

## **Is the content and duration of the Graduated Return to Play protocol after concussion demanding enough? A challenge for Berlin 2016.**

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### **Introduction**

Determining the appropriate starting point and duration of the Return to Play (RTP) process after injury is fundamental to the practice of clinical sports medicine. The most commonly cited RTP framework after concussion is outlined as part of all international concussion consensus statements. This framework is a key element of concussion management across all levels of sport and provides a 'cornerstone' of current education initiatives. In Rugby Union, RTP guidelines last underwent a major update by World Rugby, the International Federation, in 2011 and are consistent with international concussion consensus.

There is a limited evidence base informing the content and duration of the Graduated Return to Play. Specifically, the evidence evaluating the effect, optimal amount and type of rest is sparse. Moreover, current return to play guidelines for children and adolescents are based on those of adults..

Whilst research concerning a range of clinical outcomes following concussive injury in sport continues to develop, until recently, little has been known about the consequences of return to play.

### **Increased injury risk following return to play**

Three recently published studies in professional soccer players [1], American college athletes [2] and professional rugby players [3] have all identified an increased risk of injury following return to play from concussion. In addition, although not statistically significant, a further study highlighted a trend



## **Call to action – time to make the RTP protocol more challenging?**

We believe that the design and timescale of the GRTP protocol for professional athletes should be re-visited with greater emphasis on dual task activities, active re-training (cognition, balance & vision) and the development of functional assessments performed during exertion in order to better meet the principles of other rehabilitation models. We suspect that the current GRTP may not be long enough or diverse enough in order to meet these aims.

The role of modifying factors in the prognosis of concussion has been acknowledged (if not quantified) and should influence RTP decision-making. More targeted clinical evaluation and interventions could further improve the specificity of the timing, duration and nature of the GRTP protocol.

The 5<sup>th</sup> International Consensus Conference on Concussion in Sport in Berlin from October 26<sup>th</sup>-27<sup>th</sup>, 2016 provides an opportunity to revisit GRTP guidelines for all sports. We post some considerations in the web appendix.

## **References**

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