

## Dive Deeper

Want to know more?  
Check out these resources:

- ▶ **Children's Health Defense:**  
Visit [ChildrensHealthDefense.org](http://ChildrensHealthDefense.org) for in-depth articles and updates on fluoride risks, children's health and more.
- ▶ **Fluoride Action Network:**  
[FluorideAlert.org](http://FluorideAlert.org) delivers cutting-edge research, breaking news, and powerful advocacy on fluoride issues.



### Children's Health Defense Mission and Vision

Our mission is **ending childhood health epidemics by eliminating toxic exposure**. We will restore and protect the health of children by *eliminating environmental exposures, holding responsible parties accountable, and establishing safeguards* to prevent future harm of children's health.

Operating under the four pillars of **science, education, litigation, and advocacy**, Children's Health Defense shares its knowledge and expertise through legal initiatives, ongoing scientific research, the Defender News, CHD TV, CHD Films, CHD Books, and grassroots advocacy, all working to *restore children's health and protect future generations from harm*.



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[ChildrensHealthDefense.org](http://ChildrensHealthDefense.org)

# Fluoride

## What You Need To Know



Discover  
the truth  
about fluoride  
in your water  
and dental care.

Children's  
Health Defense 



## Why Worry About Fluoride?

Contrary to popular belief, **fluoride in water isn't a pure chemical compound—far from it.** It's largely *hexafluorosilicic acid*, an industrial waste product from phosphate fertilizer production. Manufacturers struggle to dispose of it, so municipalities purchase it for water fluoridation.

### Health Risks:

**Research links fluoride to neurotoxicity**, with studies showing a 2-5 IQ point drop in children exposed to levels above 1.5 mg/L.

**Dental fluorosis**, affecting 41% of U.S. adolescents per CDC data, signals overexposure, while skeletal fluorosis—altered bone density from prolonged intake—emerges at 10-14 mg/day.

- ▶ **Biochemical Impact:** Fluoride inhibits enzyme function, notably in the thyroid, where it mimics iodine, potentially disrupting hormone synthesis
- ▶ **Ethics:** Water fluoridation mandates exposure without consent, using hexafluorosilicic acid—an industrial byproduct, not pharmaceutical-grade fluoride—raising purity concerns.
- ▶ **Efficacy Debate:** Cavity declines correlate more with brushing habits than fluoridation, per WHO data. Global tooth decay rates dropped 30-50% from 1970-2000 across fluoridated and non-fluoridated countries alike, per WHO oral health surveys. Fluoride accumulates in bones over time, with 50% of ingested fluoride retained in adults.

## Where Did Fluoride Come From?

Fluoride's story begins in the early 20th century. In 1901, dentist Frederick McKay noticed "Colorado Brown Stain" on patients' teeth in areas with naturally high fluoride in water. This sparked curiosity about fluoride's effects. **By the 1930s, studies linked fluoride to fewer cavities, paving the way for its use in dental care.**

## When Did It Become Common?

**Fluoride toothpaste hit the market in the 1950s**, with Crest launching the first clinically proven formula in 1955. Today, it's a staple in oral health products.

## Fluoride in Water Supplies:

In 1945, Grand Rapids, Michigan, became the first city to add fluoride to its water, aiming to reduce tooth decay. By the 1960s, water fluoridation spread across the U.S., endorsed by the CDC as a public health win. **Now, over 70% of Americans on public water systems get fluoridated water.** But questions about its safety linger—read on to learn why.

## What Science and The Law Reveal

Mounting scientific evidence and bold legal actions are challenging fluoride's safety, revealing risks to children's health that can't be ignored.



A 2024 NIH/NTP report found **fluoride exposure above 1.5 mg/L—double the U.S. "optimal" level—lowers IQ in children**, drawing from 74 studies across 10 countries

Of these, 22 high-quality studies confirmed cognitive deficits, some showing **up to 5-point IQ drops** in heavily exposed groups.



In September 2024, a federal judge in California **ruled fluoridation at 0.7 mg/L an "unreasonable risk" to kids' brains** under the Toxic Substances Control Act, ordering EPA action.

Class-action suits filed in January 2024 in California and Illinois courts **charge toothpaste makers with hiding fluoride's neurotoxic effects on children**, citing evidence of IQ deficits linked to prenatal and early childhood exposure

