

## **'Mercury is a poison. People only begin to show symptoms when enough cells die.'**

By Tony Bartelme  
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Every week on average, Dr. Timothy Callaghan and Dr. Allan Liebermann see two or three patients with mercury-related illnesses.

Some patients arrive at their clinic in North Charleston complaining about nerve disorders, numbness in their limbs or high blood pressure.

'They don't come in and say, 'I have an acute mercury issue,?'' Callaghan said. 'But if you check their blood, you'll often find their mercury levels are very high.'

Mercury is a serious public health problem, said Callaghan, who specializes in treating people exposed to toxic chemicals. 'You'll find that many medical doctors say (mercury poisoning) doesn't exist. But that's because they're not looking for it.'

Scientists have known for centuries that mercury causes severe health problems when people are exposed to high doses, but they're only now beginning to understand how low levels harm people over long periods of time, said Kate Mahaffey, the U.S. Environmental Protection Agency's top mercury expert.

Young children are particularly vulnerable because mercury can damage their developing brains and nervous systems, causing lifelong learning problems and other disabilities, Mahaffey said. She has estimated that between 300,000 and 600,000 newborns are exposed to potentially dangerous levels of mercury every year in the United States.

Scientists still aren't sure, however, at what level mercury becomes dangerous, or whether a simple threshold exists in the first place. Studies so far have given researchers only a rough idea of its effects in low doses.

Two studies of islanders off New Zealand and Denmark showed health problems in children who had mercury levels between 3 parts per million and 10 parts per million.

Another study of Cree Indians in Quebec found people had tremors and other health problems at levels of less than 1 part per million. And a study in Finland found men with

mercury levels higher than 2 parts per million had a 69 percent greater chance of having serious or fatal heart problems.

But a large study in the Seychelles Islands off Africa found no health problems in people with typical mercury levels of 7 parts per million.

The science is clearer when it comes to mothers and their babies: The EPA has found that a pregnant woman with a hair sample at 10 parts per million has a 10 percent chance of having a baby with birth defects.

Mahaffey said research shows that the nearer people get to the 10 parts per million mark, the more likely they will have health problems.

But because of the scientific uncertainty over lower exposures, the agency settled on 1 part per million as an overall safety benchmark.

In the United States, typical levels in hair are about 0.12 parts per million for children and 0.2 parts per million for adult women, according to one federal study. Another nationwide study by the University of North Carolina-Asheville's Environmental Quality Institute and sponsored Greenpeace and the Sierra Club found typical mercury levels ranging between 0.06 parts per million for those who eat no fish, to 0.47 parts per million in those who eat large amounts.

Mahaffey and other health experts caution that nutritional benefits of eating fish also should be figured into the equation.

In October, a children's health group, National Healthy Mothers, Healthy Babies Coalition, advised pregnant women and nursing mothers to eat more fish to help their babies' brains develop.

The group cited new research from the Medical University of South Carolina that found that pregnant women were reducing fish consumption because of fears of mercury contamination. The group urged mothers to eat at least 12 ounces of fish per week.

But Paul Dantzig, also known as 'Dr. Mercury,' said he believes people should be wary about eating any fish at all, and he cites his own story as proof.

Dantzig is a dermatologist with the Columbia University School of Medicine in New York. One day seven years ago he had a plate of teriyaki tuna at a restaurant in Manhattan. The next day he had a bad rash.

Dantzig had heard about the connection between mercury and health problems, so he analyzed his blood. 'The levels were sky high.' He stopped eating fish and took medicines to clean his blood. The rash went away, along with other health problems.

Then he noticed similar rashes in patients with a skin condition called Grover's disease. He tested them for mercury and found they also had high levels. He's done studies showing a connection between mercury and Parkinson's disease, and now he's looking into whether mercury may contribute to macular degeneration, a serious eye condition.

On some days Dantzig treats three or four patients for mercury poisoning. He said he got his nickname from lab technicians because he sends them so many blood samples.

'Mercury is a poison. It gets into the body, and when it gets into cells it will kill them, so any amount is toxic,' he said. 'People only begin to show symptoms when enough cells die.'

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