

Using Analytics to Redefine Athlete Resilience

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Abstract : There is an overwhelming amount of athlete-centric information available for sport practitioners in this era of tech and big data, but protocols in athletic rehabilitation remain arbitrary. It is a common assumption that the rate at which tissue heals amongst individuals is the same; yielding protocols that are entirely time-based. Progressing athletes through rehab programs that lack individualization can potentially expose athletes to stimuli they are not prepared for or unnecessarily lengthen their recovery period. A 7-year aggregated and anonymous database was used to develop reliable and valid assessments to measure athletic resilience. Each assessment utilizes force plate technology with proprietary protocols and analysis to provide key thresholds for injury risk and recovery. Using a T score to analyze movement qualities, much like the Z score used for bone density from a DEXA scan, specific prescriptions are provided to mitigate the athlete's inherent injury risk. In addition to obliging to surgical clearance, practitioners must put in place a clearance protocol guided by standardized assessments and achievement in strength thresholds. In order to truly hold individuals accountable (practitioners, athletic trainers, performance coaches, etc.), success in improving pre-defined key performance indicators must be frequently assessed and analyzed.

Keywords : analytics, athlete rehabilitation, athlete resilience, injury prediction, injury prevention

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