

# Isokinetic Shoulder Profiling in Elite Rugby Union: Prevention and Rehabilitation

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*References: European Shoulder and Elbow Society Meeting, Lyon. 2011*

**Aims:** To evaluate the role of isokinetic profiling of the shoulder in elite rugby, with a view to concentrating on how it impacts injury prevention and rehabilitation.

**Methods:** Isokinetic shoulder testing was performed in the position of risk for shoulder injuries, in abduction and slight extension. The testing protocol was specifically designed to achieve data relating to the position of most significant glenohumeral [instability](#). This decision to err from the literature guidance was considered necessary to attempt to make the data more specific, accurate and reliable to the rugby environment. Bilateral assessment was performed on 27 elite sportsmen at speeds of 60 and 180 degrees/second. The peak torque values were statistically examined in order to highlight differences between internal and external rotation for each shoulder.

**Results:** Internal rotation was significantly stronger than external rotation for all individuals, without a correlation with playing position. The comparison between previously injured and uninjured players did not yield any statistical significance, as each participant considerably favoured internal rotation. However, the statistical analysis did show a narrower discrepancy in those who underwent rehabilitation after surgery for an injury. Dominance was rejected as an explanation for discrepancies between individual's respective limbs.

**Conclusions:** Our results have shown that those players that had received rehabilitation following injury and surgery, had better stability than those without prior shoulder injury. This not only highlights the efficacy of the current rehabilitation methods used, but suggests measures could be implemented by way of pre-habilitation, in order to reduce the primary incidence.

Isokinetic profiling may have a role in injury prevention and rehabilitation. We intend to continue to follow our group of athletes and assess the effects of isokinetic-based pre-habilitation on injury prevention.

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