

Returning Individuals to Activities and Participation...It's What We Do!

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Concussion. These days we hear this word regularly in the news in reference to sports and military-related injuries. In the past decade, there has been a dramatic increase in our understanding of the effects of injuries to the head, especially for those injuries that may, at first, seem inconsequential. Individuals injured while playing sports have been a major focus of recent public health efforts to ensure that concussive injuries are identified immediately when they happen, sufficient rest and recovery is allowed, and repeat concussions are prevented. Animal research, which has allowed us to better understand the neurometabolic cascade that occurs postconcussion, has also raised concerns about possible injury extension with rapid return to activity.¹ This preclinical evidence resulted in the development of a “best practice” approach to rest athletes until they became asymptomatic, followed by a graded resumption of activity.

We have made meaningful progress since the time of these early guidelines, and we now understand that early approaches were not based on studies or on imaging of people with concussion; these human studies are now available and are summarized in this issue by Virji-Babul et al.² One important question is: “How much rest is needed?” A randomized controlled trial published in 2015 demonstrated that adolescents with concussion who were prescribed 5 days of strict rest postconcussion demonstrated increased “concussive symptoms” at 10 days postinjury compared with those who were prescribed rest for 1 to 2 days, suggesting that a complete reduction in all activities may not be optimal.³ As a result, the pendulum has begun to swing away from the approach of “rest until asymptomatic.” Recent consensus guidance encourage a short period of rest (24-48 hours) before resuming usual activities of daily living on a gradual basis, with monitoring and guidance related to symptom management.^{4,5} The ideal timing of resumption of activity and participation after concussion continues to be a critical area where additional evidence is needed. The article by Quatman-Yates et al⁶ and the related clinical commentary by Mucha⁷ in this issue add to our knowledge in this area.

There has been scant research done on individuals with concussion that occurs outside of organized sports activities or military service. This is true despite the fact that the Centers for Disease Control and Prevention estimates that at least 2.5 million traumatic brain injuries occur in the United States each year, with most of these classified as mild brain injuries or concussion.⁸ Concussions occur commonly because of falls, motor vehicle crashes, and work-related or recreational accidents. It is possible that concussions in the general adult population are under- or misdiagnosed since many symptoms associated with concussion, including headache, fatigue, difficulty sleeping, and dizziness, can also occur for other reasons.

Physical therapists may see individuals who are experiencing the effects of concussion, but for whom a concussion has not been diagnosed. These individuals benefit from our problem-solving skills, careful listening to subjective complaints, and, most importantly, physical examination for objective findings associated with the presenting symptoms. This approach of linking symptom reports to a specific impairment in body structure/function or activity limitation is the foundation of what we do as physical therapists because it leads to the development of hypotheses to explain the cause of the problem, and the selection of targeted interventions most likely to result in optimal outcomes. The articles in this issue by Elbin et al⁹ and McQueary et al¹⁰ report on recent

advances in clinical tests related to oculomotor function, vestibular function, and postural control that we believe will be useful in identifying the impairments related to concussion. Refining and validating and useful clinical tests will move the field forward, especially if the application of these tests and measures is expanded beyond athletes to the larger population of individuals of all ages who incur a concussion.

The evidence regarding the optimal rehabilitation management of concussion is clearly evolving. When can someone return to school, to work, to recreational exercise for fun, or to activities that could put them at risk for another injury like bike riding, ice skating, or trail running? We would argue that these questions, especially as they relate to physical activity, have long been our focus as physical therapists—for individuals with brain injuries of greater severity. That we apply the same focus to patients with concussion is nothing new, we are in an ideal position to continue our process of returning people to activities and roles that they care about...because it is what we do.

References (Endnotes)

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