

Correlation Between Handgrip Strength and Functional Fitness Among Older Adults

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Maintaining functional fitness is important in order to preserve quality of life and independence as an older adult. Handgrip strength has been used to determine one's overall strength in many populations, including geriatric. **PURPOSE:** The purpose was to examine the relationship between handgrip strength (HGS) and functional fitness (FF) among older adults. **METHODS:** Twenty older adults (age: 71.60 ± 5.59 years; height: $1.64 \pm .14$ m; mass: 73.85 ± 14.90 kg) volunteered to complete the HGS test and the following FF tests: 30-s chair stand (CS), 8-foot up-and-go (UPGO), power stair climb (PSC), habitual walk (HW), and fast walk (FW). During the CS test, subjects stood from a seated position as many times as possible during a 30 s time period. Each subject completed this test one time. The UPGO test included getting up from a seated position, walking 8 feet and returning to the seated position. During the PSC Test, subjects were asked to ascend a flight of 9 stairs as quickly and safely as possible. Subjects completed three trials of the UPGO and PSC tests with a 60 s rest between trials and the best time was used for analysis. Subjects completed two trials of the HW and FW over 20-m with a 60 s rest between trials. Gait speed was calculated for each walk. Data were analyzed using a bivariate Pearson correlation ($\alpha = .05$). **RESULTS:** The results of the Pearson correlation found significant relationships between HGS and HW ($r = .51, p = .02$), FW ($r = .54, p = .01$), and PSC ($r = .67, p < .01$). No relationship was yielded between HGS and CS or UPGO. **CONCLUSION:** The results of the study suggested HGS was moderately correlated to gait speed and stair-climb power within a sample of community-dwelling older adults. These results are promising for healthcare professionals that do not have adequate time to assess time-consuming measures of functional fitness.