

How every family, school and medical professional can implement a
Community-Based Concussion Management Program

REAP® The Benefits of Good Concussion Management

REAP®

**Remove/Reduce
Educate
Adjust/Accommodate
Pace**

Authored by Karen McAvoy, PsyD

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Third Edition 2018



The Brain Injury Association of Rhode Island (BIARI) is the only non-profit in Rhode Island dedicated solely to brain injury. We are committed to increasing awareness of brain injury and its consequences, providing education to prevent brain injury and enhancing the quality of life for those affected by brain injury. After over 35 years of service to the state, we know all too well the challenges of dealing with brain injury can be overwhelming, especially when it comes to concussions in children.

Welcome to the Rhode Island REAP Manual!

The School and Youth Programs Concussion Act specifically outlines requirements for returning a student athlete diagnosed with a concussion back to play. Those prerequisites incorporate the most current international consensus guidelines. However, we know that traumatic brain injury (TBI) is more than a sports concussion issue, as less than half of student concussions are contact sport related. BIARI pledges to advocate for all students suffering the effects of concussion, both for return to play and return to learn, by combining the resources, relationships and expertise needed to support their health as well as their academics. Every student with a brain injury has a unique set of circumstances and deserves access to proper care, coordination of services and broad support based upon best practices within the school setting.

The goal of the REAP manual for Rhode Island is to have in place a streamlined set of protocol guidelines for all stakeholders. Weaving together a multi-disciplined support system will bridge gaps in services, which will better support students post-concussion, striving for the best possible outcomes. We hope this manual will be an asset to school communities and help to build an enhanced system of care for students with concussions. BIARI wants teachers, athletic staff, students and parents to feel more confident having important conversations with their schools and providers now that these guidelines are available in Rhode Island. Please contact BIARI at (401) 228-3319 for advice and support in creating a Concussion Management Team for your school.

REAP,[®] which stands for **Remove/Reduce • Educate • Adjust/Accommodate • Pace**, is a **community-based model for Concussion Management** that was developed in Colorado. The early origins of REAP stem from the dedication of one typical high school and its surrounding community after the devastating loss of a freshman football player to “Second Impact Syndrome” in 2004. The author of REAP, Dr. Karen McAvoy, was the psychologist at the high school when the tragedy hit. As a School Psychologist, Dr. McAvoy quickly pulled together various team members at the school (Certified Athletic Trainer, School Nurse, Counselors, Teachers and Administrators) and team members outside the school (Students, Parents and Healthcare Professionals) to create a safety net for all students with concussion. Under Dr. McAvoy’s direction from 2004 to 2009, the interdisciplinary team approach evolved from one school community to one entire school district. Funded by an education grant from MINDSOURCE Brain Injury Network in 2009, Dr. McAvoy sat down and wrote up the essential elements of good interdisciplinary team concussion management and named it REAP, thereby creating a model for concussion management that can be utilized by any community.



The benefits of good concussion management spelled out in REAP are known throughout communities in Colorado, nationally and internationally. REAP has been customized and personalized for various states and continues to be the “go-to” guide from the emergency department to school district to the office clinic waiting room.

Download a digital version of this publication at REAPconcussion.com

Endorsed by:



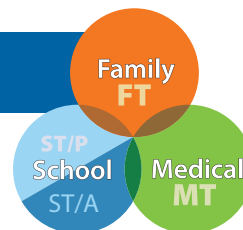
MINDSOURCE
BRAIN INJURY NETWORK



REAP is authored by: Karen McAvoy, PsyD

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How to use this Manual



Because it is important for each member of the Interdisciplinary Concussion Management Team to know and understand their part and the part of other members, this manual was written for all of the teams. As information is especially pertinent to a certain group, it is noted by a color.

» Pay close attention to the sections in **ORANGE**

FT	Family Team	Student, Parents; may include Friends, Grandparents, Primary Caretakers, Siblings and others...	For more specific information, download parent fact sheets from the various "Heads Up" Toolkits on the CDC website: https://www.cdc.gov/headsup/parents/index.html
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» Pay close attention to the sections in **LIGHT BLUE**

ST/P	School Team Physical	Coaches, Certified Athletic Trainers (AT), Physical Education Teachers, Playground Supervisors, School Nurses and others...	For more specific information, download the free "Heads Up: Concussion in High School Sports or Concussion in Youth Sports" from the CDC website: https://www.cdc.gov/headsup/highschoolsports/index.html
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» Pay close attention to the sections in **DARKER BLUE**

ST/A	School Team Academic	Teachers, Counselors, School Psychologists, School Social Workers, Administrators, School Neuropsychologists and others...	For more specific information, download the free "Heads Up to Schools: Know Your Concussion ABCs" from the CDC website: https://www.cdc.gov/headsup/schools/index.html
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» Pay close attention to the sections in **GREEN**

MT	Medical Team	Emergency Department, Primary Care Providers, Nurses, Concussion Specialists, Neurologists, Clinical Neuropsychologists & others...	For more specific information, download the free "Heads Up: Brain Injury in your Practice" from the CDC website: https://www.cdc.gov/headsup/providers/index.html
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Common Concussion Myths...

TRUE or FALSE?

Loss of consciousness (LOC) is necessary for a concussion to be diagnosed.

False! In 2012, approximately 430,000 Emergency Department (ED) visits resulted from sports and recreation-related mild traumatic brain injuries (mTBI).¹ Most concussions do not involve a loss of consciousness. While many students receive a concussion from sports-related activities, numerous other concussions occur from non-sports related activities – from bicycle and playground accidents.

TRUE or FALSE?

A concussion is just a “bump on the head.”

False! Actually, a concussion is a traumatic brain injury (TBI). The symptoms of a concussion can range from mild to severe and may include: confusion, disorientation, memory loss, slowed reaction times, emotional reactions, headaches and dizziness. You can't predict how severe a concussion will be or how long the symptoms will last at the time of the injury.

TRUE or FALSE?

A parent should awaken a child who falls asleep after a head injury.

False! Current medical advice is that it is not dangerous to allow a child to sleep after a hit to the head IF the child has been medically evaluated and more serious complications have been ruled out. Once a medical evaluation results in the diagnosis of concussion and not something more serious, then the best treatment is to allow the child to sleep.

TRUE or
FALSE?

A concussion is usually diagnosed by neuroimaging tests (i.e. CT scan or MRI).

False! Concussions cannot be detected by neuroimaging tests: a concussion is a “functional” not “structural” injury. Concussions are typically diagnosed by careful examination of the signs and symptoms after the injury. Symptoms during a concussion are thought to be due to an ENERGY CRISIS in the brain cells. At the time of the concussion, the brain tries to protect itself by decreasing blood flow to injured areas. Because of the injury there is not enough “fuel” (sugar/glucose) delivery to keep brain cells (neurons) working normally – for playing and for thinking. Over time, this blood flow returns to normal as symptoms improve. While a CT scan or an MRI may be used after trauma to the head to look for bleeding or bruising in the brain, it will present as (be read as) “normal” with a concussion. A negative scan does not mean that a concussion did not occur.





Did You Know...

» **More than 70% of concussions resolve successfully** if managed well within the first four weeks post-injury.² REAP sees the first four weeks post-injury as a “window of opportunity” to maximize positive outcomes. Research shows that the average recovery time for a child/adolescent is about 28 days, slightly longer than the average recovery time for an adult.³

» **REAP works on the premise that a concussion is best managed by an Interdisciplinary Team** that includes: the Student/Athlete, the Family, various members of the School Team and the Medical Team. The unique perspective from each of these various teams is essential!

» **The first day of the concussion is considered Day One.** The first day of recovery also starts on Day One. REAP can help the Family, School and Medical Teams mobilize immediately to maximize recovery during the entire four week “window of opportunity.”

Jeff Nadeau, MS, ATC
Rhode Island Athletic
Trainers Association
(RIATA) President

Athletic Trainers are licensed health care providers who work closely with physicians and other health care professions in a variety of settings, from middle school to professional sports. Athletic Trainers are also on the front lines of concussion diagnosis, return to learn, and return to play research. The information and guidelines presented by REAP include vital information for every parent, administrator, teacher, and coach. Concussions are no longer just “a bump on the head,” but legitimate injuries that can affect athletes and non-athletes in a variety of ways. When in doubt, sit them out!

Message to Parents

To maximize your child’s recovery from concussion, double up on the R’s: **REDUCE** and **REST!** Insist that your child rest, especially for the first few days following the concussion and slightly cut back extra-curricular and social activities over the four week recovery period. Some symptoms of concussion can be so severe on the first day or two that your child may need to stay home from school. When your child returns to school, request that he/she be allowed to “sit out” of sports, recess and physical education classes. Work with your Interdisciplinary Concussion Management Team to determine when your child is ready to return to physical activity, recess and/or PE classes (see PACE).

Don’t let your child convince you he/she will rest “later” (after the prom, after finals, etc.). Rest must happen immediately! The school team will help your child reduce their academic load [see Adjust/Accommodate]. However, it is your job to help reduce sensory load at home. Advise your child/teen to:

- Avoid loud group functions (games, dances)
- Limit, (do not fully restrict) video games, text messaging, social media and computer screen time
- Limit, (do not fully restrict) reading and homework

A concussion will almost universally slow reaction time; therefore, driving should not be allowed pending medical approval or until a parent has made the effort to supervise driving again.

Plenty of sleep and quiet, restful activities after the concussion maximizes your child’s chances for a great recovery!

When should your child go back to school? See page 8.

EVERY Member of Every Team is Important!

Every team has an essential part to play at certain stages of the recovery



First The School Team/Physical (coach, AT, playground supervisor) and/or the Family Team (parent) have a critical role at the beginning of the concussion as they may be the first to **RECOGNIZE** and **IDENTIFY** the concussion and **REMOVE** the student/athlete from play.

Second The Medical Team then has an essential role in **DIAGNOSING** the concussion and **RULING-OUT** a more serious medical condition.

Third For the next 1 to 4 weeks the Family Team and the School Team/Academic will provide the majority of the **MANAGEMENT** by **REDUCING** social/home and school stimulation.

Fourth When all **FOUR** teams decide that the student/athlete is 100% back to pre-concussion functioning, the Medical Team can approve the Graduated Return to Sport (RTS) steps. See the **PACE** page.

Finally When the student/athlete successfully completes the RTS steps, the Medical Team can determine final "clearance."

An "Interdisciplinary Team" = Adults who provide multiple perspectives of the student/athlete **AND** who provide multiple sources of data to gauge recovery status

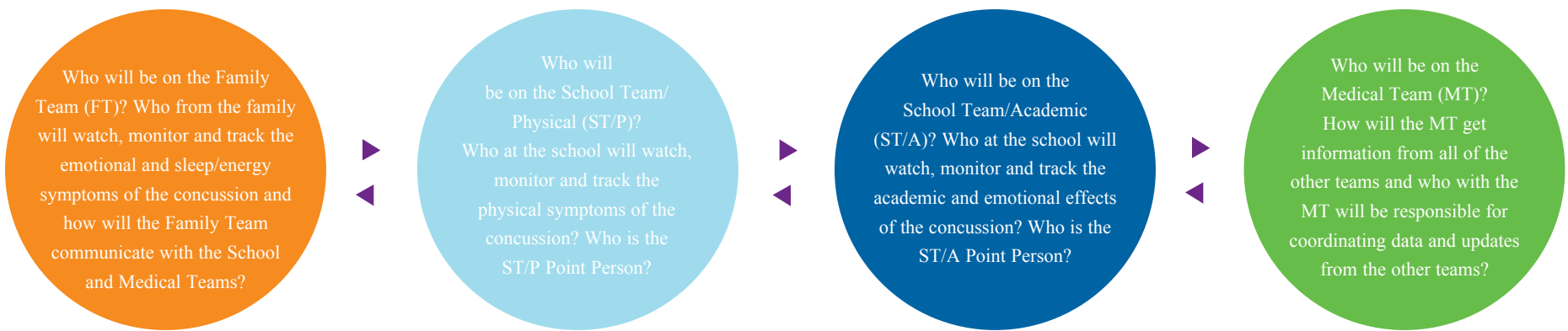
Throughout this book, the terms Return to School, Return to Learn, Return to Activity and Return to Sport are used distinctly and intentionally. However, because they all start with the words "Return to ...", there is much confusion. These definitions will help:

Return to School is defined as the process of the student physically walking back into a school setting. The decision to send a child to school on any given day is directed by the parent and is dependent upon the student's ability to manage symptoms well enough to be physically and cognitively present in the classroom to listen and learn [See 'Adjust/Accommodate for Parents' on Page 8]

Return to Learn is defined as the process by which educators help students with concussion maximize learning while minimizing symptom flare-ups. A successful Return to Learn plan is directed by educators, especially general education teachers, who have knowledge and skill in differentiated instruction to meet the needs of all students regardless of medical, psychological, learning, behavioral or social conditions [See 'Adjust/Accommodate for Educators' on Page 9].

Return to Activity is defined as the process of encouraging a person with a concussion to begin to add in sub-symptom threshold levels of physical and cognitive activity **WHILE** still in the recovery phase. A gradual re-introduction of cognitive, social and cardio activity (safe aerobic activity under close supervision) has been found to be therapeutic.* Return to Activity differs from the progressive Graduated Return to Sport and it is not intended to take the place of the Graduated Return to Sport. Return to Activity happens prior to Graduated Return to Sport with the goal of contributing to asymptomatic status, thus allowing for the start of the Graduated Return to Sport. Widely applied, Return to Activity is a positive term used to encourage people recovering from concussion to stay engaged in their own physical, cognitive and emotional rehabilitation.

Graduated Return to Sport is the process of progressively returning athletes back to sport once they are 100% symptom-free [See 'PACE' on page 12].



» REAP suggests the following timeframe:

TEAM		Week 1	Week 2	Week 3 & Week 4
FT	<p>Family Team* Help child understand he/she must be a "honest partner" in the rating of symptoms</p>	<ul style="list-style-type: none"> • Impose rest. • Assess symptoms daily – especially monitor sleep/energy and emotional symptoms. 	<ul style="list-style-type: none"> • Continue to assess symptoms (at least 3X week or more as needed), monitor if symptoms are improving. • Continue to assess symptoms and increase/decrease stimulation at home accordingly. 	<ul style="list-style-type: none"> • Continue with all assessments (at least 2X week or more as needed). • Continue to assess symptoms and increase/decrease stimulation at home accordingly.
ST/P	<p>School Team/Physical Coach/AT/School Nurse (Assign 1 point person to oversee/manage physical symptoms)</p>	<ul style="list-style-type: none"> • REMOVE from all play/physical activities! • Assess physical symptoms daily, use objective rating scale. • AT: assess postural-stability (see NATA reference in RESOURCES). • School Nurse: monitor visits to school clinic. If symptoms at school are significant, contact parents and send home from school. 	<ul style="list-style-type: none"> • Continue to assess symptoms (at least 3X week or more as needed). • AT: Continue postural-stability assessment, as needed. • School Nurse: Continue to monitor visits to school clinic. Work with student to manage symptoms by taking "pacing" and "strategic rest" breaks so student can ideally be at school daily for full days. See ADJUST/ACCOMMODATE section. 	<ul style="list-style-type: none"> • Continue with all assessments (at least 2Xweek or more as needed). • AT: Continue postural-stability assessment, as needed. • School Nurse: Continue to monitor visits to school clinic. Work with student to manage symptoms by taking "pacing" and "strategic rest" breaks so student can ideally be at school daily for full days. See ADJUST/ACCOMMODATE section.
ST/A	<p>School Team/Academic Educators, School Psychologist, Counselor, Social Worker (Assign 1 point person to oversee and manage academic and emotional symptoms)</p>	<ul style="list-style-type: none"> • REDUCE (do not eliminate) all cognitive demands. • Meet with student periodically to create academic adjustments for cognitive/emotional reduction no later than Day 2/3 and then assess again by Day 7. • Educate all teachers on the symptoms of concussion. • See ADJUST/ACCOMMODATE section. 	<ul style="list-style-type: none"> • Continue to assess symptoms (at least 3X week or more as needed) and slowly increase/decrease cognitive and academic demands accordingly. • Continue academic adjustments, as needed. 	<ul style="list-style-type: none"> • Continue to assess symptoms (at least 2X week or more as needed) and increase/decrease cognitive and academic demands accordingly. • Continue academic adjustments, as needed. • Assess if longer term academic accommodations are needed (May need to consider a 504 Plan beyond 4+ weeks).
MT	<p>Medical Team</p>	<ul style="list-style-type: none"> • Assess and diagnose concussion. • Assess for head injury complications, which may require additional evaluation and management. • Recommend return to school with academic adjustments once symptoms are improving and tolerable, typically within 48 to 72 hours. Do NOT hold students out of school until they are totally "symptom-free." • Educate student/athlete and family on the typical course of concussion and the need for rest with gradual re-integration of "activity" (school, home and social stimulation, light cardio exercise under the supervision of parent and/or physical therapist). • Monitor that symptoms are improving throughout Week 1 – not worsening in the first 48 to 72 hours. 	<ul style="list-style-type: none"> • Continue to consult with school and family teams. • Follow-up medical check including: comprehensive history, neurologic exam, detailed assessment of mental status, cognitive function, gait and balance. 	<ul style="list-style-type: none"> • Continue to consult with school and home teams. • Consider referral to a Specialty Concussion Clinic if symptoms are especially problematic or long. • It is best practice that a medical professional be involved in the management of each and every concussion, not just those covered by legislation.

*Family should sign a Release of Information so that School Team and Medical Team can communicate with each other as soon as possible.

» Don't be alarmed by symptoms – symptoms are the hallmark of concussion. The goal is to watch for a slow and steady improvement in symptoms over weeks. **It is typical for symptoms to be present for up to three to four weeks.** If symptoms persist at Week 4+, see SPECIAL CONSIDERATIONS.

» Once a concussion has been diagnosed:

“I was so passionate about hockey.

It was my life in high school, all I wanted to do.

It meant everything to me.”



Brian Belisle comes from a long line of family members dedicated to the sport of hockey. He, too, shared that passion and competitiveness that brought him much success in the sport. Part of his years of experience included suffering from concussions. From high school through college, Brian sustained approximately 4-5 documented concussions. “I didn’t feel like myself, something was off. It’s tough to explain, an indescribable feeling, really.” This is often how many students describe their symptoms, not realizing exactly what is going on with their brains, but knowing something is “not right”. After one concussion, he missed a month of school and later began to notice symptoms from “triggers” in his environment, such as fatigue from over-exertion, sensitivity to sharp noises and crowds, and some difficulty with concentration. For each concussion, Brian sought treatment, followed Return-to-Play protocols and heeded advice from his doctors. Eventually, he returned to the sport he loved.

What is Brian’s advice to student athletes? “Educate yourself about the signs and symptoms of concussion. Don’t try to play through it. Take the time to pay attention to your body and heal your brain. If something feels “off”, tell someone, get it checked out and take the time off to take care of yourself. I didn’t realize how important that was for me, until later. I’m glad I had friends, parents and doctors that supported me and fed my positivity. At first, I didn’t want to say anything to anyone, it felt weird, but it was that amazing support which helped me recover and get back to a normal life. I have since successfully graduated college and have started my career. If I can do it, so can you!”

**STEP ONE: REMOVE student/athlete from all physical activities.
REDUCE school demands and home/social stimulation.**

The biggest concern with concussions in children/teens is the risk of injuring the brain again before recovery. This is called “Second Impact Syndrome,” and it is thought to occur when an already injured brain takes another hit resulting in possible massive swelling, brain damage and/or death⁵. The concussed brain is in a vulnerable state, and even a minor impact can result in a much more severe injury with risk of permanent brain damage, or rarely, even death. Therefore, once a concussion has been identified, it is critical to REMOVE a student/athlete from ALL physical activity, including PE classes, dance, active recess, recreational and club sports until medically cleared.

Secondly, **while the brain is still recovering**, all school demands and home/social stimulation should be reasonably REDUCED (not eliminated completely) and then slowly brought back up over 4 weeks. Reducing demands on the brain will promote REST and will help recovery.

FT	Family Team	<p>REMOVE student/athlete from all physical activity immediately, including play at home (i.e. playground, bikes, skateboards), recreational, and/or club sports.</p> <p>REDUCE or limit home/social stimulation, including texting. Do not totally restrict electronics and social activities; make a reasonable home plan.</p> <p>Encourage REST for the first few days followed by a gradual re-introduction of cognitive, social and home activities.</p>
ST/P	School Team Physical	<p>REMOVE student/athlete from all physical activity immediately.</p> <p>Support REDUCTION of school demands and home/social stimulation.</p> <p>Provide encouragement to REST and take the needed time to heal.</p>
ST/A	School Team Academic	<p>REMOVE student/athlete from all physical activity at school, including PE, recess, dance class.</p> <p>REDUCE or limit school demands. Do not totally restrict academic expectations. (See ADJUST/ACCOMMODATE for Educators on pages 9-10).</p> <p>Encourage “brain REST” breaks at school.</p>
MT	Medical Team	<p>REMOVE student/athlete from all physical activity immediately.</p> <p>RULE-OUT more serious medical issues including severe traumatic brain injury.</p> <p>Consider risk factors – evaluate for concussion complications.</p> <p>Support REDUCTION of school demands and home/social stimulation.</p> <p>Encourage REST for the first few days followed by a gradual re-introduction of cognitive, social and home activities.</p>

STEP TWO: EDUCATE all teams that symptoms tell the story of the recovery of the concussion.

After a concussion, the brain cells are temporarily inefficient. A helpful way for students, parents and teachers to think of a concussion is as an “energy crisis”, not as something scary like a bruise or a bleed. Here are two energy management scripts to use with your kids/children/teens/students:

“When you have a concussion, you are like an iPhone 4, you are not an iPhone X. You are not broken, you are just not holding a charge long enough.”

“When you have a concussion, you are like a car with a small gas tank. You can get out of the garage (go to school, socialize with friends) but you need to ‘do, then fuel.’ The symptoms function like an indicator light on the car’s dashboard. When they ‘flare’, they are simply a signal of how well you have been managing your energy levels.”

Symptoms become the barometer of the concussion. If symptoms may be present for up to 4 weeks (albeit hopefully decreasing daily/weekly), it is our duty to teach our children how to “pace their energy so they can control their symptoms” – that is the best way for them to stay engaged in school and life while holding symptoms at bay. Learning to manage symptoms is an active approach to rehabilitation! Doing cognitive and home activities in smaller amounts followed by eye/brain/water intake breaks (5 to 10 minutes)... “do, then fuel”... is how the school and home plan can be rehabilitative and not restrictive. It is unreasonable to ask a child/teen to never text or watch TV over 4 weeks. It is unreasonable to ask a teacher to never ask a student to read or look at a computer or complete some in-class schoolwork or homework over 4 weeks. If we want our children/teens/students to be engaged in their own recovery, we have to keep them reasonably engaged in their own lives – socially, academically and at home – while we are waiting for the concussion to heal.



Medical Note from Caroline Sizer, MD FAAPMR

Recent research has challenged the idea that strict “brain rest” is the optimal treatment for concussion. In fact, some studies have shown *slower* recoveries in students who rest longer than 1 week after concussion⁶. While it is important to rest and avoid situations that place the student at risk for another concussion in the first 24 to 72 hours after injury, early return to normal activities using pacing techniques and early sub-symptom threshold aerobic activity (such as briskly walking) is not only safe by 5 days after concussion, it can speed up recovery from concussion⁷. We call this “active rehabilitation” for concussion. Though it is important not to over-exert the student as they recover, a gradual increase in aerobic activity and participation with school adjustments/accommodations is recommended to start within the first week of recovery, if possible. Students should be advised to push to a mild increase in symptoms, then take breaks as needed. Students should NOT push through worsening of their symptoms.

IMPORTANT

All symptoms of concussion are important; however, monitoring of physical symptoms, within the first 48 to 72 hours is critical! If physical symptoms worsen, especially headache, confusion, disorientation, vomiting, difficulty awakening, it may be a sign that a more serious medical condition is developing in the brain. **SEEK IMMEDIATE MEDICAL ATTENTION!**

PHYSICAL
How a Person Feels Physically

- | | |
|--------------------------|----------------------|
| Headache/Pressure | Nausea |
| Blurred vision | Vomiting |
| Dizziness | Numbness/Tingling |
| Poor balance | Sensitivity to light |
| Ringing in ears | Sensitivity to noise |
| Seeing “stars” | Disorientation |
| Vacant stare/Glassy eyed | Neck Pain |

COGNITIVE
How a Person Thinks

- Feel in a “fog”
- Feel “slowed down”
- Difficulty remembering
- Difficulty concentrating/easily distracted
- Slowed speech
- Easily confused

EMOTIONAL
How a Person Feels Emotionally

- | | |
|--------------------------|--------------------|
| Inappropriate emotions | Irritability |
| Personality change | Sadness |
| Nervousness/Anxiety | Lack of motivation |
| Feeling more “emotional” | |

SLEEP/ENERGY
How a Person Experiences Their Energy Level and/or Sleep Patterns

- | | |
|----------------------|--------------------------|
| Fatigue | Drowsiness |
| Excess sleep Trouble | Sleeping less than usual |
| Falling asleep | |

Do not worry that your child has symptoms for 1 to 4 weeks; it is typical and natural to notice symptoms for 1 to 4 weeks. You just want to make sure you are seeing slow and steady resolution of symptoms every day. To monitor your child’s progress with symptoms, chart symptoms periodically (see TIMEFRAME on page 5) and use the Symptom Checklist (see APPENDIX). In a small percentage of cases, symptoms from a concussion can last from weeks to months. (See SPECIAL CONSIDERATIONS on page 13.)

STEP THREE: ADJUST/ACCOMMODATE for PARENTS.

AFTER YOUR CHILD HAS RECEIVED THE DIAGNOSIS OF CONCUSSION by a healthcare professional, their symptoms will determine when they should return to school. As the parent, you will likely be the one to decide when your child goes back to school, because you are the one who sees your child every morning before school. Use the chart below to help decide when it is right to send your child back to school:

STAY HOME – EARLY SLEEP
If your child’s symptoms are so severe that he/she cannot concentrate for even 10 minutes, he/she should be kept home on total bed rest – no texting, no driving, no reading, no video games, no homework, limited TV. It is unusual for this state to last beyond a few days. Consult a physician if this state lasts more than 2 days.

STAY HOME – LIGHT ACTIVITY
If your child’s symptoms are improving but he/she can still only concentrate for up to 20 minutes, he/she should be kept home – but may not need total bed rest. Your child can start light mental activity (e.g. sitting up, watching TV, light reading), as long as symptoms do not worsen. If they do, cut back the activity and build in more REST.

TRANSITION BACK TO SCHOOL

When your child is beginning to tolerate 30 to 45 minutes of light mental activity, you can consider returning them to school. As they return to school:

- Parents should communicate with the school (school nurse, teacher, school mental health and/or counselor) when bringing the student into school for the first time after the concussion.
- Parents and the school should decide together the level of academic adjustment needed at school depending upon:
 - ✓The severity of symptoms present
 - ✓The type of symptoms present
 - ✓The times of day when the student feels better or worse
- The child **MUST** sit out of physical activity – gym/PE classes, highly physically active classes (dance, weight training) and physically active recess until medically cleared.
- Consider removing child from band or music if symptoms are provoked by sound.

Medical Note

According to the 2018 CDC Guidelines for pediatric concussion, children should return to school as soon as symptoms are tolerable, not necessarily resolved, with modifications to their schedule and academic demands. Their participation in academics should gradually increase as tolerated, monitored by the school-based concussion team. Post-concussion symptoms resolve at different rates, and consequently, an individualized approach targeting specific symptoms should be implemented with collaboration between the family, school, and medical team⁸.

» GOING BACK TO SCHOOL

Alexis was 14 years old when she suffered a concussion while playing field hockey. Her symptoms included headaches, dizziness, and sensitivities to both light and sound. With quick action, school community support and some accommodations, she was able to navigate her way back to full academic and sports participation. It takes a team approach!

“During the field hockey season of my freshman year, I got a concussion from being hit in the head by a stick during a game. I had a headache, dizziness, and just did not feel right. At that point, our athletic trainer kept me out of the game and referred me to a physician. Initially, I missed three days of school due to how I was feeling.

Luckily, my school had a return to learn protocol already in place. My first point of contact was my school nurse, with whom I checked in daily. She then shared my status and the accommodations I needed with my school counselor, advisor, athletic trainer and teachers. Initially, I would sit in class and listen, as it was difficult to take notes. I didn’t take tests and got extensions on assignments. I also found watching videos challenging, because the light and audio volume would increase my headache after only a short period of time. My teachers were very supportive of my process and made sure not to rush my recovery. Eventually, I was able to return to classes as normal. Over time, the mild headaches and drowsiness flare-ups began to fade away.

I missed quite a few field hockey practices. When we had games, I was able to watch and support my team while wearing my hat and sunglasses. After a few weeks of continued improvement, I was able (and eager) to get back to my favorite sport. Following the school’s return to play protocol, I was allowed to gradually increase my physical activity. When my team went for a run, I would bike next to them. Over time, I gradually increased from biking to short runs and sport specific drills. I still had to check in with the nurse and athletic trainer daily until I was finally cleared by my doctor to play in games once again. It was nice to know that the school was prepared to support me during this time.”

ALEXIS C.

Caroline Sizer, MD FAAPMR

**STEP THREE: ADJUST/
ACCOMMODATE for EDUCATORS.**



School Team Educators

Return to Learn (RTL)

RTL refers to a teacher’s ability to help a student with a concussion learn to “pace” levels of energy in order to maximize learning while minimally contributing to symptom flare-ups. A RTL plan is most robust when teachers, especially general education teachers, are empowered to make educational decisions for their students hourly, daily and weekly, as they see fit. While medical input may be helpful in a RTL plan, teachers need not wait for medical input/“clearance”/approval to apply or remove academic adjustments, especially if medical input is not forthcoming, timely, available or relevant. RTL recommendations provided by healthcare providers are “suggestions,” not mandates. Schools may accept or reject outside RTL suggestions based upon its educational soundness, feasibility and alignment with school policy/protocol.

» Most Common “Thinking” Cognitive Problems Post-Concussion

And suggested adjustments/accommodations

Areas of concern	Suggested Accommodations for Return-to-Learn (RTL)
Fatigue, specifically mental fatigue	<ul style="list-style-type: none"> Schedule “strategic” rest periods. Do not wait until the student’s over-tiredness results in an emotional “meltdown.” Proactively adjust the schedule to incorporate a 15-20 minute rest period 1X mid-morning and 1X mid-afternoon, as needed. Allow for “PACING” – 5 to 10 minute eye/brain/water breaks in the classroom after periods of mental exertion. Do not consider “quiet reading” as rest for all students. Consider letting the student have sunglasses, headphones, preferential seating, quiet work space, passing in quiet halls, etc., as needed.
Difficulty concentrating	<ul style="list-style-type: none"> REDUCE the cognitive load—it is a fact that smaller amounts of learning will take place during the recovery. Since learning during recovery is compromised, the academic team must decide: What is the most important concept for the student to learn during this recovery? Be careful not to tax the student cognitively by demanding that all learning continue at the rate prior to the concussion.
Slowed processing speed	<ul style="list-style-type: none"> Provide extra time for tests and projects and/or shorten tasks. Assess whether the student has large tests or projects due during the 4-week recovery period and remove or adjust due dates. Provide a peer notetaker or copies of teacher’s notes during recovery. Grade work completed—do not penalize for work not done.
Difficulty with working memory	<ul style="list-style-type: none"> Initially exempt the student from routine work/tests. Since memory during recovery is limited, the academic team must decide: What are the most important concepts for the student to know? Work toward comprehension of a smaller amount of material versus rote memorization.
Difficulty converting new learning into memory	<ul style="list-style-type: none"> Allow student to “audit” the material during this time. REMOVE “busy” work that is not essential for comprehension. Making the student accountable for all of the work missed during the recovery period (4 weeks) places undue cognitive and emotional strain on him/her and may hamper recovery. Ease student back into full academic/cognitive load.
Emotional symptoms	<ul style="list-style-type: none"> Be mindful of emotional symptoms throughout! Students are often scared, overloaded, frustrated, irritable, angry and depressed as a result of concussion. They respond well to support and reassurance that what they are feeling is often the typical course of recovery. Watch for secondary symptoms of depression – usually from social isolation. Watch for secondary symptoms of anxiety – usually from concerns over make-up work or slipping grades. New research informs us of the impact a concussion can have on emotional well-being. Supportive psychological support, education, cognitive-behavioral strategies and stress reduction are all suggested for psychological rehabilitation.

STEP THREE: ADJUST/ACCOMMODATE for EDUCATORS (continued)

Typically, **students' symptoms only require 2 to 3 days of absence** from school. If more than 3 days are missed, call a meeting with parents and seek a medical explanation.

New research shows that students who rested for 1 to 2 days followed by a gradual return to activities (school, socializing) had fewer reported symptoms than students who took 5 days of strict rest.⁶

More rest has not been proven to be the fastest, easiest way to recover from a concussion! A reasonable amount of rest, followed by a measured increase in home and school activities (activities that do not overly exacerbate symptoms) seems to be the formula for better concussion recovery.

PHYSICAL:

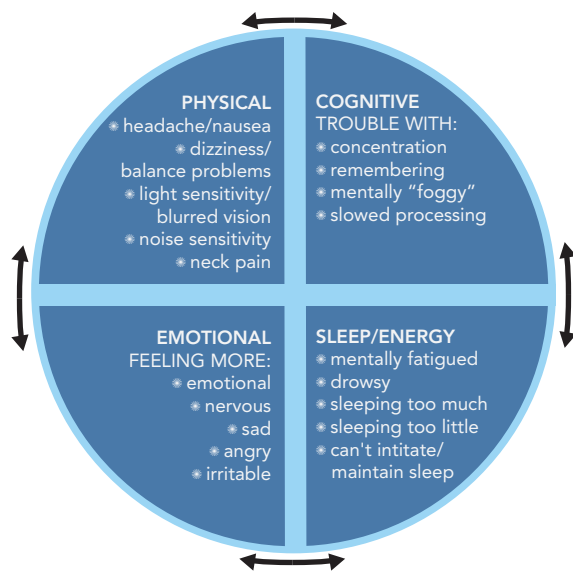
- "Strategic Rest" scheduled 15 to 20 minute breaks in clinic/quiet space (mid-morning; mid-afternoon, and/or as needed)
- Sunglasses (inside and outside)
- Quiet room/environment, quiet lunch, quiet recess
- More frequent breaks in classroom and/or in clinic
- Allow quiet passing in halls
- REMOVE from PE, physical recess, & dance classes without penalty
- Sit out of music, orchestra and computer classes if symptoms are provoked

EMOTIONAL:

- Allow student to have "signal" to leave room
- Help staff understand that mental fatigue can manifest in "emotional meltdowns"
- Allow student to remove him/herself to de-escalate
- Allow student to visit with supportive adult (counselor, nurse, advisor)
- Watch for secondary symptoms of depression and anxiety usually due to social isolation and concern over "make-up work" and slipping grades. These extra emotional factors can delay recovery

Symptom Wheel

Suggested Academic Adjustments



Read "Return to Learning: Going Back to School Following a Concussion" at nasonline.org/publications/cq/40/6/return-to-learning.aspx⁹

COGNITIVE:

- REDUCE workload in the classroom/homework
- REMOVE non-essential work
- REDUCE repetition of work (i.e. only do even problems, go for quality not quantity)
- Adjust "due" dates; allow for extra time
- Allow student to "audit" classwork
- Exempt/postpone large test/projects; alternative testing (quiet testing, one-on-one testing, oral testing)
- Allow demonstration of learning in alternative fashion
- Provide written instructions
- Allow for "buddy notes" or teacher notes, study guides, word banks
- Allow for technology (tape recorder, smart pen) if tolerated

SLEEP/ENERGY:

- Allow for "Pacing" – 5 to 10 minute eye/brain/water rest breaks in the classroom (i.e. eyes closed, head on desk) after periods of mental exertion
- Allow student to start school later in the day
- Allow student to leave school early
- Alternate "mental challenge" with "mental rest"

Message to Educators

An inefficiently fueled brain leads primarily to:

- mental fatigue
- slowed processing speed
- difficulty learning new material (aka problems with short-term memory)

How do you deal with mental fatigue in your classroom already (perhaps due to mono or family stress)? You might offer more rest breaks or some TLC.

How do you deal with a student's inability to get through in-class work due to slowed processing speed (perhaps due to ADHD)? If you teach math, you might assign every other problem. If you teach social studies, you might have the student listen with supplemental buddy notes.

What do you do if a student with seizures has been physically or cognitively unavailable to learn and now is scheduled to take a test? You might offer them the option of an oral presentation.

You see, the key to supporting a student with a concussion is **"differentiated instruction,"** a tool already within your repertoire! If you know how to help students with mental fatigue, slowed processing speed and short-term memory problems, you know how to support students with a concussion.

The best academic adjustment you can offer a student with a concussion is: REMOVAL of non-essential in-class work/homework and a REDUCTION of semi-essential in-class work/homework. Extension or postponement of work is less helpful to a student with a concussion unless it is used in combination with removal and reduction of in-class work/homework.

Adapted from [GetSchooledOnConcussions.com](https://www.getschoolledonconcussions.com)¹⁰

» How do I get back to my sport?

A.K.A. How do I get “cleared” from this concussion?

While 70% of concussions will resolve in 4 weeks, a healthcare professional, whether in the Emergency Department or in a clinic, cannot predict the length of time or the course of recovery from a concussion. In fact, a healthcare professional should never tell a family that a concussion will resolve in X number of days, because every concussion is different and each recovery time period is unique. The best way to assess when a student/athlete is ready to start the step-wise process of “Returning-to-Sport” is to ask these questions:

» Is the student/athlete 100% symptom-free at home?

- Use the Symptom Checklist every few days. All symptoms should be at “0” on the checklist or at least back to the perceived “baseline” symptom level.
- Look at what the student/athlete is doing. At home he/she should be acting the same way as before the concussion, doing chores, interacting normally with friends and family.
- Symptoms should not return when the student/athlete is exposed to the loud, busy environment of home/social, mall or restaurants.

» Is the student 100% symptom-free at school?

- Your student/athlete should be handling school work at the same level as before the concussion.
- Use the Teacher Feedback Form (APPENDIX) to see what teachers are noticing.
- Watch your child/teen doing homework; he/she should be able to complete homework as efficiently as before the concussion.
- In-school test scores should be back to where they were pre-concussion.
- School workload should be back to where it was pre-concussion.
- Symptoms should not return when the student/athlete is exposed to the loud, busy environment of school.

» If the school or healthcare professional has used neurocognitive testing, are scores back to baseline or at least reflect normative average and/or baseline functioning?

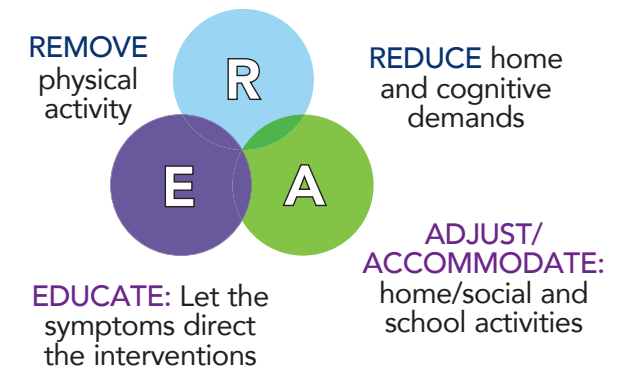
» If an athletic trainer (AT) or physical therapist (PT) is involved with the concussion, does the AT or PT feel that the student/athlete has reached his/her objective goals?

- Ask AT for feedback and/or serial administrations of the Symptom Checklist.

» Is the student off all medications used to treat the concussion?

- This includes over-the-counter medications such as ibuprofen, naproxen and acetaminophen, which may have been used to treat headache or pain.

If the answer to any of the questions is “NO,” stay the course with management and continue to repeat:



... for however long it takes for the brain cells to heal!

The true test of recovery is to notice a steady decrease in symptoms while noticing a steady increase in the ability to handle more rigorous home, social and school demands (Return to Activity).

PARENTS and TEACHERS try to add in more home/social and school activities and test out those brain cells!

Once the answers to the questions above are all “YES,” turn the page to the PACE page to see what to do next!

STEP FOUR: PACE

FAMILY TEAM Is the student/athlete 100% back to pre-concussion functioning?

SCHOOL TEAM/ACADEMIC Is the student/athlete 100% back to pre-concussion academic functioning

WHEN ALL FOUR TEAMS AGREE

that the student/athlete is 100% recovered, the MEDICAL TEAM can then approve the starting of the Graduated RTS steps. The introduction of physical activity (in the steps outlined in order below) is the last test of the brain cells to make sure they are healed and that they do not "flare" symptoms. This is the final and formal step toward "clearance" and the safest way to guard against a more serious injury.

MEDICAL TEAM approves the start of RTS steps

SCHOOL TEAM/PHYSICAL Often the AT at the school takes the athlete through the RTS steps.

If there is no AT available, the MEDICAL TEAM should teach the FAMILY TEAM to administer and supervise the RTS steps.

Graduated Return-to-Sport (RTS) Strategy Recommended by The 2016 Berlin Consensus Statement on Concussion in Sport³

Stage	Aim	Activity	Goal of each step
1	Symptom-limited activity	Daily activities that do not provoke symptoms	Gradual reintroduction of work/school activities
2	Light aerobic exercise	Walking or stationary cycling at slow to medium pace. No resistance training	Increase heart rate
3	Sport-specific exercise	Running or skating drills. No head impact activities	Add movement
4	Non-contact training drills	Harder training drills, e.g. passing drills. May start progressive resistance training	Exercise, coordination and increased thinking
5	Full contact practice	Following medical clearance, participate in normal training activities	Restore confidence and assess functional skills by coaching staff
6	Return to sport	Normal game play	

NOTE: An initial period of 24 – 48 hours of both relative physical rest and cognitive rest is recommended before beginning the RTS progression. There should be at least 24 hours (or longer) for each step of the progression. If any symptoms worsen during exercise, the athlete should go back to the previous step. Resistance training should be added only in the later stages (stage 3 or 4 at the earliest). If symptoms are persistent (e.g. more than 10 – 14 days in adults or more than 1 month in children), the athlete should be referred to a healthcare professional who is an expert in the management of concussion.

International Consensus Statements have outlined this as a safe practice for professional athletes when returning to an organized sport; these steps might ideally also be applied as best practice when returning any person with a concussion back to a recreational sport/activity.

Rehabilitation Note

"The educational, physical and mental health benefits for student athletes in a school sports based program are well documented. Although great strides have been made to make all sports safer, injuries and concussions are an unavoidable part of youth sport participation. Proper concussion management is a crucial part of recovery and it takes a coordinated effort from parents, medical providers, athletes, coaches, teachers and administrators to safely return the athlete to learn and play. The REAP guidelines and protocols connect all stakeholders together with an organized multi-disciplinary approach to the most effective treatment of concussion for Rhode Island's student athletes."

Michael P. Lunney, CAA, Executive Director, Rhode Island Interscholastic League (RIIL)

» Special Considerations

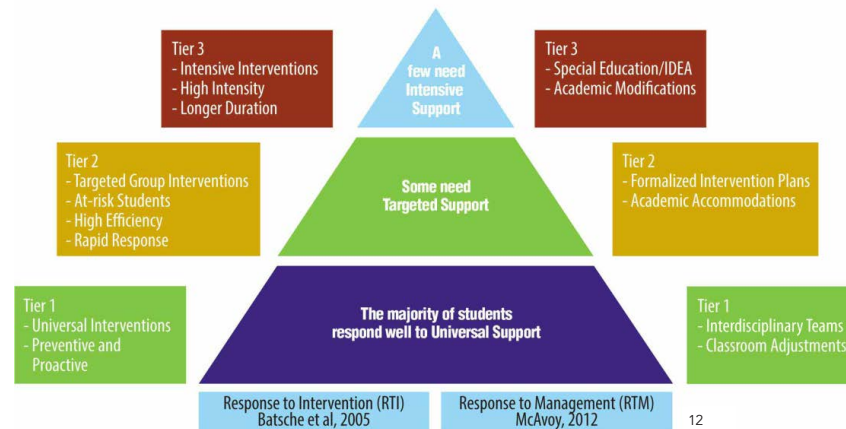
We now know, 70% of concussions will resolve within 4 weeks.

However, there remains the 30% of student/athletes who have on-going physical, cognitive, emotional or sleep/energy symptoms well beyond the 4 week mark. In those cases, the parent and medical professionals are advised to look to the school system for existing educational initiatives available to all students. A number of educational initiatives (Response to Intervention RTI; Multi-Tier System of Support MTSS) allow for ascending levels of supports for any student with a medical, psychological, behavioral or social condition impacting learning. Concussion, in theory, is a short-term, temporary condition that sometimes needs higher levels of educational support when it does not resolve in a timely fashion. Ascending levels of support suggest that good teaching and reasonable academic “adjustments” in the general education classroom are helpful to any and all students who struggle in an academic setting. Ascending levels of support are applicable to concussion. We have called this “Response to Management (RTM).”

With ascending levels of support, we maximize the student/athlete’s recovery by focusing on good academic “adjustments” in the general education classroom.

A smaller percentage of students who struggle beyond the general education classroom may need a small amount of “targeted intervention” called academic “accommodation.” Academic “accommodations” may be provided via a Health Plan, a Learning Plan, or a 504 Plan.¹¹ It is still hoped that the accommodations for learning, behavior or concussions are temporary and amenable to intervention, but may take months (instead of weeks) for progress to show. Lastly, in the rare event that a permanent “disability” is responsible for the educational struggle, the student may be assessed and referred into special education services (IDEA) and provided an IEP (Individualized Education Program). This would constitute an extremely small number of students with a concussion. The interdisciplinary teams need to continue to work together with the student/athlete with protracted recovery.

Concussion Management Guidelines



Parents and medical professionals need to seek medical explanation and treatment for slowed recovery; educators need to continue to provide the appropriate supports and the school physical team needs to continue to keep the student/athlete out of physical play.

Words Matter: Use these terms intentionally: Adjustments/ Accommodations/Modifications

DAYS TO WEEKS: Academic Adjustments
Informal, flexible day-to-day adjustments in the general education classroom for the first 3 to 4 weeks of a concussion. Can be lifted easily when no longer needed.

WEEKS TO MONTHS: Academic Accommodations
Slightly longer accommodations to the environment/ learning to account for a longer than 4+ week recovery. Helps with grading, helps justify school supports for a longer time.

MONTHS TO YEARS: Academic Modifications
Actual changes to the curriculum/placement/ instruction.

Medical Note

For students with risks for prolonged symptoms after concussion, specialist referral should be considered. Risk factors for prolonged symptoms include: multiple prior concussions, history of migraine headaches, pre-injury sleep disorders, pre-injury diagnosis of a learning disability or attention deficit, and pre-injury history of mental health, substance misuse, and/ or mood disorder. Concussed students with any of these risk factors would likely benefit from early evaluation with a comprehensive, interdisciplinary rehabilitative approach, which can include specialty-trained healthcare providers, physical therapists, occupational therapists, speech therapists, psychologists, and/ or neuropsychologists.

Caroline Sizer, MD FAAPMR

Rhode Island Resources

Brain Injury Association of Rhode Island	www.biari.org or call 401-228-3319
Rhode Island Department of Health: TBI	https://health.ri.gov/injury/traumaticbrain/
Rhode Island Department of Education: TBI	https://www.ride.ri.gov/StudentsFamilies/SpecialEducation/SpecificDisabilityInformation.aspx#1236629-traumatic-brain-injury-tbi
Rhode Island Interscholastic League	https://www.riil.org/
Rhode Island Athletic Trainers Association	https://www.riathletictrainers.net/
Rhode Island Certified School Nurse Teacher Association	https://ricsnta.nursingnetwork.com/
Rhode Island School Counselor Association	https://www.rischoolcounselor.org/
Rhode Island Chapter of the American Physical Therapy Association	https://www.riapta.com/
Rhode Island Healthy Schools Coalition	https://www.rihsc.org/
Lifespan's 4Safety Program	https://www.lifespan.org/centers-services/4-safety-program

National Resources

The Centers for Disease Control and Prevention (CDC) Heads Up! Curriculum	https://www.cdc.gov/headsup/index.html
Brain Injury Association of America	https://www.biausa.org/brain-injury/about-brain-injury/concussion
MINDSOURCE Brain Injury Network	https://mindsourcolorado.org 303-866-4173
Get Schooled on Concussions	https://www.getschooledonconcussions.com/
National Association of State Head Injury Administrators	https://www.nashia.org/
National Athletic Trainers Association	https://www.nata.org/ Concussion Position Statements: https://www.nata.org/practice-patient-care/health-issues/concussion
National Federation of State High School Associations	https://www.nfhs.org/
ImPACT Concussion Testing Protocol Tools	https://impactconcussion.com/ or https://impacttest.com/about/
International Consensus Statement on Concussion in Sport	https://bjism.bmj.com/content/51/11/838

Please Note:

This publication is not a substitute for seeking medical care.

REAP is available for customization in your state.

All questions or comments and requests for in-services/trainings can be directed to:

- Karen McAvoy, PsyD
REAPconcussion.com
Karen@GetSchooledOnConcussions.com

Rhode Island gives special thanks to...

All of the individuals, associations and state agencies that contributed to and supported the efforts to streamline concussion protocols for Rhode Island students.

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REAP thanks:

The REAP Third Edition Advisory Team: Geoff Lauer, MA, Kristin Lundgren, ATC, Danny Mistry, MD, ATC and Danny G. Thomas MD, MPH

MINDSOURCE for grant funding of the original project.



» Symptom Checklist

Name: _____ Assessment Date: _____

Date of Injury: _____ Time of Injury 2-3 Hrs 24 Hrs 48 Hrs 72 Hrs Daily Weekly

Pathways of Concern	Symptoms		Severity Rating						
				Mild	Mild	Moderate	Moderate	Severe	Severe
A	I feel like I'm going to faint	0	1	2	3	4	5	6	
V	I'm having trouble balancing	0	1	2	3	4	5	6	
	I feel dizzy	0	1	2	3	4	5	6	
	It feels like the room is spinning	0	1	2	3	4	5	6	
O	Things look blurry	0	1	2	3	4	5	6	
	I see double	0	1	2	3	4	5	6	
H	I have headaches	0	1	2	3	4	5	6	
	I feel sick to my stomach (nauseated)	0	1	2	3	4	5	6	
	Noise/sound bothers me	0	1	2	3	4	5	6	
	The light bothers my eyes	0	1	2	3	4	5	6	
C	I have pressure in my head	0	1	2	3	4	5	6	
	I feel numbness and tingling	0	1	2	3	4	5	6	
N	I have neck pain	0	1	2	3	4	5	6	
S/E	I have trouble falling asleep	0	1	2	3	4	5	6	
	I feel like sleeping too much	0	1	2	3	4	5	6	
	I feel like I am not getting enough sleep	0	1	2	3	4	5	6	
	I have low energy (fatigue)	0	1	2	3	4	5	6	
	I feel tired a lot (drowsiness)	0	1	2	3	4	5	6	
Cog	I have trouble paying attention	0	1	2	3	4	5	6	
	I am easily distracted	0	1	2	3	4	5	6	
	I have trouble concentrating	0	1	2	3	4	5	6	
	I have trouble remembering things	0	1	2	3	4	5	6	
	I have trouble following directions	0	1	2	3	4	5	6	
	I feel like my thinking is "foggy"	0	1	2	3	4	5	6	
	I feel like I am moving at a slower speed	0	1	2	3	4	5	6	
	I don't feel "right"	0	1	2	3	4	5	6	
	I feel confused	0	1	2	3	4	5	6	
I have trouble learning new things	0	1	2	3	4	5	6		
E	I feel more emotional	0	1	2	3	4	5	6	
	I feel sad	0	1	2	3	4	5	6	
	I feel nervous	0	1	2	3	4	5	6	
	I feel irritable or grouchy	0	1	2	3	4	5	6	

Other: _____

Pathways of concern: A=Autonomic, V=Vestibular, O=Oculomotor, H=Headache (Migraine & Non-Migraine), C=Cervicogenic, N=Neck Strain, S/E=Sleep/Energy, Cog=Cognitive, E=Emotional

Regular symptom progress monitoring is recommended as best practice.

» Teacher Feedback Form

Date _____

Student's Name _____

Date of Concussion _____

Student: you have been diagnosed with a concussion. It is your responsibility to gather data from your teachers before you return to the doctor for a follow-up visit. A day or two before your next appointment, go around to all of your teachers (especially the CORE classes) and ask them to fill in the boxes below based upon how you are currently functioning in their class(es).

Teachers: Thank you for your help with this student. Your feedback is very valuable. We do not want to release this student back to physical activity if you are still seeing physical, cognitive, and emotional or sleep/energy symptoms in your classroom(s). If you have any concerns, please state them below.

1. Your name 2. Class taught	Is the student still receiving any academic adjustments in your class? If so, what?	Have you noticed, or has the student reported, any concussion symptoms lately? (e.g. complaints of headaches,dizziness, difficulty concentrating or remembering, more irritable, fatigued than usual etc.?) If yes, please explain.	Do you believe this student is performing at his/her pre-concussion learning level?
			<input type="checkbox"/> Yes <input type="checkbox"/> No Date: Signature:
			<input type="checkbox"/> Yes <input type="checkbox"/> No Date: Signature:
			<input type="checkbox"/> Yes <input type="checkbox"/> No Date: Signature:
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Regular academic progress monitoring is recommended as best practice.



TITLE 16 Education

CHAPTER 16-91

School and Youth Programs Concussion Act

SECTION 16-91-3

16-91-3. School district's guidelines to be developed and implemented.

- (a) The department of education and the department of health shall work in concert with the Rhode Island Interscholastic League to develop and promulgate guidelines to inform and educate coaches, teachers, school nurses, youth athletes, and their parents and/or guardians of the nature and risk of concussion and head injury, including continuing to play after concussion or head injury. A concussion and head injury information sheet shall be signed and returned by the youth athlete and the athlete's parent and/or guardian prior to the youth athlete's return to practice or competition.
- (b) School districts are required to use training materials made available by the United States Center for Disease Control and Prevention entitled "Heads Up: Concussion in the High School Sports/Concussion in Youth Sports" and any updates or amendments thereto, or training materials substantively and substantially similar thereto. The department of education shall post training materials made available by the Center for Disease Control and Prevention and the Rhode Island Interscholastic League on its website. All coaches and volunteers involved in a youth sport or activity covered by this chapter must complete a training course and a refresher course annually thereafter in concussions and traumatic brain injuries. All school nurses must complete a training course and an annual refresher course in concussions and traumatic brain injuries. Teachers and teachers' aides are strongly encouraged to complete the training course in concussions and traumatic brain injuries. Training may consist of videos, classes, and any other generally accepted mode and medium of providing information.
- (c) School districts are encouraged to have all student athletes perform baseline neuropsychological testing, computerized or otherwise. Parents and/or guardians shall be provided with information as to the risk of concussion and/or traumatic brain injuries prior to the start of every sport season and they shall sign an acknowledgement as to their receipt of such information.
- (d) A youth athlete, who is suspected of sustaining a concussion or head injury in a practice or game, shall be removed from competition at that time.
- (e) A youth athlete, who has been removed from play, may not return to play until the athlete is evaluated by a licensed physician who may consult with an athletic trainer, all of whom shall be trained in the evaluation and management of concussions. The athlete must receive written clearance to return to play from that licensed physician.
- (f) All school districts are encouraged to have an athletic trainer, or similarly trained person, at all recreational and athletic events addressed by this statute.



Concussion management is a complex endeavor. It is important that communities create concussion management strategies and protocols based on updated, standardized care that has been vetted by national and international experts in the field of sports-related concussion. All too often members of an interdisciplinary team are following different and outdated guidelines for concussion management. Streamlined communication and dissemination of updated concussion research and resources provide the best opportunity for care teams to optimally return a concussed student to academic learning and, if an athlete, ultimately to sports.

Peter Kriz, MD

A Message from Coach David Belisle... "Put health before competition"



The Belisle name has been synonymous with Rhode Island sports for decades and Coach David Belisle has witnessed an evolution regarding athlete concussions. He remembers the days, many years ago, when after "getting your bell rung", you sat out for a while, then got back in the game. "We just didn't know what we know today. For years, most of us were unaware of the possible consequences of concussion. It's come a long way and we take it much more seriously, especially now, as world-renown, professional athletes are sharing their stories and bringing the topic to light. Coaches have Return-to-Play laws, protocols to follow, so they make the right calls to sit athletes out when a concussion is suspected and not returning them to play unless checked by a doctor. Beginning at the youngest levels, we need to take brain injuries more seriously, teach brain safety from the start and deliver a consistent message."

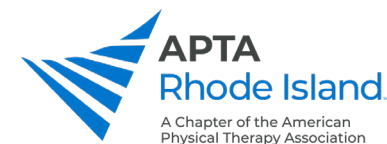
His experience came first-hand, witnessing it with his own son, Brian. "I learned the hard way. My son was my best player. He was such a competitor." Brian sustained a number of concussions in his hockey years and had to work diligently to successfully overcome symptoms, even with a strong support system in place. At times, it was as slow process.

What are Coach Belisle's recommendations? "We must put health before competition. Parents, schools, leagues, athletes and coaches all need to consistently share the same values and morals when it comes to safety in sports. Don't pressure kids to get back in the game. Everyone needs to abide by the process and, if we do so from a young age, not only will everyone be on the same page, but kids will be more honest about reporting symptoms, which can aid recovery. If we prioritize health, sportsmanship, fair play and education, sports can remain healthy for all players/athletes."

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