Pedometer Use on Walking Performance, Body Composition, and Bone Density in Older Adults

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PURPOSE: This study examined pedometer use in older adults to examine whether performance, body composition, and bone density changed over the course of a 12 week period of time. **METHODS:** Participants (N = 15, mean age = 69.2 ± 9 years) were recruited from an educational and health service agency, and regularly participated in a walking group provided by the agency. Participants were given a pedometer and were asked to record his or her number of steps accrued in the 30 minute span of the walking group activity. Walkers were able to walk at their leisure and choose which and how many days they would like to talk per week. Height, weight, body mass index, % body fat, bone density, walking speed (via 6 minute walk test), and muscular strength (via the 30 second chair stand test) were measured prior to the intervention and at the end of 12 weeks. **RESULTS:** The average number of steps taken per day per participant increased by 43.8% from the 1st to the 12th week. For each dependent measure, no statistical differences were found pre- versus post-test, including body composition measures. However, a 4% gain in walking speed was observed for the six minute walk test, and a 4.1% gain in muscular strength was observed for the chair stand test. T-scores measuring bone density decreased 9.1%. **CONCLUSION:** Overall, the introduction of the pedometer led to performance gains in walking. While not significant, the results suggest that within the 12 week span, participants increased walking speed and muscular strength. Declines in t-scores for the bone density scans may have been due to participant injury and sickness, as reported by the participants. In conclusion, pedometer use is a viable instrument for assessing and increasing walking performance in older adults. More research is needed on long-term effects of pedometer use on body composition and bone density measures.