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Abstract

Whole-Grain Intake in Mid-Life and Healthy Ageing in the Danish Diet, Cancer and Health Cohort †

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Abstract: Background: The vast majority of populations are facing growth in the proportion of older persons. Hence, there is an interest in identifying factors associated with longer and healthier life in older ages. Lifestyle, including diet, is crucial for healthy life expectancy, but evidence to support more specific dietary guidelines easily implemented in real life is lacking. Whole grains are specific dietary components with unexplored potential in healthy ageing. Methods: Using an illness-death multistate model approach with a priori chosen confounder control, the association between whole-grain intake and expected time as "healthy" and "with disease" during 20 years of follow-up was assessed. Healthy ageing was defined as the absence of cancer, ischemic heart disease, stroke, type 2 diabetes, asthma, chronic obstructive pulmonary disease, and dementia. Results: Based on data from 22,606 men and 25,468 women from the Diet, Cancer and Health cohort withmean follow-up times of 14 to 17 years, respectively, a doubling in whole-grain intake was associated with 0.43 (95% CI: 0.33–0.52) and 0.15 (0.06–0.24) years more lived without disease, for men and women. When comparing extreme quartiles, men with the highest whole-grain intake lived on average one year more without disease than those consuming the least. Furthermore, whole-grain intake was inversely associated with life expectancy with disease. Conclusions: This study suggests that whole grains are associated with healthy ageing and inversely associated with life expectancy with disease after age 50. These findings should encourage guidelines for increased whole-grain intake, especially among those with low intake, to support disease-free good health in the last part of life.

Keywords: healthy ageing; whole grains; epidemiology

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