

## High Match Load's Relation to Decreased Well-Being During an Elite Women's Rugby Sevens Tournament.

Doeven SH<sup>1,2</sup>, Brink MS<sup>1</sup>, Huijgen BCH<sup>1</sup>, de Jong J<sup>2</sup>, Lemmink KAPM<sup>1</sup>.

### Author information

### Abstract

**PURPOSE::** To determine changes in wellbeing, recovery and neuromuscular performance during and after an elite women's rugby sevens tournament and assess the influence of match load indicators.

**METHODS::** Twelve elite women rugby sevens players (age 25.3±4.1 y, height 169.0±4.0 cm, weight 63.9±4.9 kg, body fat 18.6±2.7 %) performed 5 matches during a two-day tournament of the Women's Rugby Sevens World Series. Perceived wellbeing (fatigue, sleep quality, general muscle soreness, stress levels, mood), total quality of recovery (TQR), and countermovement-jump flight time (CMJ) were measured on match day 1 (MD1), match day 2 (MD2), 1 day post-tournament (D+1) and 2 days post-tournament (D+2). Total distance, low-, moderate- and high-intensity-running (HIR) and physical contacts (PC) during matches were derived of GPS based time-motion analysis and video-based notational analysis, respectively. Internal match load was calculated by session-rating of perceived exertion (RPE) and playing time (RPE x duration).

**RESULTS::** Wellbeing ( $p<.001$ ), fatigue ( $p<.001$ ), general muscle soreness ( $p<.001$ ), stress levels ( $p<.001$ ), mood ( $p=.005$ ) and TQR ( $p<.001$ ) were significantly impaired after match day 1 and did not return to baseline values until D+2. More HIR was related to more fatigue ( $r=-.60$ ;  $p=.049$ ) and a larger number of PC with more general muscle soreness ( $r=-.69$ ;  $p=.013$ ).

**CONCLUSION::** Perceived wellbeing and TQR were already impaired after match day 1 while performance was maintained. HIR and PC were predominantly related to fatigue and general muscle soreness, respectively.

**KEYWORDS:** Regeneration; load indicators; performance; time-motion; wellness