

Utah Fish Advisories 2012

Changes to Utah Fish Consumption Values

The new Utah Fish Consumption Advisories are designed to be protective of the health of all Utahns while promoting the benefits of including fish in a healthy diet. Previously, Utah Fish Advisories recognized two population groups: (1) pregnant women and children under 5 years, and (2) all other adults. The new advisories will recognize three groups: (1) pregnant women and children under the age of 5 years, (2) women of child-bearing age and children between the ages of 6 and 16, and (3) all other adult women and men. In addition to these new classifications, the new Utah Fish Advisory uses the Agency for Toxic Substance and Disease Registry's (ATSDR) Minimum Risk Level (MRL) for mercury (0.3 micrograms/kilograms/day (ug/kg/day)) to guide consumption for all adult men and adult women who are not of child-bearing age. The allowable fish consumption for the other population groups is based upon the more conservative Environmental Protection Agency's (EPA) Reference Dose (RfD) for mercury of 0.1 ug/kg/day.

The new consumption guidelines are designed using the following information:

- The EPA RfD is based primarily upon a study of seafood eating vs. non-seafood eating populations in the Faroe Islands (over 900 infant pairs). This study found that mothers with a daily intake of roughly 1.0 ug/kg/day and higher had an increased risk of having children with neuropsychological effects due to methylmercury consumption. The children whose mothers who consumed less than this amount did not exhibit adverse health effects (Grandjean et al., 1997). To be as protective of the most sensitive populations as possible, the EPA arrived at the current RfD which is ten times less than the dose found to result in adverse health effects (USEPA, 2001).
- The ATSDR MRL is based upon a study performed in a non-industrialized region of the Seychelles Islands (over 700 infant pairs). The participants were exposed to mercury through fish consumption, and outcomes compared to a non-fish eating group. This study found that the fish-eating population consumed an average of 1.3 ug/kg/day with NO observable adverse effect (Davidson et al., 1998). To be as protective of the most sensitive populations as possible, the ATSDR arrived at the current MRL which is 4.5 times less than the dose found to cause no adverse health effects (ATSDR, 1999).
- These new guidelines are consistent with the consumption advisories used in the surrounding states of Idaho, Arizona, and Nevada.

Effectively, this advisory triples the fish consumption for the general adult population in Utah. The Utah Department of Health is confident that these changes to the fish consumption advisories will be first and foremost protective of human health and will promote fish as an important part of a healthy diet.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1999. *Toxicological Profile for Mercury*. Atlanta, Georgia: U.S. Department of Health and Human Services. Retrieved on Oct. 1, 2012 from: <http://www.atsdr.cdc.gov/toxprofiles/tp46.pdf>

Davidson et al. 1998. Effects of prenatal and postnatal methylmercury exposure from fish consumption on neurodevelopment: Outcomes at 66 months of age in the Seychelles Child Development Study. *JAMA* 280(8):701-707.

Grandjean et al. 1997. Cognitive deficit in 7-year-old children with prenatal exposure to methylmercury. *Neurotoxicol Teratol* 20:1-12.

United States Environmental Protection Agency. 2001. Integrated Risk Information System Methylmercury; CASRN 22967-92-6. Retrieved on Oct. 1, 2012 from: <http://www.epa.gov/iris/subst/0073.htm>