

Mortality in a cohort with high fish consumption.

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BACKGROUND: Our aim was to assess the mortality of fishermen and fishermen's wives in Finland, presuming that the mortality reflects their high consumption of contaminated fish. **METHODS:** All Finnish fishermen, registered since 1980, were identified from the Professional Fishermen Register (N = 6410), and the fishermen's wives from the national population register (N = 4260). The cohorts were individually linked with cause-of-death data until 2005 at Statistics Finland. The follow-up started in the year after the first registration as a fisherman and at marriage (if later) for the wives. The standardized mortality ratios (SMRs) were calculated based on the national mortality rates. In addition, blood samples and food frequency questionnaire data were collected from a volunteer sample. **RESULTS:** The average fish consumption and serum concentrations of fish-derived fatty acids and environmental contaminants were higher among the fishermen and their wives than among the general population from the same region. The fishermen and their wives had lower mortality from all causes (SMR 0.78, 95% confidence interval (CI) 0.73-0.82, and 0.84, 0.76-0.93, respectively), and ischaemic heart diseases (0.73, 0.65-0.81, and 0.65, 0.50-0.83) than the general population. Mortality from cerebrovascular diseases and malignant neoplasms was decreased among the fishermen (0.67, 0.52-0.85, and 0.90, 0.80-1.01), but not among the wives. In addition, the fishermen's mortality from water transport accidents was extremely high (8.31, 5.65-11.79). **CONCLUSIONS:** The fishermen and their wives had lower mortality from many natural causes. The high intakes of environmental contaminants in fish were not seen as excess mortality.