



## What to expect after a concussion

Being sidelined from sports and school due to a sports-related concussion can be a challenge for student athletes and their families. **Michael O'Brien, MD**, director of Boston Children's Hospital Sports Concussion Clinic, and **Marilou Shaughnessy, PsyD**, sports psychologist, from Boston Children's Sports Medicine Division, offer some advice.

**Q:** *What will doctors recommend after a concussion?*

**A:** We typically prescribe full physical and cognitive rest for a minimum of three to five days. This means eliminating all sports and exercise, and often includes staying home from school for a few days. – **Dr. O'Brien**

It can be difficult for active teens to comply with cognitive rest. However, a recent study conducted at Boston Children's and published in *Pediatrics* suggests that athletes with concussions who limit high-intensity cognitive demand (which can include texting, reading and playing video games) may recover faster than those who don't.

**Q:** *Are there steps to recovery?*

**A:** Every patient with a concussion is different. Younger athletes, those with multiple prior concussions and those with a longer duration of symptoms may need more time before returning to regular activities. – **Dr. O'Brien**

A recent study conducted at Boston Children's showed early symptoms, including nausea, dizziness and double vision, often resolve first. Other symptoms—irritability, sleep disturbance, frustration and poor concentration—take longer to resolve and may persist for two weeks or more.

We recommend a gradual re-entry into school as the first step to recovery. Our doctors provide a detailed note to teachers, and suggest they offer students a longer time for tests and projects and defer high-stakes testing.

Athletes can start stretching and walking for exercise after the initial rest period. All other exercise and sports participation should be restricted until the athlete can fully tolerate school and symptoms have fully resolved.

**Q:** *My child is anxious to return to play. How soon can he begin participating?*

**A:** We recommend athletes meet four criteria before returning to practice or games:

1. full resolution of all symptoms (no headaches, dizziness, amnesia, difficulty concentrating or double or blurry vision)
2. academic tolerance (ability to attend school for a full day and complete schoolwork)
3. exercise tolerance (with no lingering symptoms)
4. cognitive testing assessment as part of the overall assessment for safe return to play

– **Dr. O'Brien**



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We also suggest that athletes complete a minimum of two successful practices before returning to play.



**Q:** *What can our family do to help our child stay occupied after a concussion?*

**A:** Brainstorm ways to stay busy without overstimulation. What works depends on the patient's interests. I often suggest aural (listening) activities, like podcasts or *TedTalks*.

– **Shaughnessy**

**Q:** *My child's symptoms aren't resolving as quickly as hoped. What can I do to help?*

**A:** It's important for family and friends to keep offering support. Athletes may feel isolated after a concussion because their identity and friendships are linked to sports participation. – **Shaughnessy**

Be aware of significant mood changes as youths may become depressed after a concussion. They also may find that some friends, teachers or coaches don't understand concussion. A psychologist can help with coping strategies and also empower your child with the tools to explain concussion.

**Q:** *I've heard my child is at risk for another concussion or injury after a first concussion. Is that true?*

**A:** Research suggests that there is a window of vulnerability after a concussion, and that this continues even after symptoms resolve. A concussed athlete may be up to three times more likely to suffer a second concussion than an athlete who has never had a concussion – **Dr. O'Brien**

There is a value to a buffer zone between symptom resolution and return to play. The longer the symptom duration, the longer the period of symptom-free rest before return to play for contact sports. Some clinicians recommend an equal number of symptom-free weeks as symptomatic weeks. Our goal is to prevent setbacks and additional injuries.

Our best advice is to be patient. Recovery takes time, and rushing back to sports may place youth at risk for setbacks, longer recovery times or further problems.

We offer pre-season neurocognitive baseline testing, which can help inform decisions about return to play if an athlete suffers a concussion. Testing can be done in our Boston and Waltham locations.

Concussion prevention classes focused on head and neck strengthening and balance exercises, held at **The Micheli Center for Sports Injury Prevention**, can help reduce athletes' risk of concussion.

