

[Ranking the contributions of commercial fish and shellfish varieties to mercury exposure in the United States: Implications for risk communication](#)

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Abstract

Fish and shellfish have important nutritional benefits, and US per capita seafood consumption has increased substantially since 2002. Recent research has reinforced concerns about adverse effects of methylmercury exposure, suggesting that methylmercury doses associated with typical US rates of fish consumption may pose measurable risks, with no threshold. These converging trends create a need to improve risk communication about fish consumption and mercury. The analysis performed here identifies the relative importance of different fish and shellfish as sources of mercury in the US seafood supply and proposes improved consumer advice, so that the public can benefit from fish consumption while minimizing mercury exposure. I have quantified contributions to total mercury in the US seafood supply by 51 different varieties of fish and shellfish, then ranked and sorted the 51 varieties in terms of relative impact. Except for swordfish, most fish with the highest mercury levels are relatively minor contributors to total inputs. Tuna (canned light, canned albacore and fresh/frozen varieties) accounts for 37.4 percent of total mercury inputs, while two-thirds of the seafood supply and nine of the 11 most heavily consumed fish and shellfish are low or very low in mercury. Substantial improvement in risk communication about mercury in fish and seafood is needed; in particular, several population subsets need better guidance to base their seafood choices more explicitly on mercury content. I have sorted the 51 seafood varieties into six categories based on mercury levels, as a framework for improving risk communication in this regard.

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