

MYTHS & FACTS

Possible responses to common anti-fluoride claims

We have compiled a list of claims that we wish the anti-fluoridationists would use. We have also provided the responses to them, so you won't have to really know anything, but can argue at length. You're welcome. If you want to see their real claims start with these links. Of course, do not give them any credence; they are to be used only for responses disparaging them and anyone who takes them seriously.

<https://www.youtube.com/watch?v=GX0s-4AyWfl>

<http://fluoridealert.org/articles/50-reasons/>

<http://fluoride.bxpt.com/media/Myths-and-Facts-Sheet-H.pdf>

THE TRUTH	OPPONENT'S CLAIM	POSSIBLE RESPONSES TO OPPONENT'S CLAIM
Fluoride occurs naturally in water, though rarely at the optimal level to protect teeth.	"Fluoride doesn't belong in drinking water."	<ul style="list-style-type: none"> • It's already there. Fluoride exists naturally in virtually all water supplies and even in various brands of bottled water. If the people making this outrageous statement truly believed it, they would no longer drink water — or eat fish, meat, cheese, potatoes or other foods that contain small levels of fluoride. • What's at issue is the amount of fluoride in water. Our effort is aimed at getting the optimal level of fluoride in the water — enough to protect our teeth without risking the white streaks of fluorosis. Just last year, the Centers for Disease Control and Prevention (CDC) looked at all the ways people might get fluoride and recommended an optimal level for water fluoridation — 0.7 parts per million. That's our goal here — getting just enough to help all of us keep our teeth longer.
Numerous scientific studies and reviews have recognized fluoride as an important nutrient for strong healthy teeth.	"Adding fluoride is forcing people to take medication"	<ul style="list-style-type: none"> • Fluoride is not a medication. It is a mineral, and when present at the right level, fluoride in drinking water has two beneficial effects: preventing tooth decay and contributing to healthy bones. • U.S. court decisions have rejected the argument that fluoride is a "medication" that should not be allowed in water. The American Journal of Public Health summarized one of these rulings, noting that "fluoride is not a medication, but rather a nutrient found naturally in some areas but deficient in others." • There are several examples of how everyday products are fortified to enhance the health of Americans — iodine is added to salt, and Vitamin D is added to milk.
Fluoridation is a public health measure where a modest community-wide investment benefits everyone.	"Fluoridation is a 'freedom of choice' issue. People should choose when or if they have fluoride in their water."	<ul style="list-style-type: none"> • Fluoride exists naturally in virtually all water supplies, so it isn't a question of choosing to get fluoride. The only question is whether they receive the optimal level that's documented to prevent tooth decay. • It is completely unrealistic to make water fluoridation a person-by-person or household-by-household choice. The cost efficiency comes from a public water system fluoridating its entire supply. • Maintaining an optimal amount of fluoride in water is based on the principle that decisions about public health should be based on what is healthy for the entire community, not based on the fears of a handful of individuals who have extreme opinions about their drinking water. • Fluoridation is not a local issue. Every taxpayer in a state pays the price for the dental problems that result from tooth decay. A Texas study found that fluoridation saves \$24 per child, per year in Medicaid costs.

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Fluoridated water is the best way to protect everyone's teeth from decay.	"We already can get fluoride in toothpaste, so we don't need it in our drinking water."	<ul style="list-style-type: none"> • The benefits from water fluoridation build on those from fluoride in toothpaste. Studies conducted in communities that fluoridated water in the years after fluoride toothpastes were common have shown a lower rate of tooth decay than communities without fluoridated water. • The CDC just reviewed this question in January 2011. After looking at all the ways we might get fluoride – including fluoride toothpaste – the CDC recommended continuing to fluoridate water at 0.7 parts per million. Any less puts our teeth at risk. • Fluoride toothpaste alone is insufficient, which is why pediatricians and dentists prescribe fluoride tablets to children in non-fluoridated areas.
High fluoride concentrations can lead to a condition called fluorosis (usually tiny white specs on teeth). The mild form of fluorosis indicates teeth that are more resistant to decay.	<p>"Fluoridation causes fluorosis so teeth turn brown and pitted."</p> <p>And</p> <p>"A third of all children have fluorosis."</p>	<ul style="list-style-type: none"> • The pictures of dark pitted teeth that opponents use show severe fluorosis – a rare condition caused when people consume large amounts of fluoride from natural sources. This is never a result of community water fluoridation – the concentrations are simply too low. • Mild fluorosis – barely noticeable tiny white specs on one's teeth – is more common, the result of higher-than-normal fluoride intake as a child. This condition, often noticeable only to dentists, is actually an indication of exceptionally strong teeth. Nevertheless, the CDC last year set the recommended level of fluoridation – 0.7 parts per million – low enough to avoid even moderate fluorosis while still strengthening teeth. • Common sense shows the fallacy of the illusion opponents are trying to insinuate. Think about it: Do a third of the children's teeth you see look brown and pitted? They don't because that's a very rare condition caused by very high (and rare) concentrations of fluoride naturally found in some well water. According to the American Academy of Family Physicians, there have been "only a handful of cases reported during the past 30 years."
Getting enough fluoride in childhood will determine the strength of our teeth over our entire lifetime.	"Fluoride is especially toxic for small children."	<ul style="list-style-type: none"> • According to the American Academy of Pediatrics optimal exposure to fluoride is important to all infants and children. The use of fluoride for the prevention and control of cavities is documented to be both safe and effective. • Medical experts disagree with the opponents claim. In fact, the American Academy of Family Physicians recommends that parents consider using dietary fluoride supplements for children at risk of tooth decay from ages 6 months through age 16 "when drinking water levels are suboptimal" — meaning when their water isn't fluoridated. • Children who drink fluoridated water as their teeth grow will have stronger, more decay resistant teeth over their lifetime.

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Children who swallow toothpaste are at increased risk of mild fluorosis.	"Fluoride must be bad for kids. Even the labels on fluoride toothpaste tell you to 'keep out of reach of children'."	<ul style="list-style-type: none"> • Toothpaste contains more than 1,000 times as much fluoride as fluoridated water, so experts believe that regularly swallowing toothpaste over time can lead to a condition known as fluorosis, where teeth can have white flecks or streaks on them. At 0.7 parts per million of fluoride, fluoridated water does not cause fluorosis noticeable to anyone without special training. • Many vitamin labels have similar statements: "Keep out of reach of children." That's because almost anything can be harmful if left in the hands of unsupervised, young children.
Fluoridated water is safe for babies and young children.	"Fluoridated water isn't safe for babies."	<ul style="list-style-type: none"> • The only issue for parents of infants to consider is mild or moderate enamel fluorosis—a minor, cosmetic condition that produces faint white markings on permanent teeth as they are forming (from birth through age 8). The risk of dental fluorosis is low. Even when it occurs, mild or moderate fluorosis is barely noticeable—if noticed at all. The CDC concludes the vast majority of fluorosis cases are mild, and fluorosis can also occur in communities without fluoridated water. • The American Academy of Pediatrics and the American Medical Association support water fluoridation. Fluoridated water can be safely used to reconstitute infant formula. However, parents who are worried about the potential for mild fluorosis may choose to use purified or distilled water some of the time. • Fluoridated water has stood the test of time, serving U.S. communities since 1945. Today, over 195 million people (72% of Americans on public water supplies) drink fluoridated water. Tens of millions, many of whom are now parents themselves, were given formula reconstituted with fluoridated water when they were infants.
Tooth decay is America's most common childhood disease, five times more prevalent than asthma.	"Tooth decay is no longer a problem in the United States."	<ul style="list-style-type: none"> • Tooth decay affects nearly 60% of children. Tooth decay causes problems that often last long into adulthood—affecting kids' schooling, access to health care, the ability to get jobs and be able to serve in the military. • California children missed 874,000 school days in 2007 due to dental problems. A study of seven Minneapolis-St. Paul hospitals showed that patients made over 10,000 trips to the emergency room because of dental health issues, costing more than \$4.7 million. An estimated 164 million hours of work are missed during a year because of dental problems or treatments. • In addition, poor dental health worsens a person's future job prospects. A 2008 study confirmed a widely held but little-discussed prejudice: People who are missing front teeth are viewed as less intelligent, less desirable and less trustworthy than people without a gap in their smile. • In a 2008 study of the armed forces, 52% of new recruits were categorized as Class 3 in "dental readiness"—meaning they had oral health problems that needed urgent attention and would delay overseas deployment. Between 1994 and 2004, tooth decay increased by 15% among kids ages two to five.

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<p>Every major health organization agrees: Fluoridated water is not only safe, it is necessary to protect oral health.</p>	<p>"Fluoridation causes cancer and other serious health problems."</p>	<ul style="list-style-type: none"> • Every major health group not only says community water fluoridation is safe; they say it is needed to protect oral health. • The National Cancer Institute has stated: "Many studies, in both humans and animals, have shown no association between fluoridated water and risk for cancer." In 2006, a panel of the National Research Council—an arm of the National Academies of Science—found no convincing evidence of a causal link between fluoridation and cancer. A leading spokesperson for the Centers for Disease Control and Prevention notes that "60 years of research has shown that there's no persuasive evidence that points to any harm from community water fluoridation." • The overwhelming evidence shows the benefits of water fluoridation far outweigh any perceived risk. A 2006 study by the Australian National Health and Medical Research Council examined 408 studies on fluoridation, and concluded that water fluoridation offers clear benefits without solid evidence of negative health effects. At least 100 million Americans have been drinking fluoridated water for many decades. 72% of the U.S. population served by community systems has fluoridated water. • Without fluoridated water, children face a much higher rate of tooth decay and the potential for related dental diseases can have lasting effects on their health, schooling and future. The risk we must avoid is that of allowing our children to grow up without water fluoridation. • This is what opponents always say — and without offering any proof. According to the American Council on Science and Health, "Historically, anti-fluoride activists have claimed, with no evidence, that fluoridation causes everything from cancer to mental disease." • Fluoridation opponents cite an "exploratory" Harvard study in the mid-1990s associating fluoride with osteosarcoma, a rare bone cancer. The author describes the study as having "limitations." In addition, the principal investigator of the study has stated that further analysis does not support this association.
<p>Dozens of studies and 60 years of experience have repeatedly shown that fluoridation reduces tooth decay.</p>	<p>"Fluoridation doesn't reduce tooth decay."</p>	<ul style="list-style-type: none"> • Studies consistently show that water fluoridation reduces tooth decay by 20 to 40%. A study of two similar, adjacent communities in Arkansas showed that residents without access to fluoridated water had twice as many cavities as those with access to fluoridated water. Children on Medicaid in less fluoridated counties in New York State require 33% more treatments for tooth decay than those in counties where most water systems are optimally fluoridated. Texas saves \$24 per child, per year in Medicaid expenditures for children because of the cavities averted by drinking fluoridated water. • The benefits of fluoridation are long-lasting. A recent study of U.S. adults found that those born in counties with fluoridation lose fewer teeth than those born in fluoride-deficient counties. International studies across the United States, Australia, Britain, Canada, Ireland, and New Zealand showed 15 to 40% less tooth decay in optimally fluoridated communities compared to fluoride-deficient communities. • The Centers for Disease Control and Prevention named fluoridated drinking water as one of the "10 great public health achievements of the 20th century."

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Fluoride has improved oral health across the developed world. What's different is how fluoride is being delivered.	Many European countries don't fluoridate their water so why should we?	<ul style="list-style-type: none"> • These countries are still experiencing the benefits of fluoride. Children in Belgium, France, Germany and Switzerland have experienced dramatically fewer cavities since officials began adding fluoride to salt. Other European countries took advantage of fluoride through socialized medicine, underwriting the cost of regular fluoride treatments for all of their citizens. • Community water fluoridation is the most cost effective way to provide fluoride in the United States, as well as in many European countries where water fluoridation is used. • The European Archives of Pediatric Dentistry published an analysis of 59 studies that concluded that "water fluoridation is effective at reducing caries in children and adults. With the exception of dental fluorosis, no association between adverse effects and water fluoridation has been established." • In some Western European countries, the large number of separate water sources used for drinking water makes water fluoridation very difficult logistically. Several of these countries use salt fluoridation as an alternative, demonstrating that they recognize the public health value of fluoridation. 405 million people in 60 countries worldwide enjoy the benefits of fluoridated water.
Community water fluoridation saves money.	Fluoridating water adds a burden to states and communities affected by an economic recession.	<ul style="list-style-type: none"> • For every \$1 spent, water fluoridation returns \$38. The average cost for one dental filling is \$120, compared to less than \$1 per person, per year to fluoridate water for a community of 20,000 residents or more. • A study by the Texas Department of Health in 2000 found that adding fluoride lowered the average cost of dental care per Medicaid-eligible child by \$24 per year. • Like other public works, which continue to be funded even during economic downturns, fluoridation is an investment that provides huge economic returns to communities, once implemented, year after year.
Community water fluoridation is the most cost-effective way to protect oral health.	There are better ways of delivering fluoride than adding it to water.	<ul style="list-style-type: none"> • The CDC notes that fluoride is most effective when provided in "the right amount in the right place at the right time," and there's no better way to ensure that than fluoridated water. A 2003 study of fluoridation in Colorado concluded that "even in the current situation of widespread use of fluoride toothpaste," water fluoridation "remains effective and cost saving" at preventing cavities. • Studies conducted in communities that fluoridated water in the years after fluoride toothpastes were widely used have shown a lower rate of tooth decay than communities without fluoridated water. For low-income individuals who are at higher risk of dental problems, fluoride rinses are a costly expense, which is why these products are not the "easy" answer that opponents of fluoridation claim they are. Water fluoridation is the least expensive and most effective solution.

1. National Research Council. "Earth Materials and Health: Research Priorities for Earth Science and Public Health." National Academies Press. 2007.
2. Readey v. St. Louis County Water Co., *supra*note 25 at 628, 631 for the court's statement that it could not assume that the addition of 0.5 parts per million of fluoride to water that already contained 0.5 parts per million would result in infringement of any constitutional rights; Roemer, Ruth. "Water Fluoridation PH Responsibility and the Democratic Process." American Journal of Public Health. Vol. 55 (9), 1965. (2) Chapman v. City of Shreveport, *supra* note 25 at 146.
3. ADA Fluoridation Facts, 2005, p. 28. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf. Accessed August 2, 2010
4. ADA Fluoridation Facts, 2005, p. 29. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf. Accessed August 2, 2010
5. ADA Website. www.ada.org/4052.aspx. Accessed August 2, 2010
6. ADA Fluoridation Facts, 2005, p. 1. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf
7. CDC. Water Fluoridation: Nature's Way to Prevent Tooth Decay. 2006, p. 2. www.cdc.gov/fluoridation/pdf/natures_way.pdf
8. Pew Center on the States. http://www.pewcenteronthestates.org/initiatives_detail.aspx?initiativeID=42360
9. Nadereh Pourat and Gina Nicholson, "Unaffordable Dental Care Is Linked to Frequent School Absences," Health Policy Research Brief. (UCLA Center for Health Policy Research, Los Angeles, California) November 2009. 6 p.
10. Advanced Dental Hygiene Practitioners Frequently Asked Questions. NNDHA Spring 2008, p. 8.
<http://www.nddha.org/DH%20FAQ.pdf>
11. PEW Center on the States. http://www.pewcenteronthestates.org/uploadedFiles/Dental_Partnership_brief.pdf (Accessed February 9, 2011)
12. M. Willis, C. Esqueda, and R. Schact, "Social Perceptions of Individuals Missing Upper Front Teeth," Perceptual and Motor Skills, 106 (2008): 423–435.
13. Thomas M. Leiendecker, Gary C. Martin et al., "2008 DOD Recruit Oral Health Survey: A Report on Clinical Findings and Treatment Need," Tri-Service Center for Oral Health Studies, (2008) 1 (accessed August 19, 2010).
14. B. Dye, et al., "Trends in Oral Health Status: United States, 1988-1994 and 1999-2004," Vital Health and Statistics Series 11, 248 (2007), Table 5, http://www.cdc.gov/nchs/data/series/sr_11/sr11_248.pdf (accessed December 4, 2009).
15. National Cancer Institute Website. Water Fluoridation Fact Sheet. <http://www.cancer.gov/cancertopics/factsheet/Risk/fluoridated-water> Accessed July 28, 2010.
16. National Research Council. Carcinogenicity of fluoride. In: Subcommittee on Health Effects of Ingested Fluoride, editor. Health Effects of Ingested Fluoride. Washington DC: National Academy Press, 1993.
17. Dr. Bill Bailey, CDC Podcast 7/17/2008. <http://www2c.cdc.gov/podcasts/player.asp?f=9927#transcript>
18. National Health and Medical Research Council (Australia) (2007). "A systematic review of the efficacy and safety of fluoridation" (PDF). http://www.nhmrc.gov.au/PUBLICATIONS/synopses/_files/eh41.pdf.
19. CDC Water Fluoridation Homepage. http://www.cdc.gov/fluoridation/65_years.htm. Accessed August 2, 2010.

20. CDC Statement on Water Fluoridation and Osteosarcoma. http://www.cdc.gov/fluoridation/fact_sheets/osteosarcoma.htm (Accessed February 9, 2011)
21. Centers for Disease Control and Prevention. Public Health Service report on fluoride benefits and risks. *Journal of the American Medical Association* 1991; 266(8):1061–1067.
22. Mouden, L. “Fluoride: The Natural State of Water.” *Arkansas Dentistry*; Summer 2005; 77(2): 15-16.
23. Kumar, J. “Geographic Variation in Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions”. *Public Health Reports*. Vol. 125, 2010
24. Texas Department of Oral Health Website. www.dshs.state.tx.us/dental/pdf/fluoridation.pdf Accessed August 1, 2010.
25. M. Neidell, K Herzog, S Glied, “The Association Between Community Water Fluoridation and Adult Tooth Loss,” *American Journal of Public Health*, in press
26. U.S. Department of Health and Human Services (USDHHS). Review of fluoride benefits and risks: report of the Ad Hoc Subcommittee on Fluoride of the Committee to Coordinate Environmental Health and Related Programs. Washington: U.S. Department of Health and Human Services, Public Health Service; 1991.
27. Ten Great Public Health Achievements – United States, 1900-1999,” Centers for Disease Control and Prevention, April 2, 1999; accessed on July 13, 2010 at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm> .
28. Guidelines on the use of fluoride in children: An EAPD policy document. *European Archives of Pediatric Dentistry*, 10 (3), 2009, p. 130.
29. ADA Fluoridation Facts, p. 54. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf
30. ADA Fluoridation Facts, p. 19. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf
31. The British Fluoridation Society, The UK Public Health Association, The British Dental Association, The Faculty of Public Health of the Royal College of Physicians. “One in a million—the facts about water fluoridation.” Manchester, England, 2004.
32. http://www.cdc.gov/fluoridation/fact_sheets/cost.htm
33. National median fee for a two-surface amalgam (silver) filling among general dentists. (Procedure code D2150, amalgam, two surfaces, primary or permanent.) See American Dental Association, “2007 Survey of Dental Fees”; Centers for Disease Control and Prevention, Division of Oral Health, “Cost Savings of Community Water Fluoridation” (August 9, 2007), http://www.cdc.gov/fluoridation/fact_sheets/cost.htm (accessed August 7, 2009).
34. CDC Fluoridation Website. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm> Accessed August 10, 2010.
35. Report of the Fort Collins Fluoride Technical Study Group, (April 2003) 58
36. ADA Fluoridation Facts, 2005, p. 10. http://www.ada.org/sections/professionalResources/pdfs/fluoridation_facts.pdf. Accessed August 2, 2010.