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Water aerobics is followed by short-time and immediate systolic blood pressure reduction in overweight and obese hypertensive women.

Cunha RM¹, Arsa G², Neves EB³, Lopes LC⁴, Santana F⁴, Noleto MV⁴, Rolim TI⁴, Lehnen AM⁵.

Author information

Abstract

One exercise training session such as walking, running, and resistance can lead to a decrease in blood pressure in normotensive and hypertensive individuals, but few studies have investigated the effects of exercise training in an aquatic environment for overweight and obese hypertensive individuals. We aimed to assess the acute effects of a water aerobics session on blood pressure changes in pharmacologically treated overweight and obese hypertensive women. A randomized crossover study was carried out with 18 hypertensive women, 10 of them were overweight (54.4 \pm 7.9 years; body mass index: 27.8 \pm 1.7 kg/m(2)) and eight obese $(56.4 \pm 6.6 \text{ years}; \text{ body mass index: } 33.0 \pm 2.0 \text{ kg/m}(2))$. The water aerobics exercise session consisted of a 45-minute training at the intensity of 70%-75% of maximum heart rate adjusted for the aquatic environment. The control group did not enter the pool and did not perform any exercise. We measured systolic blood pressure (SBP) and diastolic blood pressure (DBP) before, immediately after, and every 10 minutes up to 30 minutes after the aerobic exercise or control session. Overall (n = 18), DBP did not change after the water aerobic exercise and control session, and SBP decreased at 10 and 20 minutes postexercise compared to the control session. Among overweight women, SBP decreased at 10 and 20 minutes postexercise. In contrast, among obese women, SBP decreased only at 10 minutes postexercise. SBP variation was -2.68 mm Hg in overweight and -1.24 mm Hg in obese women. In conclusion, the water aerobics session leads to a reduction in SBP, but not in DBP, during 10 and 20 minutes postexercise recovery. Thus, it may be safely prescribed to overweight and obese women.

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KEYWORDS: Hypertension; postexercise hypotension; water aerobic exercise

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