

Recovery from Sports Concussion in High School and Collegiate Athletes

Mike McClincy
Advisor: Pete Winkler
2006

Abstract

Introduction: Neuropsychological testing is a valuable tool in concussion diagnosis and management. ImPACT, a computerized neuropsychological testing program, consists of 8 cognitive tasks and a 21-item symptom inventory.

Method: ImPACT was used to examine the cognitive performance of 104 concussed athletes at baseline, 2, 7, and 14 days post-injury. Dependent measures included composite scores from the ImPACT computerized test battery, as well as a total symptom score from the Post-Concussion Symptom Scale.

Results: Differences between baseline and day 2 post-injury scores were observed for all ImPACT composites (Verbal memory-VERM, visual memory-VISM, processing speed-PROC, and reaction time-RT) as well as in total symptom score (SX). At day 7, concussed athletes continued to perform significantly poorer on VERM, VISM, RT, and SX. At day 14, only VERM scores were significantly different from baseline.

Conclusions: Cognitive performance deficits in concussed athletes may persist to 7 and even to 14 days in some cases. In addition to symptom status, the athlete's post-concussion cognitive functioning should be considered when making return-to-play decisions.