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# 156 - PLANT-BASED DIETS AND FALLS IN OLDER ADULTS: A PROSPECTIVE COHORT STUDY

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## Resumen

Background/Objectives: Falls are an important geriatric syndrome with major clinical and public health implications. Adequate intake of protein, vitamin D, and calcium is essential for musculoskeletal health and prevents risk of falling. However, concerns have been raised about meeting daily recommendations when following a plant-based diet. We aimed to assess the association between adherence to a plant-based diet and risk of falls among community-dwelling Spanish older adults.

Methods: Prospective cohort study using data from the Seniors-ENRICA II cohort (Madrid, Spain). The cohort was established in 2015-17 including 3,273 community dwelling adults aged 65 and over. At baseline, habitual food intake was assessed through a validated computer-assisted diet history. Food groups were classified as healthy plant foods, less healthy plant foods and animal foods. A plant-based diet index (PDI) was constructed from two complementary scores: 1) Healthy PDI (hPDI) with positive scores for healthy plant foods (fruits, vegetables, whole grains, nuts and legumes); 2) Unhealthy PDI (uPDI) with positive scores for less healthy plant foods (juices, refined grains, sugar-sweetened beverages). Animal foods received negative scores in both indices. In a follow-up wave (2019-20) self-reported falls during the previous year was collected. Odds ratios (OR) and 95% confidence intervals (CI) for the association between PDI and incident falls were calculated using logistic regression

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models adjusted for main confounders.

Results: Among the 1,847 participants, 27.9% reported at least one fall in the previous year, and 48.8% of those individuals required medical assistance. Those in the highest hPDI tertile experienced a lower incidence of falls (OR: 0.73; 95%CI: 0.55-0.96; p-trend = 0.025), particularly those requiring healthcare (OR: 0.62; 95%CI: 0.42-0.90; p-trend = 0.016). However, a higher uPDI score was associated with a higher risk of falling (OR: 1.34; 95%CI: 1.00-1.79; p-trend = 0.039).

Conclusions/Recommendations: Adherence to a hPDI was associated to a lower risk of falls among older adults while adherence to a uPDI was associated with greater risk. These results support a global transition toward healthful plant-based diets in older population and highlight the important role of a healthy diet in preventing falls.

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