

# Community Water Fluoridation – Fact Sheet

## Situational Background

Community water fluoridation (CWF), a long-standing public health measure, is under renewed scrutiny from some federal agencies and state governments. This follows recent studies raising concerns about potential neurodevelopmental effects at high fluoride exposure levels—well above current U.S. recommended level of 0.7 mg/L. These discussions are unfolding at a time when public health programs are facing significant funding reductions, including cuts to oral health services and dental coverage. In this context, CWF remains a vital, safe, cost-effective preventive initiative—especially for communities with limited access to dental care.

The [California Department of Public Health \(CDPH\)](#) affirms that CWF is a safe, effective, and cost-saving public health strategy to prevent tooth decay. The Centers for Disease Control (CDC) recognizes it as one of the top public health achievements of the 20th century. It helps reduce health disparities by benefiting all residents, especially those in underserved communities who may not have regular access to dental care.

## Key Talking Points:

**Community water fluoridation is a proven, cost-effective public health measure that safely reduces cavities, protects oral health across all ages, and saves billions in dental care—benefiting individuals, families and entire communities.**

### Why it matters

- Dental decay (cavities) is preventable, yet is the most common chronic disease in the U.S.
- Fluoridated water prevents about 25% of cavities in both children and adults.
- It saves families and health systems money by reducing the need for dental treatment.

### How Fluoride Works

- Fluoride is a natural occurring mineral found in water, soil and foods.
- At the right level, fluoride:
  - **Remineralizes teeth:** It helps rebuild weak spots in enamel caused by acids.
  - **Prevents decay:** It makes enamel more resistant to future acid attacks.
  - **Works continuously:** Every sip of fluoridated water provides a small, safe, protective effect.

- Optimally, fluoridated water works alongside fluoride toothpaste and varnish to reduce cavities more effectively than either alone.<sup>1</sup>
  - CWF: Provides a consistent, low-level exposure of fluoride in saliva and dental plaque throughout the day. This helps promote a continuous cycle of remineralization (repairing) of tooth enamel and inhibits the demineralization (softening) caused by acids from oral bacteria.
  - Fluoride Toothpaste: Brushing with fluoride toothpaste applies a much higher concentration of fluoride directly to the tooth surface. This topical application significantly increases the amount of fluoride in saliva and dental plaque for 1–2 hours after brushing, offering additional protection. Regular brushing twice a day with fluoride toothpaste provides ongoing reinforcement for enamel strength.
  - Fluoride Varnish: is a concentrated topical fluoride applied to the surface of teeth. This provides an anti-cavity effect, particularly for individuals with a high risk of developing tooth decay.

## Safety and Oversight

- California's State Water Resources Control Board Division of Drinking Water monitors fluoride daily, monthly and yearly to keep it within safe limits and is the regulatory agency for CWF.
- CWF is the controlled adjustment of the naturally occurring fluoride to the optimal level of 0.7 mg/L (parts per million). Severe dental fluorosis (from too much fluoride) is not seen in people relying on California's public water systems that fluoridate.

## How Do I Know if My Water is Fluoridated?

- To check to see if your water is fluoridated, click the link to the [Community Water Fluoridation Map](#).

## Addressing Concerns

- Some people may have seen studies linking fluoride to health risks. Studies were done in countries with much higher fluoride levels than California.
- A U.S. longitudinal study published in *Science Advances* found that childhood exposure to fluoride at recommended levels of 0.7 mg/L, does not harm cognition and may offer slight benefits, reinforcing support for water fluoridation policies.

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<sup>1</sup> California Dental Association. (n.d.). *Topical vs. Systemic Fluoride*. Retrieved from [https://www.cda.org/wp-content/uploads/CDA\\_Topical-vs.-Systemic-Fluoride.pdf](https://www.cda.org/wp-content/uploads/CDA_Topical-vs.-Systemic-Fluoride.pdf)

## At U.S. levels (0.7 mg/L), research shows no evidence of harm to children's IQ or brain development.

- *Science Advances* conducted the first, large longitudinal CWF study in the U.S. The Study was designed to assess whether fluoride exposure at recommended U.S. levels would affect cognitive performance in both secondary school and at age ~60. Key findings show that children exposed to recommended levels of fluoride in drinking water exhibit modestly better cognition in secondary school, with smaller advantage observed around age 60.<sup>1</sup>
- Health and neurodevelopmental concerns linked to fluoride levels greater than 1.5 mg/L come from studies conducted in countries with high endemic fluoride (several times above U.S. limits).
- Endemic fluoride is naturally occurring fluoride present in groundwater or surface water sources at levels that may exceed recommended limits for safe consumption.
- Extensive research, including reviews by the NTP<sup>2</sup> and other scientific bodies, did not find sufficient evidence to determine that fluoride at 0.7 mg/L has an impact on children's IQ or brain development.
- In September 2024, a federal district court ruled the EPA must reassess the safety of fluoride exposure.<sup>3</sup>
- In July 2025, the EPA filed an appeal to the federal court ruling.
- It is important to distinguish between studies based on excessive endemic fluoride and the carefully regulated fluoride level used in the U.S.
- Topical fluoride (like toothpaste) and fluoridated water work together to provide the best protection.

### Evidence from communities

- Recently published large longitudinal CWF large U.S. study on recommended fluoride levels, published in *Science Advances*, found that children raised with optimal fluoridation show modest cognitive benefits in secondary school.
- Health issues linked to fluoride mostly come from countries with much higher natural levels (several times above U.S. limits). California's systems do not reach those levels.

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<sup>2</sup> National Toxicology Program. (2024, August). *State of the Science Concerning Fluoride Exposure and Neurodevelopment and Cognition: A Systematic Review* (NTP Monograph 08). U.S. Department of Health and Human Services. Retrieved from [https://ntp.niehs.nih.gov/sites/default/files/2024-08/fluoride\\_final\\_508.pdf](https://ntp.niehs.nih.gov/sites/default/files/2024-08/fluoride_final_508.pdf)

<sup>3</sup> Food & Water Watch, Inc., et al. v. United States Environmental Protection Agency, et al., Case No. 17-cv-02162-EMC, *Findings of Fact and Conclusions of Law*, United States District Court, Northern District of California (Sept. 24, 2024). Available at: <https://www.cand.uscourts.gov/wp-content/uploads/2024/09/17-cv-2162-Food-Water-Watch-Inc.-et-al.-v.-EPA-et-al-Opinion.pdf>

- When cities stop fluoridating water, cavities increase, and dental costs rise. Calgary (Canada) and Juneau (Alaska) both saw more severe dental problems after ending fluoridation, and Calgary is reintroducing it in 2025.
- Endorsed by the CDC, California Department of Public Health, American Dental Association, American Academy of Pediatrics, WHO, and over 250 public health organizations.
- 75+ years of research confirm safety and effectiveness when used at recommended levels.

## Increased Childhood Cavities and Economic Impacts

- Ending fluoridation could have significant financial consequences. A 2025 analysis by Harvard School of Dental Medicine projected that eliminating fluoride from U.S. water systems could lead to a 7.5% increase in cavities or 25.4 million more teeth with tooth decay (equivalent to a tooth for one out of every three American children) and \$9.8 billion in additional dental treatment costs over five years.<sup>4</sup>
- In California, the removal of fluoride from public water systems is projected to increase dental care costs by approximately \$4.8 billion over five years, making it the most heavily impacted state. At the time of the study, the authors estimated that 55.5% of Californians were served by CWF.<sup>5</sup>

## Respecting Choice Through Transparency and Engagement

- Population-based policies are for the public good. The requirement to wear seat belts is the single most effective safety device in vehicles; air bags complement seat belts by lowering fatality rates.
- CWF is a population-based preventive strategy designed to deliver oral health benefits to entire communities, much like how staple foods are fortified to prevent widespread nutrient deficiencies. Adding fluoride at recommended levels is comparable to adding chlorine to kill bacteria in public water systems.
- There are easy, accessible individual alternatives for those who choose not to use fluoridated water: water filters (reverse osmosis) and purified, distilled or bottled water

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<sup>4</sup> Choi SE, Simon L. Projected Outcomes of Removing Fluoride From US Public Water Systems. *JAMA Health Forum*. 2025;6(5):e251166. doi:10.1001/jamahealthforum.2025.1166

<sup>5</sup> Bhaumik, D., & Weninger, R. S. (2025). *State-Level Costs of Removing Fluoride from Community Water Systems*. [Report]. [CareQuest Institute for Oral Health](#).

## Resources:

- Centers for Disease Control: [Community Water Fluoridation | Fluoridation | CDC](#)
- CDC MY Water's Fluoride: [CDC - MWF - My Water's Fluoride Home](#)
- CareQuest Institute for Oral Health: [Community Water Fluoridation](#)
- American Academy of Pediatrics: [I Like My Teeth](#)
- American Dental Association: [Fluoridation Facts | American Dental Association](#)
- California Dental Association: [You searched for fluoride - CDA](#)
- CDPH CWF [Joint Statement](#)

Public confusion has grown due to false information, national debates and media coverage. It's important to use trusted resources to clarify any uncertainties you may have about CWF. Engaging with experts can provide valuable insights and ensure you have the most accurate, scientific, evidence based, and up-to-date information. Please do not hesitate to reach out to the CDPH Office of Oral Health (OOH); we are here to help you navigate any challenges you might face.

For questions or information, please contact: CDPH, OOH:  
[Dental.Director@cdph.ca.gov](mailto:Dental.Director@cdph.ca.gov).

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<sup>1</sup> John Robert Warren *et al.*, Childhood fluoride exposure and cognition across the life course. *Sci. Adv.* 11, eadz0757(2025). DOI:10.1126/sciadv.adz0757