

HEALTH

# US government report says fluoride at twice the recommended limit is linked to lower IQ in kids



1 of 2 | FILE - Water flows from a water fountain in Concord, N.H., on Friday, Jan. 7, 2011. (AP Photo/Jim Cole, File)

BY MIKE STOBBE

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NEW YORK (AP) — A U.S. government report expected to stir debate concluded that fluoride in drinking water at twice the recommended limit is linked with lower IQ in children.

The report, based on an analysis of previously published research, marks the first time a federal agency has determined — “with moderate confidence” — that there is a link between higher levels of fluoride exposure and lower IQ in kids. While the report was not designed to evaluate the health effects of fluoride in drinking water alone, it is a striking acknowledgment of a potential neurological risk from high levels of fluoride.

Fluoride strengthens teeth and reduces cavities by [replacing minerals lost during normal wear and tear](#), according to the U.S. Centers for Disease Control and Prevention. The addition of low levels of fluoride to drinking water has long been considered one of the greatest public health achievements of the last century.

“I think this (report) is crucial in our understanding” of this risk, said Ashley Malin, a University of Florida researcher who has [studied](#) the effect of higher fluoride levels in pregnant women on their children. She called it the most rigorously conducted report of its kind.

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The long-awaited [report](#) released Wednesday comes from the National Toxicology Program, part of the Department of Health and Human Services. It summarizes a review of studies, conducted in Canada, China, India, Iran, Pakistan, and Mexico, that concludes that drinking water containing more than 1.5 milligrams of fluoride per liter is consistently associated with lower IQs in kids.

The report did not try to quantify exactly how many IQ points might be lost at different levels of fluoride exposure. But some of the studies reviewed in the report suggested IQ was 2 to 5 points lower in children who'd had higher exposures.

Since 2015, federal health officials have recommended a fluoridation level of 0.7 milligrams per liter of water, and for five decades before the recommended upper range was 1.2. The World Health Organization has set a safe limit for fluoride in drinking water of 1.5

The report said that about 0.6% of the U.S. population — about 1.9 million people — are on water systems with naturally occurring fluoride levels of 1.5 milligrams or higher.

“The findings from this report raise the questions about how these people can be protected and what makes the most sense,” Malin said.

The 324-page report did not reach a conclusion about the risks of lower levels of fluoride, saying more study is needed. It also did not answer what high levels of fluoride might do to adults.

The American Dental Association, which champions water fluoridation, had been critical of earlier versions of the new analysis and Malin’s research. Asked for comment, a spokeswoman late Wednesday afternoon emailed that the organization’s experts were still reviewing the report.

Fluoride is a mineral that exists naturally in water and soil. About 80 years ago, scientists discovered that people whose water supplies naturally had more fluoride also had fewer cavities, triggering a push to get more Americans to use fluoride for better dental health.

In 1945, Grand Rapids, Michigan became the first U.S. city to start adding fluoride to tap water. In 1950, federal officials endorsed water fluoridation to prevent tooth decay, and continued to promote it even after fluoride toothpaste brands hit the market several years later. Though fluoride can come from a number of sources, drinking water is the main source for Americans, researchers say.

Officials [lowered](#) their recommendation for drinking water fluoride levels in 2015 to address a tooth condition called fluorosis, that can cause splotches on teeth and was becoming more common in U.S. kids.

Separately, the Environmental Protection Agency has maintained a longstanding requirement that water systems cannot have more than 4 milligrams of fluoride per liter. That standard is designed to prevent skeletal fluorosis, a potentially crippling disorder which causes weaker bones, stiffness and pain.

But more and more studies have increasingly pointed to a different problem, suggesting a link between higher levels of fluoride and brain development. Researchers wondered about the impact on developing fetuses and very young children who might ingest water with baby formula. Studies in animals showed fluoride could impact neurochemistry cell function in brain regions responsible for learning, memory, executive function and behavior.

In 2006, the National Research Council, a private nonprofit organization in Washington, D.C., said limited evidence from China pointed to neurological effects in people exposed to high levels of fluoride. It called for more research into the effect of fluoride on intelligence.

After more research continued to raise questions, the National Toxicology Program in 2016 started working on a review of the available studies that could provide guidance on whether new fluoride-limiting measures were needed.

There were earlier drafts but the final document has repeatedly been held up. At one point, a committee of experts said available research did not support an earlier draft’s conclusions.

“Since fluoride is such an important topic to the public and to public health officials, it was imperative that we made every effort to get the science right,” said Rick Woychik, director of the National Toxicology Program, in a statement.

Malin said it makes sense for pregnant women to lower their fluoride intake, not only from water but also from certain types of tea. It might also make sense to have policy discussions about whether to require fluoride-content on beverage labels, she said.

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