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2014 Updated Fish Consumption Advice for Alaskans

Background

On July 21, 2014, the Alaska Section of Epidemiology (SOE) issued updated fish consumption guidance for people who catch and eat fish from Alaska waters.¹ Extensive scientific research has documented the numerous health, social, cultural, and economic benefits of eating fish. The updated guidelines continue to encourage fish consumption, particularly for women of childbearing age and children, as fish is an excellent source of lean protein, omega-3 fatty acids, antioxidants, and vitamins that promote healthy brain development. The purpose of this Bulletin is to provide a brief overview of the updates.

Risks Associated with Fish Consumption

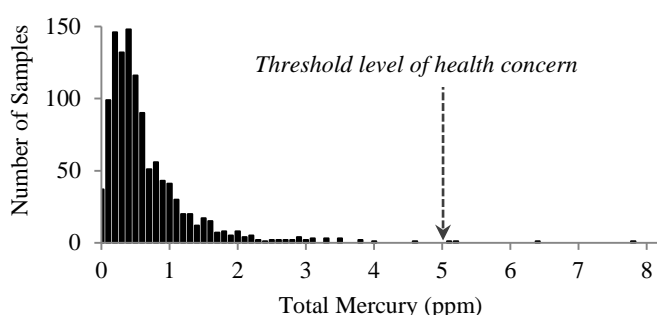
Fish can contain environmental contaminants that pose health risks, and certain fish are much safer to consume than others. Worldwide, the most important finfish contaminants are mercury, persistent organic pollutants (POPs), and biological toxins (e.g., ciguatera and scombrototoxin). POPs, which include polychlorinated biphenyls and organochlorine pesticides, are toxicants that do not degrade rapidly in the environment or in the body. Fortunately, most Alaska fish contain very small concentrations of POPs that are too low to pose a substantial threat to the public's health.² Moreover, ciguatera and scombroid poisoning are rare occurrences in Alaska. Therefore, the primary contaminant of concern in Alaska fish is mercury. Exposure to too much mercury can affect how children behave, learn, and solve problems later in life. National studies have shown that all fish contain some mercury in varying concentrations based on species, location, age, and other factors.

Biomonitoring in Alaska

To assess the safety of Alaska seafood, the Alaska Departments of Environmental Conservation (DEC) and Health and Social Services monitor contaminant levels in fish and human seafood consumers, respectively. Current data from Alaska's fish monitoring program demonstrate a wide range of mercury tissue concentrations from the 5,907 Alaska fish, shellfish, and mollusks (representing 53 species) sampled.² Most species of Alaska fish, including all five wild Alaska salmon species, contained mercury levels that were too low to constitute a health risk. However, some Alaska fish species are consistently found to have elevated mercury levels; as such, consumption restrictions for these species are warranted for pregnant women, women of childbearing age that may become pregnant, nursing mothers, and children.

Of the 1,145 women of childbearing age from 148 Alaska communities who participated in Alaska's ongoing Statewide Mercury Biomonitoring Program through March 2014, only four (0.3%) had hair mercury levels that exceeded SOE's level of health concern of >5 ppm mercury (range: 5.0–7.8 ppm; Figure).

Figure. Hair Mercury Concentrations among Pregnant Women and Women of Childbearing Age (15–45 years; n=1,145) — Alaska, July 2002–March 2014



(Contributed by Ali K. Hamade, PhD, DABT, Environmental Public Health Program Manager, Section of Epidemiology.)

Highlights of the 2014 Guideline Updates

- The Alaska fish consumption calculator has been updated to help consumers make informed fish consumption choices.³
- Due to the well-documented health and cultural benefits of fish consumption, adult men, women beyond childbearing years, and women who will not become pregnant may continue unrestricted consumption of all fish from Alaska waters except salmon shark, which should only be consumed sparingly.
- For pregnant women, women of childbearing age who may become pregnant, nursing mothers, and children aged <18 years, the following guidance is provided:
 - Continue unrestricted consumption of Alaska fish that are low in mercury, such as any of the 5 species of salmon, arctic cisco, big skate, black rockfish, broad whitefish, Dolly Varden, dusky rockfish, grayling, halibut <40 pounds, humpback whitefish, least cisco, lingcod <35 inches, Pacific cod, Pacific ocean perch, rainbow trout, roughey rockfish, sablefish, sheefish, and walleye pollock.
 - Limit consumption of lake trout, medium to large halibut (40–80 pounds), and medium-sized lingcod (35–40 inches length) to ≤16 meals per month.
 - Limit consumption of longnose skate, large halibut (80–140 pounds), and large lingcod (40–45 inches length) to ≤12 meals per month.
 - Limit consumption of yelloweye rockfish, and very large halibut (140–220 pounds) to ≤8 meals per month.
 - Limit consumption of salmon shark, spiny dogfish, very large lingcod (≥45 inches), and extra-large halibut (>220 pounds) to ≤4 meals per month.
 - Based on levels of mercury in most store-bought halibut from Alaska, continue unrestricted consumption of these fish.
- In addition to statewide fish consumption advice, the updated guidelines now provide region-specific advice based on assessments of contaminants in pike and burbot (lush) from the Middle Kuskokwim River area. To minimize exposure to mercury and maximize the health benefits of fish consumption, women of childbearing age and children living in communities in the Middle Kuskokwim River area are advised to eat more of the smaller (<2 feet long) fish and less of the larger (≥2 feet long) and dried fish, as the latter are more likely to contain higher measured mercury concentrations. Additional information is available on the SOE website.⁴
- Fishers who are concerned about mercury levels in the large halibut (≥80 lbs) or other fish they catch are encouraged to have their fish analyzed for mercury by DEC. SOE staff will then provide individualized advice about the amount of that particular fish sensitive family members may eat (phone: 907-375-8200).²
- The Alaska Fish Consumption Guidelines will be updated periodically as new data become available.¹

References

1. SOE Fish Consumption Guidelines. 2014. Available at: www.epi.alaska.gov/eh/fish/FishConsumptionAdvice2014.pdf
2. DEC Fish Monitoring Program. Available at: <https://dec.alaska.gov/eh/vet/fish.htm>
3. SOE. Fish Consumption Guidelines. 2007. Available at: www.epi.alaska.gov/eh/fish/FishConsumptionCalc.pdf
4. SOE. Fact Sheet: Mercury in Burbot (Lush) and Pike from the Middle Kuskokwim River Area – June 2, 2011. Available at: www.epi.alaska.gov/eh/fish/MidKuskoPikeBurbotFactSheetJune2011.pdf