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Desafio Singular - Unipessoal, Lda
Vila Real, Portugal

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Changes in aerobic ability during a macro cycle of training in swimming

D.A. Marinho 1,2, N. Garrido 2,3, H. Neiva 1, V.M. Reis 2,3, A.J. Silva 2,3, A.M. Costa 1,2, D. Sousa 1,2, J. Costa 1,2, A. Santos 1, M.C. Marques 1,2

1 - University of Beira Interior. Sport Sciences Department (UBI, Covilhã, Portugal)
2 - Research Centre in Sports, Health and Human Development (CIDESD, Vila Real, Portugal)
3 - University of Trás-os-Montes and Alto Douro. Department of Sport, Health and Exercise (UTAD, Vila Real, Portugal)

It seems that critical velocity and critical stroke rate are associated with aerobic performance. The aim of this study was to analyse the changes of critical velocity and critical stroke rate during 12 weeks of training in a group of young competitive swimmers.

Fourteen age group male swimmers took part in this investigation. The evaluation took place in two different trials. The first one was conducted at the beginning of the season and the second one after 12 weeks of training. For each subject the critical velocity and the critical stroke rate were determined in both trials.

The main result was that critical velocity increased, whereas critical stroke rate decreased between the first and second trials. It seems that technical ability was improved during the 12 weeks of training. The swimmers were able to perform at the same physiological intensity at higher velocities and with less stroke rate.

Key words: age group swimmers, aerobic capacity, technique, training effects