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Physical Activity at Midlife and Health-Related Quality of Life in Older Men

A recent study in the Archives investigated associations of midlife physical activity and health status in older age, and the results showed a strong association between midlife leisure time physical activity and successful survival and exceptional health status in later life. However, this cohort was limited to middle-aged men (n=1148); yes to question 2, as moderate activity (n=398); and yes to questions 3 and 4, as high activity (n=236) among whom only 11 men had a competitive activity level. After a 26-year follow-up in 2000 (median age, 73 years; range, 66-81 years), 552 men (91% of survivors at that time [deaths were verified from the Central Population Register]) could be reassessed using a mailed questionnaire. The questionnaire included inquiries about anthropometric measures, housing, prevalence of chronic diseases, medication, and lifestyle factors. The Finnish version of the RAND-36 Item Health Survey 1.0, which is practically the same as SF-36 and validated in the Finnish population, was embedded into the questionnaire. From the responses, a summary morbidity index was also assessed according to the method of Charlson et al. The 8 domains of RAND-36 were physical function, role physical, bodily pain, general health, vitality, social function, role emotional, and mental health. Analyses were performed using NCSS 2004 statistical software (NCSS, Kaysville, Utah). Analysis of covariance was used to compare baseline activity groups, and P < .05 was considered statistically significant.

Results. In 2000, men with a low physical activity in midlife reported significantly higher prevalences of coronary artery disease (P = .02), cerebrovascular disorders (P = .046), and chronic obstructive pulmonary disease (P = .04). Of the adjusted HRQoL scales in old age (in the year 2000), only physical function was significantly related to physical activity in midlife (Figure). Further adjustment for individual diseases (history of coronary ar-
Physical Activity Benefits Various Aspects of Healthy Aging

Physical activity is an effective approach to preventing chronic diseases. We and others have also found that physical activity in midlife is related to healthy aging. In this issue of the Archives, Savela and colleagues report a significant positive association between higher midlife physical activity and greater physical function in older men; activity was not associated with other components of health-related quality of life. A major strength of this study is its long follow-up and detailed measures of quality of life in older age. However, 2 limitations are notable. Assessment of physical activity was limited, with 3 broad categories; thus, measurement errors might have attenuated associations. Second, the sample was relatively small with 552 participants.

In our previous study, Savela et al note, we did not consider individual quality of life components; our interest was in understanding overall successful survival—a clear public health priority. Nonetheless, for comparison, in our data, midlife physical activity was related to the SF-36 mental health index and to physical function (2 components in our definition of successful survival, along with chronic diseases and cognition). Adjusted odds ratios (95% confidence intervals) for the fifth vs first quintile of physical activity were 0.43 (0.38-0.49) (P value for trend, <.001) for physical function and 0.80 (0.72-0.90) (P value for trend, <.001) for mental health. Overall, however, despite relatively low power, the study by Savela et al adds to the growing evidence that greater physical activity in midlife contributes to aspects of healthy aging.

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INVITED COMMENTARY

Comment. Leisure-time physical activity in midlife predicted better physical function in old age but was not significantly associated with mental or social dimensions of the HRQoL in this socioeconomically homogeneous male cohort. Moreover, the relationship was not explained, albeit attenuated, by diseases associated with less physical activity. Because the physical function score of the SF-36 has been shown to be a valid measure of mobility-disability, more physical activity in healthy individuals in midlife may thus have an independent and specific impact for the prevention of disability in old age.

Tilvis, Miettinen, and T. E. Strandberg.


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