Appendix

Table 1. Nutrition and MeHg toxicity: epidemiologic data.

Population	*n*	Source of Hg	Hg exposure	Nutrient factor measured	Relationship	Ref.
Northern Canada	432	Marine food	71 nmol Hg/L in cord blood plasma	Se in plasma (4.2 μmol/L); ω-3 fatty acids (4.5% of phospholipids in plasma)	Positive correlation between blood concentrations of Se and Hg; ω-3 fatty acids and Hg	(*28*)
Northern Canada	448	Country food	100 ppb Hg in blood (16% of tests)	Eating habits (food consumption frequency and preferences)	Lake trout was a major contributor to Hg exposure; exposure may also be associated with a longer beluga harvest	(*29*)
Northern Canada	NA	Country food	NA	Thiamine deficiency	Similarities exist between the symptoms of Hg and thiamine neurotoxicity; a concurrence of thiamine antagonists and Hg exposure in the diet	(*30*)
Denmark	198	Environment	6.9 nmol Hg/L in blood	Serum Se, Ni, Cd, Al, Zn, Cu	Positive correlation between blood Se and Hg; correlation between Hg and fish intake	(*31*)
Faroe Islands	1,023	Maternal sea-food diet	24.2 μg Hg/L in cord blood (25% of tests exceeded 40 μg/L); 4.5 mg Hg/g in maternal hair	Whale and fish dinners	Whale meat and frequent fish consumption were associated with high blood Hg; correlation between blood Se and Hg	(*32*)
Finland	1,861	Fish	103 g fish/d	Intake of vitamin C, protein, ω-3 fatty acids, Se and salt and plasma antioxidants (α-tocopherol, γ-tocopherol, β-carotene)	Higher fish consumption was associated with higher Hg intake	(*33*)
Greenland	376	Country and marine food	14.9 μg Hg/L maternal blood; 21 μg Hg/L offspring blood	Number of meals of country food/wk	No effect of country food intake on gestational length or birth weight	(*20*)
Greenland	138	Marine food	86–186 μg Hg/L in blood	Blood Se	No correlation between Se and Hg by individuals, but in groups according to eating habits	(*34*)
Greenland	1	Diet	NA	Country food and beluga maktak (intake not evaluated)	Man stopped eating traditional diet and began to show symptoms of Hg poisoning; symptoms disappeared after eating maktak again	(*35*)
Norway	32	Fish	18 μg Hg/d	Lipids, Se (115 μg Se/d)	Positive correlation of dietary Hg with LDL-cholesterol; negative correlation with HDL-cholesterol	(*36*)
Japan	NA	Fish	NA	Ethanol	Ethanol was several times more common among residents of MeHg-polluted areas	(*37*)
Japan	NA	Fish	NA	Ethanol	Mortality from liver cancer, chronic liver disease, and cirrhosis was higher in verifed Minamata disease patients	(*38*)
Japan	575	Environment	NA	Se	Expression of Hg values in relation to urine Se is a good index in younger subjects as creatinine concentration changes with age	(*39*)
Sweden	18	Dental amalgam	27 nmol Hg/L in plasma; 6.5 nmol Hg/mmol creatinine in urine	Nicotine chewing gum	Chewing gum increases the release rate of Hg vapor from amalgam fillings	(*40*)
Turkey	95	Dialysis	NA	Se	Subjects on hemodialysis are subject to more toxic elements than transplantation patients	(*41*)
Sweden	395	Fish	6.7 ng Hg/g whole blood (at least two fish meals/wk)	Plasma Se	Plasma Hg was associated with ω-3 fatty acids in phosphatidylcholine; both plasma Se and Hg are positively associatied with fish intake	(*42*)
Sweden	30	Dental amalgam and fish	0.6 ng Hg/g breast milk; 2.3 ng Hg/g in blood; 0.28 μg Hg/g in hair 6 wk after delivery	Breast milk, fish intake	Blood Hg was positively correlated with number of amalgams and intake of fish; amalgam Hg was the main source of Hg in the milk	(*43*)
United States	52	Nonoccupational environmental exposure	1.05 ppm Hg in hair	Vitamin C supplementation	No effect of vitamin C on Hg body burden as measured by hair and blood Hg	(*44*)
Norway	49	Occupational exposure to Hg^0	NA	Se	Exposed group excreted more Se into urine; no significant correlation between Hg and Se excretion was found	(*45*)

Abbreviations: d, day, HDL, high-density lipoprotein; LDL, low-density lipoprotein; NA, not available; wk, week.