

Relationship between self-reported history of the head impact and the performance on cognitive tests of sports-related concussion in collegiate rugby football players

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Sport-related concussion cause short-lived impairment of neurological function that resolves spontaneously. However, there is a long-term effect of repetitive concussion in the retired athlete. The purpose of this study was to examine the relationship between self-reported concussion history and the performance on neurocognitive test battery in collegiate rugby football players.

Collegiate rugby football players (n=468) participated the neurocognitive test battery of sports-related concussion (CogSport : CogState Ltd, Australia) and answered concussion history questionnaire (number of

concussion and loss of consciousness) before the start of the 2013 autumn season. Participants were categorized into 3 concussion history groups (non-concussion: n=113, 3 times or less: n=218, ≥ 4 concussion history: n=137). In the result, the CogSport score (visual memory and reaction time) of participants who reported ≥ 4 concussion history lower than those who reported 3 times or less concussion history ($p < .05$). These results suggested that neurocognitive function decline in collegiate rugby football player with multiple concussion history.