

Myths & Facts

Responses to Common Claims about Community Water Fluoridation

THE TRUTH	FALSE CLAIMS	THE FACTS ABOUT COMMUNITY WATER FLUORIDATION (CWF)
<p>Fluoride occurs naturally in water, though usually not at a high enough level to protect teeth.</p>	<p><i>"Fluoride doesn't belong in drinking water."</i></p>	<ul style="list-style-type: none"> • Fluoride exists naturally in virtually all water supplies.^{1,2} • There are proven benefits to our health from having the right amount of fluoride — just enough to protect our teeth — in the water. • In 2011, federal health officials recommended a new level of fluoride for water: 0.7 parts per million.³
<p>Fluoride has been recognized as an important nutrient for healthy teeth.</p>	<p><i>"Adding fluoride to water is like forcing people to take medication"</i></p>	<ul style="list-style-type: none"> • Fluoride is a mineral and in the right amount, fluoride in drinking water strengthens teeth. Fluoride is not a medication. • Fluoride is one of several examples of everyday products fortified to improve our health — iodine is added to salt, folic acid is added to breads and cereals, and Vitamin D is added to milk. • U.S. court decisions have rejected the argument that fluoride is a medication.⁴
<p>Fluoridation is the most cost-effective way to prevent tooth decay and build healthy communities.</p>	<p><i>"We can save taxpayer money by ending fluoridation of our water system."</i></p>	<ul style="list-style-type: none"> • Evidence shows that for most cities, every \$1 invested in fluoridation saves \$32 in costs to treat dental problems.⁵ • In Texas, the state saved \$24 per child, per year in Medicaid expenditures because of the cavities that were prevented by drinking fluoridated water.⁶ • Water fluoridation saved the state of Colorado nearly \$149 million by avoiding unnecessary dental treatment.⁷
<p>Fluoridation is a public health measure, a modest community-wide investment that benefits everyone.</p>	<p><i>"Fluoridation is a 'freedom of choice' issue. People should choose when or if they have fluoride in their water."</i></p>	<ul style="list-style-type: none"> • Fluoride exists naturally in virtually all water supplies, so it isn't a question of choosing, but a question of assuring that people receive the right amount to prevent tooth decay. • Public health decisions are made based on what benefits the <i>entire</i> community and on sound scientific evidence. • Our tax dollars help pay to fix dental problems that result from tooth decay. For example, in New York, Medicaid enrollees in counties where fluoridation was rare needed 33.4% more fillings, root canals, and extractions than those in counties where there was fluoridated water.⁸
<p>Fluoridated water is the best way to protect <u>everyone's</u> teeth from decay.</p>	<p><i>"We can get fluoride in toothpaste, so we don't need it in our drinking water."</i></p>	<ul style="list-style-type: none"> • Fluoridated water + toothpaste = less tooth decay! The benefits of water fluoridation build on those from fluoride toothpaste. Fluoride toothpaste alone is not enough, which is why pediatricians and dentists often prescribe fluoride tablets to children living in non-fluoridated areas.⁹ • After looking at all the ways we get fluoride — including fluoride toothpaste — the U.S. Centers for Disease Control and Prevention (CDC) recommended that communities fluoridate water at 0.7 parts per million. Any less than that puts the health of our teeth at risk.¹⁰

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<p>Very high fluoride concentrations can lead to a condition called fluorosis. Nearly all fluorosis in the U.S. is mild. This condition does not cause pain and does not affect the health or function of the teeth.</p>	<p><i>"Fluoridation causes fluorosis, and more U.S. children now have dental fluorosis."</i></p>	<ul style="list-style-type: none"> Nearly all cases of fluorosis — faint, white specks on teeth — are mild.¹¹ Mild fluorosis does not cause pain, and it does not affect the health or function of the teeth. In 2015, the CDC proposed a new level for fluoridation — 0.7 parts per million — that is expected to reduce the likelihood of fluorosis while continuing to protect teeth from decay.¹²
<p>Getting enough fluoride in childhood is critical to strengthening our teeth over an entire lifetime.</p>	<p><i>"Fluoride is especially unsafe for small children."</i></p>	<ul style="list-style-type: none"> Babies and children need fluoride to strengthen their growing teeth.¹³ The use of fluoride to prevent and control cavities is documented to be both safe and effective.¹⁴ Children who drink fluoridated water as their teeth grow will have stronger teeth that resist decay better over their lifetime. A 2010 study confirmed that the fluoridated water consumed as a young child makes the loss of teeth due to decay less likely 40 or 50 years later.¹⁵
<p>Children who swallow toothpaste are at increased risk of mild fluorosis.</p>	<p><i>"There's a warning label on fluoride toothpaste that tells you to 'keep out of reach of children', so fluoride in water must also be a danger."</i></p>	<ul style="list-style-type: none"> The warning label on toothpaste reflects the fact that it contains a higher concentration (roughly 1,000 times as much fluoride) per milligram than fluoridated water. Fluoride toothpaste is recommended for babies and toddlers by the American Academy of Pediatrics, the American Association of Pediatric Dentistry, and the American Dental Association. The only risk to children of too much fluoride is dental fluorosis, which does not harm the teeth or a child's health. That is why it is important to follow the guidelines on the proper amount of toothpaste to use, to supervise children when brushing, and to teach them to spit but not to swallow.
<p>Fluoridated water is safe for babies and young children.</p>	<p><i>"Fluoridated water isn't safe to use for babies."</i></p>	<ul style="list-style-type: none"> The ADA states that doctors "can suggest the continued use of powdered or liquid concentrate infant formulas reconstituted with optimally fluoridated drinking water."¹⁶ Parents should discuss any questions they may have with their health care providers. A 2010 study examined the issue of fluorosis and infant formula, and reached the conclusion that "no general recommendations to avoid use of fluoridated water in reconstituting infant formula are warranted." The researchers examined the condition's impact on children and concluded that "the effect of mild fluorosis was not adverse and could even be favorable."¹⁷

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<p>Although Americans' teeth are healthier than they used to be, many people still suffer from decay and the impact it has on their lives.</p>	<p><i>"Tooth decay is no longer a problem in the United States."</i></p>	<ul style="list-style-type: none"> • Tooth decay is the most common health problem in U.S. children, five times more common than asthma. Tooth decay affects a child's ability to sleep, speak, learn and grow. • Poor dental health damages job prospects. A 2008 study showed that people who were missing front teeth were seen as less intelligent and less desirable by employers.¹⁸ • 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.¹⁹
<p>Leading health and medical organizations agree: fluoridated water is both safe and effective.</p>	<p><i>"Fluoridation causes cancer and other serious health problems."</i></p>	<ul style="list-style-type: none"> • Leading health and medical authorities support water fluoridation as safe. The CDC reports that panels of experts from different health and scientific fields have provided strong evidence that water fluoridation is safe and effective.²⁰ • More than 3,200 studies or reports had been published on the subject of fluoridation.²¹ • A 2011 Harvard study found no link between fluoride and bone cancer.
<p>Dozens of studies and 70 years of experience have consistently shown that fluoridation reduces tooth decay.</p>	<p><i>"Fluoridation doesn't reduce tooth decay."</i></p>	<ul style="list-style-type: none"> • The CDC recognizes fluoridation's effectiveness in preventing tooth decay and cited fluoridated drinking water as one of the "10 great public health achievements of the 20th century."²² • An analysis of two similarly sized, adjacent communities in Arkansas showed that residents without access to fluoridated water had twice as many cavities as those with access to fluoridated water.²³ • Adults benefit from fluoride, too. A 2007 review of studies found that fluoride prevents caries (tooth decay) among adults of all ages and that fluoridated water prevents decay by as much as 27%.

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<p>Millions of people living in Europe are receiving the benefits of fluoride.</p>	<p><i>"European countries have rejected fluoridation."</i></p>	<ul style="list-style-type: none"> • Fluoridated water reaches 12 million Europeans, mostly residents of Great Britain, Ireland and Spain. Fluoridated milk programs reach millions more people, mostly in Eastern Europe.²⁴ • Salt fluoridation is the most widely used approach in Europe. In fact, at least 70 million Europeans consume fluoridated salt, and this method of fluoridation reaches most of the population in Germany and Switzerland. These two countries have among the lowest rates of tooth decay in all of Europe.²⁵ • Technical challenges are a major reason why fluoridated water is not widespread in Europe. In France and Switzerland, for example, water fluoridation is logistically difficult because of the terrain and because there are tens of thousands of separate sources for drinking water. This is why Western Europe relies more on salt fluoridation, fluoride rinse programs and other means to get fluoride to the public.
<p>Community water fluoridation is the most cost-effective way to protect oral health.</p>	<p><i>"There are better ways of delivering fluoride than adding it to water."</i></p>	<ul style="list-style-type: none"> • 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.²⁶ • 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.²⁷ • Water fluoridation is inexpensive to maintain and saves money down the road. The typical cost of fluoridating a local water system is between 40 cents and \$2.70 per person, per year.²⁸
<p>Water fluoridation has been thoroughly studied, and the evidence shows it is safe and effective.</p>	<p><i>"The National Research Council's 2006 report said that fluoride can have harmful effects."</i></p>	<ul style="list-style-type: none"> • The National Research Council (NRC) raised the possibility of health concerns about areas of the U.S. where the <i>natural</i> fluoride levels in well water or aquifers are unusually high. These natural fluoride levels are two to four times higher than the level used to fluoridate public water systems.²⁹ • The NRC itself explained that its report was <u>not</u> an evaluation of the safety of water fluoridation.³⁰ • The CDC reviewed the NRC report and stated, "The report addresses the safety of high levels of fluoride in water that occur naturally and does not question the use of lower levels of fluoride to prevent tooth decay."³¹

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<p>Some studies are better than others. Many studies were poorly designed, gathered unreliable data, and were not peer-reviewed by independent scientists.</p>	<p><i>"Studies show that fluoride is linked to lower IQ scores in children."</i></p>	<ul style="list-style-type: none"> • The foreign studies that anti-fluoride activists cite involved fluoride levels that were at least double or triple the level used to fluoridate drinking water in the U.S. • British researchers who evaluated these studies from China and other countries found "basic errors."³² These researchers pointed out that the lower IQs could be traced to other factors, such as arsenic exposure, the burning of high-fluoride coal inside homes and the eating of contaminated grain.
<p>Much of the fluoride used to fluoridate public water systems is extracted from phosphate rock.</p>	<p><i>"Fluoride is a by-product from the phosphate fertilizer industry."</i></p>	<ul style="list-style-type: none"> • Much of the fluoride used to fluoridate water is extracted from phosphate rock, and so is phosphoric acid—an ingredient in Coke and Pepsi. After fluoride is extracted from phosphate rock, much of that rock is later used to create fertilizers that will enrich soil. Opponents use this message a lot, maybe because they want to create the false impression that fluoride comes from fertilizer.³³

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