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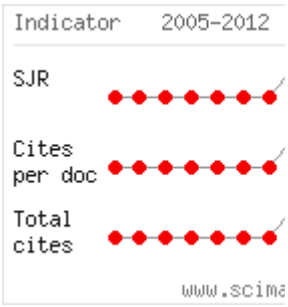

RELATIONSHIPS BETWEEN DRY LAND STRENGTH, POWER VARIABLES AND SHORT SPRINT PERFORMANCE IN YOUNG COMPETITIVE SWIMMERS

Nuno Garrido, Daniel A. Marinho, Tiago M. Barbosa, Aldo M. Costa, António J. Silva, José A. Pérez-Turpin, Mário C. Marques

Abstract

The aim of this study was to identify the dry land strength and power tests that can better relate with sprint swimming performance in young competitive swimmers. Twenty-eight (16 boys and 12 girls) young competitive swimmers of national level (12.01 ± 0.56 years-old, Tanner stage 1-2) volunteered to participate in this study. Swimming

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performance (25 m and 50 m freestyle sprint tests), muscle strength (bench press and leg extension) and muscle power (throwing medicine ball and countermovement jump) performances were tested. Spearman ranking correlation coefficient were computed to verify the association between strength and power variables with sprint swimming performance. Regarding strength tests, the bench press and leg extension exercises were moderate but significantly associated with 25 m and 50 m tests ($-0.69 \leqslant \rho \leqslant -0.58$). The sprint tests were only associated with throwing power tests ($-0.74 \leqslant \rho \leqslant -0.54$) and not with vertical jump height. The main results suggested that, simple dry land strength and power tests although moderate are significantly associated with sprint swimming performance in young competitive swimmers.

Key words: Children; Swimming; Training and Control; Front Crawl; Testing.

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J. Hum. Sport Exerc. ISSN 1988-5202. doi:10.4100/jhse. Faculty of Education. University of Alicante. C/ San Vicente del Raspeig s/n - 03690 San Vicente del Raspeig - Alicante - Spain jhse@ua.es