

The Joys of Combating Misinformation

OR

How stupid are
dentists as
business people?



Fluoride: A naturally occurring mineral



- 13th most abundant mineral in the earth's crust
- **Surface water** (rivers)—typically low concentrations, 0.2 mg/L (ppm) or less
- **Groundwater** (wells)—higher concentrations, 0.1 mg/L to over 5.0 mg/L
- **Ocean** is typically 0.8 to 1.4 mg/L

A fluoride timeline

1874

A German doctor conducts an animal test and finds that fluoride protects tooth enamel.

1901

Dr. Frederick McKay, a dentist, moves to Colorado and learns of a city where many people's teeth have "brown spots" but cavities are rare.

1945

Studies begin to learn whether fluoride cuts the cavity rate. Cavities fall dramatically.

1956

Crest starts selling fluoride toothpaste to the consumer market.

1995

The U.S. Surgeon General calls CWF "the cornerstone" of dental prevention.

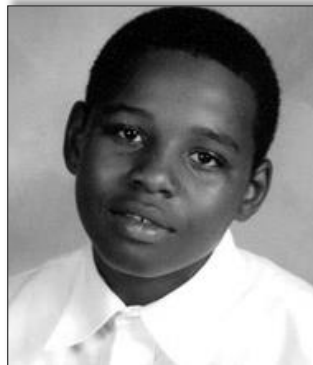
1999

CDC names fluoridation one of 10 great public health achievements.

Why Oral Health Matters

Dental cavities are the **most common chronic disease** for Adults and children. It's significantly more common than *asthma*, *obesity*, and *diabetes*. **Infectious and Transmissible**

- Severe pain (toothaches)
- Difficulty in chewing
- Poor weight gain
- Difficulty concentrating
- Predictor of cavities later in life
- Costly to treat
- Deaths



Avoiding the need for hospital treatment/GA*

- The average cost of treating early childhood cavities in hospital operating rooms in Colorado ranged from **\$10,000 to \$15,000** per child
- U.S. and International Studies: Water fluoridation prevents > 2/3rds of hospitalization of children ***under general anesthesia*** for extensive cavity treatment
- **Water operators prevent more decay (cavities) than all dentists combined ever will** — Kip Duchon, P.E., retired CDC National Water Fluoridation Engineer



Cavities affect our ability to learn and succeed

- Cavities are the **most common chronic disease** of *adults and children*
- Children with recent dental pain are 3 times more likely to be **absent from school**
- Adults with missing or unhealthy teeth are at a disadvantage when **seeking many jobs**
- **Disproportionally** impacts the socioeconomically disadvantaged



How fluoride works



Studies show fluoride works through **both** topical and systemic effects.

- It's beneficial *before* permanent teeth are developing below the gums.
- Continuous exposure to small amounts of fluoride helps *both* adults and children by remineralizing the tooth enamel.

Leading health & scientific groups that SUPPORT fluoridation

1. American Water Works Association – over [51,000 active members](#)
2. American Academy of Pediatrics – approximately [67,000 active members](#)
3. American Dental Association – over [159,000](#) active members
4. Centers for Disease Control and Prevention
5. American Academy of Family Practitioners – over [129,000](#) active members
6. American Nurses Association – [4 million](#) active members
7. American Medical Association – over [270,000](#) active members
8. American Dental Hygienists Association – over [226,000](#) active members
9. Department of Defense – [Memo](#) regarding fluoridation of military bases around the world
10. World Health Organization*

Leading health & scientific groups that OPPOSE fluoridation

0

A long list of false claims by fluoridation opponents

- No toxicological testing has been conducted on fluoride
- The ADA says it shouldn't be used in infant formula
- Fluorosis is a sign of toxic effects
- It causes ADHD
- It causes Alzheimer's
- It harms the kidney, the immune system and other systems
- It's a conspiracy — the phosphate fertilizer industry is disposing of its "hazardous waste"
- Cavities have fallen in all nations, so fluoridation must not matter
- Some people are allergic to fluoridated water
- It causes thyroid problems
- The only way fluoride works is by topical application
- This is "forced medication"
- The Cochrane Group says there's no evidence behind fluoridation
- Water systems should use a pharmaceutical grade of fluoride

They circulate false information

Did the city of Dallas really end fluoridation?

ALEX JONES' **PRISON PLANET**

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Dallas, Texas Ends Over 50 Years of Water Fluoridation

Arjun Walla
[Collective Evolution](#)
May 7, 2014

Anti water fluoridation advocates have been successful in the removal of fluoride from the water supply in Dallas, Texas. The ban comes after five decades of water fluoridation, but more and more people around the world have been gathering to put a stop to the practice over the last few years.

"We don't need it and we'd just save a million dollars that we can use for something else. We're looking into seeing what we can do immediately so we can get those funds up from now." – Sherril Kadane, Dallas City Council Member

"Yeah, this is major big. I knew we would prevail. It only makes sense. We're spending too much money on an ineffective program." – Scott Griggs, Dallas City Council Member

The decision was made after activists continually showed up to city council meetings, providing evidence and warning them regarding the risks involved with water fluoridation. As a result, the city could save over \$1 million a year that is spent on the industrial chemical, that's right, an industrial chemical.

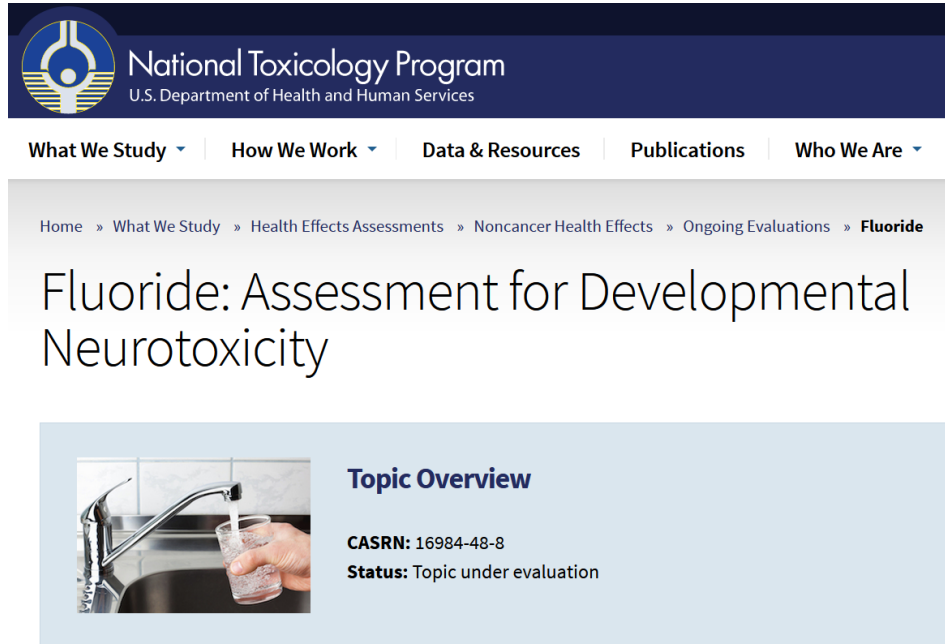
The substance added to our drinking water is called hydrofluorosilicic acid. It is a toxic waste substance created from the creation processes of aluminum, fertilizer, steel and nuclear industries. It's not the natural element of fluoride, again, it's industrial toxic waste.

For example, in the Phosphate Mining & Production Industry, much of the hydrofluorosilicic acid

(Source: A. Walla, "Dallas, Texas Ends Over 50 Years of Water Fluoridation," Prison Planet, May 7, 2014; the city council did not vote to end or "ban" water fluoridation. In fact, the city reaffirmed support in 2015 for continued fluoridation of its municipal water system.)

What about claims that fluoride lowers IQs?

The National Academies of Sciences weighs in



The screenshot shows the National Toxicology Program (NTP) website. The header includes the NTP logo and the text "National Toxicology Program U.S. Department of Health and Human Services". Below the header are navigation tabs: "What We Study", "How We Work", "Data & Resources", "Publications", and "Who We Are". The breadcrumb trail reads: "Home » What We Study » Health Effects Assessments » Noncancer Health Effects » Ongoing Evaluations » Fluoride". The main title is "Fluoride: Assessment for Developmental Neurotoxicity". Below the title is a "Topic Overview" section with a small image of a hand holding a glass of water under a faucet. The text in this section includes "CASRN: 16984-48-8" and "Status: Topic under evaluation".

“Based on the NASEM review, the NTP removed the hazard classification of fluoride..”

- The National Academies was asked to peer-review a report that described fluoride as harmful to cognitive development (IQs).
- The National Academies gave it a negative review and said the findings do not apply to **low fluoride exposures** such as those “typically associated with drinking-water fluoridation.”
- **Fluoride at levels in water fluoridation (0.7 ppm) and below 1.5 ppm = no IQ changes**

Public health measure *or* individual choice?

Water fluoridation is a public health measure that prevents at least 25% cavities for adults and children



Fluoridation benefits *everyone*, regardless of age, income, or education



Reverse osmosis benefits those **opposing** fluoridation*

Opponents misrepresent data

Opponents use these misleading graphs

Figure 1: Data from WHO Database

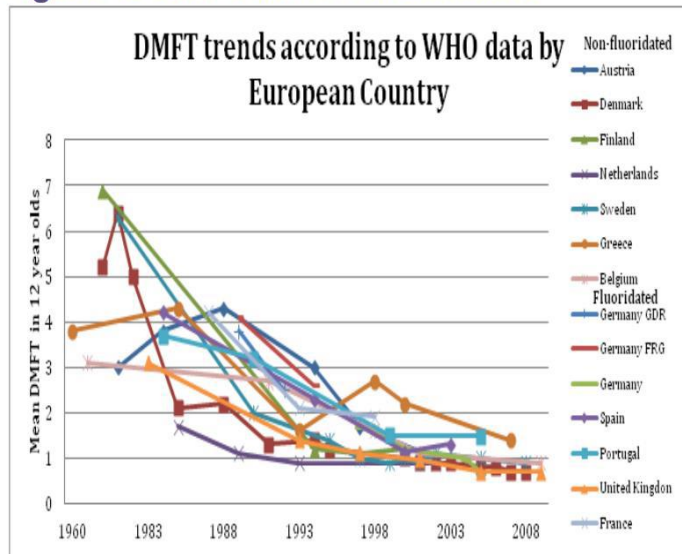
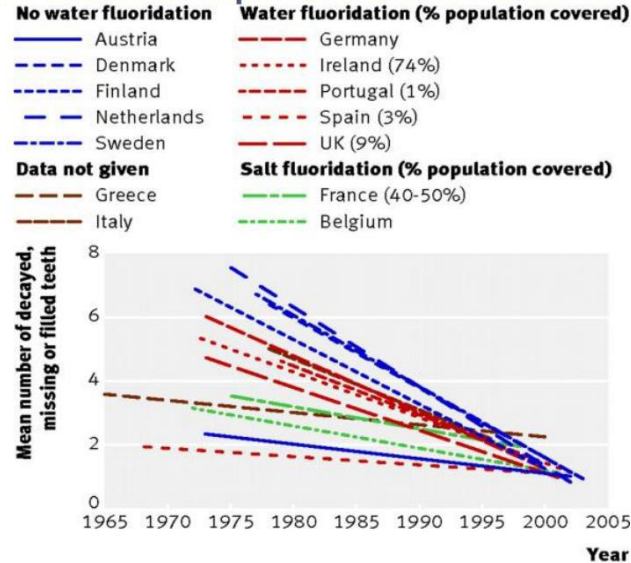


Figure 2: Data manipulated to show linear trend



Graphs created to depict declining trends in tooth decay

Figure 1. Source: Data from the World Health Organization database. Available at <http://www.mah.se/CAPPI/Country-Oral-Health-Profiles/> ;

Figure 2. Source: Cheng, KK, Chalmers, I, Sheldon, TA. Adding Fluoride to water supplies. *BMJ*; 2007;335(7622):699-702.

- Their chart shows only 2 countries with salt fluoridation.

This is false.

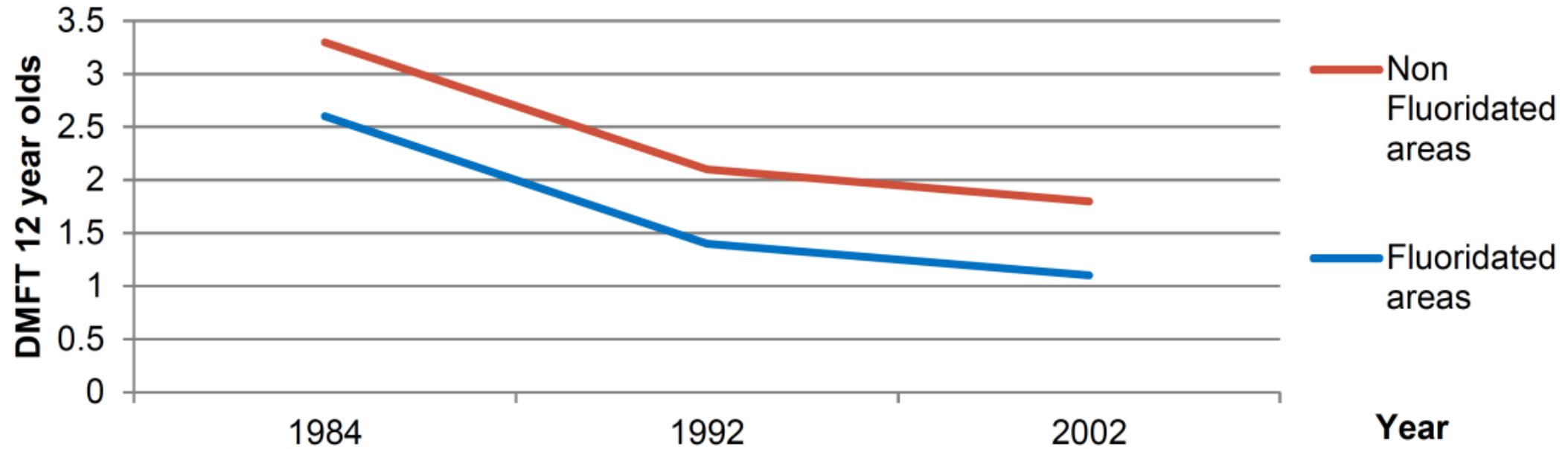
- **Germany** is shown as a country with water fluoridation.

This is false.

- They omit the fact that some of these nations fund free dental services in schools.

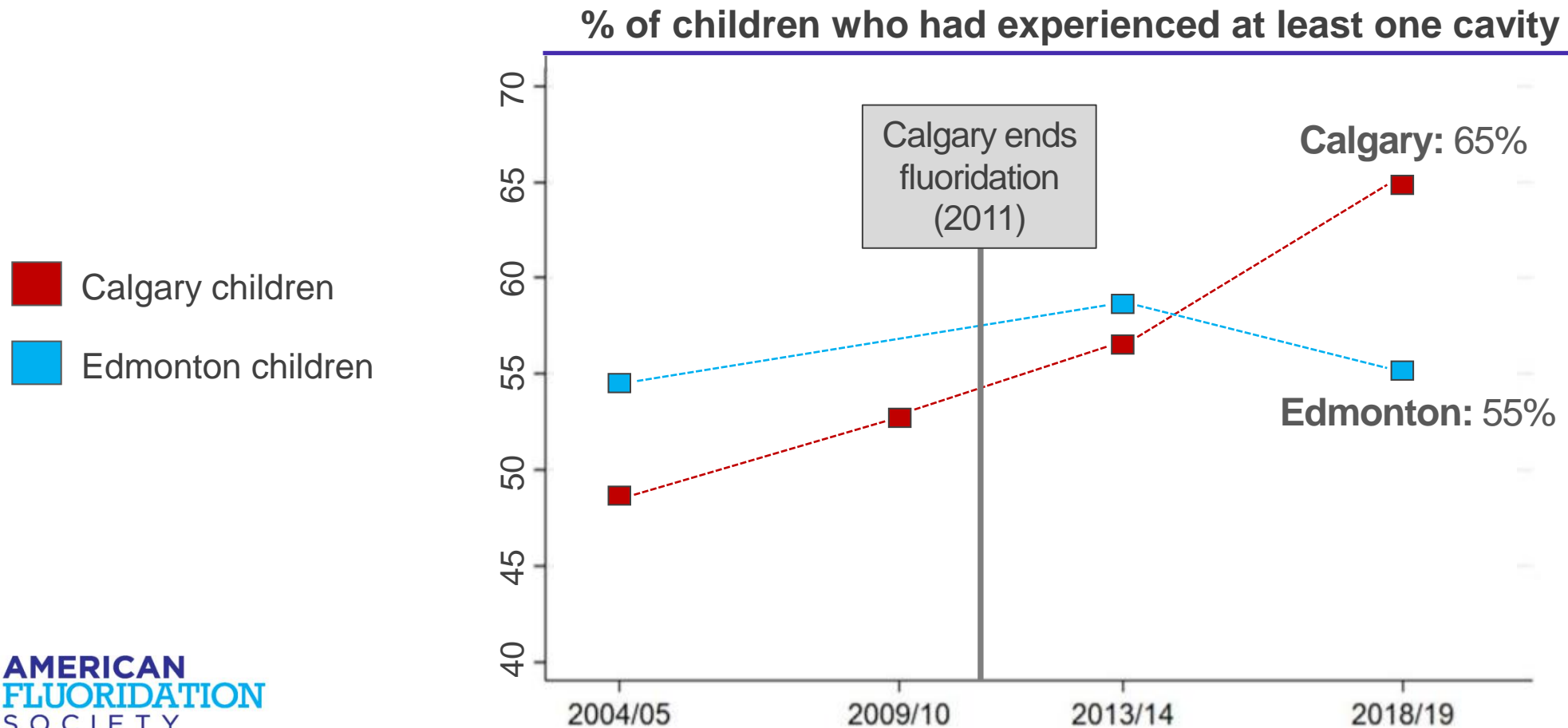
A clear benefit from fluoridation

A chart like this compares apples to apples. Children in Ireland who live in fluoridated areas have lower rates of decay.



Look at what happened in Calgary

STUDY: The prevalence of decayed, extracted, missing or filled primary teeth (children in Grade 2)



How to be prepared for Testimony or media interviews

During the interview: 5 tips

- 1. Use statistics strategically and sparingly:** When it comes to data, “less is more”. Choose 2 or 3 key statistics, and work these into your answers. (If the reporter is writing about older adults’ oral health, make sure one stat applies to this group.)
- 2. Don’t assume they know:** Even if a reporter seems familiar with the issue, there are probably gaps in their knowledge.
- 3. Use plain language:** Avoid jargon or clinical language that many media consumers won’t understand.

During the interview: 5 tips

- 4. Protect your credibility:** If the reporter asks about a study you aren't familiar with, tell them you will call back with an answer after reviewing data or conferring with a research expert.
- 5. Keep your cool:** Don't be defensive when you get a tough or loaded question. Be cordial and friendly — even if you feel they may not give you a fair shake. You have more to lose by being hostile than you have to gain.

Connect with your audience right away

How you present yourself will shape how they react

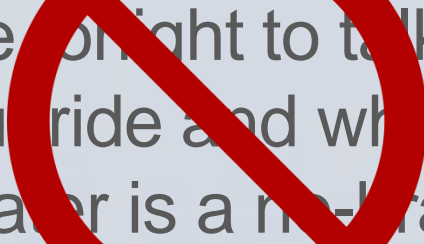


Connect with your audience right away

“I’m here tonight to talk to you about fluoride and why adding it to our water is a no-brainer.”



Connect with your audience right away


“I’m here tonight to talk to you about fluoride and why adding it to our water is a no-brainer.”



Connect with your audience right away

“I’m pleased to be here. I will share facts about dental health, and I’ll do my best to answer your questions. My goal is to give you the information you need to make an informed decision.”



Avoid terms that may confuse or mislead

<i>Scientific Term</i>	<i>Scientific/Public Health Meaning</i>	<i>How the Public May Hear It</i>
Caries	Disease that causes decay	Who carries what?
Random sample	A subset in which each member had an equal chance of being selected	They picked people without thinking carefully about it
Chemical	Any substance consisting of matter	A substance that is “artificial” and toxic
Intervention	An evidence-based health practice	The government is intervening in something

Engaging the media

How media outreach has aided advocacy

Media outreach: Pinellas County, Florida

- The **Tampa Bay Times** criticized the decision by the county commission to end CWF and covered the issue intensely.
- Dr. Johnny Johnson, a local dentist, answered questions and clarified dental issues for their reporters and editorial writers.
- For its editorials raising readers' awareness, the Times was awarded the Pulitzer Prize.



The 2013 Pulitzer Prize Winner in Editorial Writing

For their diligent campaign that helped reverse a decision to end fluoridation of the water supply for the 700,000 residents of the newspaper's home county

Tampa Bay Times



Establish a relationship with local water operators



Water personnel play key role

- They are the experts in the water division
- They handle a job that most local elected officials do not fully understand
- Elected officials tend to defer to water operators and managers—especially when they hear no countervailing facts
- Nearly all elected officials have never set foot in their water plant



How one person can make a difference

- Building new plants – independent
- Delay startup fluoridation
- City official approached me
- Director was opposed to fluoridation
- Met with city officials and director
- Started fluoridation 2-3 years sooner than “planned”



Clearwater Utilities Director David Porter, in charge of delivering clean drinking water to the city's 110,000 residents every day, plans to raise fluoride levels in drinking water to federally recommended levels sometime in March.

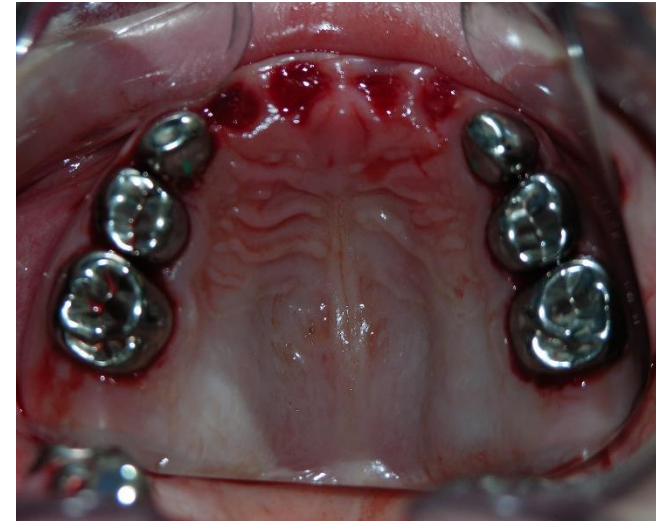
Utilities Director – Clearwater, FL

Avoiding the need for hospital treatment

- The average cost of treating early childhood cavities in hospital operating rooms under **general anesthesia** in Colorado ranged from **\$10,000 to \$15,000** per child
- U.S. and International Studies: Water fluoridation prevents > 2/3rds of hospitalization of children ***under general anesthesia*** for extensive cavity treatment
- **Water operators prevent more decay (cavities) than all dentists combined ever will** — Kip Duchon, P.E., retired CDC National Water Fluoridation Engineer



Full mouth rehabilitation under general anesthesia





Dr. Johnny Johnson

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AmericanFluoridationSociety.org

What questions do you have?

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