

Circuit Resistance Training in women: body composition and cardiac morphology #71

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Exercise can elicit morphologic and functional benefits to the heart, mainly on the left ventricle, that it is responsible for the systemic blood circulation. The aim of this study was to analyze the effects of circuit resistance training (CRT) on body mass (BM), body free fat mass (FFM), body fat mass (FM), left ventricular mass (LVM), rest final diastolic volume (FDV), rest final systolic volume (FSV), rest systolic volume (SV), relationships LVM/body surface (BS), LVM/BM and LVM/FFM in sedentary women, 39.71 ± 3.8 years old (n=14). The protocol consisted of 3 sessions/week of a circuit training of 9 stations with alternating muscle groups. In each session, the subjects performed the circuit 2 times with one set of 8-12 maximal repetitions (RM) in each station, during 10 weeks. The body composition was analyzed by DXA and, the heart parameters by echocardiDoppler in pre and post experimental period. Student's *t* test was applied for all variables ($\alpha=0.05$). There was increase in the FFM and LVM with maintenance of LVM/FFM, demonstrating that a left ventricular hypertrophy accompanied by the increase of the body free fat mass. There was increase in LVM/BS and LVM/BM, with maintenance of the variables FDV, FSV and SV, indicating an improvement in left ventricular morphology to achieve the systemic blood circulation. Besides the increase in FFM, there was a reduction of FM and maintenance of BM. The proposed CRT improved the body composition and the heart morphology in women.

Key words: circuit resistance training; body composition; DXA; echocardiDoppler; women.