



Association of State and Territorial Dental Directors

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Key Messages:

The NTP report, EPA court decision & Cochrane review

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I. Background:

The National Toxicology Report (NTP) released its final report on fluoride in August 2024. The following month, a federal court in Northern California instructed the Environmental Protection Agency (EPA) to adopt new rules related to the levels of fluoride in drinking water.

In its decision, the court referred to fluoridated water as having “an unreasonable risk,” but the judge said he did not conclude with certainty that fluoridated water is harmful. He simply instructed the EPA to evaluate the issue and issue new rules.

II. Fluoride is an important mineral that is proven to protect teeth.

- Tooth decay is the most common chronic disease among children and adults. Fluoride is a mineral that exists naturally in lakes, rivers or groundwater, but most communities don’t have enough fluoride in their water supply to protect teeth from decay.
- This is why thousands of U.S. communities add a little more fluoride to reach the recommended level for preventing decay. Fluoridation reduces tooth decay by 25% for children and adults.
- Water fluoridation helps to reduce dental health disparities. In fact, a report by the National Institutes of Health reached this conclusion: *“Not only does water fluoridation confer a protective effect beyond that offered by other sources of fluoride, it can especially benefit children in low-income families.”*
- Fluoridation is the most inexpensive way to prevent decay. In fact, a community that fluoridates its drinking water saves \$32 per resident, per year.
- The recently released Cochrane review should not be misinterpreted. Because of Cochrane’s inclusion criteria, many well-designed studies were excluded from its review. Here are some examples:
 - A 2022 Israeli study found that a child’s odds of being cavity-free doubled if they lived in a fluoridated area.
 - A 2024 Canadian study probably met Cochrane’s inclusion criteria, but the study was published after the period of time that Cochrane considered. This study found that the rate of children needed decay treatment under general anesthesia soared 78% after a large Canadian city ceased fluoridation.
- A co-author of the Cochrane review told NBC News that “contemporary studies are showing that water fluoridation is beneficial.”

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III. Ending a fluoridation policy would be a hasty decision that will backfire.

The NTP report does not justify ceasing fluoridation

- The NTP asked the National Academies of Sciences to review its report. The National Academies voiced concern that the NTP had failed to provide “clear and convincing” evidence “to support its conclusions” about fluoride. The NTP did not address all of the concerns that the National Academies raised.
- Opponents of fluoridation claim that the NTP report shows a link between fluoride and lower IQs. But there are two serious flaws with that argument:
 - Most of the studies that NTP analyzed were published in low-quality journals that are not indexed by the National Library of Medicine.
 - Many of the studies in NTP’s report measured fluoride exposure in a way that is flawed. This method is not reliable, so the results of these studies are not reliable.
 - NTP reported a link to lower IQs but only when the level of fluoride was *above 1.5 milligrams per liter*. That is much higher than the level used for water fluoridation.

The California court decision does not justify ceasing fluoridation

- The California court cited the NTP report more than 120 times, leaning on it as a key basis for its decision. Yet the court ignored a key point — NTP said that its report was **not** an evaluation of the safety of fluoridated water.
- The court did not instruct EPA to ban water fluoridation. The court referred to the potential risk of fluoridated water, but it clarified that its decision “does not conclude with certainty” that fluoridated water is harmful.
- Since the California court decision, several key medical and dental organizations have reaffirmed their view that fluoridated water is safe. These organizations include the American Academy of Pediatrics and the American Dental Association.

Communities should focus on the known harms instead of the theoretical ‘risk’

- We know that tooth decay negatively affects children and adults, affecting their ability to learn and earn.
- Ending fluoridation will backfire. Recent studies from the U.S. and Canada show that dental health worsens significantly after a community ceases fluoridation. In fact, two large Canadian cities (Calgary and Windsor) voted to resume fluoridation after experiencing a spike in the local rate of tooth decay.

IV. Neither the NTP report nor the EPA court decision questioned the safety of topical fluoride.

- Both the NTP report and the California court decision focused on fluoride that is *swallowed* in drinking water. They raised no concerns at all about fluoride in toothpaste or other topical forms of mineral.

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