

Eight Weeks of Zumba Fitness Training Improves Balance Ability in Women

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Category: Masters

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ABSTRACT

Zumba fitness (Zumba) is a Latin-inspired dance-fitness program that blends Latin music and repetitive steps/dance moves that form a "fitness-party". There is very little evidence to the effectiveness of Zumba as a mode of exercise despite its widespread popularity with more than 14 million people of both genders and all ages. The purpose of the study was to examine the effects of 8 weeks of Zumba fitness training on balance ability and body composition in sedentary women. Fourteen sedentary women, aged 24.6 ± 5.7 years, were assigned into two groups: Zumba fitness training group (ZT; $n=6$) and aerobic exercise training group (AT; $n=8$). Subjects in ZT performed the Zumba fitness at 60-80% of maximal heart rate, 60 min/session, and 3 sessions/week for 8 weeks, whereas subjects in AT performed aerobic exercises including walking and/or jogging on treadmill or elliptical machine as well as cycling on cycle ergometer at the same exercise intensity, frequency and duration as the ZT. Height (cm), body mass (kg), waist circumference (cm), hip circumference (cm), percent body fat (%), blood pressure (mmHg), resting heart rate ($b \cdot \text{min}^{-1}$), blood glucose ($\text{mg} \cdot \text{dL}^{-1}$), blood lipids ($\text{mg} \cdot \text{dL}^{-1}$), maximal oxygen consumption (VO_2max , $\text{ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$), muscular strength (kg), and balance ability (sec) were measured pre- and post-exercise training, and the results were analyzed utilizing a repeated measures two-way ANOVA. Balance ability in the dominant limb was significantly increased only in ZT (12.2 ± 3.5 to 20.8 ± 8.6 sec, $p < .05$). In the non-dominant limb, increased tendency of the time was shown in ZT (8.8 ± 6.2 to 17.7 ± 15.4 sec, $p = .084$). VO_2max increased significantly in AT (30.1 ± 5.1 to 33.3 ± 5.6 $\text{ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$, $p < .05$). Systolic blood pressure ($p = .013$) and diastolic blood pressure ($p = .032$) decreased significantly in both groups. There was no significant difference in other variables after 8 weeks of training. The results indicate that Zumba fitness is an effective exercise regimen to improve balance ability in sedentary women.

Supported by Internal Faculty Grant from the Midwestern State University