.	
<p>*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.</p> <p>Athletes may begin Step 1 (i.e., 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 (i.e., 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 exercise before engaging in at-risk activities. Written determination of readiness to return to sport (RTS) should be provided by a HCP before unrestricted RTS as directed by local laws and/or sporting regulations.</p> <p>HCP- healthcare professional; maxHR- predicted maximal heart rate according to age (i.e., 220-age).</p>			
This content was duplicated from Table 1 and Table 2 that were published within the Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport–Amsterdam, October 2022 (Patricios JS, 2023). Used with permission.			

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