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Effects of a handball match on the hydration status of athletes

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Abstract

Introduction: Scientific evidence suggests the need to establish guidelines that ensure an optimal state of hydration in high-performance athletes.

Objectives: The purpose of this study was to evaluate the effects of a handball match on the hydration status of 14 athletes (23 ± 4 years old).

Methods/Design: The analyses were led by application of t-Student test for dependent samples before and after the match, through measurement of the corporal composition [total corporal water (At) and total corporal mass (Mc)], relationship: Sweating-Water ingestion (r: TS-IA) and urinary [urinary volume (Vu) and specific gravity (Du)].

Results: After the handball match, reductions were verified on At (-0.44%), Mc (-0.90%). The r: TS-IA, revealed that on average hydration during the match compensated for 88.08% of the water lost through sweating (IA: 8.72 ml/min versus TS: 9.90 ml/min). Moreover, a positive relationship was observed between total sweating and water consumption (r = 0.9572; p).

Conclusions: The results of this study indicate that the requirements of a game of handball altered hydration levels. Therefore, it is recommended to have hydration strategies for each individual athlete and the sport that consider the environmental and physiological variables.

Keywords: hydration, handball, dehydration.
