Comparing Short Physical Performance Battery Results in Active vs. Non-Active Geriatric Individuals

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Older adults experience age-related declines in skeletal muscle tissue, but staying active throughout life can decrease this risk, which in turn, allows individuals to maintain independence for longer. **PURPOSE:** To determine if increases in daily physical activity would lead to improvements on the Short Physical Performance Battery, which assesses lower extremity physical functioning. **METHODS:** Twenty-one participants (age = 71.76 ± 5.40 years; height = 158.33 ± 6.10 cm; mass = 81.31 ± 12.92 kg; body fat percent = 41.99 ± 5.64 %; BMI = 32.35 ± 5.56 kg/m^2) were pre-screened using the Health History Questionnaire and Montreal Cognitive Assessment. Participants self-selected into the walking experimental group, where they were asked to increase their average number of steps per day. Participants in the control group were asked to proceed with their usual daily routines. Individuals were tested monthly for the following variables to determine improvement over the first three months of the program: 8' (2.44 m) walk at a habitual pace (gait speed), how long it took to complete five chair stands, and static balance (side-by-side stance, semi-tandem stance, tandem stance). A one-way ANOVA was used to assess baseline differences between groups and the remaining analyses were conducted using a 2 (Condition: Control, Walking) x 4 (Time: Baseline, Month 1, Month 2, Month 3) repeated measures ANOVA. **RESULTS:** No significant differences at baseline between the two groups were observed (all p values > .20). The main analyses revealed no significant interaction effects (all p values > .23), but significant main effects of Time emerged for gait speed ($F_{3,51} = 5.20$, $p = .01$) and chair stands ($F_{3,51} = 3.92$, $p = .03$). Across groups, participants' average gait speed improved from Baseline (0.99 ± 0.13 m/s) to Month 3 (1.13 ± 0.17 m/s). Similarly, the average time it took participants to complete five chair stands decreased from Baseline (12.60 ± 4.05 seconds) to Month 3 (10.45 ± 3.79 seconds). **CONCLUSION:** Both groups improved on measures of gait speed and chair stands. While there were no significant group differences, the walking group improved at a greater rate. Significant differences may be seen at the conclusion of the study (Month 6).