

## First evidence that a common pollutant may reduce iodine levels in breast milk

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Researchers in Texas are reporting the first evidence from human studies that perchlorate, a common pollutant increasingly found in food and water, may interfere with an infant's availability of iodine in breast milk. Iodine deficiency in infants can cause mental retardation and other health problems, the scientists note. The study also provides further evidence that iodine intake in U.S. mothers is low and that perchlorate may play a key role.

In a study scheduled for the November 1 issue of ACS' semi-monthly *Environmental Science & Technology*, Purnendu Dasgupta and colleagues note that perchlorate occurs naturally in the soil and is also manufactured as a rocket fuel and explosive ingredient. Past studies showed that perchlorate can inhibit iodine uptake. However, scientists did not know its effects on iodine levels in the milk of nursing mothers.

To find out, the researchers collected breast milk samples from 13 breastfeeding mothers and measured their content of iodine, perchlorate, and thiocyanate, another iodine inhibitor found in certain foods. The study showed that if these breast milk samples were fed to infants, 12 of 13 infants would not have an adequate intake of iodine.

It also showed that nine of the infants would have ingested perchlorate at a level exceeding those considered safe by the National Academy of Sciences. "Even though the number of subjects was not large, in terms of the number of total samples analyzed, this is the most extensive study on the topic," the researchers say, adding that the low iodine levels are



"disconcerting."

Article: "Intake of Iodine and Perchlorate and Excretion in Human Milk"; <u>dx.doi.org/10.1021/es801549w</u>

Source: ACS

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