



Investigating Mercury Exposure at a Day Care Center



Research chemists at the Environmental Health Laboratory review metals data.

and certified for use as a daycare center. Concerns surfaced about the former thermometer factory and the potential impact of its mercury use on the health of the children and staff.

CDC's Environmental Health Laboratory analyzed urine samples from Kiddie Kollege staff and students for possible mercury exposure. Previous nationally representative data on human mercury urinary levels published in CDC's *Third National Report on Human Exposure to Environmental Chemicals* were used as reference levels to which levels in the children and staff were compared.

Understanding employees' and parents' concern about the need for more information, CDC and ATSDR provided additional assistance to the New Jersey Department of Health and Senior Services (NJDHSS) for several rounds of follow-up testing. As an additional measure, the NJDHSS and ATSDR reviewed the medical records of any child or adult who attended or worked at the daycare center to assess whether an individual's past or present medical conditions

In 2006, CDC and the Agency for Toxic Substances and Disease Registry (ATSDR) were contacted about Kiddie Kollege Day Care Center in Franklin Township, New Jersey. The building that housed Kiddie Kollege was formerly a thermometer factory that used mercury and that subsequently was sold, renovated,

were consistent with mercury poisoning. After each review, if further medical follow-up was indicated, the child's parents and physician were referred to the Pediatric Environmental Health Specialty Unit at the Mt. Sinai School of Medicine in New York or to the Robert Wood Johnson School of Medicine in New Jersey for additional testing or evaluation. CDC's laboratory tested a total of 189 urine samples during this investigation.

Most children had levels of mercury in their urine that were not unusual and that were consistent with national reference values. Some children had urine levels of mercury that were slightly higher than national reference values, and these children underwent several subsequent rounds of testing. The low urine levels of mercury in these children and the slight decline of the levels over time were consistent with background sources (i.e., diet or dental filings) and a contribution from the daycare center exposure. No urine levels of mercury were in a range known to be toxic.

CDC's work in Franklin Township, New Jersey, is just one example of how scientists at CDC's Environmental Health Laboratory use advanced laboratory science and innovative techniques to help change and improve people's health across the nation and around the world.



A research chemist at the Environmental Health Laboratory operates an inductively coupled plasma mass spectrometry (ICP-MS).

For more information about CDC at Work, please contact us at (202) 245-0600 or go to <http://www.cdc.gov/washington/>.