

## **Survey of Mercury Exposure level of Elementary School Children in Korea**

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While it has been recognized that mercury compounds are highly toxic and brought up fatal disease, called Minamata, in Japan, there were no reports associated with the problems due to mercury exposure yet in Korea. It has, however, become to be necessary to investigate the levels and causes of mercury exposure as increasing interests in health effects of pollutants and mercury properties to build up in organisms and up along the food chain (Bioaugmentation).

Nationwide survey of about 600 children at 10 elementary schools was conducted to evaluate the exposure levels and to set up national policy. Exposure levels were determined in whole blood and urine samples and questionnaire information was analyzed as well.

It was shown that most of children are exposed to mercury in this survey, levels ranged from 0.04 ppb to 9.57 in blood, 0.23 to 23.16 ppb in urine. The mean levels are 2.26 ppb in blood and 3.12 in urine, both of which were under the reference level of US EPA. There was not any difference between genders but was distinct regional difference. The mercury concentration in blood was higher than that of inland in coastal regions whereas the level in urine is higher in inland. There was high statistical significance among the exposure levels and children's preference to fish and amount of intake.

Mercury exposure in Korea was considered to be from mainly food intake. The mercury concentrations of children near the power plant were investigated but the level was rather low. We cannot find out any evidence that emissions from the plants influence on the exposure level. More check-ups pertaining to the associations between levels and questionnaire results were conducted to evaluate major influence factor.

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