Supplemental Material

A Quantitative Synthesis of Mercury in Commercial Seafood and Implications for Exposure in the U.S.

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Some values in Supplemental Material, Table 1 were incorrect in the Supplemental Material originally published online. They have been corrected here.

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Supplemental Material, Table S1. Summary of Hg concentrations across studies in commonly consumed seafood items in the U.S.

Seafood Item	*Grand Mean Hg (ppm)[a]*	*Samples (Total)[b]*	*SE_W*	*SD_W*	*Min, Max (ppm)[c]*	*CV*
Anchovies (All)	0.103	455	0.041	0.197	(0.008, 0.154)	1.91
Bass (Chilean)	0.357	100	0.041	0.185	(0.310, 0.600)	0.52
Bass (Freshwater, All)	0.170	149	0.059	0.361	(0.118, 0.242)	2.12
Bass (Saltwater, Black, White, Striped)	0.288	1660	0.150	1.004	(0.005, 0.650)	3.49
Bass, Striped (All)	0.285	1367	0.140	1.155	(0.028, 0.650)	4.05
Bass, Striped (farmed)	0.028	15	NA	NA	(0.028, 0.028)	NA
Bass, Striped (wild)	0.295	1311	0.134	1.147	(0.094, 0.650)	3.89
Bluefish	0.351	1019	0.145	0.965	(0.034, 0.680)	2.75
Butterfish	0.054	109	0.021	0.112	(0.004, 0.080)	2.08
Carp (All)	0.156	477	0.095	0.521	(0.030, 0.472)	3.35
Catfish (All)	0.118	1757	0.087	0.586	(0.005, 0.714)	4.97
Catfish (wild, all species)	0.144	1396	0.078	0.513	(0.005, 0.714)	3.57
Catfish, Channel (wild)	0.120	521	0.038	0.253	(0.020, 0.231)	2.10
Catfish (farmed, all species)	0.012	320	0.008	0.073	(0.008, 0.030)	6.14
Clams (All)	0.028	1027	0.032	0.177	(0.005, 0.300)	6.29
Clams, Hard	0.047	181	0.026	0.130	(0.005, 0.300)	2.75
Clams, Geoduck	0.030	11	0.021	0.049	(0.010, 0.041)	1.66
Clams, Cockle	0.054	122	0.073	0.404	(0.019, 0.253)	7.47
Clams, Pacific Littleneck	0.022	18	0.009	0.022	(0.011, 0.028)	0.99
Clams, Softshell	0.016	471	0.020	0.249	(0.008, 0.086)	15.42
Cod (All)	0.087	2115	0.038	0.358	(0.019, 0.176)	4.12
Cod, Atlantic (farmed)	0.034	24	NA	NA	(0.034, 0.034)	NA
Cod, Atlantic (wild)	0.070	1452	0.017	0.261	(0.035, 0.113)	3.70
Cod, Pacific	0.144	431	0.038	0.260	(0.019, 0.176)	1.81
Crab (All)	0.098	1564	0.086	0.453	(0.005, 0.302)	4.61
Crab (Blue, King and Snow)	0.095	1087	0.098	0.526	(0.005, 0.302)	5.56
Crab, Blue	0.110	864	0.103	0.594	(0.014, 0.302)	5.40
Crab, Dungeness	0.120	264	0.037	0.225	(0.051, 0.192)	1.88
Crab, King	0.027	203	0.032	0.154	(0.005, 0.101)	5.63
Crab, Snow	0.110	20	0.073	0.187	(0.048, 0.223)	1.71
Crawfish (All)	0.034	206	0.019	0.104	(0.021, 0.210)	3.03
Croaker (All)	0.094	1031	0.053	0.309	(0.011, 0.287)	3.30
Croaker, Atlantic	0.069	572	0.025	0.135	(0.011, 0.146)	1.97
Croaker, White	0.138	368	0.059	0.427	(0.040, 0.287)	3.09
Cuttlefish	0.134	156	0.085	0.275	(0.020, 0.270)	2.05
Eel (All)	0.186	986	0.111	0.608	(0.030, 0.800)	3.28
Eel (wild)	0.216	659	0.110	0.551	(0.030, 0.800)	2.55
Eel (farmed)	0.066	220	0.027	0.163	(0.049, 0.181)	2.46
Flatfish (Flounder, Plaice, Sole)	0.110	3070	0.079	0.417	(0.005, 0.463)	3.80
Flounder (All)	0.119	1687	0.075	0.406	(0.005, 0.463)	3.42
Flounder, Summer	0.121	427	0.042	0.216	(0.005, 0.184)	1.79
Flounder, Windowpane	0.152	84	0.037	0.152	(0.105, 0.180)	1.00
Flounder, Winter	0.070	302	0.039	0.228	(0.021. 0.146)	3.27
Freshwater Perch (All)	0.141	1295	0.110	0.745	(0.014, 0.810)	5.27
Grouper (All)	0.417	643	0.196	0.804	(0.035, 1.080)	1.93
Haddock (All)	0.164	226	0.166	0.752	(0.020, 0.381)	4.59
Hake (All)	0.146	739	0.090	0.489	(0.015, 0.269)	3.36
Halibut (All)	0.254	3553	0.061	0.711	(0.036, 0.450)	2.80
Halibut, Pacific	0.261	3111	0.053	1.127	(0.158, 0.450)	4.32

Table S1. (continues through page 4)

Seafood Item	Grand Mean Hg (ppm)[a]	Samples (Total)[b]	SE_W	SD_W	Min, Max (ppm)[c]	CV
Halibut, Greenland	0.183	138	0.120	0.630	(0.040, 0.289)	3.44
Herring (All)	0.043	1277	0.026	0.174	(0.010, 0.321)	4.09
Herring, Atlantic	0.037	973	0.015	0.119	(0.010, 0.132)	3.19
Herring, Pacific	0.060	194	0.048	0.300	(0.017, 0.140)	4.97
Lingcod	0.363	333	0.128	0.952	(0.080, 0.440)	2.62
Lobster (All)	0.153	344	0.070	0.315	(0.042, 0.249)	2.06
Lobster, American	0.200	142	0.075	0.367	(0.045, 0.249)	1.84
Lobster, Spiny	0.100	62	0.035	0.137	(0.064, 0.210)	1.36
Mackerel (All)	0.581	2506	0.451	3.258	(0.008, 1.510)	5.61
Mackerel, Atlantic	0.045	191	0.037	0.192	(0.033, 0.270)	4.30
Mackerel, Chub	0.096	154	0.031	0.171	(0.028, 0.152)	1.78
Mackerel, King	1.101	821	0.383	3.470	(0.110, 1.510)	3.15
Mackerel, Spanish	0.440	1168	0.097	1.105	(0.147, 0.530)	2.51
Marlin (All)	1.517	821	1.654	7.495	(0.140, 10.520)	4.94
Marlin, Blue	2.465	364	2.120	9.532	(0.190, 10.520)	3.87
Marlin, Striped	0.861	179	0.528	2.356	(0.140, 1.720)	2.74
Marlin, White	0.695	56	0.120	0.518	(0.270, 0.718)	0.75
Monkfish	0.174	92	0.024	0.117	(0.083, 0.198)	0.67
Mullet	0.050	638	0.027	0.152	(0.006, 0.310)	3.05
Mussels (All)	0.028	755	0.016	0.106	(0.013, 0.085)	3.84
Ocean Perch	0.117	262	0.082	0.421	(0.010, 0.548)	3.59
Orange Roughy	0.513	152	0.103	0.569	(0.350, 0.595)	1.11
Oysters (All)	0.020	5310	0.013	0.178	(0.005, 0.083)	9.00
Oysters, Eastern	0.018	4573	0.009	0.161	(0.006, 0.083)	8.87
Oysters, Pacific	0.039	290	0.025	0.171	(0.008, 0.070)	4.37
Pike	0.404	1374	0.101	1.328	(0.247, 1.340)	3.29
Plaice	0.148	282	0.137	0.576	(0.015, 0.343)	3.88
Pollock (All)	0.058	540	0.059	0.342	(0.005, 0.704)	5.93
Pollock, Atlantic	0.160	79	0.053	0.330	(0.030, 0.170)	2.07
Pollock, Pacific/Alaska	0.050	235	0.027	0.145	(0.005, 0.140)	2.89
Porgy	0.065	169	0.027	0.143	(0.033, 0.102)	2.20
Sablefish	0.243	477	0.080	0.620	(0.151, 0.517)	2.55
Salmon (All)	0.048	2818	0.023	0.143	(0.005, 0.190)	3.00
Salmon, Atlantic (farmed)	0.026	145	0.020	0.077	(0.005, 0.117)	2.91
Salmon, Atlantic (wild)	0.058	95	0.015	0.083	(0.047, 0.073)	1.43
Salmon, Chinook, farmed	0.017	4	0.017	0.024	(0.005, 0.029)	1.41
Salmon, Chinook, wild	0.067	580	0.013	0.106	(0.041, 0.090)	1.59
Salmon, Chum	0.046	456	0.018	0.139	(0.014, 0.082)	3.00
Salmon, Coho	0.044	567	0.007	0.065	(0.016, 0.063)	1.49
Salmon, Pink	0.037	222	0.009	0.064	(0.005, 0.040)	1.72
Salmon, Sockeye	0.039	396	0.004	0.026	(0.005, 0.057)	0.66
Salmon (canned)	0.035	61	0.012	0.042	(0.028, 0.090)	1.20
Sardine (All)	0.078	1023	0.036	0.206	(0.010, 0.330)	2.65
Scallops (All)	0.040	336	0.033	0.148	(0.004, 0.090)	3.65
Seabass, Black	0.120	139	0.032	0.118	(0.005, 0.150)	0.98
Shad (All)	0.077	93	0.031	0.099	(0.040, 0.156)	1.29
Shad, American	0.067	76	0.019	0.095	(0.040, 0.111)	1.42
Shark (All)	0.882	3722	0.462	2.504	(0.080, 8.250)	2.84
Shark, Blacktip	0.882	250	0.274	1.249	(0.380, 2.140)	1.42
Shark, Blue	0.664	50	0.480	1.516	(0.270, 1.900)	2.28
Shark, Mako	1.259	166	0.464	1.995	(0.206, 3.200)	1.58
Shark, Sandbar	0.869	115	0.301	1.141	(0.082, 1.397)	1.31
Shark, Thresher	0.622	119	0.421	1.874	(0.130, 1.300)	3.01

Table S1. (continues through page 4)

Seafood Item	Grand Mean Hg (ppm)[a]	Samples (Total)[b]	SE_W	SD_W	Min, Max (ppm)[c]	CV
Sheepshead	0.166	340	0.038	0.347	(0.128, 0.197)	2.09
Shrimp (All)	0.053	935	0.053	0.212	(0.003, 0.380)	4.03
Shrimp, Brown	0.077	72	0.024	0.083	(0.020, 0.130)	1.07
Shrimp, Pink	0.083	49	0.016	0.079	(0.005, 0.085)	0.95
Shrimp, White	0.057	113	0.036	0.136	(0.006, 0.200)	2.38
Skate (All)	0.138	70	0.027	0.093	(0.032, 0.214)	0.67
Smelt	0.025	175	0.019	0.086	(0.008, 0.125)	4.03
Snapper (All)	0.230	1244	0.104	0.514	(0.031, 0.776)	2.27
Snapper, Gray	0.233	699	0.068	0.595	(0.121, 0.348)	2.55
Snapper, Red	0.243	279	0.168	0.725	(0.031, 0.776)	2.98
Sole	0.086	1101	0.056	0.310	(0.013, 0.308)	3.62
Squid	0.044	728	0.024	0.130	(0.008, 0.095)	2.99
Swordfish	0.893	1726	0.296	2.052	(0.150, 3.310)	2.30
Tilapia	0.019	129	0.027	0.097	(0.002, 0.150)	4.99
Tilefish (All)	0.883	109	0.695	2.962	(0.080, 1.450)	3.35
Tilefish, Atlantic	0.171	47	0.049	0.195	(0.131, 0.229)	1.14
Tilefish, Gulf of Mexico	1.445	61	0.059	0.324	(1.123, 1.450)	0.22
Trout (freshwater, wild and unknown status)	0.344	2804	0.087	1.030	(0.030, 0.440)	3.00
Trout, Lake	0.349	2748	0.080	1.268	(0.047, 0.440)	3.63
Trout (freshwater, farmed)	0.029	178	0.015	0.066	(0.005, 0.060)	2.30
Tuna (fresh/frozen, All)	0.450	3780	0.340	1.619	(0.007, 3.030)	3.59
Tuna, Albacore	0.317	296	0.103	0.475	(0.030, 0.500)	1.50
Tuna, Atlantic bonito	0.499	263	0.359	2.200	(0.326, 1.662)	4.41
Tuna, Bigeye	0.582	376	0.222	1.113	(0.114, 1.149)	1.91
Tuna, Blackfin	0.856	159	0.231	0.972	(0.200, 1.160)	1.14
Tuna, Bluefin (farmed)	0.455	108	0.156	0.540	(0.190, 1.020)	1.19
Tuna, Bluefin (wild)	0.796	514	0.542	2.408	(0.057, 3.030)	3.03
Tuna, Skipjack	0.198	341	0.083	0.320	(0.060, 0.450)	1.62
Tuna, Yellowfin	0.270	1183	0.125	0.797	(0.030, 0.650)	2.95
Tuna, Albacore (canned)	0.328	1362	0.113	0.955	(0.155, 0.588)	2.92
Tuna, Light (canned or packed)	0.118	972	0.038	0.300	(0.047, 0.400)	2.55
Tuna, Yellowfin (canned)	0.143	298	0.098	0.688	(0.029, 0.240)	4.80
Weakfish/Seatrout (All)	0.361	2105	0.193	1.348	(0.021, 1.060)	3.73
Whitefish (All)	0.106	2721	0.051	0.707	(0.018, 0.352)	6.70
Whiting	0.040	27	0.015	0.056	(0.030, 0.051)	1.38

SE_w = Weighted standard error (see main text for details)

SD_w = Weighted standard deviation (see main text for details)

CV = Coefficient of variation

[a]Grand Mean Hg calculated across studies, based on wet weight

[b]Total samples across studies

[c]Minimum and maximum mean reported across studies

Search Terms for Supplemental Material, Table S2: Seafood Hg Database

mercury and anchovies
mercury and anchovy
mercury and bass
mercury and bluefish
mercury and buffalofish
mercury and butterfish
mercury and carp
mercury and catfish
mercury and clam
mercury and cod
mercury and crab
mercury and crayfish
mercury and croaker
mercury and flounder
mercury and grouper
mercury and haddock
mercury and hake
mercury and halibut
mercury and herring
mercury and lincod
mercury and lobster
mercury and mackerel
mercury and marlin
mercury and monkfish
mercury and mullet
mercury and mussel
mercury and orange roughy
mercury and oyster
mercury and perch
mercury and pike
mercury and plaice
mercury and pollock
mercury and porgy
mercury and sablefish
mercury and salmon
mercury and sardine
mercury and scallop
mercury and scorpionfish
mercury and sea trout
mercury and seatrout
mercury and shad
mercury and shark
mercury and sheepshead
mercury and shrimp
mercury and skate
mercury and smelt
mercury and snapper
mercury and sole
mercury and squid
mercury and swordfish
mercury and tilapia
mercury and tilefish
mercury and trout
mercury and tuna
mercury and whitefish

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