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ORIGINAL ARTICLE

COMPARATIVE EFFECT OF FORWARD STAIRCASE CLIMBING VERSUS BACKWARD STAIRCASE CLIMBING TRAINING ON CARDIO RESPIRATORY PARAMETERS FOR SUBJECTS WITH HYPERTENSION

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Abstract

Background and Objective: Forward staircase climbing and backward staircase climbing training, individually have found to be effective in cardiorespiratory parameters such as blood pressure, heart rate in subjects with hypertension. The purpose of this study was to find the comparative effect of forward staircase climbing versus backward staircase climbing training on cardio respiratory parameters for subjects with hypertension. **Methods:** An experimental study design, 40 subjects with hypertension were randomized into 20 subjects each group; forward staircase climbing group and backward staircase climbing group. Forward staircase climbing group received forward staircase training while backward staircase climbing group received backward staircase training for 4 weeks. Outcome measures such as heart rate, blood pressure were measured before and after four weeks of training. **Results:** Analysis of means within the groups found that there is statistically significant improvement in means of blood pressure and heart rate in forward stair climbing and in backward stair climbing groups. When post-intervention means were compared between the groups there was no statistically significant difference in means of heart rate and blood pressure. **Conclusion:** The present study concluded that the forward staircase climbing and backward staircase climbing training found significant effect in improvement of cardiorespiratory parameters such as blood pressure and heart rate for subjects with hypertension. However, forward stair climbing shown to have greater percentage of improvement on cardiorespiratory parameters than backward stair climbing technique.

Key words: Hypertension, Heart rate, Blood pressure, Harvard 3 minute step test, forward staircase climbing, backward staircase climbing.