Abstract

Introduction: Oral rehydration drinks help maintain physical capacity and hydration during exercise. Objective: Evaluate, in a case and self-control study, the effectiveness of three hydration and exercise protocols on work capacity and physical and psychosomatic stress during indoor cycling (InC). Methods: 14 middle-aged eutrophic men participated in three controlled randomly and not sequentially hydration (~278 mL/6 c 15 min) and exercise (InC/90 min) protocols: No liquids, plain water, or sports drinks (SD). The response variables were: Body temperature (BT), heart rate (HR), and mean blood pressure (MBP). The co-variables: Distance traveled (DT), ergometer resistance (R), body fat (BF), difference in body weight between tests (rBW), and age of the participants. The differences between protocols were evaluated using GLM Repeated Measures, the independence of associations by multiple linear regression. Results: In non-liquids, the subjects showed higher BT, HR, and MBP than when they drank plain water or SD (p < 0.01). Work capacity was the same in the three hydration protocols. BT was the most sensitive variable detected by the hydration status of the subjects. 34%, 99%, and 21% of the associated variance to HR, MBP, and BT was explained by DT + BT, BT + BF, and BW + age + R + DT + BF, respectively. Conclusions: Liquid intake with or without electrolytes does not affect work capacity, and they are equally effective as hydration sources during 90 min of InC at strong and very strong intensities. Body temperature is the most sensitive variable detected by the subject’s hydration status during exercise.

Keywords
Key words, Spinning, Dehydration, Exercise, Sports nutrition, Vital signs.