

**APHA- Student Assembly**

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***Safe levels of mercury in selected fish from grocery stores in the Inland Empire, California***

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**Abstract:**

Background/problem: Fish is a rich source of omega-3 fatty acids that benefit the heart of healthy people and those at high risk of cardiovascular disease. However, most fish are contaminated with methylmercury, the organic form of mercury (Hg) which impairs neurological development in fetuses and exhibits toxic effects in adults, posing a challenge to public health. The purpose of this study was to examine if commercially sold fish in the Inland Empire have safe levels of methylmercury, as deemed by the USEPA. Methods/Design: Twenty-four fish, including two samples of four species were obtained from three grocery stores in the Inland Empire. Species included tilapia, catfish, salmon, mackerel, and swordfish. Samples were tested at the E.S. Babcock & Sons Inc. Environmental Laboratories in Riverside, CA. USEPA Method 7471A Mercury Cold Vapor Technique was used. Homogenous mixture of 0.5 g of fish sample was used for analysis. Data Analysis: Means and associated variance levels of Hg were estimated along with 95% CI and compared to USEPA standard reference doses. Results: Tilapia, catfish and salmon had Hg concentrations lower than the USEPA standards. Mackerel and swordfish had higher concentrations of Hg. The average Hg concentration found in fish samples in ppm was 0.00618, in tilapia; 0.01131 in salmon; 0.00132 in catfish and 0.2868 in swordfish and mackerel. Conclusion/Recommendations: Our pilot data suggests that tilapia, salmon and catfish from grocery stores in the Inland Empire are within the USEPA advisories for mercury levels and safe for consumption.

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