

Water Fluoridation Myths and Facts

MYTH: “Fluoride doesn’t belong in drinking water.”

FACT: Fluoride occurs naturally in water, though rarely at the optimal level to protect teeth.

- 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 statement truly believed it, they would no longer drink water or grape juice — or eat shellfish, meat, cheese or other foods that contain trace levels of fluoride.
- What’s at issue is the amount of fluoride in water. There are proven benefits for public health that come from having the optimal level of fluoride in the water — just enough to protect our teeth. In 2011, federal health officials offered a new recommended optimal level for water fluoridation: 0.7 parts per million. That’s our goal: getting just enough to help all of us keep our teeth longer.

MYTH: “Adding fluoride is like forcing people to take medication”

FACT: Numerous scientific studies and reviews have recognized fluoride as an important nutrient for strong, healthy teeth.

- 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.
- There are several examples of how everyday products are fortified to enhance the health of Americans — iodine is added to salt, folic acid is added to breads and cereals, and Vitamin D is added to milk.

MYTH: “Our city council can save money by ending fluoridation of our water system.”

FACT: Fluoridation is one of the most cost-effective health strategies ever devised.

- A community that stops fluoridating or never starts this process will find that local residents end up spending more money on decay-related dental problems. Evidence shows that for most cities, every \$1 invested in fluoridation saves \$38-\$45 in unnecessary treatment costs.

MYTH: “Fluoridation is a ‘freedom of choice’ issue. People should choose when or if they have fluoride in their water.”

FACT: Fluoridation is a public health measure where a modest community-wide investment benefits everyone.

- Fluoride exists naturally in virtually all water supplies, so it isn’t a question of choosing to get fluoride. The only question is whether people receive the optimal level that’s documented to prevent tooth decay.

MYTH: “We already can get fluoride in toothpaste, so we don’t need it in our drinking water.”

FACT: Fluoridated water is the best way to protect everyone’s teeth from decay.

- 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 reviewed this question in January 2011 and again in April 2015. After looking at all the ways we might get fluoride — including fluoride toothpaste — the CDC recommended that communities fluoridate water at 0.7 parts per million. Any less than that puts the health of our teeth at risk.
- Fluoride toothpaste alone is insufficient, which is why pediatricians and dentists often prescribe fluoride tablets to children living in non-fluoridated areas.

MYTH: “Fluoridation causes fluorosis, and fluorosis can make teeth brown and pitted.”

FACT: 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 health

- Nearly all cases of fluorosis are mild — faint, white specks on teeth — that are usually so subtle that only a dentist will notice this condition. Mild fluorosis does not cause pain, and it does not affect the health or function of the teeth.
- The pictures of dark pitted teeth that anti-fluoride opponents circulate show *severe* cases of fluorosis, a condition that is almost unheard of in the U.S. Many of these photos are from India, and the reason is *natural* fluoride levels over there are dramatically higher than the level used in the U.S. to fluoridate public water systems.
- In 2011, the CDC proposed a level for fluoridation — 0.7 parts per million — that is expected to reduce the likelihood of this mild fluorosis while continuing to protect teeth from decay. The CDC further confirmed this level in 2015.

MYTH: “Fluoridation causes cancer and other serious health problems.”

FACT: Leading health and medical organizations agree: fluoridated water is both safe and effective.

- The American Academy of Family Physicians, the Institute of Medicine and many other respected authorities endorse water fluoridation as safe. The Centers for Disease Control and Prevention reports that “panels of experts from different health and scientific fields have provided strong evidence that water fluoridation is safe and effective.”

References

National Research Council. *Earth materials and health: Research priorities for earth science and public health*. Washington, DC: The National Academies Press, 2007.

Roemer, R. (1965). Water fluoridation: Public health responsibility and the democratic process. *American Journal of Public Health*, 55, 1337-1348.

Centers for Disease Control and Prevention, American Dental Association (2006). Water fluoridation: Nature’s way to prevent tooth decay. Retrieved from <http://stacks.cdc.gov/view/cdc/5198>

Pew Charitable Trusts (2012). *Children’s dental policy*. Retrieved from <http://www.pewstates.org/projects/childrens-dental-policy-328060>

Pourat, N. & Nicholson, G. (2009). Unaffordable dental care is linked to frequent school absences. *UCLA Health Policy Research Brief*. Retrieved from <http://healthpolicy.ucla.edu/publications/Documents/PDF/Unaffordable%20Dental%20Care%20Is%20Linked%20to%20Frequent%20School%20Absences.pdf>

ADA statement on FDA toothpaste warning labels (1997). *New York State Dentistry Journal*, 63, 50

- American Dental Hygienists' Association (2008). *Competencies for the dental health practitioner*. Retrieved from http://www.adha.org/resources-docs/72612_ADHP_Competencies.pdf
- Neidell, M., Herzog, K., & Glied, S. (2010). The association between community water fluoridation and adult tooth loss. *American Journal of Public Health, 100*, 1980-1985
- Willis, N., Esqueda, C., Schact, R. (2008). Social perceptions of individuals missing upper front teeth. *Perceptual and Motor Skills, 106*, 423-435
- Leiendecker, T.M., Martin G.C., & Moss, D.L. (2011). 2008 DOD recruit oral health survey: A report on clinical findings and treatment need. *Mil Med, 176*, 1-44
- Dye, B.A, Tan, S., Smith, V., Barker, L.K, Thornton-Evans, G., et al. (2007). Trends in oral health status: United States, 1988-1994 and 1999-2004. National Center for Health Statistics. *Vital Health Stat 11*(248).
- National Institutes of Health, National Cancer Institute (2012). *Fluoridated water*. Retrieved from <http://www.cancer.gov/cancertopics/factsheet/risk/fluoridated-water>
- Bailey, B. (2008, July 17). *CDC Podcast* [Audio podcast]. Retrieved from <http://www2c.cdc.gov/podcasts/player.asp?f=9927#transcript>
- National Health and Medical Research Council (Australia). (2007). *A systematic review of the efficacy and safety of fluoridation*. Retrieved from http://www.nhmrc.gov.au/files/nhmrc/publications/attachments/eh41_statement_efficacy_safety_fluoride.pdf
- Centers for Disease Control and Prevention (2013). *Community water fluoridation*. Retrieved from <http://www.cdc.gov/fluoridation/>
- Centers for Disease Control and Prevention (1991). Public health service report on fluoride benefits and risks. *Journal of the American Medical Association, 266*, 1061-1067
- Kumar, J. (2010). Geographic variation in Medicaid claims for dental procedures in New York state: Role of fluoridation under contemporary conditions, *125*, 647-654
- Texas Department of Oral Health (2000). Water fluoridation costs in Texas: Texas health steps (EPSDT-Medicaid). Retrieved from www.dshs.state.tx.us/dental/pdf/flstudy.pdf
- Department of Health and Human Services (1991). Review of fluoride: Benefits and risks, Review of the ad hoc subcommittee on fluoride of the committee to coordinate environmental health and related programs. Retrieved from <http://health.gov/environment/ReviewofFluoride/>
- Centers for Disease Control and Prevention (1999). *Ten great public health achievements – United States, 1900-1999*. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>
- Toumba J., Lygidakis N., Oulis C., Parnell C., Espelid I., Poulsen S., & Twetman S. (2009). Guidelines on the use of fluoride in children: An EAPD policy document. *European Archives of Pediatric Dentistry, 10*, 129-135
- British Fluoridation Society (n.d.) *One in a million: The facts about water fluoridation*. Retrieved from <http://www.bfsweb.org/onemillion/11%20One%20in%20a%20Million%20-%20Support%20for%20Fluoridation.pdf>
- Centers for Disease Control and Prevention (2013). *Cost savings of community water fluoridation*. Retrieved from <http://www.cdc.gov/fluoridation/factsheets/cost.htm>
- Centers for Disease Control and Prevention (2001). *Recommendations for using fluoride to prevent and control dental caries in the United States*. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>
- City of Fort Collins (2003). *Fluoride technical study group report*. Retrieved from <http://www.fcgov.com/utilities/what-we-do/water/water-treatment/treated-drinking-water/drinking-water-fluoridation/fluoride-technical-study-group-report>