

Balance Assessment in the Management of Sport-Related Concussion

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KEYWORDS

- Postural stability • Equilibrium • Clinical assessment
- Traumatic brain injury

Over the past decade, there is probably no sports injury more discussed in the lay media than concussion or traumatic brain injury (TBI). There has also been a flood of publications into the peer-reviewed medical literature on the topic in recent years, and the medical community has a better understanding of concussive injury today than it did just 10 years ago. Clinicians, especially those responsible for the medical care of elite athletes, have been placed under the microscope and are being scrutinized for their management of these potentially catastrophic injuries. Concussion often presents with varying symptomatology and most experts think it should be evaluated using a multifactorial approach.¹⁻⁴ Yet many clinicians neglect the use of a comprehensive concussion assessment plan,⁵ despite the complexity of this injury. Given that athletes may under-report concussions by nearly 50%,⁶ significant attention has been given to the validation of objective measures for managing concussion. Although neuropsychological testing has proven to be a valuable tool in concussion management, it is most useful when administered as part of a comprehensive assessment battery that includes grading of symptoms and clinical balance tests.^{2,4,7,8}

A thorough sideline and clinical examination by the certified athletic trainer and team physician is considered an important first step in the management of concussion. It is best if the clinician performing the examination knows the athlete well enough to detect changes in their disposition. The evaluation, whether on the field or in the clinical setting, should be conducted in a systematic manner. The evaluation should include obtaining a *history* for specific details about the injury (eg, mechanism, symptomatology, concussion history), followed by assessing *neurocognitive function* and *balance*, which is the focus of this article. The objective measures from balance testing

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