Diet and physical activity behaviors for healthy aging

av

Konstantinos-Georgios Papaioannou

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Opponent: docent Antoneta Granic
Newcastle University
Newcastle, United Kingdom

Örebro universitet
Institutionen för Hälsovetskaper
701 82 ÖREBRO
Abstract


The process of aging is characterized by physiological changes in various body systems and biological functions, that affect health and functional capacity. Adopting healthy lifestyle behaviors could be an effective, accessible, and low-cost strategy to delay age-related functional changes. Dietary habits, including both patterns and amounts of specific food items, and physical activity (PA) are two lifestyle factors that may have an impact on several age-related health aspects. The overall aim of this thesis was to determine the links between diet, physical activity behaviors, and biological markers of healthy aging, including muscle health, metabolic health, and systemic inflammation in older adults.

The findings of the present work collectively highlight the role of diet and physical activity behaviors on biological markers of healthy aging in older adults. Daily amounts of sedentary time were detrimentally associated with the systemic inflammatory environment, with sex-specific alterations in pro- and anti-inflammatory biomarkers. In term of dietary habits, higher intakes of vegetables were associated with lower levels of the pro-inflammatory biomarker IL-6 in older adults, regardless of intakes of other health-related food groups, physical activity behaviors, and adiposity level. Moreover, lower intakes of fruit and vegetables (FV) in general, and of vegetables in particular, increased the likelihood of having metabolic syndrome (MetS) in older adults, which was evident even after considering time spent in sedentary behavior and adherence to the moderate-to-vigorous physical activity (MVPA) guideline. Finally, healthy eating was beneficially associated with lower sarcopenia risk in physically active older men and women, even when engagement in muscle-strengthening activities and adherence to guidelines for protein intake were considered.

Overall, the present thesis demonstrates the detrimental impact of excessive amounts of sedentary time on markers of systemic inflammation and highlights the beneficial effects of healthy eating on biological determinants of healthy aging regardless of the potential confounding effects of physical activity behaviors.

Konstantinos-Georgios Papaioannou, School of Health Sciences Örebro University, SE-701 82 Örebro, Sweden, konstantinos.papaioannou@oru.se