

# Support Community Water Fluoridation – Trust the Experts instead of Accepting the Arguments of Fluoridation Opponents

**Introduction:** I wish it were as easy to counter anti-fluoridation arguments as simply stating that virtually all claims made by fluoridation opponents (FOs) were flawed and erroneous. Unfortunately...

**Primary Fact:** There are two completely contradictory and mutually exclusive interpretations and presentation of the evidence regarding the safety and effectiveness of community water fluoridation (CWF) based on exactly the same scientific evidence which is available to those on both sides of the argument.

**Critical Questions:** How can someone who is not a fully trained and experienced scientist &/or health professional specializing in fluoridation-related health issues (particularly those who are responsible for making decisions that impact the health and safety of members of their community) evaluate the accuracy and relevance of complex scientific evidence? How can someone who is not a fully trained and experienced scientist &/or health professional determine who they should accept as a trustworthy expert to present a fair, accurate evaluation of the evidence – Pro-CWF or Anti-CWF representatives?

## Critical Facts and Questions:

1. It is Important to Understand How Science-Based Conclusions are Made – and how they differ from conclusions based on NotScience beliefs (morals, religion, philosophy, laws, arts and politics). ([link](#))
2. CWF is recognized a safe and effective public health measure by major and respected science and health organizations worldwide, including the U.S., Canada, Britain, Europe, Australia, New Zealand and other countries. 124 specific examples. ([link](#))
3. Major, respected science and health organizations do not post warnings about any health risks of CWF. ([link](#))
4. **No major, respected science or health organizations in the world support the anti-fluoridation opinions** that CWF is ineffective &/or harmful to health as legitimate. There is also absolutely no evidence that a significant number of science &/or health professionals oppose CWF.  
Carefully examine the ideology of organizations that oppose CWF and the credentials and history of those who vigorously oppose the practice. ([link](#))
5. **If** the arguments and claims of FOs are a scientifically accurate interpretation of the evidence and are presented correctly, fairly and truthfully, how are facts 2, 3 & 4 possible? ([link](#)) [Recent anti-F claims](#)
  - o **Q1** – Why do the major science and health organizations in the world (and the hundreds of thousands of members they represent) continue to support CWF and not the anti-fluoridation opinions?
  - o **Q2** – Why do only a relatively small number of trained and experienced scientists &/or medical professionals support the anti-fluoridation agenda and beliefs?
6. Since there are only a relatively few scientists and health professionals, virtually no mainstream scientific organizations, a few alternate health groups and some questionable supporters of the anti-fluoridation arguments that CWF is dangerous and ineffective — and it can be easily demonstrated that the available anti-fluoridation ‘evidence’ is presented inaccurately — how is it possible that FOs are often successful in their efforts to ban or stop community water fluoridation? ([link](#))
7. The anti-science tactics employed by FOs (and others who dismiss an established scientific consensus) to try and convince members of the public to trust their proclamations that CWF is dangerous, unethical and ineffective over the conclusions of mainstream science and health professionals must be exposed so they can be understood and dismissed by rational, caring members of the public. ([link](#))  
Specifically, FOs:
  - ([a.](#)) Ignore the scientific consensus; ([b.](#)) Hijack the democratic process; ([c.](#)) Employ fear mongering; ([d.](#)) Employ Gish Gallop tactics; ([e.](#)) claim accidents with some link to fluorine happen, so CWF should be banned; ([f.](#)) Create a veneer of science; ([g.](#)) Blur Ethics and Science; ([h.](#)) Misrepresent Freedom of Choice; ([i.](#)) Provide misleading claims about other countries and CWF; ([j.](#)) Make public, libelous claims against science and health professionals who support CWF; ([k.](#)) Make false, out-of-context, irrelevant, misleading presentations of article/study conclusions.
8. **Bottom Line:** I appreciate your willingness to examine arguments for trusting the overwhelming majority of scientists and health professionals and the scientific consensus over the outlier, anti-fluoridation opinions. There are dozens of factors that can increase or decrease the risk of dental decay. All methods known to increase risk should be minimized and all methods that reduce the risk (including fluoridation) should be implemented.

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## Support Community Water Fluoridation – Trust the Experts instead of Accepting the Arguments of Fluoridation Opponents

**Introduction:** I wish it were as easy to counter anti-fluoridation arguments as simply stating that virtually all claims made by **fluoridation opponents (FOs)** were flawed and erroneous (which they are). Unfortunately, those arguments are often presented using effective strategies that make them appear believable to many voters and elected officials. To effectively counter very simple anti-fluoridation arguments like “*Fluoride is a poison that should never be put in drinking water*” requires paragraphs of detailed explanations and supporting evidence to even have a chance at refuting the claim. My detailed explanation, complete with specific supporting evidence, is over 30 pages long with many links to supporting evidence. **If you are considering the possibility that anti-fluoridation arguments might have some validity, I hope you will choose to read this presentation of reasons to reconsider your position.**

Community water fluoridation (CWF) has been an important public health measure since the early 1950s after it was first tested successfully in [Grand Rapids, Michigan](#) in 1945. That initial test was the result of nearly [20 years of scientific investigation](#) which provided evidence that exposure to fluoride ions (F<sup>-</sup>) in drinking water at about 1 ppm appeared to significantly reduce the risk of tooth decay – while limiting the risk of dental fluorosis. Since that discovery and the effectiveness of the Grand Rapids experiment, a number of countries have implemented CWF programs. Based on the success of CWF, other F<sup>-</sup> based dental health measures have been developed and successfully employed like fluoridated toothpaste, fluoride rinses and varnishes and, in some countries, fluoridated salt and milk.

However, there has been opposition to CWF since the beginning, and decisions on whether to fluoridate drinking water (or not) have usually been made in the U.S. and other countries by a majority of voters or government officials elected by the voters, not by a majority of science or health experts. **An important dilemma is that most of those voters and elected officials are not trained scientists &/or health professionals.** Consequently, the decisions of most voters and elected policy-makers concerning CWF are not (and cannot be) based on their personal evaluation of the relevant body of complex scientific evidence.

My contention in the following discussion is that the democratic process (if it is to produce legitimate science-based results beneficial to the population it is supposed to protect) requires an accurate, impartial consideration of topics by fair-minded, well-informed voters and elected officials. The question I attempt to address in the discussion is: **If political decisions that impact public health issues based on complex scientific evidence are made by the majority of voters and elected officials who don't have the training and experience necessary to personally evaluate the evidence, how can these individuals determine what the best decisions are regarding CWF – particularly when they encounter diametrically opposed, mutually exclusive arguments for and against CWF?** The same question and concerns are relevant to vaccination policies, climate-related decisions, education policies regarding young-earth creationism, implementing & following pandemic safety measures (wearing masks, social distancing, appropriate isolation, etc.), and other science-based issues that impact public policies and public health measures.

I am a scientist, and I have studied fluoridation issues for over 25 years. I believe that anti-fluoridation arguments, tactics and the consequences to public health are dangerous, as are anti-vaccination arguments, ignoring science-based methods to limit the spread of a pandemic and the rejection of other science-based policies.

While researching drinking water related topics in the mid-1990s, I came across some anti-fluoridation literature, read it, and began to wonder if I should be concerned about the safety and effectiveness of CWF – which I and my family were drinking. I had not previously encountered anti-fluoridation claims, so I embarked on an extensive investigation and evaluation of those claims and the tactics employed by **fluoridation opponents (FOs)**. After months of examining the actual evidence and the specific arguments based on that evidence, I determined those allegations of harm were hugely exaggerated and were actually dangerous for public health – just as anti-vaccination claims and opinions, if believed and acted upon, can harm public health.

I have actively and publicly engaged in countering anti-F<sup>-</sup> arguments since 2015 when FOs launched a serious effort to stop fluoridation of Denver Water. Fortunately, the Denver Water Board members carefully researched the issue, trusted the overwhelming majority of experts and the scientific consensus, and they voted to continue fluoridation. Even after hearing a presentation by Paul Connett, one of the top anti-fluoridation activists, the Board concluded *“Nothing has been presented to the Board or learned in our research that would justify ignoring the advice of these public health agencies and medical and community organizations, or deviating from the thoroughly researched and documented recommendation of the U.S. Public Health Service.”*

<https://www.denverwater.org/sites/default/files/fluoride-board-resolution-august-2015.pdf>

12 years earlier, the Fort Collins, CO City Council had to make a similar decision. A ‘fluoride technical study group’ responsible for reviewing all evidence for/against CWF was created, The study group was presented with arguments from fluoridation opponents, yet the findings on CWF effectiveness, health risks, costs and other risks were all in favor of CWF – resulting in one of the more detailed CWF evaluations available.

[https://www.fcgov.com/utilities/img/site\\_specific/uploads/fluoride-report030903.pdf](https://www.fcgov.com/utilities/img/site_specific/uploads/fluoride-report030903.pdf)

I am fully aware that there has been recent research since the Fort Collins decision and Denver fluoridation battle which FOs have presented to the public, allegedly as sufficient proof that CWF can reduce IQ and cause ADHD and other neurological problems – not to mention ongoing claims CWF causes arthritis, bone fracture, cancer, cardiovascular disease, diabetes, GI effects, hypersensitivity, kidney disease, male fertility and pineal gland issues, skeletal fluorosis and thyroid disease. (<http://fluoridealert.org/issues/health/>)

Anyone who is responsible for making decisions about CWF will probably have been sent hundreds of letters from FOs that provide reams of “conclusive evidence” that allegedly proves CWF is responsible for all the damaging health issues listed above in addition to claims that CWF amounts to the illegal addition of medication to the water supply that forces everyone to drink a poison.

Anyone who is responsible for making decisions about CWF will also have received letters from scientists and health professionals who claim that, despite the strongly held opinions and claims of FOs, the overall body of scientific evidence has continued to support the safety and effectiveness of fluoridation since 1945 when fluoridation was first tested.

Anyone who has encountered anti-fluoridation claims will understand that a significant proportion of the arguments consist of presenting evidence based on published studies that allegedly prove the claims that CWF is ineffective and actually causes serious damage to the health of those who drink it. However, to personally understand and evaluate the validity of evidence provided by FOs requires significant science or health-care training and experience. As noted earlier, most members of the public who are elected community decision makers and/or voters responsible for making choices on CWF and other science-based public health measures (like vaccination and how to cope during a pandemic) are not trained scientists or health care professionals.

My goal is to provide accurate facts, a description of anti-F<sup>-</sup> tactics and convincing evidence in favor of accepting the conclusions of most relevant science and health experts (and the organizations that represent them) that CWF is a safe, effective, ethical science-based public health measure (like drinking water disinfection, vaccination

programs and science-based methods for handling a pandemic) for reducing the risk of dental decay and protecting the health of citizens — without having to present a detailed evaluation of the specific scientific evidence that has led to those science-based conclusions. **If you believe that most scientists and health care professionals responsible for public health care practices actually care about others, have relevant training and experience and try their best to make and promote effective, science-based decisions that will benefit their fellow citizens, I encourage you to read the following information.**

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**An important fact:** There are two completely contradictory and mutually exclusive interpretations and presentation of the evidence regarding the safety and effectiveness of CWF:

1. **Pro-CWF:** An important and ethical public health measure that significantly lowers risk of tooth decay and related health problems with no proven health risks that cause concerns.
  2. **Anti-CWF:** An unethical method of forced medication that does not significantly reduce tooth decay rates and significantly contributes to an increased risk of lower IQ, ADHD, cancer, thyroid problems, etc. — as referenced earlier.
- **The Pro-CWF and Anti-CWF conclusions are based on exactly the same scientific evidence** which is available to those on both sides of the argument. That creates a serious dilemma for non-scientists.

Some thoughts regarding the evidence provided regarding science-based decisions:

- I. The supporting evidence is generated, selected, interpreted and presented to the public quite differently by representatives of the different sides.
- II. The body of scientific evidence relevant to CWF is extremely complex and extensive — there are many hundreds of studies of varying quality, disparate relevance and sometimes conflicting conclusions that cover over seven decades of research.
- III. Since there is no secret cache of evidence available to one side of the argument or the other, the real issue is how that body of scientific evidence is evaluated and how conclusions are reached and presented to the relevant science and health communities to influence the scientific consensus. **Perhaps even more important** is how the conclusions are presented to those members of the public (who are not trained and experienced scientists or health professionals) to influence health policy decisions. Are studies conducted, evidence evaluated and conclusions presented fairly and accurately, or is the goal to accumulate and present ‘evidence’ that supports a strongly-held belief that must be protected.
- IV. Who decides which selections and interpretations of the evidence are valid, science-based and legitimate, and how is that information presented to the public?
- V. As discussed below (Fact 2.), the major science and health organizations in the world do not accept the conclusions of the FOs (or, for that matter, vaccination opponents). If the FOs’ or vaccination opponents’ interpretation of the evidence is true, and the mainstream science and health organizations that support CWF and vaccination are completely wrong, **how can the mainstream organizations be trusted to provide accurate information for any other science-based health issues?**
- VI. As described below, most scientists and health professionals are Pro-CWF, but some FOs do have science/health degrees and experience.

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**A Critical Question: How can someone who is not a fully trained and experienced scientist &/or health professional specializing in fluoridation-related health issues (particularly those who are responsible for making decisions that impact the health and safety of members of their community) evaluate the accuracy and relevance of complex scientific evidence? How can they determine which of the completely contradictory pro-CWF and anti-CWF claims are legitimate and should be followed for the benefit of their constituents &/or fellow citizens?**

**My answer: Most people can’t** — they must, at some level, depend on the evaluation and conclusions of someone they accept as a trustworthy expert; and that would either be a CWF supporter or opponent.

**That leads to another important question to consider:** How can someone who is not a fully trained and experienced scientist &/or health professional determine who they should trust to present an accurate evaluation of the evidence – Pro-CWF or Anti-CWF representatives? Do they toss a coin? Do they immediately trust an expert whose conclusions align with their beliefs? Or do they try to be as diligent and impartial as possible and carefully consider not only the conclusions presented, but who is presenting the conclusions, how the evidence is presented and the tactics used to present and support the conclusions.

This decision of who to trust for guidance on important, science-based issues is critical, not only for CWF and other health related issues like vaccination, other water treatment processes and how to deal with a pandemic, but all other science-based issues and controversies like evolutionary theory, GMO crops, fears of electromagnetic radiation, etc. **Hopefully a considered evaluation of important facts that apply to the proponents of both sides of the conflicting views will be undertaken before a decision is made about who should be considered a trusted scientific expert on CWF and on all other important science-based issues.** [More information here](#)

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Below are some important facts and questions to encourage your trust and acceptance of Pro-CWF representatives of the well-established, 75-year scientific consensus that CWF is a safe and effective public health measure — regardless of political persuasion and without resorting (initially anyway) to a detailed evaluation of the evidence — over the Anti-CWF claims by that fluoridation is harmful and ineffective:

1. **Fact – It is Important to Understand How Science-Based Conclusions are Made** – and how they differ from conclusions based on [NotScience beliefs](#) (morals, religion, philosophy, laws, arts and politics): Scientific understanding of the natural world is constantly evolving. The continual possibility of change in any scientific consensus based on legitimate scientific research is one of the most unique, important and often misunderstood characteristics of science. (My detailed explanation of [What Is Science](#)) However, without a reliable process that allows for a change in consensus based on a fair and accurate evaluation of evolving evidence, science would either be an unchanging, authoritarian belief system, and all of the characteristics of modern society which are based on an evolving understanding of the natural world would not exist — or scientific understanding resemble a pinball game. continually changing and bouncing around from new idea - to new idea - to new idea, and nothing would be accomplished.

It is critical to understand the difference between:

- a. scientists who dispute an established scientific consensus and use legitimate, relevant, accurately presented, reproducible scientific evidence to convince relevant experts the consensus needs changing, and
- b. those who don't have the evidence to change the scientific consensus, abandon the scientific communities and try to change public opinion instead.

**\*\* Science, in any area of study – including fluoridation – can only progress by serious challenges to an accepted scientific consensus by legitimate scientists who acquire and present newly acquired legitimate evidence and who work within the scientific communities to convince other legitimate scientists their evidence is good quality, is fairly represented, is reproducible by others (who will probably be skeptical), and is actually a fair and legitimate challenge to the current consensus. When those criteria are met the consensus can begin to change – and scientific knowledge (which impacts all of society) progresses.**

- Mother Nature does not care one whit about politics or any strongly-held personal beliefs. If you jump off a cliff without taking proper science-based precautions, it does not matter how strongly-held your dismissal of gravity and belief in personal levitation might be, you will pay the natural consequences.
- Virtually any scientific issue is complex – even for scientists. There may be thousands of studies conducted over many decades on any given sub-specialty – like fluoridation, vaccination, evolution, climate issues – and the quality and reliability of those studies will range from excellent to poor. Some

studies will be reproducible and some won't. Some studies will be designed, conducted and evaluated reasonably and impartially – some will be designed, conducted and evaluated with strong desires for a pre-defined outcome and conclusions.

- For any given science-based issue, the available body of evidence is evaluated by relevant experts who determine the quality, relevance and reproducibility of each study, and they formulate the best conclusion possible from all the evidence ([a scientific consensus](#)). Obviously, this is a complex process and there is often disagreement among the experts. Therefore the consensus represents a majority viewpoint at any given time, and it is subject to constant review and modification as new legitimate, reproducible evidence is produced. Despite potential complications and disputes, a scientific consensus is the best explanation of the data at any given time and is adopted by the majority of relevant experts. ([Wikipedia](#), [Rationalwiki](#), [Bloomberg](#)).
- In order to change the scientific consensus, legitimate, compelling, reproducible scientific evidence must be presented. For over 70 years, FOs have been completely unable to provide a single high-quality, convincing, legitimate, reproducible, scientific study to support their claims that drinking optimally fluoridated water is ineffective or harmful to health. The scientific consensus that fluoridation is safe and effective has not changed. **Those who dismiss acceptance of the scientific consensus as the most reliable conclusion to trust regarding complex scientific issues, have never provided a workable alternative** – except to just ignore the consensus and blindly adopt their conclusions.
- Consequently, there is a critical difference between legitimate scientists and health care providers who challenge an accepted scientific consensus and follow the established protocols of working within the scientific community to effect change, and anti-science activists who demand change based only on their strong, inflexible, unsupported beliefs – examples include anti-vaccination activists, anti-fluoridation activists, young-earth/Noah's-flood activists, anti-water-disinfection activists, activists who believe there is no relationship between climate change and human activities, and the new wave of [hydroxychloroquine-'cure'/anti-mask/anti-distancing fanatics](#).
- As described above, legitimate scientists &/or health care providers do not morph into anti-science activists just because they disagree with a scientific consensus. Scientists or health care providers morph into Anti-Science Activists when:
  - The **morphing anti-science activists (MA-SAs)** have extremely strong, inflexible philosophical, political, ethical &/or spiritual beliefs (or business goals) which conflict with a specific scientific consensus.
  - The evidence MA-SAs claim to have in support of their beliefs is not of convincing quality, has been misrepresented &/or is not reproducible. Consequently, they are unable to convince relevant expert scientists to consider changing the consensus.
  - MA-SAs then choose to abandon working within the scientific community to produce more substantial, high-quality supporting evidence.
  - The MA-SAs choose not to work with other scientists to better explain their evidence and perhaps convince the scientific community their evidence and interpretations are valid.
  - MA-SAs choose not to assist others to successfully reproduce and confirm their experimental or observational results.
  - MA-SAs then choose to take their beliefs and their interpretation of the evidence directly to the public in a deliberate effort to bypass the processes of science and **hijack the democratic process**.
  - MA-SAs adjust and present their 'evidence' in a manner (often employing disingenuous, false fear-mongering tactics) that is most likely to sway public opinion and cause well-meaning individuals who don't have relevant scientific training or experience to join their cause.
  - MA-SAs don't correct members of the public who further distort the available 'evidence' as they originally presented it – or those who even completely fabricate claims.

- MA-SAs argue to the public that their interpretation of their ‘evidence’ is more legitimate than the interpretation of the vast majority of evidence by the overwhelming majority of scientists they disagree with.
- MA-SAs often promote the idea that mainstream scientists and health care professionals who support the scientific consensus should not be trusted because they are part of some vaguely defined (and completely unproven) conspiracy – or they have not bothered to adequately understand and evaluate the evidence and just blindly accept the position of others.
- At that point the scientists &/or health care providers have abandoned the legitimate practices of science and have become anti-science activists. Unfortunately, since many members of the public hold similar, very strong beliefs about the same science-based issues (even though they don't have the training or experience to personally evaluate decades of complex scientific evidence), the anti-science activists can frequently find uncritical public support for their opinions. Other converts can be recruited by employing some of the tactics described below.
- The consequences of ignoring science-based conclusions and resulting anti-science actions by individuals with strongly-held, inflexible beliefs in their rights and personal freedoms has probably never been demonstrated more obviously than by the current pandemic. Similarities of anti-science beliefs:
  - Ignoring the scientific consensus that face mask use, social distancing and responsible isolation limits the spread of viruses has led (and will continue to lead) to the spread of the covid-19 virus.
  - Ignoring and discounting the scientific consensus that [vaccinations limit the spread of viruses](#) has led (and will continue to lead) to the spread of communicable diseases.
  - Ignoring and dismissing the scientific consensus that community water fluoridation is safe and reduces the risk of tooth decay has led (and will continue to lead) to an increase in dental decay and related health and social issues, particularly for the disadvantaged.

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2. **Fact – CWF** is recognized a safe and effective public health measure by major and respected science and health organizations worldwide, including in the U.S., Canada, Britain, Europe, Australia, New Zealand and other countries. [Health Agencies of all 50 states in the U.S., a number of health insurance companies and the States/Provinces in Australia and Canada](#) also support CWF.

The [World Health Organization](#) and 123 other specific examples of worldwide CWF support:

1. [Academy of Dentistry International](#): *“Fluoride helps the teeth to become stronger and less likely to decay. Here are some of the ways you can get the benefits of fluoride. Due to fluoridation, 1 out of 5 kids have no decay. Many communities have added the correct amount of fluoride needed for good dental health to the community water supply. In areas where this is not done, fluoride may be added to the water supply by some institutions.”*
2. [Academy of General Dentistry](#) *“Supports Water Fluoridation. The controlled addition of a fluoride compound to public water supplies is considered to be the most cost-effective way to prevent cavities and fight tooth decay.”*
3. [Academy of Nutrition and Dietetics](#) supports *“optimal systemic and topical fluoride as an important public health measure to promote oral health and overall health throughout life. Fluoride is an important element in the mineralization of bone and teeth.”*
4. [Alliance for a Cavity-Free Future](#) states, *“Community water fluoridation (CWF) is the adjustment of the natural fluoride concentration of a community water supply to the recommended level for optimal oral health. Fluoridation is a public health measure against tooth decay that benefits people irrespective of age, gender, income, ethnicity, employment or access to treatment. CWF has long been a controversial topic with a lot of misinformation and ‘junk science’ shared through the media, on the internet and now also through social media. Caution should therefore be exercised in evaluating material in this area. ... In over 70 years of CWF there have been no proven adverse health effects.”*

5. [American Academy of Family Physicians](#) “supports fluoridation of public water supplies as a safe, economical, and effective method to prevent dental caries.”
6. [American Academy of Pediatric Dentistry](#) “Endorses and encourages the adjustment of fluoride content of public drinking water supplies to optimal levels where feasible.”
7. [American Academy of Pediatrics](#) (AAP) “continues to recommend children drink fluoridated tap water despite a new study linking fluoride intake among pregnant women with a small dip in their children’s IQ.” The [Campaign for Dental Health](#) (CDH), a program of the AAP, “was created to ensure that people of all ages have access to the most effective, affordable and equitable way to protect teeth from decay — community water fluoridation. The CDH is a broad network of oral health advocates, health professionals, child and family organizations, and scientists who are working together to preserve our nation’s gains in oral health. More than 165 local, state, and national organizations are partners in the CDH.”
8. [American Association for the Advancement of Science](#) objectives “are to further the work of scientists, to facilitate cooperation among them, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation and the importance and promise of the methods of science in human progress, ... request the Council of the Association, through the Board of Directors, through the Administrative Secretary, to go on record as endorsing fluoridation of community water supplies as a method for advancing dental public health...”
9. [American Association for Community Dental Programs](#) “is a partner in the Campaign for Dental Health, joining 30 other organization allies to support the campaign to promote water fluoridation.”
10. [American Association for Dental Research](#) “supports community water fluoridation as a safe and effective, evidence-based intervention for the prevention of dental caries. ... in the the current context of fluoride availability, the balance of evidence currently shows that community water fluoridation is safe, effective and cost-saving and in some communities, reduces oral health disparities. Therefore, AADR supports community water fluoridation and recommends the fluoridation of community water sources to a level of 0.7 milligrams of fluoride per liter of water.”
11. [American Association of Oral and Maxillofacial Surgeons](#): A resolution (with 20 other organizations) to commemorating the 70th anniversary of community water fluoridation and “acknowledging “community water fluoridation as one of the most practical, cost-effective, equitable, and safe measures communities can take to prevent tooth decay and improve oral health.”
12. [American Association of Public Health Dentistry](#) “reiterates its strong endorsement and support for the fluoridation of all community water systems as a safe and effective public health measure for the prevention of tooth decay.”
13. [American Association of Women Dentists](#) “supports the use of fluoride products and recognizes the importance of fluoride in cavity prevention in both children and adults. Approved methods of receiving fluoride include but are not limited to community water fluoridation, topical fluoride application and fluoride supplements as recommended by a licensed dentist to prevent tooth decay.”
14. [American Council on Science and Health](#) reports: “Well, the media just handed these conspiracy theorists a gift on a giant silver platter: Multiple outlets are reporting that pregnant women who consume too much fluoride produce children with lower IQs. The reports are based on an extremely controversial study [2019 Green, et al.] just published in JAMA Pediatrics. Are the study’s conclusions true? It’s doubtful.” ([fluoridation information](#))
15. [American Dental Assistants Association](#): Resolution on Fluoridation, “Whereas, Studies have repeatedly and convincingly documented fluoridation of the public water supply as the most efficient and economical means of preventing dental caries; and ... Resolved, That all Local Organizations and State Associations of the American Dental Assistants Association urge the use of fluoride supplements as preventive measures in areas lacking community water fluoridation.” (Word Document)
16. [American Dental Association](#) (ADA) “unreservedly endorses the fluoridation of community water supplies as safe, effective and necessary in preventing tooth decay. This support has been the Association’s position since policy was first adopted in 1950.” [ADA 2018 Fluoridation Facts](#) –

comprehensive answers to questions about fluoridation's effectiveness, safety, practice and cost-effectiveness – includes refutations of anti-fluoridation arguments.

17. [American Dental Education Association](#) states, *“On average, people that live in fluoridated water communities have 25% fewer trips to the dentist than people in communities with non-fluoridated water. Frequent exposure to the optimal fluoride concentration in water is an effective strategy to reduce the risk of tooth decay at the population level because it does not require any individual behavioral change.”*
18. [American Dental Hygienists’ Association](#) states, *“Community water fluoridation is an effective, safe, and inexpensive way to prevent tooth decay. Fluoridation benefits Americans of all ages and socioeconomic status. Children and adults who are at low risk of dental decay can stay cavity-free through frequent exposure to small amounts of fluoride. This is best gained by drinking fluoridated water and using a fluoride toothpaste twice daily.”*
19. [American Dietetic Association](#) *“reaffirms that fluoride is an important element for all mineralized tissues in the body. Appropriate fluoride exposure and usage is beneficial to bone and tooth integrity and, as such, has an important, positive impact on oral health as well as general health throughout life. Fluoride is an important element in the mineralization of bone and teeth. The proper use of topical and systemic fluoride has resulted in major reductions in dental caries (tooth decay) and its associated disability.”*
20. [American Fluoridation Society](#) aims *“1) To promote improvement of dental health by securing the optimum fluoride content of community water systems in areas where it is sub-optimal. 2) To promote and co-ordinate medical, dental, educational, and administrative efforts to achieve this remotely by means of electronic media and personal contacts. 3) To distribute information about dental health and the benefits/risks of optimally fluoridated water to the fluoridation decision-makers in the communities. 4) To provide direct support to communities across the United States that may need expert testimony from the American Fluoridation Society member(s). 5) To provide the necessary information to debunk the opposition to fluoridation’s pseudo-science.”* [Resource Library](#) – selection from over 6,600 published research papers.
21. [American Heart Association](#): *“Fluoridation - No evidence exists that adjusting the fluoride content of public water supplies to a level of about one part per million has any harmful effect on the cardiovascular system.”*
22. [American Medical Association](#) *“(1) urges state health departments to consider the value of requiring statewide fluoridation (preferably a comprehensive program of fluoridation of all public water supplies, where these are fluoride deficient), and to initiate such action as deemed appropriate; and (2) supports the 2011 proposed fluoridation standards as promulgated by the US Department of Health and Human Services and the Environmental Protection Agency.”*
23. [American Nurses Association](#) *“recognizes the public health benefits of fluoridation of public drinking water systems and supports its use when the following conditions are met: a) The concentration of fluoride in the public drinking water is in accordance with the most current Public Health Service Recommendations for safe and optimal prevention of dental caries. b) State and local governments have carefully considered whether to fluoridate the public drinking water based on the existing water supply’s naturally occurring fluoride concentration. c) The most current, evidence-based, sound research supports the benefits of public water fluoridation and does not indicate harmful risks.”*
24. [American Osteopathic Association](#) *“supports the fluoridation of fluoride-deficient public water supply.”*
25. [American Society for Clinical Nutrition](#) *“agrees that fluoridation of community water supplies to an optimum level wherever the natural level is less than optimum is a safe, economical, and effective measure to improve dental health by improving nutrition.”*
26. [American Student Dental Association](#) *“encourages the fluoridation of community water supplies as a scientifically proven safe and effective means of preventing dental decay as recommended by the U.S. public health service.”*

27. [American Public Health Association](#) *“is a longtime, proud supporter of community water fluoridation as a safe, effective and cost-saving means of preventing tooth decay.”* [Position Paper](#)
28. [American Water Works Association](#) (AWWA) *“supports the recommendations of the World Health Organization (WHO), American Medical Association (AMA), Canadian Medical Association (CMA), Centers for Disease Control (CDC), American Dental Association (ADA), Canadian Dental Association (CDA), and other professional organizations in the medical community, for the fluoridation of public water supplies as a public health benefit.”*  
\*\* This support continues despite a 2008 threat of potential legal action from anti-fluoridation attorney, Robert E. Reeves: *“If AWWA wishes to lower its potential liability related to fluoridation of water, please contact our office. We would suggest that one avenue AWWA may wish to pursue in the next month is to contact the National Kidney Foundation and its Chief Medical Officer Joseph Vassalotti. You could discuss with NKF a simultaneous public announcement by NKF and AWWA to voice a change in your organizations’ positions related to the safety of fluoridated water that you now no longer support the safety of fluoridated water.”* (no longer on fluoridealert site, but can be found [here](#) or [here](#))
29. [Association of Maternal and Child Health Programs](#) – Collaboration to Improve Early Childhood Oral Health: *“MCH agencies recognize the importance of oral health, and have supported programs to improve oral health for mothers and children. Examples of initiatives that target oral health in early childhood include population services such as community water fluoridation and dental sealants...”*
30. [Association of State and Territorial Dental Directors](#) (ASTDD) states, *“Community water fluoridation has been demonstrated to be safe, cost-effective, and beneficial through every stage of life and for all people, regardless of age, race, ethnicity, or socioeconomic status. Water fluoridation reduces oral health disparities by creating a healthy environment. Reports show that water fluoridation, a community level intervention, continues to be an efficient method for the delivery of fluoride in many countries. Community water fluoridation has an individual lifetime cost less than the cost of a single filling. Other forms of fluoride, such as fluoride toothpaste, and clinical interventions complement community water fluoridation.”* ([resources](#))
31. [Association of State and Territorial Health Officials](#) supports *“access to community water fluoridation and build public awareness of how it benefits everyone in the community, regardless of age and socioeconomic status, and protects against tooth decay in populations with limited access to preventive services. Publicize the fact that people who live in communities with community water fluoridation experience 25 percent fewer cavities over a lifetime than people without access to fluoridation, contributing to better health and lowering healthcare costs.”*
32. [Australian Academy of Paediatric Dentistry](#) states, *“Fluoride is a naturally occurring element like calcium, phosphorous, or iron, and is as important as calcium in keeping your teeth healthy. Fluoride works by helping the body to repair the early damage caused by plaque acids a long time before any holes become visible. Fluorides are of proven benefit as part of an overall plan to prevent and control tooth decay. Only a tiny quantity of fluoride is needed, and the best way to get this is by drinking and cooking with water which has had the fluoride level correctly adjusted, and by using a fluoride containing toothpaste. Although we usually think of fluoride preventing cavities in children, it also works well in adults too. There is a life long benefit.”*
33. [Australian Dental Association](#) states, *“With long-demonstrated negligible adverse reactions, fluoridated water has proven to be the most equitable way of providing protection against decay to the Australian community.”*
34. [Australian Government Department of Health](#) confirms, *“The most up-to-date evidence confirms fluoride in the water system is safe and effective for people of all ages. Water fluoridation began in Australia in the 1960’s and has made a significant contribution to improving the oral health of Australians. Along with good oral hygiene and a healthy diet it can help prevent dental decay.”*

35. [Australian Medical Association](#) states, *“Water fluoridation is something that has the full backing of the Australian Dental Association and the Australian Medical Association. It’s cheap, it’s proven to be beneficial, and data repeatedly proves that it is effective in reducing cavities in children.”*
36. [Australian National Health and Medical Research Council](#) (NHMRC) *“strongly recommends community water fluoridation as a safe, effective and ethical way to help reduce tooth decay across the population. NHMRC supports Australian states and territories fluoridating their drinking water supplies within the range of 0.6 to 1.1 milligrams per litre (mg/L).”*
37. [Australian Research Centre for Population Oral Health](#) released [Guidelines for use of fluorides in Australia: update 2019](#) that stated, the 2019 *“NHMRC Review searched the post-2006 literature for evidence of possible harmful effects of water fluoridation on human health. The NHMRC Review concluded that water fluoridation at current Australian levels is not associated with cognitive dysfunction, lowered IQ, cancer, hip fracture and Down syndrome. There was no reliable evidence of an association between water fluoridation at current Australian levels and other human health outcomes.”*
38. [British Association for the Study of Community Dentistry](#) Position Statement (Word doc): *“We support the maximisation of the use of fluoride vehicles to reduce the prevalence and severity of tooth decay. ... Dental caries can be largely prevented by maintaining a constant low level of fluoride in the oral cavity. Optimal fluoride can be obtained from different sources such as fluoridated drinking water, salt, milk and toothpaste. ... Long-term exposure to an optimal level of fluoride results in substantially lower incidence and prevalence of tooth decay across all ages.”*
39. [British Dental Association](#) states, *“We support water fluoridation as a safe and effective public health intervention, as part of a package of measures to improve dental health, where technically feasible and appropriate to local needs.”* (link may not work due to site restructuring)
40. [British Fluoridation Society](#) *“was founded in 1969 to work for improved dental health in the UK through the introduction of water fluoridation schemes.”*
41. [British Medical Association](#) policy book 2019-2020, *“notes that only 10% of the UK population are supplied with artificially fluoridated water following fragmented local introduction schemes since 1968 and: i) acknowledges that this regional disparity has had detrimental effects on the dentition of areas where fluoridation is not routine; ii) calls for a universal approach to water fluoridation; (Lapsed 2019) iii) calls on Public Health England to renew its policy on water fluoridation, not just its guidance.”*
42. [British Oral Health Foundation](#): *“Fluoride can greatly help dental health by strengthening the tooth enamel, making it more resistant to tooth decay. It also reduces the amount of acid that the bacteria on your teeth produce. Children who have fluoride when their teeth are developing tend to have shallower grooves in their teeth, so plaque can be more easily removed. The addition of fluoride to water has been researched for over 60 years, and water fluoridation has been proven to reduce decay by 40 to 60 percent.”*
43. [Canadian Dental Association](#) *“supports fluoridation of municipal drinking water (at minimum levels required for efficacy as recommended by the Federal-Provincial Subcommittee on Drinking Water) as a safe, effective and economical means of preventing dental caries in all age groups.”*
44. [Canadian Dental Hygienists Association](#) *“Endorses the use of fluoride as an important oral health promotion and disease prevention approach; Recommends that water fluoridation be maintained and extended to additional communities where feasible.”* ([FAQs CWF 2017](#))
45. [Canadian Medical Association](#) policy: *“That the CMA encourage programs to promote fluoridation of communal water supplies.”*
46. [Canadian Paediatric Society](#) position statement 2019, The Use of Fluoride in Infants and Children, *“The primary mechanism of the action of fluoride in preventing tooth decay is topical. Water fluoridation is an effective delivery method for topical fluoride.”*
47. [Canadian Public Health Association](#) states, *“Adding fluoride to drinking water has been a public health measure for about the last 65 years. Fluoride is a mineral that helps to strengthen tooth enamel and*

- prevent cavities. Health and dental organizations worldwide endorse the safety and effectiveness of water fluoridation. Everyone can benefit from water fluoridation.”
48. [Center for Public Health Law Research](#) states, “In the judgment of a Community Guide expert panel, there is significant evidence to support water fluoridation as an effective public health intervention aimed at reducing tooth decay.”
  49. [Centers for Disease Control](#) states, “Drinking fluoridated water keeps teeth strong and reduces cavities (also called tooth decay) by about 25% in children and adults. By preventing cavities, community water fluoridation has been shown to save money both for families and for the US health care system. Because of its contribution to the large decline in cavities in the United States since the 1960s, CDC named community water fluoridation one of 10 great public health achievements of the 20th century.” [Fluoride Legislative User Information Database](#) (FLUID) “is a comprehensive database containing legal decisions by U.S. courts and current information on federal, state and local policies regarding community water fluoridation.”
  50. [Children’s Dental Health Project](#) states, “For 70 years, CWF has been an effective and safe way to reduce the rate of tooth decay. Even though fluoride toothpaste is widely used by Americans, studies in recent years continue to show that drinking water or other beverages with fluoride maximizes protection from cavities.”
  51. [Childsmile](#) (NHS Health Scotland) “is a national programme designed to improve the oral health of children in Scotland and reduce inequalities both in health and access to dental services.” The [Programme Manual](#) states, “Fluoride is a naturally occurring mineral. When fluoride is present in the saliva, the fluoride ions become concentrated in the plaque. Even at very low levels, fluoride in the plaque and saliva is able to alter the balance between demineralisation and remineralisation, favouring the remineralisation process. As the remineralisation happens in the presence of fluoride, the new mineral crystals are stronger and less susceptible to acid attack. ... Fluoride can either be given to children systemically (in the form of drops or tablets; added to milk or water in Public Health Programmes) or be used topically in the form of gels, varnishes or mouthwashes.” (p. 19)
  52. [Council of European Dentists](#) 2015 Manual of Dental Practice states, “Fluoride is a substance which gives protection to teeth against tooth decay, if ingested in optimal quantities, or applied to the surface of the teeth by means of toothpaste or other methods.”
  53. [Council of State Governments](#): “resolution seeks to encourage states to support and adopt community water fluoridation initiatives which have been shown to be effective in reducing dental caries and saving costs associated with tooth decay.”
  54. [Community Preventive Services Task Force](#) “recommends community water fluoridation to reduce tooth decay (i.e., dental caries or cavities).”
  55. [DentaQuest](#): “Fluoride fights the acids that cause cavities by making teeth stronger. Even before teeth come in, fluoridated water can make teeth stronger. After teeth come in, fluoride treatments, fluoridated water, and fluoride toothpaste protect against cavities.” [Fluoridation Toolkit](#)
  56. [Dentistry](#) “is the primary print and online title the UK dental profession” and [supports community water fluoridation](#).
  57. [Department of Health & Social Care, UK](#) — Advancing our health: prevention in the 2020s. “Water fluoridation schemes such as this have been used for over 70 years internationally, and in England for over 55 years. In its [2018 report, PHE concluded](#), that ‘water fluoridation is an effective and safe public health measure to reduce the frequency and severity of dental decay, and narrow differences in dental health between more and less deprived children and young people’.”
  58. [Environmental Protection Agency](#), Q&A on Fluoride recognizes “Fluoride can also be added to public drinking water supplies as a public health measure for reducing cavities among the treated population.” “The HHS recommended optimal level of 0.7 milligrams per liter is set to promote public health benefits of fluoride for preventing tooth decay while minimizing the chance for dental fluorosis.”
  59. [European Academy of Paediatric Dentistry](#) “reaffirms its support [2019] for the use of community water fluoridation as a safe, effective, relevant and cost saving public health measure for the

*prevention and control of dental caries. The Academy recognises that CWF alone is not a panacea but should be seen as an important element in a multi-faceted approach to caries prevention and control, which includes oral health promotion and access to affordable care.”*

60. [European Food Safety Authority](#): *“Although fluoride is not essential for tooth development, its role in the prevention of dental caries has been known for many years. Epidemiological studies have shown an inverse correlation between the presence of fluoride in drinking water and the prevalence of dental caries in children.”*
61. European [Scientific Committee on Health and Environmental Risks](#) (SCHER) – summary of 2010-2011 report, [Critical Review](#) of Any New Evidence on the Hazard Profile, Health Effects, and Human Exposure to Fluoride and the Fluoridating Agents of Drinking Water: *“Water fluoridation has not been linked with bone fractures, and modest fluoridation may even lower bone fracture risk. Animal and human studies have examined other possible risks from fluoride intake. They have not found clear links between fluoride and bone cancer, or with other suggested risks such as neurological or reproductive effects.”*
62. [Food and Drug Administration](#): Bottled water containing greater than 0.6 and up to 1.0 mg/L total fluoride will be eligible to make the claim, *“Drinking fluoridated water may reduce the risk of [dental caries or tooth decay].”*
63. [Fédération Dentaire Internationale](#) (FDI) Policy Statement, *“In recognition of the importance of promoting oral health through water fluoridation, the FDI World Dental Federation states that: Water fluoridation is particularly appropriate for populations demonstrating moderate to high risk of dental decay. @rWesén fluoridat  
the rates of dental decay in communities. At the fluoride concentrations recommended for the prevention of dental decay, scientific research and reviews show that human general health is not adversely affected. The public health benefits of water fluoridation in the prevention of dental decay far outweigh the possible occurrence of very mild/mild dental fluorosis...”*
64. [Fluoride Exposed](#): *“[Effie and Kylie] are Fluoride Exposed's fearless leaders. One Ph.D. ecologist and one MPH public health educator, taking the lead on a new approach to transparency in fluoride and water science. ... Our goal here is not to ask you to support fluoridation like we do. Our goal is for everyone to learn more about science, regardless of your values-based beliefs about fluoridation.”* ([DentalTown](#) and [DentistryIQ](#) articles)
65. [Food Safety Authority of Ireland](#) (FSAI) stated, *“Overall, the FSAI’s Total Diet Study 2014-2016: Assessment of Dietary Exposure to Fluoride in Adults & Children in Ireland concludes that, based on scientific evidence, there is no safety concern for children and adults living in Ireland from exposure to fluoride through intake of foods and beverages.”*
66. [Green Facts](#): *“An ‘optimum’ level of fluoride in drinking water, associated with the maximum level of dental caries protection and minimum level of dental fluorosis, has been determined. ... Fluoridated drinking water is one of the most cost-effective means of delivering fluoride to large numbers of individuals. It requires a suitable community-wide drinking water delivery system along with a reasonable level of technological development.”*
67. [Health Canada](#): *“Community Water Fluoridation has been proven to be a safe, effective and equitable way to prevent and reduce tooth decay (including root decay) for people of all ages - from children to seniors.”*
68. [Health Research Board, Ireland](#): Health Effects of Water Fluoridation, An Evidence Review – *“In summary the literature found no strong evidence that CWF is definitively associated with negative health effects.”*
69. [Health Resources and Services Administration](#): *“Fluoride helps to prevent dental decay. Most effectiveness is shown with systemic exposure to very low concentrations during tooth development via community water fluoridation or supplements, in combination with higher topical concentrations, which should not be swallowed. • Remember that fluoride, when properly used, is safe. ... Children*

*benefit from consuming properly fluoridated water. Encourage fluoridation of your municipal water supplies.” (p.49)*

70. [Health Resources in Action \(HRiA\)](#) policy: *“Despite its proven safety and effectiveness, community water fluoridation (CWF) implementation remains a challenge and is often thwarted, while de-fluoridation efforts are also ramping up throughout the country. A small, vocal, well-organized minority that relies on junk science and appeals to fear-based messaging means that fluoridation can no longer win on its scientific merits alone.” In conjunction with this important work, HRiA has developed an [Online Community Toolkit](#) for use by anyone interested in implementing — or preventing the termination of — community water fluoridation in their community.”*
71. [Hispanic Dental Association](#): *“Our Advocacy Efforts include, Championing Community Water Fluoridation.”*
72. [Indian Dental Association](#) (India): *“Fluoride helps prevent tooth decay by a) Conversion of hydroxyapatite to a fluoridated hydroxyapatite, b) Increased rate of post eruptive maturation, c) Inhibits the micro-organism d) Fluoride has been reported to alter tooth morphology. In the event that water fluoridation is not feasible, school water fluoridation can be an alternative.”*
73. [Indian Health Service](#) (U.S.) states, CWF *“has the potential to benefit all age groups and all socioeconomic strata, including the lowest, which has the highest caries prevalence and is least able to afford preventive and restorative services. Community water fluoridation is also the most cost-effective of all community-based caries preventive methods. An effective community water fluoridation program should be the cornerstone of all public oral health programs.”*
74. [Institute for Evaluation of Labour Market and Education Policy](#): *“Taking all together, we investigate and confirm the long-established positive relationship between fluoride and dental health. Second, we find precisely estimated zero-effects on cognitive ability, non-cognitive ability and math test scores for fluoride levels in Swedish drinking water. Third, we find that fluoride improves later labor market outcomes, which indicates that good dental health is a positive factor on the labor market.”*
75. [Institute for Science in Medicine](#) states, *“[The public can be misled about CWF](#) when the media, in attempting to provide ‘balanced’ reporting on the ‘controversy,’ frequently give weight to the views of anti-fluoridationists that are not warranted by the scientific facts of the matter. Needed Policy: In order to optimize the dental health of citizens, all communal water systems need to implement CWF as recommended by recognized public health authorities.”*
76. [International Association for Dental Research](#) (IADR), *“considering that dental caries (tooth decay) ranks among the most prevalent chronic diseases worldwide; and recognizing that the consequences of tooth decay include pain, suffering, infection, tooth loss, and the subsequent need for costly restorative treatment; and taking into account that over 50 years of research have clearly demonstrated its efficacy and safety; and noting that numerous national and international health-related organizations endorse fluoridation of water supplies; fully endorses and strongly recommends the practice of water fluoridation for improving the oral health of nations.”*
77. [Irish Dental Association](#) report concluded: *“Ireland was pioneering when it introduced water fluoridation. It was and still is an efficient and effective public health measure against dental decay.” and “The Irish Dental Association “strongly endorses water fluoridation as the most practical, cost effective and safe, public health measure to control the occurrence of tooth decay in Ireland. Community water fluoridation is endorsed by the World Health Organisation (WHO) as the first choice method of providing fluoride to communities. The US Centers for Disease Control and Prevention (CDC), and the EU Scientific Committee on Health and Environment Risks (SCHER) have also endorsed water fluoridation.” ([Link to Word document](#))*
78. [Irish Expert Body on Fluorides and Health](#), which operates under the aegis of the [Department of Health](#), states, *“Community water fluoridation is the adjustment of the natural fluoride concentration in drinking water to the recommended level<sup>1</sup> to prevent tooth decay (dental caries).”*
79. [KidsHealth](#): *“Scientific research continues to show the benefits of fluoride when it comes to prevention of tooth decay and its safety. Dramatic reductions in tooth decay in the past 30 years is attributed to*

*fluoridation of the water supply, and parents and health professionals should continue to ensure that kids receive enough fluoride to prevent cavities.”*

80. [Linus Pauling Institute](#): *“The use of fluoridated dental products and adequate intakes of fluoride reduce the occurrence of caries throughout life by promoting tooth mineralization and re-mineralization. ... The major sources of systemic and topical fluoride are drinking water, foods and beverages made with fluoridated water, infant formulas, and fluoride-containing oral care products. Fluoridated salt and milk are currently available outside the US in Europe, Latin America, and Southeast Asia.”* Linus Pauling’s [statement supporting fluoridation](#).
81. [Malaysian Dental Association](#) (MDA): Questions and answers in support of fluoridation.
82. [Mayo Clinic](#) states, *“By the age of 6 months, children should have fluoride in their water, and children of brushing age should use soft brushes and fluoridated toothpaste.”*
83. [National Academies of Sciences Engineering Medicine](#) *“Fluoride is not a medication. Adding fluoride to water is similar to adding iodine to salt or Vitamin D to milk. These are routine measures taken to improve the public’s health. Seventy years of scientific testing show that fluoridated drinking water improves dental health. Currently, nearly 70 percent of Americans live in communities that add fluoride to drinking water. ... Community fluoridation is inclusive. It provides protection to everyone in the community. This includes people who may not use fluoride toothpaste or do not have regular dental checkups.”*
84. [National Association of County and City Health Officials](#) states, *“Community water fluoridation is the most cost-effective way to deliver fluoride to people of all ages, education levels, and income levels who live in a community.”*
85. [National Association of Local Boards of Health](#), Oral Health Guide: Community Water Fluoridation: *“This document specifically addresses prevention of tooth decay through community water fluoridation. NALBOH’s goal is to inform BOHs about this effective public health intervention.”*
86. [National Black Caucus of State Legislators](#) resolution ETE-13-02, *“Recognizing the Importance of Community Water Fluoridation”*
87. [National Cancer Institute](#): *“Water fluoridation is the process of adding fluoride to the water supply so the level reaches approximately 0.7 ppm, or 0.7 milligrams of fluoride per liter of water; this is the optimal level for preventing tooth decay.”*
88. [National Dental Association](#) Position, *“that Community Water Fluoridation is safe, beneficial and cost effective and should be encouraged and supported under the following conditions: Community water supplies should contain the optimal fluoride levels as recommended by the U.S. Public Health Service (a range from 0.7 – 1.2 parts per million) ...”*
89. [National Health and Medical Research Council](#) (Australia) 2017 Public Statement confirms *“that community water fluoridation helps to reduce tooth decay, and that there is no reliable evidence that water fluoridation at current Australian levels causes health problems.”*
90. [National Health Service, UK](#) states, *“Over the past 50 years, there have been several reviews of the safety and effectiveness of water fluoridation schemes. Recent large reviews that have been carried out. Overall, these reviews found that water fluoridation appears to contribute to reduced tooth decay levels and doesn't seem to be associated with any significant health risks.”*
91. [National Institute of Dental and Craniofacial Research](#) states, *“Fluoride (said like floor-eyed) is a mineral that occurs naturally in soil, water, and air that has been shown to prevent cavities, or tooth decay. For the past several decades, fluoride has been added to community water supplies and oral care products such as toothpaste and mouth rinse. Fluoride works by strengthening the tooth’s hard outer surface called enamel. Fluoride can prevent tooth decay across the lifespan; both children and adults benefit from it.”*
92. [National Kidney Foundation](#): Although the NKF does not formally endorse CWF, the organization states, *“The benefits of water and dental products containing fluoride is the prevention of tooth decay and dental cavities in people of all ages.”*

93. [National Maternal and Child Oral Health Resource Center](#): *“Community water fluoridation is the best method for delivering fluoride to all members of the community regardless of age, educational attainment, income level, or access to routine oral care. Community water fluoridation is a major factor responsible for the decline in prevalence and severity of dental caries (tooth decay) during the second half of the 20th century.”*
94. [National Network for Oral Health Access](#): *“NNOHA fully supports the continued expansion of access to optimally fluoridated water.”*
95. [Network for Public Health Law](#): State Laws and Regulations Addressing Fluoridation in Water *“Community water fluoridation is recommended by nearly all health organizations, including the American Dental Association, American Academy of Pediatrics, U.S. Public Health Service, and World Health Organization. Many studies have illustrated the benefits of a fluoridated community water supply, particularly in preventing tooth decay. According to the Centers for Disease Control and Prevention, community water fluoridation is a cost-effective, efficient way to deliver fluoride to all members of a community.”*
96. [New Zealand Dental Association](#) *“continues to strongly support and promote community water fluoridation as a safe and effective preventative measure to improve public oral health. It is the NZDA’s position that all New Zealanders who could have access to optimally fluoridated water do so have access.”*
97. [New Zealand Medical Association](#) *“supports the expanded use of community water fluoridation to reduce the burden of oral disease and reduce health inequities in New Zealand.”*
98. [New Zealand Ministry of Health](#) states, *“Adjusting the natural level of fluoride in our water supplies makes a significant difference in helping to prevent tooth decay for all New Zealanders. The most recent New Zealand oral health survey (2009) showed that children and adolescents living in areas with fluoridated water have 40 percent less tooth decay than those living in areas without. The significant benefits of water fluoridation for oral health are also supported by over 60 years of studies around the world.”*
99. [New Zealand Nurses Association](#) states, *“The benefits of water fluoridation on dental health are widely accepted as the safest, most effective intervention in reducing the level of dental caries (World Health Organisation 1994). However, there are still many areas in New Zealand where public water supplies are not fluoridated and where the protection it offers – estimated at 2.4 and 12 fewer decayed teeth per person in New Zealand - is not available.”*
100. [NZ Dental & Oral Health Therapists Association](#) states, *“Fluoride is a natural substance which helps protect our teeth. Numerous studies have shown that children and adults living in areas with community water fluoridation have significantly lower tooth decay than those living in non fluoridated areas. It makes them stronger and reduces tooth decay.”*
101. [Oral Health Foundation](#) (UK) states, *“Local authorities from across the United Kingdom should add fluoride to water supplies, following new research confirms it has no negative effects. That is the message from the Oral Health Foundation, which is calling for the introduction of widespread community fluoridation schemes, a move they believe will help protect millions of Brits from tooth decay. The extensive research, carried out by the National Toxicology Program in the US where 80% of water is fluoridated, states that following years of analysis, there is ‘no link between elevated levels of fluoride and cognitive learning deficits.’”*
102. [Oral Health Group](#) – News on oral health, including support of fluoridation issues.
103. [Paediatric Society of New Zealand](#) lists *“Key points to remember about community water fluoridation: 1) Community water fluoridation is an effective, safe and affordable way to prevent and reduce tooth decay for everyone. 2) Overwhelming evidence from decades of having community water fluoridation is that it is safe.”*
104. [Pan American Health Organization](#): *“Water fluoridation is considered one of the most successful public health interventions of the 20th century and salt fluoridation has proven to be a cost-effective*

- method for reducing caries in the Latin America and Caribbean Regions. The introduction of systemic and topical fluorides have drastically reduced the rate of dental decay worldwide.”*
105. [Pew Charitable Trusts](#) *“supports water fluoridation because it’s one of the most cost-effective strategies for states and communities to improve the oral health of their residents.”* [Fluoridation Advocacy](#)
  106. [Platform for Better Oral Health in Europe](#) states, *“A range of effective population-based preventative initiatives have been implemented across Europe. These include **water fluoridation** programmes (Ireland, Poland, Serbia, Spain, UK); fluoridated salt programmes (Switzerland, Slovakia, France, Germany and the Czech Republic) and fluoridated milk programmes targeting children (Bulgaria, UK).”*
  107. [Public Health Agency of Canada](#) Position Statement on Community Water Fluoridation: *“Community water fluoridation is an important and often overlooked public health measure that has contributed over the last 70 years to the health of Canadians by preventing tooth decay and thereby improving oral health. ... The big advantage of community water fluoridation is that it benefits all residents in a community, regardless of age, socioeconomic status, education, oral hygiene practices, employment or access to routine dental care, making it a truly equitable public health practice.”*
  108. [Public Health Association of New Zealand](#) *“supports community water fluoridation as an effective, ethical public health measure which protects and promotes oral health, and reduces inequalities in New Zealand. Preventing tooth decay with community water fluoridation is almost 30 times cheaper than treating decay. The New Zealand Oral Health Survey found 40 percent less tooth decay in communities with water fluoridation. Very good research has not found any evidence of harmful health effects from community water fluoridation at optimal levels such as those in New Zealand.”*
  109. [Public Health England](#): *“Water fluoridation is one of a range of interventions available to improve oral health, and the only one that does not require behaviour change by individuals. ... Reviews of studies conducted around the world confirm that water fluoridation is an effective, safe public health measure suitable for consideration in localities where tooth decay levels are of concern.”*
  110. Robert Wood Johnson Foundation funded [Healthy Drinks. Healthy Kids.](#) which includes the recommendation, *“Drinking fluoridated water is one of the best ways to reduce a child’s chances of having cavities. Fluoride is a naturally occurring mineral that helps prevent cavities. Fluoridation refers to how much fluoride is added to drinking water. The recommended level of fluoride in drinking water is 0.7 parts per million.”* These recommendations were developed by experts at the Academy of Nutrition and Dietetics (AND), the American Academy of Pediatrics (AAP), the American Academy of Pediatric Dentistry (AAPD), and the American Heart Association (AHA) under the leadership of Healthy Eating Research (HER).
  111. [Royal Australasian College of Physicians New Zealand](#): *“Fluoridation of community water supplies is the single most effective public health measure to prevent dental decay. Community water fluoridation programmes have directly reduced the rate of dental caries in New Zealand and throughout the world, including Australia, Canada, the USA, Chile, Columbia, Britain and Ireland.”*
  112. [Royal Society of New Zealand and Office of the Prime Minister’s Chief Science Advisor](#) report stated. *“There is compelling evidence that fluoridation of water at the established and recommended levels produces broad benefits for the dental health of New Zealanders. In this context it is worth noting that dental health remains a major issue for much of the New Zealand population, and that economically and from the equity perspective fluoridation remains the safest and most appropriate approach for promoting dental public health.”*
  113. [Singapore Ministry of Health](#) recommends, *“Make sure that your children's drinking water is fluoridated. If your water supply does not contain fluoride, your dentist or pediatrician may prescribe daily fluoride supplements. ... Studies since [the 1930s] have repeatedly shown that when fluoride is added to a community's water supply, tooth decay decreases.”*
  114. [Singapore’s National Water Agency, PUB](#): *“Fluoridation is a requirement by the Ministry of Health and has been a practice since 1957. It helps in the prevention of dental caries.”*

115. [Special Care Dentistry Association](#) Fluoride Use Policy links to the 2018 American Academy of Pediatric Dentistry [Position Statement](#) supporting CWF.
116. [State of Israel Ministry of Health](#): *“Drinking water fluoridation is the most efficient, safest, simplest, cheapest, and most equal measure, by a significant margin, among all methods for preventing dental diseases in the general public. Drinking water fluoridation reduces dental caries levels at all ages – as long as one still has teeth, of course.”*
117. [U.S. Department of Defense](#): *“The Assistant Secretary of Defense for Health Affairs has determined that providing optimally fluoridated water at DoD installations helps to improve and sustain the military readiness and health of military personnel.”*
118. [U.S. Department of Health and Human Services](#) report states, *“Through this final recommendation [2015], the PHS updates and replaces its 1962 Drinking Water Standards related to community water fluoridation—the controlled addition of a fluoride compound to a community water supply to achieve a concentration optimal for dental caries prevention. For these community water systems that add fluoride, PHS now recommends an optimal fluoride concentration of 0.7 milligrams/liter (mg/L). In this guidance, the optimal concentration of fluoride in drinking water is the concentration that provides the best balance of protection from dental caries while limiting the risk of dental fluorosis.”*  
[Head Start: CWF](#): *“Community water fluoridation works in two ways. First, drinking tap water with fluoride strengthens children's permanent teeth that have not come into the mouth yet. This helps prevent tooth decay. Second, when children and adults drink tap water with fluoride, fluoride goes into the saliva. Fluoridated saliva washes the teeth and makes the outsides of the teeth strong. This also helps prevent tooth decay.”*  
[Healthy People 2030](#): *“Increase the proportion of people whose water systems have the recommended amount of fluoride — OH-11”*
119. [U.S. National Institutes of Health ODS](#): *“Water fluoridation protects teeth in two main ways—by preventing the development of caries through ingestion of drinking water during the tooth-forming years and through direct contact of fluoride with teeth throughout life.”*
120. [U.S. Preventive Services Task Force](#) (USPSTF): *“All children are at potential risk of dental caries; those whose primary water supply is deficient in fluoride (defined as LT 0.6 parts per million) are at particular risk. ... the Community Preventive Services Task Force recommended fluoridation of community water sources based on strong evidence of effectiveness in reducing dental caries.”*
121. [U.S. Public Health Service](#) Statement July 7, 2020 from eight former Chief Dental Officers of the USOHS, *“As the former chief dental officers of the USPHS, we have spent our entire careers dedicated to improving the Nation’s oral health. Continued efforts to support CWF anchors our efforts to achieve health equity. With the forthcoming release of the second-ever Surgeon General’s Report on Oral Health, and in commemoration of the 75th anniversary of CWF in Grand Rapids, we reaffirm our support and commitment to CWF.”*
122. [U.S. Surgeons General’s statements on CWF](#): *“Since the 1950s, each U.S. Public Health Service Surgeon General has committed his or her support for community water fluoridation.”* ([additional info](#))
123. [WebMD](#) states, *“Fluoride is a mineral that occurs naturally in many foods and water. ... Fluoride helps prevent tooth decay by making the tooth more resistant to acid attacks from plaque bacteria and sugars in the mouth. It also reverses early decay. In children under 6 years of age, fluoride becomes incorporated into the development of permanent teeth, making it difficult for acids to demineralize the teeth. Fluoride also helps speed remineralization as well as disrupts acid production in already erupted teeth of both children and adults.”*
124. [World Health Organization](#) (WHO) states, *“The use of fluoride for population based prevention of dental caries has been endorsed officially by WHO since the late 1960s.”* 2016 World Health Organization report: [Fluoride and Oral Health](#)
  - [Additional science/health organization support and endorsements](#)
  - [36 Reviews of fluoridation studies](#)

- Again, if the FOs' interpretation of the evidence is true, and the mainstream science and health organizations that support CWF and other public health measures like vaccination are completely wrong, how can the mainstream organizations be trusted to provide accurate information for any other science-based health issues?

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3. **Fact** – Even mainstream science and health organizations that don't publicly endorse CWF do not post warnings against CWF or publicly state that CWF causes any of the health issues claimed by FOs.

Specifically:

a. **Thyroid Problems – no warnings of thyroid risks from CWF:**

- [American Thyroid Association](#): No mention of fluoridation as a risk factor for [hypothyroidism](#) or [hyperthyroidism](#).
- [Australian Thyroid Foundation](#): No mention of fluoridation as a risk factor for thyroid disorders.
- [Thyroid Association of New Zealand](#): No mention of fluoridation as a risk factor for thyroid issues.
- [British Thyroid Foundation](#): No mention of fluoridation as a risk factor for thyroid issues.
- [Thyroid UK](#) – No mention of fluoridation as a risk factor for hypothyroidism.

b. **Cancer Organizations – no warnings of cancer risk from CWF:**

- [American Cancer Society](#) – Water Fluoridation and Cancer Risk: *“The general consensus among the reviews done to date is that there is no strong evidence of a link between water fluoridation and cancer”* and *“More recent studies have compared the rates of osteosarcoma in areas with higher versus lower levels of fluoridation in Great Britain, Ireland, and the United States. These studies have not found an increased risk of osteosarcoma in areas of water fluoridation.”*
- [Canadian Cancer Society](#): *“Based on current evidence, CCS believes it is unlikely that adding fluoride to water raises the risk of cancer, including osteosarcoma, in humans. At the same time, we know that there are many benefits to water fluoridation, especially for people who have less access to dental care. We will continue to watch this area of research and update our information as we learn more.”*
- [Cancer Council Western Australia](#) - Cancer myth: Fluoride and cancer: *“Fluoridation is considered by many to be a major public health achievement of the 20th century. The addition of fluoride to drinking water has led to a significant reduction in dental caries. There is no consistent evidence that fluoride in drinking water increases the risk of cancer. The weight of the current evidence supports the view that there is no link between water fluoridation and osteosarcoma.”*
- [Cancer Society, New Zealand](#): *“One hazard that has been mentioned is that children drinking fluoridated water are at higher risk of developing an extremely rare form of bone cancer called osteosarcoma. At this time there is no evidence that this is true.”*
- [National Cancer Control Programme](#): Water Fluoridation and effects on health: *“In conclusion, all systematic reviews to date have found no association between fluoridation of drinking water at the recommended levels and risk of cancer or bone fracture. The effects of fluoride on health and related matters are kept under constant review. In addition, the Expert Body on Fluorides and Health in Ireland is of the opinion that water fluoridation significantly benefits dental health.”*
- [National Cancer Institute](#) – Fluoridated Water: *“More recent population-based studies using cancer registry data found no evidence of an association between fluoride in drinking water and the risk of osteosarcoma or Ewing sarcoma.”* and in a DCEG article, Contaminants in Drinking Water, stated *“Over the years, DCEG research on the association between contaminants in drinking water and cancer has made a significant impact in the following areas: A DCEG study found no evidence that fluoride in drinking water poses an elevated risk of cancer, as had been suggested by some previous reports.”*

c. **FOs resort to threats of legal action** against organizations that have publicly supported CWF. They are bullies who don't have evidence to support their opinions, so they abandon working within the constraints of scientific protocol to present legitimate evidence that could change the scientific consensus that CWF is a safe and effective public health measure. xxxxxxxx This constitutes a significant reason some health organizations have removed their public endorsement of fluoridation. If an organization is not directly responsible for dental health it can be more prudent to remove an endorsement than risk a lawsuit. The threatened groups, however, have not supported the **anti-fluoridation** claims. Several examples:

- In 2016 a [threatening letter](#) to the American Thyroid Association prepared by anti-fluoridation activist, Karen Spencer (who created this letter), clearly exposes the **anti-fluoridation** tactics. The petition 'suggests' the ATA *"Publish a position statement opposing the practice of community water fluoridation..."* and provides a not-so-subtle suggestion of potential consequences of ignoring the petition, *"In closing, given the fluoridation lawsuit pending in Peel, Ontario ... and other anticipated American lawsuits yet to be filed, we suggest that the ATA leadership and directors should be prepared to demonstrate their scientific integrity and professional ethics. We suggest the ATA speak for themselves..."* [Response from S. Slott, DDS](#)
- In 2015 a [letter threatening legal action](#) if the anti-fluoridation agenda was not followed was sent to the National Academy of Sciences, Institute of Medicine (NAS/IOM) — now the National Academy of Medicine — board members, *"Failure to address the current fluoride DRI and assertions in NAS/IOM reports regarding safe levels of fluoride for pregnant women, fetuses, young children, the elderly, and those with health conditions or a genetic profile that increases their susceptibility as noted in this document with parties using that material in the making of individual and public health decisions may result in legal action."*
- In 2007 anti-fluoridation attorney, Robert Reeves, sent the National Kidney Foundation (NKF) a [threatening letter](#) suggesting potential lawsuits against the then current and past members of the NKF Board of Directors, both collectively and against their personal assets, as well as against the NKF staff, if NKF did not remove its name from the list of organizations which support fluoridation – *"In light of your mission of educating and empowering kidney patients, to not openly inform the kidney patient community of the whole story about fluoride is actionable under a number of legal mechanisms for enjoinder, suit and negligent misrepresentation. ... Even if it is ultimately determined that neither NKF or any past and present Officers, Board Members and/or employees are liable criminally or for any tort such as negligent misrepresentation this still could be a major public relations disaster for NKF which is best handled now rather than later..."* The NKF is a charitable organization which provides much needed services and activities on behalf of kidney patients. Rather than waste its limited resources and subjecting its Boards and staff to protracted and expensive litigation fighting an antifluoridationist attorney with nothing to lose, the NKF prudently decided to simply remove its name from the list. Review the [reference to AWWA/NKF](#) threat discussed above.
- **Question to consider:** Why are threats of legal action necessary if the arguments and opinions presented in these threatening letters are a legitimate and accurate representation of the actual scientific evidence?
  - Do members of these organizations simply ignore widespread claims that CWF is dangerous &/or are they too lazy or dumb to evaluate or understand any new evidence?
  - Have the members actually determined fluoridation is harmful but have decided to ignore the issue and keep recommending a harmful practice for some reason and just let their patients and fellow citizens suffer?
  - **Or — perhaps is there no legitimate, persuasive evidence to support the anti-fluoridation claims?**

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4. **Fact** – In stark contrast to the widespread support for CWF by respected science and health organizations worldwide — and the hundreds of thousands of scientists and health professionals they represent — **I am aware of no major, recognized science or health organizations that have publicly stated CWF is harmful or ineffective**, and there are relatively few scientists and/or health care providers that support the anti-fluoridation conclusions.

\*\* In fact, I have only found a few alternative science/health organizations that accept the anti-fluoridation opinions as legitimate. The few I have found that promote a public anti-fluoridation policy are listed below. These organizations often also subscribe to other ‘medical’ notions that don’t conform to mainstream medical practices. Examples:

- a. the International Academy of Oral Medicine and Toxicology ([IAOMT](#)) recommends “*policies [that] should reduce and work toward eliminating avoidable sources of fluoride, including water fluoridation, fluoride-containing dental materials, and other fluoridated products, as a means to promote overall health.*” IAOMT also oppose dental mercury amalgam fillings and recommend their removal, which has increased the bottom lines of members by advocating expensive, unnecessary removal and replacement of safe, durable, long-lasting amalgam fillings by employing the same types of scare tactics used in the campaign against fluoridation.  
**In fact, Christine Till**, one of the most public and prolific fluoridation/harm researchers (author/coauthor of at least 11 publications promoted by FOs since 2018) chose to speak (virtually) at an [IAOMT meeting in September, 2020](#) which gave top billing to other speakers including **defrocked British ‘doctor’ Andrew Wakefield**, whose study linking vaccines and autism (which fueled anti-vaccination passion) was exposed as fraudulent, and [Judy Mikovits](#), a former biochemist who starred in a viral video that promulgated a litany of false information on the coronavirus. The IAOMT is an exceptionally good example of the only type of organizations that accept Till’s studies as well-conducted and relevant. ([Quackwatch](#), [Rationalwiki](#))
- b. the International College of Integrative Medicine ([ICIM](#)) stated, 11/13/2018, “*ICIM joins with our similarly minded medical partners in seeking to prevent illness. We whole heartedly support a national ban on the practice of community water fluoridation that augments natural levels of fluoride in the water with an industrially created chemical to a concentration deemed "optimal" by fluoridation proponents. We agree with the IAOMT who in 2017 published a Position Paper Against Fluoride Use in Water, Dental Materials and Other Products that the evidence of harm to the public and to the environment outweigh any arguments of dental benefit. We also agree with the AAEM who recognized fluoride as one of the common irritants for those with multiple chemical sensitivities in 2008.*” In addition to opposing CWF ([published letter](#)), [as of 7/20/2020](#), the ICIM did “*not recommend that people who are well wear a facemask to protect themselves from respiratory diseases, including COVID-19.*” The ICIM’s advice for treating “*more severe cases [of COVID-19]: Osteopathic manipulation of the upper thoracic spine to include the “rib raising technique” increases lymphatic outflow and helps modulate the sympathetic nervous system.*” ([Science-based Medicine](#), [Respectful Insolence](#))
- c. the American College for Advancement in Medicine ([ACAM](#)), “*Supports banning the addition of fluoride or products containing fluoride to public water supplies and to any substances intended for human consumption.* (archived)”, ([Science-Based Medicine](#))
- d. the International Academy of Biological Dentists and Medicine ([IABDM](#)) recommends a NO vote on mandated water fluoridation in Portland. It also promotes the idea that, with respect to [vaccination](#), “*the right of every individual to make their own health decisions*” and “*too often, [public health] measures cross the line and infringe upon the right of informed consent. Fluoridation is one such measure. Mandatory vaccination is another.*” In 2015 there were about [180 members](#).
- e. the International Chiropractors Association ([ICA](#)) “*considers public water fluoridation to be possibly harmful and a deprivation of the rights of citizens to be free from unwelcome mass medication. The ICA is opposed to the addition of fluoride in any of its forms of drinking water supplies of our nation’s*

*cities and municipalities.”* The ICA also *“supports each individual’s right to select his or her own health care and to be made aware of the possible adverse effects of vaccines upon a human body.”* and *“questions the wisdom of mass vaccination programs. Chiropractic principles favor the enhancement of **natural immunity** over artificial immunization.”* It is important to understand that natural ([or innate](#)) immunity is only a general type of protection – not the protection vaccination provides against specific viruses and bacteria. ([SfSBM](#), [Science-Based Medicine](#))

- f. the American Academy of Environmental Medicine ([AAEM](#)) *“Supports banning the addition of fluoride or products containing fluoride to public water supplies and to any substances intended for human consumption.”* In 2016 there were about [244 practitioners worldwide](#). ([Wikipedia](#), [Science Based Medicine](#), [RationalWiki](#), [Quackwatch](#))
- g. the Children’s Health Defense ([CHD](#)) is not a science or health organization. It is an advocacy group that labels *“U.S. Water Fluoridation: A Forced Experiment that Needs to End.”* The organization is [anti-vaccination](#) and also believes; *“COVID-19 Testing, Reaching, and Contacting Everyone (TRACE) Act” is Unconstitutional and Threatens the Liberty of All Americans.”* ([Wikipedia](#), [reviews](#), [ACoSaH](#)), [Fact Check](#), [Respectful Insolence](#), [Skeptical Raptor](#), [Science-Based Medicine](#))
- h. the Fluoride Action Network (FAN) is not a science or health organization, but it is one of the larger, more vocal, persistent and well-funded organizations dedicated to halting or preventing CWF. FAN References: [Critique of Claims](#), [Irrational Fears](#), [Fluoride & IQ](#), [Institute for Science in Medicine](#), [BDJ Team](#), [Respectful Insolence](#), [The Atlantic](#),
- i. **It is advisable to carefully examine the reliability and credibility of any alleged science or health organization you depend on for your health and safety.** [This resource](#) provides a list of warning signs for questionable organizations and a list of candidates. [This resource](#) describes why one should be wary of many “Alternative,” “Complementary,” and “Integrative” health methods – and those who promote them. Note, this [“Open Letter”](#) from Fluoride Free NZ has signatures of Paul Connett & Noel Campbell, described below, but there are no representatives from [any](#) of the major science or health organizations in the world.
- j. Vocal, high-profile fluoridation opponents who aggressively promote the anti-fluoridation agenda frequently will also oppose other science-based practices like vaccination, and they are often prone to promoting various conspiracy theories to support their beliefs. Some vocal FOs (with references to evaluations of their opinions) include:
  - Paul Connett, Ph.D, is a retired chemistry professor and executive director of FAN. He has been invited to speak at anti-fluoridation events around the world. His 2015 presentation in Denver, in an effort to halt fluoridation, is one of the reasons I decided to publicly challenge the claims and tactics of anti-fluoridation activists. Connett provides an excellent example of the presentation of anti-F<sup>-</sup> opinions by someone with science training.  
\*\* Connett References: [ScienceBlogs](#), [Quackwatch](#), [Open Parachute \(2013-2014 debate\)](#), [Campaign for Dental Health](#), [MSoF](#), [I Like My Teeth](#)
  - Bill Osmunson, DDS, MPH is senior advisor of FAN and a vocal opponent of CWF. He actively promotes misleading anti-fluoridation propaganda like *“[there’s the same equivalence](#) of fluoride in an 8 ounce glass of fluoridated tap water as there is in a “pea-sized” amount needed to call the Poison Control Center, as recommended on the back of any fluoridated toothpaste.”* Osmunson is very active in online comment sections as can be seen in [his response](#) to Ken Perrott’s evaluation of studies promoted by FOs and a [discussion](#) about a possible online debate. Osmunson provides an excellent example of the presentation of anti-F<sup>-</sup> opinions by someone with health-care training.
  - Joseph Mercola is an osteopathic physician and alternative health merchant who is a vocal opponent of [vaccination](#) and [fluoridation](#) health practices. He also supports other questionable practices, for example marketing *“[The 13 Amazing Health Benefits of Himalayan Crystal Salt, the Purest Salt on Earth](#)”* in addition to ([Himalayan Salt lamps](#)). His claim is, *“Typical Table and*

*Cooking Salt in Your Grocery Store Has Been 'Chemically Cleaned'. What remains ... is sodium chloride – an unnatural chemical form of salt."*

**In fact**, after the cleaning process, what remains, the “*Typical Table and Cooking Salt*”, is actually pure salt (NaCl) which is white. **The pink color of the Himalayan salt is caused by contaminants “at least 84 naturally occurring trace elements (Mercola)”**. Only about ¼ of the minerals in HCS are nutrients, and the other ¾ have no health benefits and “many of them are known to be harmful (mercury, arsenic, lead, for example)”. There is also no legitimate scientific evidence that HCS lamps have any health benefits whatever. Mercola has been issued numerous FDA warnings for making false/illegal product claims. He provides an excellent example of the presentation of anti-F<sup>-</sup> opinions by someone with alternative-health-care training.

\*\* Mercola References: [Science-Based Medicine](#), [American Council on Science and Health](#), [RationalWiki](#), [Bad Science Debunked](#), [The Ringer](#), [Skeptiod](#), [ScienceBlogs \(more\)](#), [Skeptic's Dictionary](#), [Rational Wiki](#), [Slate](#)

- ‘Professor’ Noel Campbell, “Bachelor of Dental Science” was one of six original Australian signers of the FAN [Professionals’ Statement](#) opposing CWF. The ‘Professor’ title was apparently given by a Chinese university for his charity work, but sadly the paperwork had been lost. Campbell voluntarily de-registered himself as a dentist many years ago after getting into trouble for repeatedly pumping ozone up a woman’s bottom to cure her facial pain. Spoiler alert: Pumping ozone up your bottom doesn’t cure facial pain. Not surprisingly, the Dental Practice Board of Victoria found him guilty of “grossly negligent dental treatment”.

\*\* Campbell References: [UK Against Fluoridation](#), [Sydney Morning Herald](#), [News.com.au](#), [InSight](#), [ABC.net.au](#), [TheAge](#)

- Mike Adams, the “Health Ranger” (Natural News) is a vocal anti-fluoride activist as well as a vaccine denier and an [opponent of modern medicine](#). His article [The 10 biggest health care lies in America](#) begins, “*Mainstream health care isn’t based on “health” or “caring.” It’s actually based on an ingrained system of medical mythology that’s practiced -- and defended -- by those who profit from the continuation of sickness and disease.*” [Claims Debunked](#)

\*\* Adams References: [Campaign for Dental Health](#), [Rational Wiki](#), [McGill](#), [Science Based Medicine](#), [Forbes](#), [Worst Science Websites, 2016](#), [Bad Science Debunked](#), [Big Think](#), [Skeptical Science](#)

- Alex Jones (InfoWars) is a vocal anti-fluoride, [anti-vaccination](#) activist and promotes a number of conspiracy theories like “*the Sandy Hook massacre of 20 first graders and six adults was an elaborate hoax*”.

\*\* Jones References: [Campaign for Dental Health](#), [Rational Wiki](#), [Bad Science Debunked](#), [Rolling Stone](#), [NY Times \(more\)](#)

- [David Icke \(Son of the Godhead\)](#) – former footballer and sports broadcaster – is a [vocal anti-fluoride activist](#) and promotes a number of other [outlier beliefs](#).

\*\* Icke References: [Rational Wiki](#), [BBC](#), [TheGardian](#)

- [James Reeves](#) – one of the more prolific FOs, publicly denouncing CWF with standard anti-F<sup>-</sup> claims in wide-spread comment sections responding to any articles that mention fluoride or fluoridation. Reeves regularly employs [two anti-science tactics](#), Gish Gallop and *Argumentum ad nauseam*. [An example of 148 Reeves’ comments](#) over a three week period in response to three articles. If you look at this example, you will see that Reeves seldom responds to my challenges and refutations – he just copy/pastes the next unfounded claim. I admit to responding to his comments to keep him galloping...

- k. **There is absolutely no evidence that most (or even a significant number of) science and health professionals oppose CWF**, even though opponents of CWF (and others who hold views contrary to a scientific consensus) are frequently extremely vocal about their beliefs, very eager to share their opinions with others, and will do whatever they can to promote their beliefs. Most of the vocal anti-

CWF activism around the world is conducted by members of the public who are not trained scientists or health care professionals. However, they have very strong and inflexible personal beliefs that align with those of professional FOs, and they have unconditionally accepted the anti-F<sup>-</sup> arguments as valid and acted on them. They believe they are accepting a legitimate interpretation and presentation of the evidence, even though they don't have the training &/or experience to personally evaluate that evidence. To be fair, most people who accept the conclusions and recommendations of mainstream scientists and health care providers don't have the training &/or experience to personally evaluate the relevant bodies of evidence either – they trust their health to professionals who accept the scientific consensus.

**In fact:** The heavily promoted [FAN Professionals' Statement to End Water Fluoridation](#) (PStEWF), initiated in 2007 actually confirms the outlier status of FOs. By March, 2015 the PStEWF had collected about 4,700 signatures from around the world, and by December 2018 a whopping 4,804 signatures had been collected out of the millions of working and retired medical, dental and scientific professionals in the world. For example, out of those 4,804 signatures, only:

- 378 dentists worldwide signed the petition. That's roughly 0.02% of the 1.8 million practicing dentists in the world and **0.19%** of the [200,000 dentists](#) in the U.S.
- 582 MDs signed the petition. That's about 0.006% of the 10-15 million practicing physicians in the world and only **0.06%** of the [950,000 physicians](#) in the U.S.
- 860 nurses signed the petition. That's about 0.003% of practicing nurses worldwide and just **0.03 %** of the [3 million registered nurses](#) in the U.S.
- 106 pharmacists signed the petition. That's approximately 0.005% of the more than 2 million practicing pharmacists worldwide and **0.03%** of the [310,000 pharmacists](#) in the U.S.
- 537 individuals with a PhD signed the petition. That's just **0.01%** of the [4.5 million PhD holders](#) in the U.S.
- 130 dental hygienists signed the petition. That's **0.06%** of the [219,000 dental hygienists](#) in the U.S.

Those minute percentages, based on the number of practicing professionals, don't even reflect the millions more retired professionals in the U.S. and other countries who could have signed the petition if they believed the anti-fluoridation propaganda was supported by accurate and legitimate evidence.

It is significant that the **Fluoride Action Network** '[Who Opposes Fluoridation](#)' page can list no major, respected science or health organizations that support their position. An examination of the 10 specific fluoridation opponents listed by FAN:

- #1 - Statements by European officials don't constitute scientific evidence against fluoridation, and there are many reasons (not based on any proven harm) why other countries don't choose to fluoridate their water. ([Fluoride Myths & Facts](#) #13) The 2016 World Health Organization, '[Fluoride and Oral Health](#)' paper states, "*Fluoride is effective at controlling caries because it acts in several different ways...(p70)*" and "*The question of possible adverse general health effects caused by exposure to fluorides taken in optimal concentrations throughout life has been the object of thorough medical investigations which have failed to show any impairment of general health. (P79)*" **It is important to understand that there have been absolutely no high quality reproducible studies in the subsequent 4 years (2016 – 2020) that have proven (or even strongly suggested) any harm from drinking optimally fluoridated water**, despite extremely vocal claims by FOs to the contrary.
- #2 - A few Nobel Prize-Winning scientists (all but one before the early 1960s) don't constitute scientific evidence against fluoridation.
- #3 - EPA scientists do not oppose fluoridation – [in 1997](#) a majority of members (20) who attended a meeting were able to adopt a resolution opposing California's fluoridation law.

- #4 - Thousands of medical and scientists constitute well under 0.2% of relevant professionals. Check the numbers described in the FAN Professionals' Statement above.
- #5 - The opinion of a few selected "Key Leaders" does not constitute a scientific consensus, but the support of community water fluoridation by the major science and health organizations, their members, and the majority of relevant experts does constitute a scientific consensus.
- #6 - The personal opinions of a few (4) civil rights leaders does not constitute a scientific consensus, and unless they are specifically trained, their opinions are based entirely on who they choose to believe – not on a personal evaluation of the evidence.
- #7 - The opinion of Ralph Nader does not constitute or reflect the scientific consensus.
- #8 - Whether or not communities in North America or other countries fluoridate their water is usually a political decision ultimately decided by a majority of voters (or elected officials), most of whom do not have the training or experience to personally evaluate the body of complex scientific evidence.
- #9 - See # 8. The values presented completely ignore all the other communities in the U.S. that continue to fluoridate their drinking water.
- #10 - The arguments have nothing to do with the safety and effectiveness of community water fluoridation confirmed by the overwhelming body of evidence from over 75 years of research, evaluated by relevant experts and accepted by virtually all recognized science and health organizations in the world.

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5. **Two extremely important questions to consider based on the above facts:** If the arguments and claims of FOs are a scientifically accurate interpretation of the evidence and are presented correctly, fairly and truthfully:

- d. **Q1** – Why do the major science and health organizations in the world (and the hundreds of thousands of members they represent) continue to support CWF and not the anti-fluoridation opinions?
- e. **Q2** – Why do only a relatively small number of trained and experienced scientists &/or medical professionals support the anti-fluoridation agenda and beliefs?
- **My Answer:** The decision to dismiss the interpretation of available evidence supporting a scientific consensus that is accepted by most scientists in the world requires trusting in one's strongly-held, inflexible beliefs instead of the relevant scientific consensus. That conviction demands requiring that the evidence be selected, interpreted and presented to support those beliefs. As noted previously, in order to change a scientific consensus, legitimate new scientific evidence must be presented to experts in the relevant scientific community sufficient to initiate change. **For over 70 years, FOs have been completely unable to provide a single confirmed, convincing, legitimate, reproducible, scientific study to support their claims that drinking optimally fluoridated water is ineffective or harmful to health – that includes recent F<sup>-</sup>/IQ studies aggressively promoted by FOs.** The scientific consensus that fluoridation is safe and effective has not changed. The arguments and claims of FOs are not based on an impartial, accurate &/or truthful representation of the 75-year body of scientific evidence.

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6. **Another critical question to consider:** Since there are only a relatively few scientists and health professionals, virtually no mainstream scientific organizations, a few alternate health groups and some questionable supporters of the anti-fluoridation arguments that CWF is dangerous and ineffective — and it can be easily demonstrated that the available anti-fluoridation 'evidence' is presented inaccurately — how is it possible that FOs are often successful in their efforts to ban or stop community water fluoridation?

- f. **My Answer:** FOs (and others who oppose widely-accepted science-based conclusions) are extremely dedicated, vocal and persistent in their mission to end CWF (or challenge other

accepted science-based conclusions). There are a number of often successful tactics employed by FOs and other anti-science activists to “adjust” public opinion and encourage members of a community to actively and vocally oppose an accepted scientific conclusion.

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7. **Fact: The anti-science tactics [employed by FOs](#)** (and others who dismiss an established scientific consensus) to try and convince members of the public to trust their proclamations that CWF is dangerous, unethical and ineffective over the conclusions of mainstream science and health professionals **must be exposed so they can be understood and dismissed by rational, caring members of the public:**

- a) As described earlier, **FOs completely ignore the scientific consensus** if possible, dismiss it as an irrelevant farce if confronted with it and avoid working within the scientific community to provide legitimate scientific evidence (which does not exist) necessary to change the consensus.

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- b) **FOs Hijack the Democratic Process:** Democracy only works if good decisions are made by accurately informed members of the public — whether they are the voters making decisions that determine how science is used to best help and protect their fellow citizens or the individuals elected by the voters who are entrusted with making those science-based decisions. Since most of the voters and elected officials are not trained scientists or health care professionals, **it is the goal of anti-science activists to generate distrust of any scientific consensus they disagree with and the scientists and/or health care providers who support the consensus of relevant experts.**

Since the ‘evidence’ of anti-science activists is not sufficient to convince the majority of relevant experts to change the scientific consensus, FOs must take their battle against science directly to the public, confident that most individuals will not try (or be able) to understand the science.

Anti-science activists argue that the concept of a scientific consensus is irrelevant. They try to replace it with a **public consensus** where conclusions based on complex scientific evidence can be determined (and voted on) by anyone (based on their beliefs), regardless of training and experience, instead of by scientists and health care professionals who actually understand the evidence and its context and the consequences of making science-based decisions.

Many well-meaning members of the public are persuaded by the anti-science arguments, and they choose to unconditionally trust the anti-F<sup>-</sup> conclusions on CWF over those of mainstream scientists and health professionals. These converts make up the FOs’ militia, and they are directed to vocally oppose CWF in their communities by attending community meetings and voicing their opinions voting for (or adopting, if they are elected officials) anti-F<sup>-</sup> policies. The same tactics are used by vaccination opponents.

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- c) **FOs Employ Fear Mongering to Try and Change Public Opinion and Spread Discord:** Fear is an extremely powerful motivator of public opinion, and FOs exploit the complexity of fluoridation science and the power of fear to drive their anti-science, fear-mongering campaign. FOs try and convince concerned citizens that a beneficial public health measure is actually evil incarnate. FOs can effectively dispense their shock and scare content because they bypass normal channels of scientific review and deliver their message directly to the media and the public.

It is far easier to create and promote negative, fear-invoking ‘evidence’ than it is for most scientists and health care workers to provide and discuss accurate, complex scientific evidence to refute the fear-based claims. Part of the problem is that exposure to excessive levels of fluoride ions (way above those found in CWF) can cause negative health issues – just like excessively high exposure to other substances. Examples:

- **“[Fluoride is a deadly poison](#)”** sounds really scary – who in their right mind would want to drink water that contains a deadly poison. This simple claim is far more effective at



**HEALTH EFFECTS**

Fluoride is a highly toxic substance that can cause a range of adverse health effects. Certain members of the public are at particularly high risk of harm.

manipulating public opinion than trying to describe the science-based fact that low levels of fluoride ions in optimally fluoridated water (0.7 ppm) are safe and actually protect health.

- "[Due to its high toxicity](#), fluoride has long been used as a pesticide. In the United States, there are currently two fluoride-based pesticides that are allowed to be sprayed on food. These are: cryolite and sulfuryl fluoride." & "Sodium Fluoride used in Rat Poison. While it's one of the main ingredients in toothpaste, sodium fluoride is widely used in rat and cockroach poisons." It should be apparent that the use of fluorine in pesticides or rat poison has absolutely nothing to do with CWF. [Chlorine is also used in pesticides](#). By the 'logic' of FOs, water disinfection and salt should be banned.

The fact is, virtually any substance is a deadly poison at high enough exposure levels – even drinking [too much water](#) can be a [deadly poison](#).

FOs completely ignore the concept of dose (or exposure level), because an accurate statement that too much fluoride exposure (drinking water with 3-4 times more than the optimal level of fluoride) can increase the risk of dental fluorosis would not cause anyone to take notice of their claims.

- "[Fluoride is a highly toxic substance that can cause a range of adverse health effects](#)." CWF reduces IQ, and studies prove CWF causes ADHD, other neurological problems, arthritis, bone fracture, cancer, cardiovascular disease, diabetes, GI effects, hypersensitivity, kidney disease, male fertility and pineal gland issues, skeletal fluorosis and thyroid disease. These claims sound really scary – who in their right mind would want to drink water that severely damaged one's health?

Compare those horrifying claims with the science-based conclusions that, in over 75 years of studies, drinking optimally fluoridated water has not been shown to cause any health issues besides lowering the risk of dental decay by 15% - 25% or so. Which of these claims is more likely to cause someone to take action if they accepted it as true? (discussed below)

- CWF is a "[Toxic Treatment: Fluoride's Transformation from Industrial Waste to Public Health Miracle](#). ... unlike the pharmaceutical grade fluoride in their toothpaste, the fluoride in their water is an untreated industrial waste product, one that contains trace elements of arsenic and lead."

Sounds really scary, right? These claims are often a strong motivation for fear that trumps the science-based description that many fluoridation chemicals are a byproduct of processing [phosphorite rock](#) and are carefully regulated so contaminants are nearly undetectable and certified to be within safe limits. "In fact, [NSF](#) was only able to detect the reported trace amounts [of contaminants] by dosing the chemicals into reagent water at 10 times the manufacturer's maximum use level." [Additional information](#).

- \*\* As stated previously, how can someone who is not trained and experienced in science &/or health care determine which claims are true? Will a significant number of people make the effort to find and try to understand the scientific evidence, or will they simply confirm the fearful claims with a Google search?

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- d) **FOs Employ Gish Gallop:** Another very common tactic of anti-science activists is Gish Gallop, "a technique used during debating that focuses on overwhelming an opponent with as many arguments as possible, without regard for accuracy or strength of the arguments. The term was coined by Eugenie Scott and named after the [creationist Duane Gish](#), who used the technique frequently against proponents of evolution." ([Wikipedia](#))

"By using a quantity of arguments as a quality itself, a [Gish Gallop](#) tries to create the illusion of authority and weight of evidence. It is effectively [style over substance](#)."

"A Gish Gallop is a well-established method of outmaneuvering rhetorical opponents with an overwhelming onslaught of dubious arguments. The Gallop works by leveraging two basic tendencies in human reasoning. First, it's easier and faster to make a false claim than it is to disprove one.

Second, if an opponent fails to disprove every single one of the spurious statements you state, you can claim victory on the leftovers.” (Carl Alviani). ([Pseudo-Science Blog](#), [Effectiviology](#), [Skeptical Science](#), [Open Parachute](#)).

I discussed one example, [James Reeves](#), earlier.

- **One of the most remarkable examples of Gish Gallop I have experienced was a series of posts by Bill Osmunson trying to link fluoridation and cancer.** In the posts Osmunson dumped over 16,000 words (referencing over 80 studies) into the exchange in an apparent attempt to support his claim that drinking optimally fluoridated water is a significant risk factor for causing cancer: *“Randy, Lets talk science rather concensus. Remember, the masses can be wrong. Marketing can change public opinion. The next few posts will be just a touch on one aspect of fluoride, carcinogenicity.”* ([09-04-2018 02:04 PM](#)), *“Randy, Let’s look at some studies.”* ([09-04-2018 02:05 PM](#)), ([09-04-2018 02:07 PM](#)), ([09-04-2018 04:11 PM](#)), ([09-04-2018 04:12 PM](#)), ([09-04-2018 04:47 PM](#)), ([09-04-2018 04:57 PM](#)), ([09-04-2018 05:02 PM](#)), ([09-04-2018 05:03 PM](#)), ([09-04-2018 05:05 PM](#)), ([09-04-2018 05:06 PM](#)), ([09-05-2018 04:12 PM](#)), ([09-05-2018 04:14 PM](#)), ([09-05-2018 04:18 PM](#)), *“This forum only accepts 20,000 charactors, so I cannot post all the fluoride cancer studies. Here are some, in response to your claim, ‘Fluoride is NOT a carcinogen’”* ([07-11-2018 06:26 PM](#)) (**Note:** The site changes, and it may be necessary to go back or forward a page or so.)  
[My response](#) – I asked Osmunson, if he had all of that legitimate evidence proving CWF caused cancer, why did he present it in a public forum instead of demanding a meeting with cancer experts to demonstrate why his evidence should be sufficient to change the scientific consensus. He provided no answer. If you examine other comments From Dr. Hanie and David Fierstien asking specific questions of Osmunson regarding his claims, they were also unanswered.  
**If any of the anti-fluoridation interpretations of the studies were legitimate, why do none of the cancer organizations list community water fluoridation as a cancer risk?** Do the activists have a better understanding of the evidence than the relevant experts? Why would anyone trust the opinions of passionate activists who have no legitimate training or evidence to support their opinions, but who continue to dump tons of irrelevant studies into public discussions.

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e) FOs claim accidents with some link to fluorine happen, so CWF should be banned:

- [A report](#) on the Fluoride Alert site stated, *“Marin County – October 26 – November 1, 1977. Fluoride feeder valve malfunctioned. Five communities received fluoride above 'accepted' level for several days without notice to the public.”* Other accidents were listed as well. Following the logic of this argument, chlorination of drinking water should be banned because accidents occasionally occur that release chlorine compounds into the environment and kill or injure people. So, everyone should be responsible for the disinfection of their own water.  
**Perhaps every human activity in which accidents occur should be banned.**
- [A headline from Fluoride Alert](#) screamed, *“Reported Poisoning Incidents from Fluoride Toothpastes, Supplements, & Mouthrinses: As a result of the FDA’s warning, there are now over 20,000 reports each year to Poison Control Centers in the United States due to excessive ingestion of fluoride toothpaste.”*
- [Child’s death](#) – a tragic accident, but completely unrelated to CWF.
- [3 Hemodialysis patients died](#) – tragic, but related to [equipment failure](#), unrelated to CWF.
- *“[A blast at the factory](#) of chemical maker Hube Global on September 27th killed five people and led to the leakage of EIGHT tons of hydrofluoric acid.”* Of course [hydrofluoric acid](#) production has absolutely nothing to do with the safety and effectiveness of CWF, but that doesn’t stop FOs from trying to spread fear.
- It is completely irresponsible, irrelevant and disingenuous to use unfortunate accidents that have nothing whatever to do with CWF to try and “prove” drinking optimally fluoridated water

is harmful. Think of what would happen if every activity that could be linked (even remotely) to an accident was banned. This is one of the more irrational anti-F tactics.

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f) FOs “[Create A Veneer of Science to enhance the appeal of their claims](#)”: FOs (like all anti-science activists) conduct questionable studies, reference (cherry-pick) poor quality studies, inconclusive studies &/or studies that are irrelevant to CWF as 'proof' their opinions are valid, and they deliberately distort conclusions of legitimate scientific evidence before spinning it out to the public. The fact is, any study allegedly supporting the anti-fluoridation opinions that fluoridation is harmful will have one or more of the following characteristics:

1. The study referenced had nothing to do with drinking optimally fluoridated water. Examples:

- [“Developmental fluoride neurotoxicity: a systematic review and meta-analysis, Choi, Zhang, Grandjean, 2012”](#) was one of the first reviews utilized by FOs to scare people into fearing CWF lowers IQ. It was promptly criticized by scientists and health professionals because the studies reviewed had absolutely nothing to do with CWF, had low sample sizes and high fluoride levels, didn't consider other contaminants and risk factors and had other significant limitations. The coauthors even admitted “*each of the articles reviewed had deficiencies, in some cases rather serious ones, that limit the conclusions that can be drawn.*” [Critique 1](#), [Critique 2](#), [Critique 3](#), [2013 response of CWF support from Harvard Deans](#).

[Harvard Study Finds Fluoride Lowers IQ - Published in Federal Gov't ...](#)  
Sacramento Bee - 18 hours ago  
PRNewswire-USNewswire/ -- Harvard University researchers' review fluoride/brain studies concludes "our results support the possibility  
...  
[Strong Teeth or Strong Grades? Fluoride Could Lower IQ in Kids](#)  
RedOrbit  
[all 8 news articles »](#)  
[Harvard Study Finds Fluoride in Water Lowers IQ – Published in ...](#)  
Food Consumer - 3 hours ago  
New York – July 24, 2012 – Harvard University researchers' review t

- One of the first studies in Osmunson's fluoride/cancer Gish Gallop example above ([Pal S, Sarkar C, 2014](#)) exposed rats to “*sodium fluoride at a dose of 20mg/kgb.w./day for 30 days*” and found it caused serious health issues.

Ok, let's put that into a rational perspective. That's the equivalent of human exposure of 1.8 mg F<sup>-</sup>/kgb.w./day. That would require a 4.5 Kg (10 pound) infant to ingest 8.1 mg of F<sup>-</sup> per day by drinking 11.6 liters (**3 gallons**) of optimally fluoridated water. A 150 pound adult (68 Kg) would have to ingest 122 mg F<sup>-</sup> per day by drinking over 85 liters (**22 gallons**) of optimally fluoridated water per day. Of course high exposure levels to most any substance can cause harm – think of what would happen if infants consumed **3 gallons** of water per day! It should be obvious that results from this study have nothing to do with CWF, but that doesn't stop FOs from using studies like this to try and 'prove' CWF causes cancer. FOs don't care about honesty, accuracy or relevance – only about creating fear.

2. The study examined exposure to fluoride ions at far higher levels than found in optimally fluoridated water. (Examples below)
3. The study conclusions may suggest a possible correlation (or association) between two variables, but that does not prove a cause and effect relationship.
4. The study didn't consider or adjust for numerous other factors potentially associated with the alleged risk, and it proved nothing.
5. The study was unrepeatable by other legitimate, impartial scientists.
6. The study methodology was demonstrably flawed and had significant limitations.
7. The study conclusions are contradicted by the majority of related studies &/or
8. The claim was a complete fabrication.

Unfortunately, without diving into the complexities of each of the hundreds of studies cited by FOs to support their opinions, it is difficult to prove the claims above are true. I will provide some specific examples below to illustrate the tactics, but my examples only expose the most basic and obvious limitations of the studies – these explanations don't begin to explain in detail

the specific, serious limitations of each of the studies that have caused the scientific community to reject them as legitimate evidence that CWF causes harm.

- **These are examples of characteristic 2 above:** These are also examples of the complexity of actually trying to evaluate the scientific literature and explaining the results – even if one is a scientist.

It is important to understand that in rats, “[a 5-fold increase in the dose of fluoride ions is required to achieve comparable human serum levels.](#)” (FiDW p 98) So, to approximate an optimal level of fluoride (0.7 ppm or mg/L) from CWF, a rat would have to drink water containing 3.5 ppm F<sup>-</sup>, and rats drinking water containing 20 ppm F<sup>-</sup> would be equivalent to a human regularly drinking the EPA maximum contaminant level (MCL) of 4 ppm F<sup>-</sup> or 4 mg/L.

- [Neurotoxicity of sodium fluoride in rats](#) – “Weanlings received drinking water containing 0, 75, 100, or 125 ppm F for 6 or 20 weeks, and 3 month-old adults received water containing 100 ppm F for 6 weeks.” The lowest exposure level in this study (75 ppm) was 3.75 times higher than the EPA’s MCL of 4 ppm, human (20 ppm rat) and the highest level was 35.7 times greater than optimally fluoridated water (0.7 ppm human / 3.5 ppm rat equivalent)
- [Roles of mitochondrial fission inhibition in developmental fluoride neurotoxicity](#) – “using Sprague-Dawley rats developmentally exposed to NaF (10, 50, and 100 mg/L [that’s 4.5, 22.5 and 45 mgF<sup>-</sup>/L] from pre-pregnancy until 2 months of delivery to mimic human exposure...” Actually, the study doesn’t mimic human exposure to CWF. The lowest level (4.5 mg/L) is higher than the optimal level in CWF, 22.5 mg/L is higher than the EPA MCL, and **45 mg/L is over 10 times higher than the fluoride content of optimally fluoridated water.** How many substances do you think could be demonstrated to have harmful effects at 10 times the recommended exposure level??

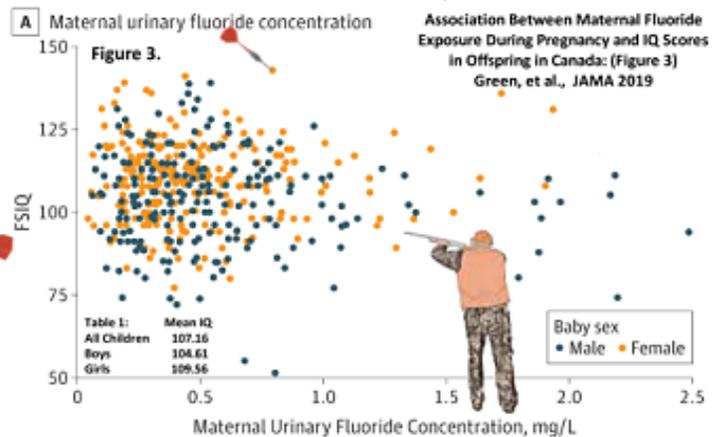
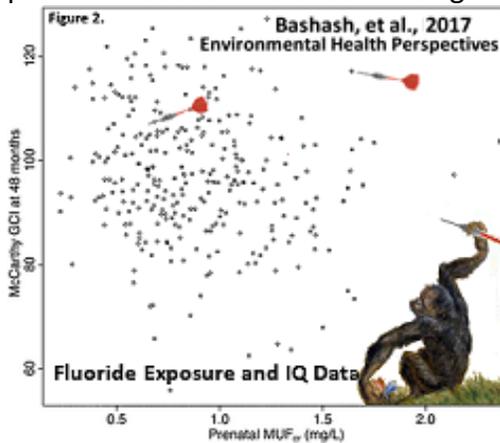
- → Contrast the above studies with a 2018 Study, [An Evaluation of Neurotoxicity Following Fluoride Exposure from Gestational Through Adult Ages in Long-Evans Hooded Rats](#), designed and conducted by the NTP to evaluate potential harm of fluoride concentrations at levels 2.5 to 5.7 times that found in optimally fluoridated water (0.7 ppm). “Long-Evans hooded male rats maintained on a standard diet (20.5 ppm F<sup>-</sup>) or a low F<sup>-</sup> diet (3.24 ppm F<sup>-</sup>) with drinking water exposure to 0, 10, or **20 ppm F<sup>-</sup>** from gestational day 6 through adulthood. ... Equivalent human daily water intakes of 1.74 mg F/day for an adult or 0.63–1.23 mg/day for 1 to 14 years of age have been approximated in rodents using drinking water concentrations of 7 to 9 ppm F<sup>-</sup>. In the current study, the top dose of 20 ppm F<sup>-</sup> was selected based upon the US Environmental Protection Agency’s Maximum Contaminant Level of 4 ppm [5.7 times higher than optimally fluoridated water] and the conventional wisdom that a 5-fold increase in dose is required to achieve comparable human serum levels.

**Conclusions:** “At these exposure levels, we observed no exposure-related differences in motor, sensory, or learning and memory performance on running wheel, open-field activity, light/dark place preference, elevated plus maze, pre-pulse startle inhibition, passive avoidance, hot-plate latency, Morris water maze acquisition, probe test, reversal learning, and Y-maze. Serum triiodothyronine (T3), thyroxine (T4), and thyroid stimulating hormone (TSH) levels were not altered as a function of 10 or 20 ppm F<sup>-</sup> in the drinking water. No exposure-related pathology was observed in the heart, liver, kidney, testes, seminal vesicles, or epididymides. Mild inflammation in the prostate gland was observed at 20 ppm F<sup>-</sup>. No evidence of neuronal death or glial activation was observed in the hippocampus at 20 ppm F<sup>-</sup>.” As NTP researchers were preparing to conduct this study, FOs praised the NTP and were confident this “[New Fluoride/Brain Study Could End Fluoridation](#)”

- **Several recent studies** ([2017 Bashash et al.](#) and [2019 Green, et al.](#)) are heavily promoted by FOs as proof that CWF reduces IQ, yet they **provide excellent examples of characteristics 3, 4, 5, 6, 7**

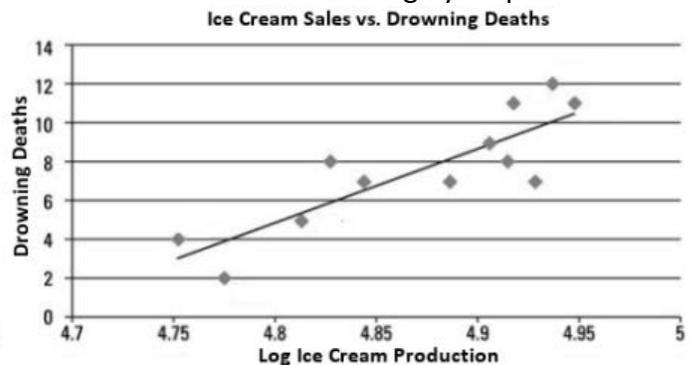
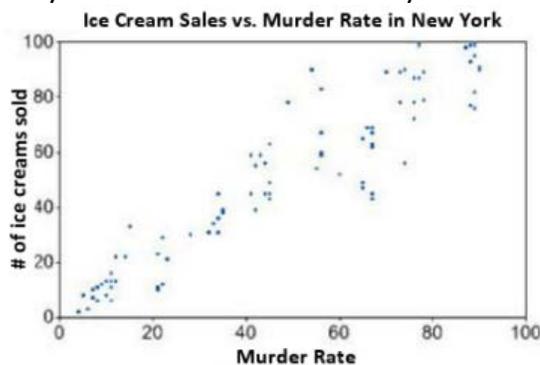
and 8 above.

In fact, these studies were so obviously flawed they received immediate, significant and detailed criticism from relevant experts worldwide. ([Green1](#), [Green2](#), [Bashash1](#), [Bashash2](#), [G&B](#)) Unfortunately, many well-meaning citizens who don't have significant science &/or health training can easily be scared by fluoridation opponents (and irresponsible journalists) who present these studies as convincing evidence fluoridation causes lower IQ.



However, anyone with a moderate understanding of science (and no prior anti-F<sup>-</sup> bias) can examine the graphs presented in the articles and realize the importance of two statistical facts that cast immediate doubt on any conclusions made by the authors (or other FOs) that CWF might lower IQ:

1. A correlation (or association) between variables [does not imply a cause and effect relationship](#).
2. The [greater the scatter of data points](#) in a graph, the weaker any potential correlation will be. They will then conclude that any conclusions based on that data will be highly suspect.



An example: The two graphs above show strong [correlations between ice cream sales and deaths](#) and would provide anti-ice-cream activists very strong evidence that **Ice Cream Consumption is Dangerous and All Sales Should Be Banned**. Hopefully it is obvious there might be other variables involved (like temperature) that have not been included in the analysis, but are more likely to correlate with death rates than ice cream sales. This example is just one relatively simple illustration of the many ways anti-science activists can produce study results that appear to support their opinions.

The dependence of FOs (and all anti-science activists) on the way their so-called 'evidence' is produced, packaged and promoted (as described above) is the primary reason **they have been completely unsuccessful in changing the scientific consensus** – unfortunately, it is also the reason they have often been successful at influencing public opinion.

For anyone who trusts the majority of scientists and health professionals, the best argument that the 'evidence' provided by FOs should not be trusted is that no mainstream science or health organizations accept any of the studies referenced by FOs as valid, significant evidence CWF is harmful or ineffective.

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g) **FOs Blur the Boundary Between Ethics and Science to Fabricate False Moral Arguments:**

For example, FOs portray CWF as a medication that constitutes an immoral violation of one's personal freedom by forcing a medication on unwilling members of the public. For example, [FAN claims](#) that, *"Unlike all other water treatment processes, fluoridation does not treat the water itself, but the person consuming it. The Food & Drug Administration accepts that fluoride is a drug, not a nutrient, when used to prevent disease. By [FOs'] definition, therefore, fluoridating water is a form of mass medication."* That opinion is not science – it's not even a supportable belief – yet it fuels the chaos FOs promote.

**Fact:** The claim that *"The FDA accepts that fluoride is a drug"* is spurious, because the [FDA does not regulate water treatment chemicals](#), and the FDA does regulate fluoridated bottled water as a ["Food For Human Consumption"](#), not a drug. If the FDA regulated fluoridated bottled water as a drug, warnings similar to those on toothpaste (which contains fluoride levels over 1,000 times greater than optimally fluoridated water) would be required to have warnings. FOs can reference no regulations that CWF constitutes any form of medication from any source besides their own opinions.

**The FAN claim,** *"Unlike all other water treatment processes, fluoridation does not treat the water itself, but the person consuming it"* is an example of how reality can be 'adjusted' to fit a specific belief.

- The argument that there is a difference between treating the water vs. treating the person is completely irrelevant and misleading.

**Fact:** All elements/chemicals that impact human health (either positively or negatively) *"treat the person"*. Although some chemicals like lead *"treat the person"* poorly at any exposure level, many elements/chemicals *"treat the person"* positively at low to moderate exposure levels and negatively at excessively high exposure levels. For example, while sodium, potassium, chlorine, vitamins, calcium, H<sub>2</sub>O, etc. are beneficial at low appropriate exposure levels, they are all deadly poisons at excessively high exposure levels.

It is remarkable that the concept ["The Dose Makes the Poison"](#) was understood nearly 500 years ago, but the FOs completely ignore the concept, claiming that [Fluoride is a deadly poison](#) without any context of exposure levels – and completely contrary to the 75-years of scientific evidence that has demonstrated low-level exposure to fluorine is beneficial to health.

\*\* This is one of the better examples of how the presentation of accurate facts in a deliberately misleading manner can scare concerned, well-meaning individuals into signing a [petition to ban dihydrogen monoxide](#). ([more DHMO facts](#)) Think of what can be accomplished if individuals, in their passion to change public opinion, are not constrained by an obligation to present information accurately and responsibly.

- All water treatment methods involve adding chemicals that are **toxic at high levels** to the water. Disinfection also creates [disinfection byproducts](#) like [chloroform](#) which are also harmful at high exposure levels and have no health benefits. It is irrelevant whether you arbitrarily label them a medicine, a poison, or a treatment chemical.
- Using anti-science arguments one could easily create a case against drinking water disinfection by claiming *"Unlike all other water treatment chemicals chlorine has been used as a chemical weapon, and the disinfection byproducts do not treat the water itself, but, like the element chlorine, pose a threat to the person consuming it. The CDD recognizes that [chlorine is poisonous](#), and DBPs as potentially [causing liver damage and decreased nervous system activity](#). By definition, therefore, water disinfection is a form of mass poisoning, people are forced to drink disinfectants and DBPs, and the practice should be abandoned."*

Take a look at the EPA [Risk Assessment of Disinfection Byproducts \(DBPs\)](#), there is no evidence that exposure to DBPs (or the disinfectants) treat the body in a beneficial manner: *"Exposure to DBPs is a potential human health hazard; both the epidemiologic and toxicologic literature*

*provide some evidence of potential adverse health effects. Taken as a whole, epidemiologic studies on chlorinated drinking water offer some evidence of an association with certain cancers, reproductive and developmental effects, warranting further investigation. ... In in vivo studies at high doses of individual DBPs and some defined DBP mixtures, there is evidence of carcinogenicity, reproductive and developmental effects, nephrotoxicity and hepatotoxicity.”*

Note: I am in no way endorsing these arguments, only demonstrating how facts can be manipulated to create a fear-based ‘moral argument’. In fact:

- CWF and other water treatment processes (disinfection, pH adjustment, corrosion control and flocculation/coagulation) all protect the health of citizens who drink the water by different methods – reducing dental decay, killing pathogens, removing contaminants, reducing the risk of harmful chemicals leaching from pipes, etc.
- The benefits of all drinking water treatment methods to protect the health of the entire population far outweigh any risks, and the chemicals which remain in the treated water are regulated to be within safe limits. Take a look at your water quality report – there are low but safe amounts of a number of potentially harmful chemicals in all public water.

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- h) **FOs Employ the Freedom of Choice Argument and claim CWF constitutes forced mass medication** (or intentional poisoning) — Anyone drinking public water should have a choice regarding any chemicals they are exposed to.

This is a legitimate argument for individuals deciding on personal exposure to substances that are not part of public health measures (like vaccination programs and water treatment processes) that impact entire communities – not just individuals.

References: ([Open Parachute](#), [Fluoridation Facts, p 92](#))

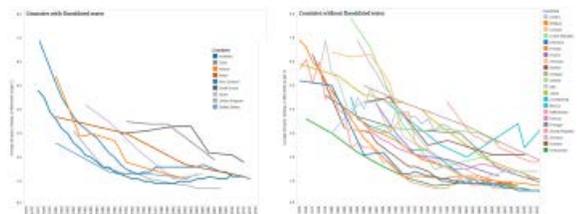
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- i) **FOs Claim Most of the World doesn’t Fluoridate their Water & Decay Rates Have Fallen Both in Countries that use CWF and Those that Don’t.** This is another example of the selective presentation of actual evidence.

- **Claim: Most of the Countries in the World don’t Fluoridate their Water.** It is true most countries don’t employ CWF, but the reasons are not based on scientific evidence that fluoridation causes harm or is ineffective. Reasons for not utilizing CWF include sufficient natural fluoride levels, lack of centralized public water supplies, utilization of fluoridated salt or milk, and other technical, legal, financial or political reasons ([Fluoride Facts, p 102](#), [Fact \\*13](#), [Skeptic](#), [CDHP](#), [PEW](#))

- **Claim: Decay Rates Have Fallen Both in Countries that use CWF and Those that Don’t.**

FOs often present several graphs allegedly showing that over the last 45 years or so decay rates have decreased in countries that employ CWF and those that don’t. The article “[Is Fluoridated Drinking Water Safe](#)” by Nicole Davis (with comments by P. Grandjean) in the



Magazine of the Harvard T.H. Chan School of Public Health demonstrates a common example of how information can be misrepresented – and yet appear legitimate. The story received significant and very specific criticisms from [Oral Health Representatives of the UK and Ireland](#) the presidents of the [AAP](#) and [ADA](#), including requests for recension/retraction from the [Dean of Harvard School of Dental Medicine](#) and [members of the Harvard School of Dental Medicine](#) and [several alumni of the Harvard School of Public Health](#). The criticisms clearly demonstrate how Nicole Davis utilized the anti-science tactics outlined above.

- **Facts:** The graphs presented by FOs to try prove CWF is ineffective are country-wide and fail to consider/compare fluoridated vs. non-fluoridated communities, natural F<sup>-</sup> levels, or take into

account other methods utilized to reduce decay in different communities. A [detailed discussion](#) of how graph data is misrepresented by FOs. Other examples:

- In a [recent study](#), July 2020, from New Zealand concluded, *“In this national cross-sectional study of 275,843 children, those living in areas without community water fluoridation had significantly higher odds of severe caries compared with children living in areas with water fluoridation after adjustment for age, sex, ethnicity, area-level deprivation, and residual location.”*
- Most studies have demonstrated an increase in decay rates after stopping fluoridation in communities which did not make any other recorded changes to oral health risk factors: [Does cessation of community water fluoridation lead to an increase in tooth decay?](#) A systematic review of published studies: McLaren & Sonica Singhal, J Epidemiol Community Health. 2016 – *“Overall, the published research points more to an increase in dental caries post-CWF cessation than otherwise.”*
- Three recent studies have demonstrated an increase in dental decay in cities after CWF was halted:
  - ~> [Juneau, AK](#) – Consequences of community water fluoridation cessation for Medicaid-eligible children and adolescents in Juneau, Alaska: Jennifer Meyer, et al., BMC Oral Health 2018;18:215, *“Additionally, the age group that underwent the most dental caries procedures and incurred the highest caries treatment costs on average were those born after CWF cessation.”* ([Discussion](#))
  - ~> [Windsor, Ontario](#) – [City Council voted](#) to remove CWF in 2013 and reintroduce it in 2018. The [Oral Health Report 2018 Update](#), Windsor-Essex County Health Unit: *“From 2011/2012 to 2016/2017, communities that recently ceased fluoridation observed a greater decrease in the percentage (13%) of students without caries compared to an 8% decrease in the communities that were never fluoridated.”*
  - ~> [Calgary, Alberta](#) – Measuring the short-term impact of fluoridation cessation on dental caries in Grade 2 children using tooth surface indices: Lindsay McLaren, et al., Community Dentistry and Oral Epidemiology, June 2016: *“Trends observed for primary teeth were consistent with an adverse effect of fluoridation cessation on children's tooth decay, 2.5–3 years post-cessation. Trends for permanent teeth hinted at early indication of an adverse effect.”*
- It is true most countries don't employ CWF, but the reasons are not based on scientific evidence that fluoridation causes harm or is ineffectiveness. Reasons for not utilizing CWF include sufficient natural fluoride levels, lack of centralized public water supplies, utilization of fluoridated salt or milk, and other technical, legal, financial or political reasons ([Fluoride Facts, p 102](#), [Fact \\*13](#), [Skeptic](#), [CDHP](#), [PEW](#))

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- j) **FOs Make Public, Libelous Claims** against the scientists and health care professionals who disagree with them, sowing confusion and encouraging public distrust of the scientific processes and the science and health communities.
- \*\* To convince the public their opinions are valid, FOs claim those who support CWF are either too stupid or incompetent to understand and recognize evidence FOs claim proves obvious dangers of fluoridation. Or they may claim all the pro-CWF professionals actually understand the issue but simply don't care about the alleged havoc fluoridation is causing to the health of their families and fellow citizens – or they are being paid by some mysterious “fluoride-conglomerate” to keep silent.
- \*\* Since the scientific evidence does not support their strongly held, inflexible opinions, FOs try and convince concerned citizens that a beneficial public health measure is actually evil incarnate supported by a bunch of ignorant fools. A primary argument is that representatives of all supporting science/health organizations are either too stupid or incompetent to understand and recognize what FOs claim are obvious dangers of fluoridation. Another anti-F<sup>-</sup> explanation is that professionals who

support CWF actually understand the dangers, but they simply don't care about the alleged havoc fluoridation is causing to the health of their families and fellow citizens. Examples:

- Anti-fluoridation activist Bill Osmunson, DDS, MPH provides the following explanations for why the mainstream science and health organizations continue to support CWF:  
([07-09-2018 9:09 PM](#)) *"CDC references the ADA and AAP, and the ADA and AAP reference each other and the CDC. Circular referencing. ... Johnny, the credibility of those so called "scientific" organizations has been seriously tarnished. They do not protect the public. **They are lemmings, followers, part of a herd, not scientists.** Scientists question and do not assume and base their science on trust. Those allegedly "credible" scientific organizations promoting fluoridation at 1 ppm have not and **did not review the science and follow the science.** [note, when this was written, the accepted fluoridation level was actually 0.7 ppm] They all waited for someone else to stand out from the herd and protect the public. ... They were silent because they **never looked at the science**"* and on 8/19/2018 stated, *"**The CDC simply reacts to the ADA and they don't think for themselves or review the research.** CDC does not determine the dosage, efficacy or safety of any substance used to prevent disease."*  
(**Note:** The site changes, and it may be necessary to go back or forward a page or so.)
- Another anti-fluoridation activist, posting under the name "[CarryAnne](#)" (her background history and arguments match anti-fluoridation activist, [Karen Spencer](#) – the author of [threatening letters](#) to health organizations) provides the following explanations for why the mainstream science and health organizations continue to support CWF:  
([08-22-2018 06:59 AM](#)) *"**Willful blindness and financial benefit** affect both organizations [ADA and EPA] and individuals and are eminently rational rationales for refusal to change, although also **morally corrupt**" and "vested interests are doing their part to **protect a profitable program that causes misery to millions**" and "Agnotology: **Culturally induced ignorance** or willful blindness, particularly the promotion of misleading scientific data and anecdotes by a biased group"  
([08-19-2018 01:05 PM](#)) that, *"I don't believe most dentists intentionally support fluoridation for this purpose [big bucks earned from treating dental fluorosis]. Most are either **ignorant or willfully blind.** Others are either **cowed into silence** per my previous comments or are indeed **sociopaths** motivated by power, prestige and paychecks"  
([07-25-2018 11:30 PM](#)) *"the **malignant medical myth of fluoridation** persists because not only is there a profitable business model built on fluoridation, **fluoridation promotion is profitable** to many advocates"  
([07-03-2018 07:35 AM](#)) *"I have it on good authority that they [American Thyroid Association] don't want to provoke a political storm with other groups - **cowards.**"*  
(**Note:** The site changes, and it may be necessary to go back or forward a page or so.)***
- **A reminder** that it isn't just a few marginal science and health organizations that support CWF – as noted above, the overwhelming majority of respected, mainstream organizations support CWF. Is it more reasonable to believe that representatives of these organizations *"**don't think for themselves or review the research, they are lemmings, followers, part of a herd, not scientists, most are either ignorant or willfully blind.** ... or are indeed **sociopaths** motivated by power, prestige and paychecks"* — or, since there is no legitimate evidence supporting the anti-F<sup>-</sup> opinions, a workable alternative is to convince people those who support CWF can't be trusted.

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- k) **FOs Make Out-Of-context, Irrelevant, Misleading Presentations of Article/Study Conclusions:** Unless one takes the time to review and understand every claim made by FOs, one will never know what content has been taken out of context to create a false or misleading claim – it is wise to consider all 'evidence' for anti-F<sup>-</sup> claims 'modified' in some manner since the overwhelming majority of relevant experts do not accept the anti-fluoridation interpretations and presentations as valid.

- As an example, CarryAnne ([08-18-2019 08:17 AM](#)) provided an out of context quote from an article that actually concluded fluoridation was effective. Specifically CarryAnne quoted the 2013 European Food Safety Authority review, [Scientific Opinion on Dietary Reference Values for fluoride](#): *“Fluoride has no known essential function in human growth and development and no signs of fluoride deficiency have been identified.”* The rest of the summary was conveniently ignored: *“Though fluoride is not essential for tooth development, **exposure to fluoride leads to incorporation into the hydroxyapatite of the developing tooth enamel and dentin. The resulting fluorohydroxyapatite is more resistant to acids than hydroxyapatite. Thus, teeth which contain fluoroapatite are less likely to develop caries.** Apart from incorporation of fluoride into the dentin and enamel of teeth before eruption, **dietary fluoride exerts an anticaries effect** on erupted teeth through contact with enamel during consumption, excretion into saliva and uptake into biofilms on teeth. In addition, fluoride interferes with the metabolism of oral microbial cells, by directly inhibiting, for example, glycolytic enzymes and cell membrane-associated H<sup>+</sup> ATPases in microbial cells after entry of hydrofluoric acid into their cytoplasm.* (Summary, page 2).

**When considering the effectiveness of a substance for reducing the risk of tooth decay and improving health, it is irrelevant whether that substance is considered to have an “essential function” in the context of diet** — I imagine most rational experts would consider protecting health a very important, if not essential, function in the context of supporting vs. opposing CWF.

- Another CarryAnne example: ([09-13-2018 03:44 PM](#)) *“Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds. These populations include the elderly, people with deficiencies of calcium, magnesium, and/or vitamin C, and people with cardiovascular and kidney problems.... Post menopausal women and elderly men in fluoridated communities may also be at risk of fractures.”* - [United States Public Health Service Report](#) (ATSDR TP-91/17, Sec.2.7, April 1993)

In the example above, the quote included everything in the paragraph from the US Public Health Service review **EXCEPT** the last two sentences, which were conveniently scrubbed out – and which actually support the scientific consensus that fluoridation does not cause adverse health effects. Here is rest of the quote for appropriate context: *“For most of these populations, there are very limited data to support or refute increased susceptibility to fluoride. Additionally, **there are no data to suggest that exposure to typical fluoride drinking water levels would result in adverse effects** in these potentially susceptible populations.”* (Page 162-163)

- Note the most of the examples provided above about how anti-fluoridation activists present their arguments to the public demonstrate their complete disregard for a transparent, accurate, presentation of the scientific evidence related to CWF.

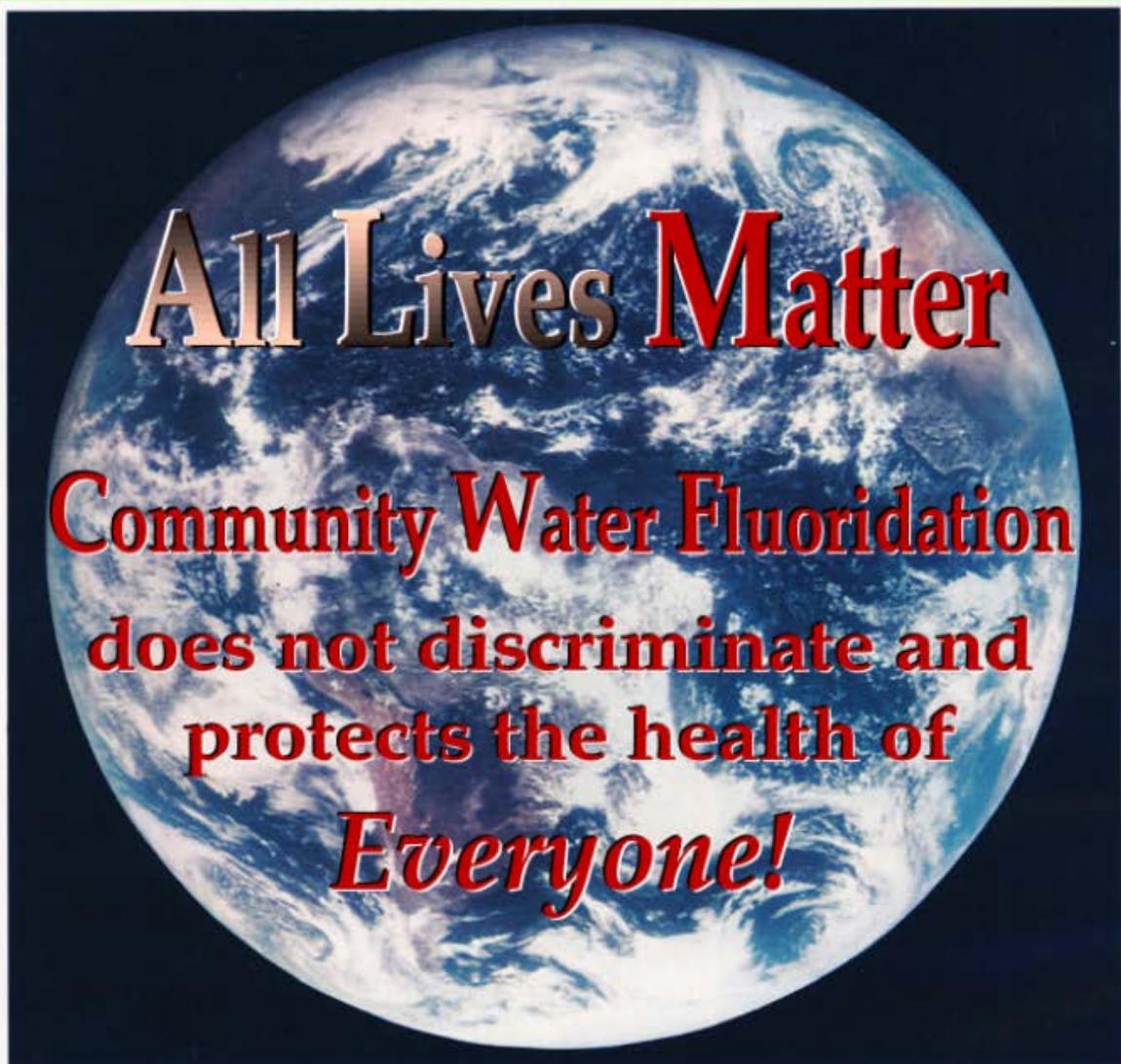
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8. **Bottom Line:** If you have read this far, I appreciate your willingness to examine arguments for trusting the overwhelming majority of scientists and health professionals and the scientific consensus over the outlier, anti-fluoridation opinions. I hope I have provided sufficient evidence, without a detailed examination of hundreds of studies, to cast serious doubt on the arguments and tactics of FOs. As previously noted, I began my investigation of the risks and benefits of CWF because of concerns from reading anti-fluoridation arguments. I had, and still have, no predisposition either for or against CWF, and I have absolutely nothing to gain or lose because of my position on CWF. I am simply concerned about the accurate interpretation and representation of scientific evidence, whether it relates to CWF, vaccination, evolution, climate change, and other topics where extremely strong personal beliefs often dictates what someone will believe instead of an impartial evaluation of the relevant body of evidence. During my years of investigation I found no evidence that even strongly suggested CWF didn’t reduce the risk of dental decay (particularly in disadvantaged communities) or that it lowered IQ and/or caused numerous health problems. If I had found such evidence, I would not continue to be a CWF supporter – and I would certainly not try to convince others that support of CWF is an important public health

measure that should be supported. There are dozens of factors that can increase or decrease the risk of dental decay. All methods known to increase risk should be minimized and all methods that reduce the risk (including fluoridation) should be implemented.

Respectfully, Randy Johnson, MS  
Littleton, Colorado

# The Weight of Science



"Scientists will find the

*truth because they are committed to finding it, and they know if they screw up, other scientists will be more than willing to debunk their shoddy findings. Lone, "one scientist" discoveries are rare. Most factual conclusions are the product of many individuals and groups checking and cross-checking each other." [Dave McMillan](#)*