are consistent with previous reports associating long-term exposure to inorganic arsenic with cardiovascular disorders and diabetes.

This research study is among the largest epidemiological studies that has ever been conducted in Wisconsin related to contaminated drinking water. It was conducted in cooperation with the county health departments and officials in each local township. The study is unique in that the residents themselves bore much of the cost by paying for the arsenic analyses. Analytical costs paid by families that completed health surveys were in excess of $40,000. Residents were extremely cooperative. More than half of those who submitted a water sample for analysis also completed a health survey.

Major strengths of this study are the large cohort size, the availability of current arsenic measurements on each water supply, and detailed information about exposure times and health outcomes. The major weaknesses are the self-reported aspect of the data and the fact that groundwater in the arsenic-affected region often contains a variety of other minerals that could contribute to the health effects were are attempting to assess, or antagonize the health effects of arsenic. This is a significant problem, in part, because only a few wells in this region have been tested for potential co-contaminants like nickel, lead and cadmium.

Our understanding of the long-term health impact of arsenic could be improved by continuing to follow the health of some of the families who participated in this study. It would be useful to continue to monitor the health of residents who reported long-term exposure to well water that contained more than 20 μg of arsenic per liter. An exposure registry could be established using this database. Families who agreed to participate in the registry would be contacted on a regular basis and asked to provide ongoing health outcome and arsenic exposure information.

References cited:


