Abstract

Universe: There is scarce and inconsistent information about gender-related differences in the hydration of sports persons, as well as about the effects of hydration on performance, especially during indoor sports. Objective: To determine the physiological differences between genders during indoor physical exercise, with and without hydration. Methods: 21 spinning sportspeople (12 men and 9 women) participated in three controlled, randomly assigned and non-sequential hydration protocols, including no fluid intake and hydration with plain water or a sports drink (volume adjusted to each individual every 15 min), during 90 min of spinning exercise. The response variables included body mass, body temperature, heart rate and blood pressure. Results: During exercise without hydration, men and women lost ~2% of body mass, and showed higher body temperature (~0.2°C), blood pressure (~4 mmHg) and heart rate (~7 beats/min) compared to exercises with hydration. Body temperature and blood pressure were higher for men than for women during exercise without hydration, differences not observed during exercise with hydration. Between 42-99% of variance in body temperature, blood pressure and heart rate could be explained by the physical characteristics of subjects and the work done. Conclusions: During exercise with hydration (either with water or sport drink), the physiological response was similar for both genders. Exercise without hydration produced physical stress, which could be prevented with either of the fluids (plain water was sufficient). Gender differences in the physiological response to spinning (body temperature, mean blood pressure and heart rate) can be explained in part by the distinct physical characteristics of each individual. (Nutr Hosp. 2014;29:644-651) DOI:10.3305/nh.2014.29.3.7017

Keywords