Ultra-processed food consumption and incident frailty: A prospective cohort study of older adults

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Background: Ultra-processed food intake has been associated with chronic diseases. The aim of this study was to assess the relationship between ultra-processed food intake and incident frailty in community-dwelling older adults.

Methods: Prospective cohort study with 1,822 individuals aged 60 who were recruited in 2008-2010 in Spain. At baseline, food consumption was obtained using a validated computerized face-to-face dietary history and classified according to the nature and extent of its processing following the NOVA classification. In 2012, incident frailty was ascertained based on Fried's criteria. Logistic regression was used to obtain odds ratios (OR) and their 95% confidence interval (95% CI). Models were adjusted for main confounders.

Results: After a mean follow-up of 3.5 years, 132 cases of frailty were identified. In the fully adjusted analyses, the ORs (95% CI) of frailty risk across quartiles of ultra-processed food intake, expressed as percentage of total energy, were: 1.00, 1.52 (0.78-2.96), 2.98 (1.62-5.50), and 3.67 (2.00-6.73); p linear-trend: <0.001. Similar results were obtained when ultra-processed food intake was expressed as gram per day/weight of each subject (g/kg). Nutrients from ultra-processed foods were calculated. The highest quartile of intake of total proteins, animal proteins, carbohydrates, simple sugars, polysaccharides, total fatty acids, monounsaturated fatty acids, saturated fatty acids and polyunsaturated fatty acids were significantly associated with frailty when compared with the lowest one. Regarding food groups, the highest versus the lowest tertiles of intake of yogurts and fermented milks, and other non-alcoholic drinks were also significantly related to incident frailty.

Conclusions: Higher intake of ultra-processed food was associated with an important increase of frailty risk.

Speaker Biography

Helena Sandoval-Insausti is Medical Doctor, Master of Public Health and since February 2016, Doctoral candidate in Public Health. She is visiting researcher at the Nutrition Department of Harvard T.H. Chan School of Public Health since August 2017. She has worked widely in nutrition and aging with ENRICA cohort with more than 3000 participants. She is winner 2017 Best Epidemiology Article Award of the Spanish Society of Epidemiology and winner 2018 Best MD Internship of Madrid, Spain.

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