

Effect of endurance exercise training on blood pressure in elderly patients with hypertension

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This study is conducted with the aim of investigating the effect of moderate physical activity (60% of maximal heart rate-MHR) on blood pressure in elderly people with hypertension. Hypertension is considered a modifiable risk factor for cardiovascular disease through physical activity. The purpose and significance of this study, was to investigate the role of exercise as an alternative therapy, since some patients exhibit sensitivity/intolerance to some drugs. Initially, 65 hypertensive males (average age = 49.7 years), (systolic blood pressure, SBP >140 mmHg and/or diastolic blood pressure, DBP>85 mmHg) and 25 hypertensive males as control group (average age = 50.3 years and systolic blood pressure, SBP >140 mmHg and/or diastolic blood pressure, DBP>85 mmHg) were selected. The subjects were divided based on their age, duration of disease, physical activity, and drug consumption. Then, blood pressure and heart rate (HR) were measured in all of the patients using sphygmomanometer (pre-test). The exercise sessions were consisted of warm up, aerobic activity and cool down (total duration 20 minutes for first session up to 55 minute in last session). At end of the 12th session (mid-test) and final session (24th session), blood pressure measured for last time (post-test). The control group was without any exercise during the study. The results were analyzed using t-test. Our results indicated that moderate physical activity was effective in lowering blood pressure by 6.4/5.6–mm Hg for SBP and 2.4/4.3–mm Hg for DBP in hypertensive patients, irrespective of age, duration of disease, and drug consumption ($P<.005$). the control group indicate no changes in BP. Physical activity programs with moderate intensity (approximately at 60% MHR), three days per week, can be used not only as a preventive measure for diastolic hypertension (DBP>90 mmHg high blood pressure), but also as an alternative to drug therapy in the treatment of hypertension, as well.

Biography

Elham Ahmadi is a lecturer at the university and has participated in two research projects and has coached for several years as a coach in sports medicine clubs and is currently working on a new research project.

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