

ABSTRACT

THESIS: Pedometer Intervention to Increase Physical Activity of Patients Entering a Maintenance Cardiac Rehabilitation Program

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PAGES: 98

Purpose: The primary purpose of this study was to determine if a pedometer-driven physical activity (PA) intervention with individualized stepcount goals would be more efficacious in yielding greater amounts of PA than the usual time-based PA recommendations given to maintenance CR patients. Additionally, the secondary purpose of this study was to assess differences in stepcount activity on days attending maintenance CR and on non-rehab days.

Methods: Subjects entering maintenance CR for the first referral were recruited for study participation and stratified into pedometer feedback (PF) and usual care (UC) groups. All subjects wore a New Lifestyles NL-1000 pedometer. PF subjects wore the pedometer for the duration of the 8-week study. For comparison, UC subjects wore the pedometer at baseline, week 4, and week 8. Both groups were encouraged to accumulate a minimum of 40 - 50 min/d at moderate intensity when attending maintenance CR. UC subjects were encouraged to follow-up with at least 30 min/d PA outside maintenance CR, while PF subjects were given daily stepcount goals. Stepcount goals were calculated as 10% of baseline stepcounts and added weekly to increase daily goal. All subjects completed a 6-

minute walk test at baseline and week 8, and behavioral change questionnaires were completed at baseline, week 4, and week 8.

Results: A total of 18 subjects (PF, n = 9, 53.7±8.0; UC, n = 9, 60.2±9.6 yrs) completed the 8-week study. There were no differences between groups at baseline. PF group increased daily stepcounts by week 4 (19%, 1,080±649 steps/d) and 8 (44%, 2,468±846 steps/d) in addition to days attending rehab by week 4 (14%, 1064±45 steps/d) and 8 (36%, 2,711±423 steps/d) and non-rehab days by week 8 (42%, 1,747±759 steps/d). PF subjects accumulated greater daily stepcounts compared to UC subjects at weeks 4 (26%, 1,405±393 steps/d) and 8 (48%, 2,612±284 steps/d). UC subjects accumulated greater stepcounts on rehab compared to non-rehab days, but no changes were found from baseline for daily stepcounts, rehab, or non-rehab days. There was a time effect for responses to social support from friends for all subjects (baseline to week 4) and a time by group effect for decision balance pro-questions by week 4 where PF significantly increased, UC significantly decreased, and both groups were significantly different.

Conclusions: The results of this study suggest that a pedometer-driven PA intervention yields significantly greater stepcounts compared to time-based PA recommendations among maintenance CR patients.

Key Words: Maintenance cardiac rehabilitation, phase III, pedometer, intervention, stepcounts, physical activity.