**Rethinking the Recommendations after Concussion**

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If you polled 100 people about the treatment for concussion, I would guess that 99 would say “rest.” Some might add that you “have to be in a dark room for a couple of days” or others would comment that “cannot look at a TV, computer or phone at all.” My favorite is the advice to “not think” after concussion, although I yet to figure out how that is actually accomplished. These ideas are quite prevalent in the lay public and even in the medical community. The problem with these recommendations is that none of them were based on empirical data.

Ask any concussion specialist and they were tell you the misinformation about rest and when to return to activity is the most frequent problem they encounter. The value of rest is so engrained in everyone’s mindset that it’s almost heretical to say that it is the wrong approach, but I am here to tell you that strict rest post-concussion is, in fact, the wrong approach.

There is no evidence that using your brain after a concussion makes the concussion worse. A particular activity (e.g., reading) may increase symptoms but it will not extend the length of the injury. Research has shown us that individuals who are completely shut down after concussion actually take longer to recover. That is the message we want our athletes and parents to hear.

We need to move away from focusing on “rest” and instead emphasize “symptom management.” If the athlete is doing an activity that increases their headache, makes them dizzy or experience other symptoms, tell them to take stop or take a break. I like to make the comparison to the old Henny Youngman joke, “Patient: Doc, it hurts when I do this. Dr: Then do that!” The parents and I laugh and the kids look confused, but they get the point. We need to encourage a symptom-tolerated progression back to activity.

This does not mean we tell them to “push through” or minimize their symptoms in any way. In fact, it’s quite the opposite. Complete rest does not help us understand what may aggravate their symptoms and what does not, but symptom-tolerated return to activity does. We want them to learn to listen to their body and adjust their activity according to their symptoms.

Many of you are familiar with Dr. John Leddy’s work. He is a sports medicine physician and the Buffalo Concussion Treadmill Test (and now the Buffalo Concussion Bicycle Test) originated out of his lab. To Dr. Leddy’s credit, he has been touting the value of early movement after concussion for more than a decade. The data out of his lab and others has proven that exercise is an effective and safe treatment acutely after a concussion, even in pediatric patients.

So, what does that mean practically for an athletic trainer and those who treat acute concussions? It means we need to be rethinking our initial recommendations and the return-to-play exertional protocol! I tell patients that they should “take it easy” during the first 1-2 days after a concussion. That means sleep if you are tired and avoid activities that aggravate your symptoms. However, after that first couple of days, patients need to start moving. The sooner we move people, the sooner they get better! This is the same recommendation made in the Berlin Concussion in Sport Group consensus paper (2017). The next CISG (Paris) has been moved to 2021 due to COVID but I imagine this will be reinforced and further refined in the updated consensus statement.

If the athlete is highly symptomatic, continued symptom-limited rest is recommended. If the symptoms are improving or have stabilized, the athlete can tolerate low-level exertion on even the third day post-injury. Of course, as all athletic trainers know, we need to specific with our student-athletes about what low-level exertion means. I recommend 10-15 minute walk for the first couple of days. Think about it as “Step 1” in the traditional exertional return-to-play protocol that you are all know well. The level of exertion can then be increased incrementally, as tolerated. Always instruct the athlete to reduce the level of exertion if there is significant symptom exacerbation. The idea is not to make them feel worse, but most athletes will report that “it just feels good to move.”

I call this “therapeutic exertion” not return-to-play exertion and I emphasize that to the athlete. Starting exertion earlier is not designed to get athletes back to play earlier but to make them feel better sooner. We must still take a cautious approach to our return-to-play decisions and not rush the recovery process.

Once the athlete is fully asymptomatic and passed any cognitive tests or other components of your program’s RTP protocol, they do not need to start at step one of the five exertional stages. The athlete has always demonstrated they can tolerate activity, but additional days of non-contact practice can be added if you are concerned about returning the athlete too soon. Sports-specific practice, particularly more complex practice activities, are incredibly helpful in teasing out any residual symptoms post-concussion.

The mantra for concussion treatment should be a focus on active rehabilitation and early intervention. As our understanding of the underlying pathophysiology of concussion improves, our treatment recommendations will continue to evolve.

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