

## **Dietary fish and meat intake and dementia in Latin America, China, and India: a 10/66 Dementia Research Group population-based study.**

[Albanese E](#), [Dangour AD](#), [Uauy R](#), [Acosta D](#), [Guerra M](#), [Guerra SS](#), [Huang Y](#), [Jacob KS](#), [de Rodriguez JL](#), [Noriega LH](#), [Salas A](#), [Sosa AL](#), [Sousa RM](#), [Williams J](#), [Ferri CP](#), [Prince MJ](#).

From King's College London, Section of Epidemiology, Health Services and Population Research Department, De Crespigny Park, SE5 8AF London, United Kingdom. emiliano.albanese@iop.kcl.ac.uk

**BACKGROUND:** Evidence of an association between fish and meat consumption and risk of dementia is inconsistent and nonexistent in populations in developing countries.

**OBJECTIVE:** The objective was to investigate associations between fish and meat consumption with dementia in low- and middle-income countries. **DESIGN:** One-phase cross-sectional surveys were conducted in all residents aged  $>$  or  $=65$  y in 11 catchment areas in China, India, Cuba, the Dominican Republic, Venezuela, Mexico, and Peru. A total of 14,960 residents were assessed by using the 10/66 standardized protocol, which includes face-to-face interviews for dietary habits and a cross-culturally validated dementia diagnosis.

**RESULTS:** Dietary intakes and the prevalence of dementia varied between sites. We combined site-specific Poisson regression prevalence ratios (PRs) for the association between fish and meat consumption and dementia in 2 fixed-effect model meta-analyses adjusted for sociodemographic and health characteristics and fish and meat consumption as appropriate. We found a dose-dependent inverse association between fish consumption and dementia (PR: 0.81; 95% CI: 0.72, 0.91) that was consistent across all sites except India and a less-consistent, dose-dependent, direct association between meat consumption and prevalence of dementia (PR: 1.19; 95% CI: 1.07, 1.31).

**CONCLUSIONS:** Our results extend findings on the associations of fish and meat consumption with dementia risk to populations in low- and middle-income countries and are consistent with mechanistic data on the neuroprotective actions of omega-3 (n-3) long-chain polyunsaturated fatty acids commonly found in fish. The inverse association between fish and prevalent dementia is unlikely to result from poorer dietary habits among demented individuals (reverse causality) because meat consumption was higher in those with a diagnosis of dementia.