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209 - MACRONUTRIENT CONTENT AND QUALITY, AND RISK OF MULTIMORBIDITY IN THE UK BIOBANK

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Resumen

Background/Objectives: Multimorbidity is one of the main determinants of health span among older adults. The impact of diet on the development of multimorbidity has been studied, addressing specific diet patterns or nutrients; however, no studies have focused on optimal macronutrient quantity and quality, and multimorbidity. We aimed to examine the prospective association between overall, healthy and unhealthy Low-Carbohydrate diets (LCD), and Low-Fat diets (LFD), and incidence of multimorbidity.

Methods: This study included 112,710 individuals from the UK Biobank cohort. Food consumption was assessed using up to five 24-hour dietary recalls. LCD and LFD scores were computed, with unhealthy and healthy versions of both scores, based on macronutrient quality (high-quality vs. low-quality carbohydrate or fat, and plant vs. animal protein). Multimorbidity was defined as the coexistence of two or more of nine chronic diseases including cancer, chronic obstructive pulmonary disease, dementia, Parkinson's disease, stroke, depression, osteoarthritis, diabetes, and coronary heart disease.

Results: 8,387 multimorbidity cases occurred during a median follow-up of 10.7 years. Overall LCD and LFD scores were not associated with higher risk of multimorbidity. For the unhealthy LCD score, a higher risk of multimorbidity was found for individuals in the highest quintile vs. the lowest quintile [fully-adjusted hazard ratio (HR): 1.07, 95% confidence interval: 1.01, 1.15, p-trend = 0.16]; analyses among non-tobacco smokers showed an estimate of 1.11 (1.00, 1.23, p-trend = 0.09). The unhealthy LFD score was

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associated with multimorbidity among the general population [fully-adjusted HR quintile 5 vs. 1: 1.07 (1.00, 1.14), p-trend = 0.07] and among never smokers [1.12 (1.01, 1.24); p-trend = 0.01]. Results for the healthy scores were less consistent. The plant protein component in the scores showed an inverse association with the risk of incident multimorbidity, whereas the low-quality fat component and the animal protein component were associated with higher risk of multimorbidity.

Conclusions/Recommendations: Diets defined only by the total amount of carbohydrates or fat were not associated with incident multimorbidity. However, unhealthy versions including low-quality macronutrients and animal protein were associated with increased risk of multimorbidity.

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