Mercury Contaminated Seafood: State Advisories and Other Protective Steps

Mercury Policy Project

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FDA MONITORING DATA*

MERCURY CONTAMINATION IN SEAFOOD BY PERCENTAGE OF SAMPLES TAKEN

Canned Tuna

Year	# samples taken	0-0.3 ppm	0.3-0.5 ppm	0.5-1 ppm	Exceeds FDA's Action Level** 1-2 ppm**	2-4 ppm**	>4 ppm**
1992	39	74%	18%	8%	0%	0%	0%
1993	19	89%	11%	0%	0%	0%	0%
1994	NONE	--	--	--	--	--	--
1995	13	85%	15%	0%	0%	0%	0%
1996	NONE	--	--	--	--	--	--
1997	NONE	--	--	--	--	--	--
1998	NONE	--	--	--	--	--	--

Large Tuna

Year	# samples taken	0-0.3 ppm	0.3-0.5 ppm	0.5-1 ppm	Exceeds FDA's Action Level** 1-2 ppm**	2-4 ppm**	>4 ppm**
1992	47	62%	13%	25%	0%	0%	0%
1993	68	63%	21%	16%	0%	0%	0%
1994	6	33%	50%	0%	17%	0%	0%
1995	32	22%	22%	47%	9%	0%	0%
1996	6	17%	17%	33%	33%	0%	0%
1997	2	50%	50%	--	--	--	--
1998	NONE	--	--	--	--	--	--

Shark

Year	# samples taken	0-0.3 ppm	0.3-0.5 ppm	0.5-1 ppm	Exceeds FDA's Action Level** 1-2 ppm**	2-4 ppm**	>4 ppm**
1992	135	1%	18%	42%	30%	8%	1%
1993	62	8%	8%	55%	16%	13%	0%
1994	55	9%	25%	33%	31%	2%	0%
1995	29	3%	34%	38%	25%	0%	0%
1996	14	0%	14%	36%	43%	7%	0%
1997	21	4%	24%	43%	24%	5%	0%
1998	7	0%	29%	29%	29%	1%	0%

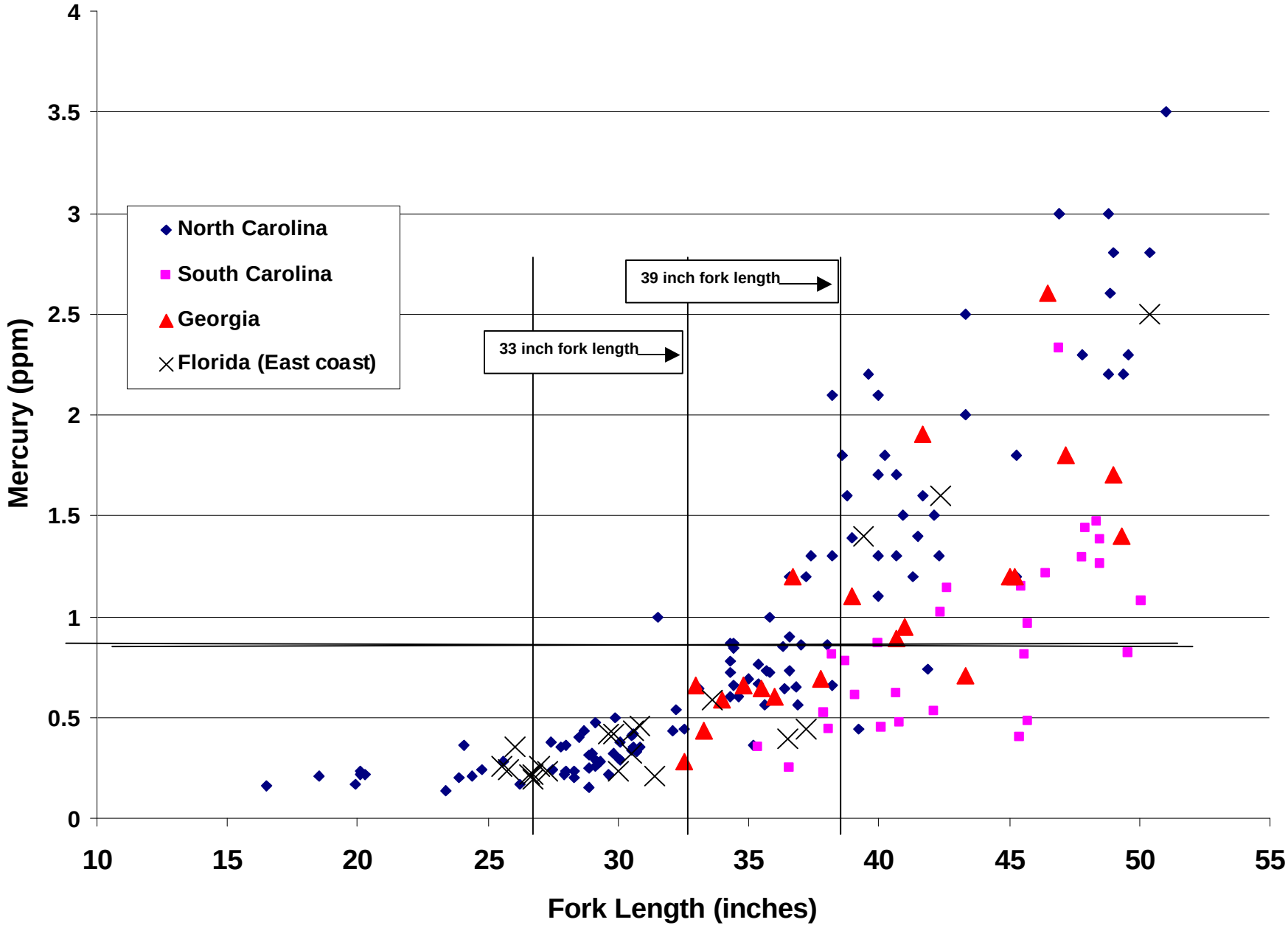
Swordfish

Year	# samples taken	0-0.3 ppm	0.3-0.5 ppm	0.5-1 ppm	Exceeds FDA's Action Level** 1-2 ppm**	2-4 ppm**	>4 ppm**
1992	109	2%	7%	59%	30%	2%	0%
1993	83	10%	16%	52%	23%	1%	0%
1994	94	1%	10%	56%	28%	5%	0%
1995	47	2%	9%	47%	40%	2%	0%
1996	112	4%	3%	48%	43%	2%	0%
1997	70	9%	6%	41%	40%	3%	1%
1998	33	15%	9%	45%	31%	0%	0%

* Information received in response to a 1999 Freedom of Information Request; Food and Drug Administration (US). Listing of pesticides, industrial chemicals, and elements data by fiscal year, origin, sample flag, and industry/product code. Washington: FDA; 1999 Jun 3.

** Percentage over FDA's 1 part per million "action level" for methylmercury in seafood.

Mercury concentrations in the edible tissue of King Mackerel collected in North Carolina, South Carolina, Georgia and Florida (East Coast).

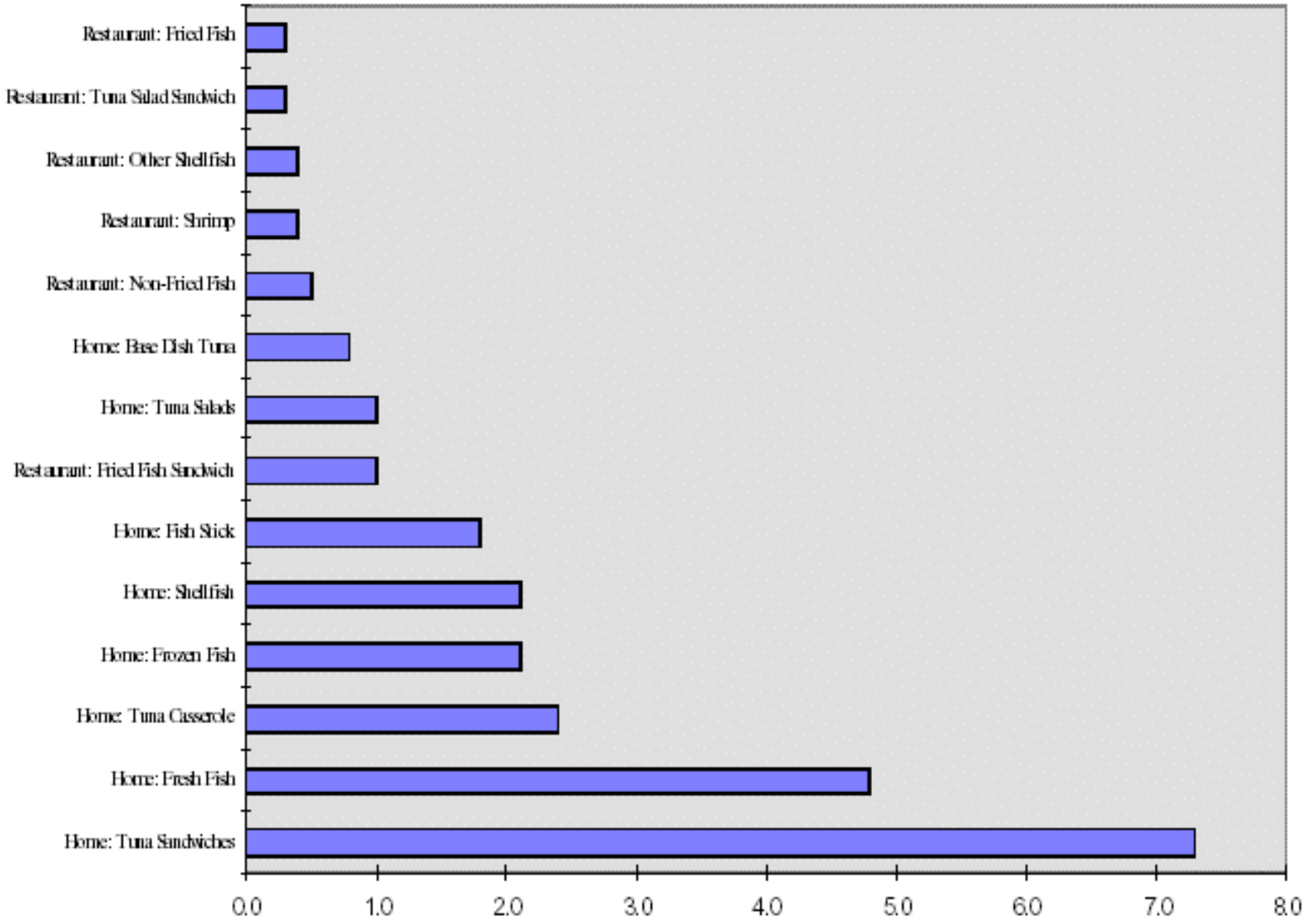


State Mercury Seafood Advisories Where More Stringent than FDA Standards*

State	Age of Children	Fresh Tuna	Shark	Tilefish	Swordfish	King Mackerel	All other Ocean and Shellfish
Connecticut	Under 6	One meal per month	General pop. 1 to 2 meals per month		General pop.1 to 2 meals per month		One to two meals per week
Maine	Under 8		General pop. 2 meals per month	General pop. 2 meals per month	General pop. 2 meals per month	General pop. 2 meals per month	No more than 2 meals per week, including canned
Massachusetts	Under 12	Do not consume tuna steak					No more than 2 meals per week, including canned
Minnesota	Under 6	One meal per month					Salmon, shellfish 2 to 3 meals per week. Cod, pollock, and haddock 1 meal per week. Halibut, orange roughy 1 meal per month
New Hampshire	Under 7						No more than 2 meals per week, including canned
New Jersey			General pop. do not consume		General pop. do not consume		
Washington	Under 6	Do not consume fresh or frozen					
Wisconsin	Under 15	One meal per month General pop. 1 meal per week	General pop. 1 meal per month	General pop. 1 meal per month	General pop. 1 meal per month	General pop. 1 meal per month	Salmon, shellfish 2 to 3 meals per week. Cod, pollock, and haddock 1 meal per week. Halibut, orange roughy 1 meal per month. General pop. 1 meal per week.

* Where not specified for general population, Table applies to pregnant and nursing women, women who may become pregnant, and children

Average Number of Fish Meals Per Person in 1997



Source: 1998 Annual Report on the United States Seafood Industry

Mercury Contamination in Canned Tuna by Percentage of Samples Taken

Year	Source	Number of Samples Taken	0-0.3 ppm	0.3-0.5 ppm	0.5-1 ppm
1990-1991	Florida*	49	90%		10%
1992	FDA**	39	74%	18%	8%
1993	FDA**	19	89%	11%	0%
1995	FDA**	13	85%	15%	0%
2000	Florida***	118	53%	35%	8%

* Florida Department of Agriculture and Consumer Services, Division of Chemistry, Bureau of Chemical Residue Laboratory/ Summary of Mercury Analyses in Canned Tuna
FY 1990-1991 and July - September 1991
** Information received in response to a 1999 Freedom of Information Request; Food and Drug Administration, Listing of pesticides, industrial chemicals, and elements data by fiscal year, origin, sample flag, and industry/product code. Washington: FDA; 1999 Jun 3
*** Florida Department of Agriculture and Consumer Services/ Final Report for Mercury Survey Samples, Oct-Dec 2000

State Canned Tuna Methylmercury Advisories

State	*Date*	*Advisory*
Michigan	1997	Pregnant women limit to 7 oz of tuna per week
Minnesota	1997	Pregnant women limit to 7 oz of tuna per week
New Jersey	1997	Pregnant women limit to 8 oz of tuna per week
Vermont	1999	Pregnant women limit to 7 oz of tuna per week
Connecticut	2000	Pregnant women, women planning pregnancy and young children limit to one to two meals per week
Maine	2000	Women of child-bearing age, pregnant women and children under 8, limit to 1 can of “white” tuna or 2 cans of “light” tuna per week
Massachusetts	2001	No more than 12 oz canned tuna per week. Very small children, including toddlers, should eat less.
New Hampshire	2001	Women of child-bearing age and pregnant women, limit to1 can “white” or 2 cans “light” per week. Children limit to one-half can “white” or 1 can “light” per week.
Washington	2001	Women of child-bearing age limit to less than 6 oz per week canned per week
Wisconsin	2001	Women of child-bearing age and children under 15 limit to one canned tuna meal per week

Mercury Levels in Fish and Shellfish
Recent Survey

SPECIES	MEAN (MG/KG)	RANGE	NO. OF SAMPLES
Fish			
Halibut	0.290	0.038-0.617	2
Hoki	0.186	0.065-0.307	8
Monkfish	0.198	0.096-0.300	2
Orange Roughy	0.595	0.527-0.647	6
Other	0.105	0.006-0.664	12
Pollack	0.012	0.007-0.020	4
Salmon	0.050	0.029-0.079	14
Sea Bass	0.065	0.030-0.094	4
Sea Bream	0.053	0.051-0.056	4
Shark	1.521	1.006-2.200	5
Marlin	1.091	0.409-2.204	4
Swordfish	1.355	0.153-2.706	17
Trout	0.060	0.014-0.103	14
Tuna	0.401	0.141-1.500	34
Shellfish			
Exotic prawns	0.025	0.006-0.047	14
Lobster	0.075	0.009-0.231	4
Mussels	0.030	0.017-0.041	4
Other	0.038	0.003-0.186	9
Prawns	0.048	0.013-0.249	14
Squid	0.011	0.003-0.036	9

Source: University of Bristol Survey 'Mercury in imported fish and shellfish and UK farmed fish and their products' Unpublished.

http://www.food.gov.uk/multimedia/pdfs/Mercury_in_Fish_table.pdf

Recommendations

FDA should develop effective surveillance, monitoring, testing, enforcement and consumer programs for methylmercury in commercial seafood in conjunction with consumer groups, the fishing industry and appropriate federal, state and local government agencies.

Rationale:

Federal and state governments are spending millions of dollars each year tracking the mercury problem. Yet how can the US measure meaningful progress at reducing mercury pollution over time if we are leaving out testing one of the most critical indicators? methlymercury levels in seafood?

Existing federal fish data for mercury, some of it decades old, needs to be reevaluated for accuracy and applicability in light of modern, state-of-the-art testing methodologies, approaches and equipment. Also, critical fish size data information, not incorporated into past testing, must be included as part of any comprehensive seafood testing protocol.

While the National Marine Fisheries and EPA are on the verge of testing popular marine recreational finfish for methylmercury in the Gulf, their primary intent does not appear to be testing "methylmercury levels in commonly available commercially harvested seafood species" consumed by the general US public.

In light of the most recent science, FDA should establish a regulatory limit for methylmercury in seafood fully protective of the US population and, in particular, women of childbearing age, pregnant and nursing mothers and children. FDA should also expand its list of "do not consume" seafood known to have high mercury levels.

Rationale:

In the past, FDA has all but ignored the findings of the 1991 studies by the National Academy of Sciences and the US General Accounting Office and one wonders aloud if this will now happen again--history repeating itself. For over 10 years, FDA has been evaluating the hazards of mercury in seafood, but has never issued results.

In 2001, GAO released a report on the inadequacy of FDA's Hazard Analysis Critical Point regulations. According to GAO, FDA does not provide adequate guidance to the fishing industry to identify and prevent seafood contaminated with methylmercury from exposing consumers. GAO recommended that FDA complete its hazards assessment for mercury in seafood "soon."

The July 2000 NAS report endorsed EPA's RfD, as has the European Union. As also discussed, over 20% of the state health departments in the Nation appear to be applying some variation of the NAS-supported approach to advise their sensitive populations about methylmercury in canned tuna. In addition, there are many commonly consumed seafood, including, but not limited to marlin and tuna, that clearly exceed the FDA's current action level.

FDA must recognize, as does the National Marine Fisheries Service now--based upon a briefing statement released on March 27, 2002--that: "subsistence, commercial, and marine recreational fishermen and their families represent a new sub-population of the seafood consuming public that will likely require additional safeguards in order to protect them against excessive methylmercury ingestion via seafood.“

Rationale:

According to the March 2002 National Marine Fisheries Service statement:

"There is a portion of the public that consumes seafood in excess of 15 pounds per year, and they also consume large quantities of seafood that are harvested for personal consumption. In particular, subsistence, commercial, and marine recreational fishermen and their families are at risk of exceeding the methylmercury consumption guidelines as they may be consuming seafood well in excess of 15 pounds per year, and they may be consuming non-commercially harvested seafood that is not subject to the FDA’s 1.0 ppm methylmercury monitoring and restrictions."