

It is important for the school leaders to identify a school staff member on the concussion management team who will function as a case manager or concussion management leader, such as a school nurse, athletic trainer, school counselor or other identified school professional. This person will have the role of advocating for the student's needs and serve as the primary point of contact for the student, family, and all members of the concussion management team (1,2). The case manager is responsible for ensuring all are informed and understand how to implement the student's accommodations.

Return-to-Learn Framework: (5,3)

Points of Emphasis

- To initiate the Return-to-Learn protocol, the student must be evaluated by a licensed healthcare professional and documentation must be provided to the school.
- The protocol emphasizes allowing the student to participate in school in a modified fashion so as not to worsen symptoms. Determining "how much is too much" may be a trial and error process.
- The student should be granted adequate time to complete missed academic work based on the amount of time needed for complete recovery.
- The student should report to the case manager **daily** in order to monitor symptoms and assess how the student is tolerating the accommodations (a symptom checklist is recommended), as well as assess how staff are implementing the modified learning plan.
- As the student's recovery progresses through the outlined phases, teachers should be prepared to apply "mastery learning" criteria within their subject matter. By identifying essential academic work, teachers can facilitate recovery by reducing the student's anxiety levels related to perceived volume of work that will be required once he/she is medically cleared to resume a full academic load.

Phase 1: No School/Complete Cognitive Rest

- **Symptom Severity:** In this phase, the student may experience high levels of symptoms that at best prohibit the student to benefit from school attendance and may cause symptoms to increase in intensity. During this stage, physical symptoms tend to be the most prominent and may interfere with even basic tasks. Many students are unable to tolerate being in the school environment due to severe headache, dizziness or sensitivity to light or noise.
- **Treatment:** Emphasis on cognitive and physical rest to allow the brain and body to rest as much as possible.
- **Intervention Examples:**
 - No School

- Avoid activities that exacerbate symptoms. Activities that commonly trigger symptoms include reading, video games, computer use, texting, television, and/or loud music.
- Other symptom “triggers” that worsen symptoms should be noted and avoided in the effort to promote healing
- No physical activity- this includes anything that increases the heart rate as this may worsen symptoms
- No tests, quizzes or homework
- Provide students with copies of class notes (teacher or student generated)

Phase 2: Part-Time School Attendance with Accommodations:

- **Symptom Severity:** In this phase, the student’s symptoms have decreased to manageable levels. Symptoms may be exacerbated by certain mental activities that are complex or of long duration. Often students can do cognitive activities but only for very short periods of time (5-15 minutes) so need frequent breaks to rest and “recharge their batteries”.
- **Treatment:** Re-introduction to school. Avoid settings and tasks that trigger or worsen symptoms. In the first few days of returning to school the goal is not to immediately start catching up on the missed work or learn new material. Rather the initial goal is simply to make sure the student can tolerate the school environment without worsening symptoms. This means the first few days often include just sitting in class and listening (no note-taking or reading). Once the student can tolerate this, he/she can try short intervals (5-15 minutes) of cognitive work per class.
- **Intervention Examples:**
 - Part-time school attendance, with focus on the core/essential subjects and/or those which do not trigger symptoms; prioritize what classes should be attended and how often. Examples: (1) half-days, alternating morning and afternoon classes every other day; or (2) attending every other class with rest in the nurse’s office, library or quiet location in between. - Symptoms reported by the student should be addressed with specific accommodations
 - Eliminate busy work or non-essential assignments or classes.
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 - Limit or eliminate “screen time” (computers, phones, tablets, smart boards), reading and other visual stimuli, based on the student’s symptoms.
 - Provide student with copies of class notes (teacher or student generated)
 - No tests or quizzes.
 - Homework load based on symptoms. There should be no due dates on homework assignments. This allows students to work at a pace that does not exacerbate symptoms and reduces their anxiety about completing the assignments. Many students have heightened anxiety during concussion recovery and due dates exacerbate this.

- Allow to leave class 5 minutes early to avoid noisy, crowded hallways between class changes.
- No physical activity including gym/recess or participation in athletics
- If this phase becomes prolonged and/or the student is unable to tolerate the school environment or do any work for even short periods of time, a tutor can be helpful (either in school or at home) to implement oral learning at a pace that does not worsen symptoms. A tutor can also help students organize their work and plan how they will spend their limited time studying (i.e. which assignment should I do first, second, third, etc), as many students are unable to do this basic “executive function” task during concussion recovery.

Phase 3: Full-Day Attendance with Accommodations:

- **Symptom Severity:** In this phase, the student’s symptoms are decreased in both number and severity. They may have intervals during the day when they are symptom-free. Symptoms may still be exacerbated by certain activities.
- **Treatment:** As the student improves, gradually increase demands on the brain by increasing the amount, length of time, and difficulty of academic requirements, as long as this does not worsen symptoms.
- **Intervention Examples:**
 - Continue to prioritize assignments, tests and projects; limit students to one test per day with extra time to complete tests to allow for breaks as needed based on symptom severity
 - Continue to prioritize in-class learning; minimize overall workload
 - Gradually increase amount of homework
 - Reported symptoms should be addressed by specific accommodations; Accommodations are reduced or eliminated as symptoms resolve
 - No physical activity unless specifically prescribed by the student’s physician or health care provider. If the student has not resolved their symptoms after 4-6 weeks, health care providers will often prescribe light aerobic activity at a pace and duration below that which triggers symptoms. This “sub-symptom threshold exercise training” has been shown to facilitate concussion recovery (14). The student can do this at school in place of their regular PE class, by walking, riding a stationary bike, swimming, or jogging. No contact sports are allowed until the student is completely symptom-free with full days at school and no accommodations, and has received written clearance from a licensed health care professional.

Phase 4: Full-Day Attendance without Accommodations:

- **Symptom Severity:** In this phase, the student may report no symptoms or may experience mild symptoms that are intermittent.
- **Treatment:** Accommodations are removed when student can participate fully in academic work at school and at home without triggering symptoms.

- **Intervention Examples:**
 - Construct a reasonable step-wise plan to complete missed academic work; an extended period of time is recommended in order to minimize stress
 - Physical activities as specified by student's physician (same as phase 3)

Phase 5: Full School and Extracurricular Involvement:

- **Symptom Severity:** No symptoms are present. Student is consistently tolerating full school days and typical academic load without triggering any symptoms.
- **Treatment:** No accommodations are needed
- **Interventions:**
 - Before returning to physical education and/or sports, the student should receive written clearance and complete a step-wise return-to-play progression as indicated by the licensed healthcare professional.

Class/Subject Accommodation Examples:

History:

- Books on Audiotape
- Provide detailed class notes to allow student to listen and not be consumed with note-taking during class
- Oral discussion for learning and oral test-taking preferred to written work

Language Arts, English & Writing:

- Books on Audiotape
- Reduce overall amount of written and typed assignments as screens and annotating may be bothersome to the concussed student. Speech-to-text software programs can be helpful for writing papers or annotating.
- Oral discussion for learning and oral test-taking preferred to written work

Math:

- Reduce homework assignments to the least amount possible to demonstrate mastery learning concept
- Provide outline of necessary steps to complete problem (concussed students often experience difficulty remembering and may leave out pertinent steps)

- Student should be given extra time to complete in-class assignments and homework
- Oral discussion for learning and oral test-taking preferred to written work

Science:

- Books on Audiotape
- Detailed class notes to allow student to listen and not be consumed with note-taking during class
- Hands-on learning may be helpful
- Oral discussion for learning and oral test-taking preferred to written work
- Speech-to-text software programs can be helpful for writing lab reports and assignments.

Additional Specific Accommodation Examples: (5,15)

- Extending time on testing and assignments to allow for slower processing speed especially if there is a significant reading demand. Students recovering from concussion have limited endurance and therefore can only attend to a task for short intervals (5-15 min) before triggering symptoms. Symptoms are not just limited to physical symptoms. If there is a lack of comprehension despite 2 or 3 attempts, even without a headache, the student should take a break.
- Providing a quiet room for testing to minimize distraction
- Offering preferential seating (usually in the front of class or away from windows) to minimize distraction and allow better monitoring of the student
- Class information and corresponding assignments should be divided into manageable chunks to minimize cognitive load.
- Reduce light sensitivity by allowing the student to wear sunglasses in class
- Allow breaks every 15 minutes for prolonged reading or screen time
- Allow the student to eat lunch in a quiet location
- Avoid assemblies, pep rallies, athletic events and other events with loud noise and/or bright lights

If concussion symptoms increase, it usually means the student is reaching a point of over-exertion and needs a break. Some students may only need periodic breaks throughout the school day while others may need more frequent breaks depending on the severity of symptoms.