ACCURACY OF THE T2MINUTE METHOD FOR MEASURING ELITE ROWING TRAINING

Tran, J.1, Main, L.C.1, Rice, A.J.2, Gastin, P.B.1
1: Deakin University (Melbourne, Australia); 2: Australian Institute of Sport (Canberra, Australia).

Introduction
Elite rowers undertake a combination of rowing-specific and non-specific modes of training, incorporating bouts of continuous and interval efforts, and low- and high-intensity work (Steinacker 1993). However, current training load measures are not suitable for measuring load in certain modes and intensities, e.g., heart rate monitoring is not valid during intermittent work (Achten & Jeukendrup 2003). To address these limitations, the T2minute method was developed to quantify rowing training loads. The method incorporates a modal weighting factor to account for differences in load imposed by training in various modes. The measure also includes intensity weighting factors based upon intensity zones standardised by the Australian Institute of Sport. The purpose of this study was to examine the accuracy of the T2minute method for quantifying elite rowing training loads, by comparing the method to Banister's TRIMP (Banister et al. 1975) and the Session-Rating of Perceived Exertion method (S-RPE; Foster et al. 2001) as criterion measures.

Methods
Fourteen elite Australian rowers (12 males, 2 females) participated in this study. Training load data was collected from 4 weeks of routine training. Athletes completed varied training, including rowing-specific (on-water and ergometer rowing) and non-specific sessions (cycling, running, swimming). Spearman's correlation coefficients (rho) with 90% confidence limits [CL] were calculated to examine the relationship between the criterion measures and the T2minute method. Inferences were drawn from effect sizes, calculated from the correlation coefficients.

Results
A strong correlation was observed between the T2minute and Banister's TRIMP (rho ± 90% CL = 0.59 ± 0.43, $p < 0.05$). A moderate correlation was observed between the T2minute and S-RPE (rho ± 90% CL = 0.42 ± 0.41, $p < 0.05$). The true effect was likely positive for both comparisons (92.1% likely for T2minute vs. Banister's TRIMP; 86.4% likely for T2minute vs. S-RPE).

Discussion
The T2minute method is sufficiently accurate for field measurement of elite rowing training loads from varied training. This method improves upon existing measures, providing a novel means to measure overall training and sessions of variable intensities. Future research should focus on incorporating the measurement of strength training loads, and on examining the method's applicability to other sports.

References
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