

The Type of Fish you Eat Matters Suggests by a 20-Year Study of 90,000 Adults

Researchers evaluated the relationship between dietary [seafood](#) intake and long-term mortality risk in a large Japanese cohort.

The researchers analyzed 90,944 community-dwelling Japanese adults from the [Japan Public Health Center-based Prospective Study](#) (JPHC Study) and followed them for an average of 20.8 years to assess associations between different fish types, processing methods, marine omega-3 fatty acids, and mortality.

The study found that moderate seafood intake was associated with lower all-cause mortality among women, while omega-3-rich fish in women and unsalted seafood in men were associated with lower mortality from [cerebrovascular disease](#).



Study

The present study aimed to address this knowledge gap by evaluating how total seafood, unsalted varieties, and marine [fatty acids](#) were associated with all-cause and cause-specific mortality in a long-term Japanese cohort.

The study was conducted across 11 [public health](#) center areas in Japan and comprised data from 90,944 participants (42,150 males and 48,794 females; aged 40 to 69 years at initial recruitment) who were followed for an average of 20.8 years. The researchers excluded people with a reported history of cancer, stroke, or coronary artery disease before the dietary baseline. Participants reported their usual intake over the preceding year using a previously validated 138-item food frequency questionnaire (FFQ) that captured the consumption of 19 seafood items.

For their analyses, the researchers assessed total fish and shellfish, [salted seafood](#), unsalted fish and shellfish, and omega-3-rich fish (such as mackerel, salmon, and sardines), alongside marine-derived omega-3 fatty acids. The study's "unsalted" category also included canned tuna and certain processed fish products.

The study used Cox regression models to compare mortality across five intake groups. Analyses were carried out across energy-adjusted intake quintiles and adjusted for individuals' age, body mass index (BMI), smoking, [alcohol consumption](#), physical activity, medical history, and other dietary factors, including sodium intake.

Results

During follow-up, 26,976 participants died. After adjustment for other factors, total fish and shellfish consumption showed a [nonlinear association](#) with all-cause mortality among females. Mortality was lowest in an upper-middle intake group consuming approximately 100 g/day, but the researchers cautioned against interpreting this as an established optimal amount.

Among females, higher consumption of omega-3-rich fish was associated with lower all-cause and cerebrovascular [disease](#) mortality, with a similar overall trend for cardiovascular deaths. The highest intake group had an approximately 19% lower hazard of cerebrovascular disease mortality than the lowest group.

Among males, total seafood intake showed no association with all-cause mortality, although the fourth intake group had lower cerebrovascular [disease](#) mortality. For unsalted fish and shellfish, several intake groups had lower cerebrovascular disease mortality than the lowest intake group. Associations were clearer when salted products were excluded, but the study did not establish whether sodium explained this pattern.

In women, moderate unsalted seafood intake was also associated with lower overall and cardiovascular mortality, including deaths from [heart disease](#). In women, higher marine-derived omega-3 fatty acid intake was similarly associated with lower overall, cardiovascular, and cerebrovascular mortality, but not with overall mortality in men.

A weak upward trend between omega-3-rich fish consumption and all-cause mortality was observed among males, but the highest-intake group did not differ significantly from the [lowest-intake group](#).

The study relied on a single dietary assessment and did not measure exposure to seafood contaminants. [Dietary changes](#) during follow-up may have been missed, unmeasured factors could have influenced the findings, and the salted and unsalted seafood categories were not independently validated.

Conclusion

The present study suggests that associations with mortality vary according to [seafood](#) type and processing method. The observational findings do not establish that changing fish intake prevents stroke or cardiovascular deaths.

Further research is needed to confirm the associations, investigate differences between males and females, and determine whether the findings should influence [dietary guidance](#).

Source:

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