

MERCURY LEVELS IN COMMERCIAL FISH AND SHELLFISH

A number of surveys have been done to ascertain how much mercury is in the fish we eat. Based on the wide range of mercury levels found in different test samples, it is difficult to know how much mercury is in any given fish meal.

There are also contradictions between different studies. One study showed moderate mercury content in tuna, while another report showed much higher levels. Ditto for lobster, in which one report showed high mercury levels while another showed a modest amount.

All studies we have looked at show that salmon contains very little mercury. In the following table, mercury levels are provided for different fish species. The "ND" stands for "none detected," and salmon is one of the few fish species in which mercury was not detected. The first four fish species listed on this chart are those with the highest mercury content.

SPECIES	MERCURY CONCENTRATION (PPM)				NO. OF SAMPLES	SOURCE OF DATA
	MEAN	MEDIAN	MIN	MAX		
MACKEREL KING	0.73	NA	0.23	1.67	213	GULF OF MEXICO REPORT 2000
SHARK	0.99	0.83	ND	4.54	351	FDA SURVEY 1990-02
SWORDFISH	0.97	0.86	0.10	3.22	605	FDA SURVEY 1990-02
TILEFISH (Gulf of Mexico)	1.45	NA	0.65	3.73	60	NMFS REPORT 1978
ANCHOVIES	0.04	NA	ND	0.34	40	NMFS REPORT 1978
BUTTERFISH	0.06	NA	ND	0.36	89	NMFS REPORT 1978
CATFISH	0.05	ND	ND	0.31	22	FDA SURVEY 1990-02
CLAMS	ND	ND	ND	ND	6	FDA SURVEY 1990-02
COD	0.11	0.10	ND	0.42	20	FDA SURVEY 1990-03
CRAB	0.06	ND	ND	0.61	59	FDA SURVEY 1990-02
CRAWFISH	0.03	0.03	ND	0.05	21	FDA SURVEY 2002-03
CROAKER (Atlantic)	0.05	0.05	0.01	0.10	21	FDA SURVEY 1990-03
FLATFISH	0.05	0.04	ND	0.18	22	FDA SURVEY 1990-02
HADDOCK	0.03	0.04	ND	0.04	4	FDA SURVEY 1990-02
HAKE	0.01	ND	ND	0.05	9	FDA SURVEY 1990-02
HERRING	0.04	NA	ND	0.14	38	NMFS REPORT 1978
JACKSMELT	0.11	0.06	0.04	0.50	16	FDA SURVEY 1990-02
LOBSTER (Spiny)	0.09	0.14	ND	0.27	9	FDA SURVEY 1990-02
MACKEREL ATLANTIC (N. Atlantic)	0.05	NA	0.02	0.16	80	NMFS REPORT 1978
MACKEREL CHUB (Pacific)	0.09	NA	0.03	0.19	30	NMFS REPORT 1978
MULLET	0.05	NA	ND	0.13	191	NMFS REPORT 1978
OYSTERS	ND	ND	ND	0.25	34	FDA SURVEY 1990-02
PERCH OCEAN	ND	ND	ND	0.03	6	FDA SURVEY 1990-02
PICKEREL	ND	ND	ND	0.06	4	FDA SURVEY 1990-02
POLLOCK	0.06	ND	ND	0.78	37	FDA SURVEY 1990-02
SALMON (Canned)	ND	ND	ND	ND	23	FDA SURVEY 1990-02
SALMON (Fresh/Frozen)	0.01	ND	ND	0.19	34	FDA SURVEY 1990-02
SARDINES	0.02	0.01	ND	0.04	22	FDA SURVEY 2002-03
SCALLOPS	0.05	NA	ND	0.22	66	NMFS REPORT 1978
SHAD (American)	0.07	NA	ND	0.22	59	NMFS REPORT 1978
SHRIMP	ND	ND	ND	0.05	24	FDA SURVEY 1990-02
SQUID	0.07	NA	ND	0.40	200	NMFS REPORT 1978
TILAPIA	0.01	ND	ND	0.07	9	FDA SURVEY 1990-02
TROUT (Freshwater)	0.03	0.02	ND	0.13	17	FDA SURVEY 2002-03
TUNA (Canned, Light)	0.12	0.08	ND	0.85	131	FDA SURVEY 1990-03
WHITEFISH	0.07	0.05	ND	0.31	25	FDA SURVEY 1990-03
WHITING	ND	ND	ND	ND	2	FDA SURVEY 1990-02

SPECIES	MERCURY CONCENTRATION (PPM)				NO. OF SAMPLES	SOURCE OF DATA
	MEAN	MEDIAN	MIN	MAX		
BASS (Saltwater)	0.27	0.15	0.06	0.96	35	FDA SURVEY 1990-03
BLUEFISH	0.31	0.30	0.14	0.63	22	FDA SURVEY 2002-03
BUFFALOFISH	0.19	0.14	0.05	0.43	4	FDA SURVEY 1990-02
CARP	0.14	0.14	0.01	0.27	2	FDA SURVEY 1990-02
CROAKER WHITE (Pacific)	0.29	0.28	0.18	0.41	15	FDA SURVEY 1990-03
GROUPER	0.55	0.44	0.07	1.21	22	FDA SURVEY 2002-03
HALIBUT	0.26	0.20	ND	1.52	32	FDA SURVEY 1990-02
LOBSTER (Northern/American)	0.31	NA	0.05	1.31	88	NMFS REPORT 1978
MACKEREL SPANISH (Gulf of Mexico)	0.45	NA	0.07	1.56	66	NMFS REPORT 1978
MACKEREL SPANISH (S. Atlantic)	0.18	NA	0.05	0.73	43	NMFS REPORT 1978
MARLIN	0.49	0.39	0.10	0.92	16	FDA SURVEY 1990-02
MONKFISH	0.18	NA	0.02	1.02	81	NMFS REPORT 1978
ORANGE ROUGHY	0.54	0.56	0.30	0.80	26	FDA SURVEY 1990-03
PERCH (Freshwater)	0.14	0.15	ND	0.31	5	FDA SURVEY 1990-02
SABLEFISH	0.22	NA	ND	0.70	102	NMFS REPORT 1978
SCORPIONFISH	0.29	NA	0.02	1.35	78	NMFS REPORT 1978
SHEEPSHEAD	0.13	NA	0.02	0.63	59	NMFS REPORT 1978
SKATE	0.14	NA	0.04	0.36	56	NMFS REPORT 1978
SNAPPER	0.19	0.12	ND	1.37	25	FDA SURVEY 2002-03
TILEFISH (Atlantic)	0.15	0.10	0.06	0.53	17	FDA SURVEY 2002-03
TUNA (Canned, Albacore)	0.35	0.34	ND	0.85	179	FDA SURVEY 1990-03
TUNA (Fresh/Frozen)	0.38	0.30	ND	1.30	131	FDA SURVEY 1990-02
WEAKFISH (Sea Trout)	0.25	0.16	ND	0.74	27	FDA SURVEY 1990-03

Source of data:

- FDA Surveys 1990-2003 "National Marine Fisheries Service Survey of Trace Elements in the Fishery Resource"
- Report 1978 "The Occurrence of Mercury in the Fishery Resources of the Gulf of Mexico"
- Report 2000 Market share calculation based on 2001 National Marine Fisheries Service published landings data
- * Mercury was measured as Total Mercury and/or Methylmercury
- ND** - mercury concentration below the Level of Detection (LOD=0.01ppm)
- NA** - data not available.

