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High levels of mercury found in North Shore babies

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One in 10 babies along Minnesota's North Shore are born with unhealthy levels of mercury in their bodies, according to a new report on contamination around Lake Superior, the first to look for the pollutant in the blood of U.S. infants.

Researchers at the Minnesota Department of Health said they were surprised to find that some of the 1,465 children they tested had very high concentrations. It's the first solid evidence that infants in the state are contaminated by mercury, a pollutant that can cause neurological damage and is distributed around the world, primarily by coal-fired power plants.

"We've never had hard evidence that there were exposures," said Pat McCann, the research scientist who conducted the study for the Health Department and the Environmental Protection Agency (EPA). "This provides that."

Researchers also found that the Minnesota infants were more likely to have unhealthy mercury levels in their blood than their counterparts in Wisconsin and Michigan. That's probably because their mothers ate more fish, the primary source of mercury in people, health officials said. Babies born in the summer months, when local fish consumption is highest, had more mercury than those born in winter, McCann said.

The northern Minnesota ecosystem, where mercury in the natural environment is more of a problem than in other regions, may also play a role, McCann said. Bacteria that are common in wetlands and lakes transform the heavy metal deposited by air into something that can be transported up the aquatic food chain -- from micro-organisms to fish to pregnant women.

"People could be eating enough fish to cause exposures that we are concerned about," McCann said. Now, health care providers can use the findings to persuade women of child-bearing age to avoid fish such as walleye that are often high in mercury, she said.

Mercury can affect the brain and nervous system development in fetuses and babies. At high levels, it's been shown to affect memory, attention and language. As a result, the EPA has established a health standard for women of childbearing age and infants of 5.8 millionths of a gram per liter of blood. Anything above that is considered unhealthy, though would not necessarily result in neurological problems.

Diet warnings

The state Health Department conducted the study on infants in the Lake Superior Basin as part of the EPA's research into the consequences of mercury pollution in people. Infants in that region were chosen because an international organization focused on Lake Superior contributed funding, not because the population there is at higher risk, McCann said.

Between 2008 and 2010 they randomly checked blood samples taken from unidentified infants born around the basin. The majority by far were from Minnesota, where the basin extends from Duluth to Hibbing and up along the shore to the Canadian border. In all, 8 percent of the babies had blood concentrations above the EPA health standard -- up to a thousand times higher. In Minnesota, 10 percent of the blood samples had mercury levels above the healthy standard.

McCann said that because this is the first time a study of mercury in infants has been conducted, it's not possible to compare the findings with other regions or populations. But other federal health surveys have shown that five to 10 percent of women of child-bearing age have mercury concentrations that are considered unhealthy.

Still, it's a clear indication that exposure to infants in Minnesota is too high, she said, and that expectant mothers should be

FINDINGS FROM MINNESOTA INFANTS

- One in 10 babies along Minnesota's North Shore are born with unhealthy levels of mercury in their bodies.
- 1,465 children tested by researchers at the Minnesota Department of Health had very high concentrations.
- Minnesota infants were more likely to have unhealthy mercury levels in their blood than their counterparts in Wisconsin and Michigan.

reminded to be aware of how much fish they eat.

Because "babies don't eat fish," she said.

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