

RISK-BENEFIT ANALYSIS OF SEAFOOD CONSUMPTION: A REVIEW

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Research on the benefits and risks of seafood consumption has increased greatly over the past few decades. Early work with indigenous groups such as the Greenland Inuits suggested an association between high fish intake and reductions in coronary heart disease. On the other hand, consumption of mercury-contaminated seafood in Minamata Bay, Japan, showed the risks associated with populations exposed to high levels of mercury. Two large epidemiological studies involving pregnant women and their offspring in the Faroe Islands and the Seychelles Islands further explored the risks, or lack of risks, associated with mercury by examining neurodevelopmental effects among populations consuming high amounts of fish. At the same time, a number of studies on the potential benefits of long-chain omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) confirmed the beneficial roles of these compounds in health and expanded their role beyond heart disease. Over the past 10 years, a number of risk-benefit models for seafood have been developed, particularly following the 2004 mercury advisory released jointly by the U.S. Environmental Protection Agency and the U.S. Food and Drug Administration. The debate over possible risks and benefits has intensified and while researchers agree that seafood is an important part of the diet for all segments of the population, there is disagreement surrounding the amount and types of seafood that should be consumed to maximize benefits and minimize risks. This presentation will provide a historical overview of the controversy surrounding seafood consumption, including a summary of some of the major findings of risk-benefit analyses.