

COMMUNITY WATER FLUORIDATION MYTHBUSTERS

NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health



Public Health
Prevent. Promote. Protect.

Myth 1: Fluoride's main benefits come from topical application to the teeth.

Myth 2: Fluoride is a medication.

Myth 3: Fluoride is not approved by the U.S. Food and Drug Administration (FDA).

Myth 4: Water fluoridation causes serious health complications.

Myth 5: Most other developed countries reject water fluoridation.

Myth 6: Water fluoridation is too expensive.

Myth 7: Water fluoridation infringes on personal choice.



MYTH #1:

Fluoride's main benefits
come from topical
application to the teeth.



MYTH #1: Fluoride's main benefits come from topical application to the teeth.

TRUTH

- ▶ Even with the use of other fluoridated products such as toothpaste or mouthwash, fluoridated water reduces tooth decay by 25% among children and adults.



MYTH #1: Fluoride's main benefits come from topical application to the teeth.

TRUTH

- ▶ Drinking fluoridated water and eating foods made with fluoridated water maintains a low level of fluoride in your saliva and dental plaque throughout the day. This prevents cavities by continually strengthening the tooth surface.



MYTH #1: Fluoride's main benefits come from topical application to the teeth.

TRUTH

- ▶ A combination of brushing with fluoride toothpaste and drinking fluoridated water is ideal to prevent cavities and decay.



MYTH #1: Fluoride's main benefits come from topical application to the teeth.

MORE INFORMATION...

- ▶ [American Dental Association](#)
- ▶ [Centers for Disease Control and Prevention](#)



MYTH #2:
Fluoride is a medication.



MYTH #2: Fluoride is a medication.

TRUTH

- ▶ Fluoride is a naturally-occurring mineral, not a medication, and every natural water source has some fluoride in it already.



MYTH #2: Fluoride is a medication.

TRUTH

- ▶ Community water fluoridation simply adjusts the amount of fluoride in the water to support the prevention of tooth decay.



MYTH #2: Fluoride is a medication.

TRUTH

- ▶ We consume many foods and beverages similarly fortified with vitamins and minerals for added health benefit, such as fortifying milk with Vitamin D, adding iodine to salt, and enriching breads with B vitamins.



MYTH #2: Fluoride is a medication.

MORE INFORMATION...

- ▶ [Campaign for Dental Health](#)



MYTH #3:

**Fluoride is not approved
by the U.S. Food and
Drug Administration
(FDA).**



MYTH #3: Fluoride is not approved by the FDA.

TRUTH

- ▶ The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for regulating safe drinking water, so approving the fluoride that is added to tap water does not fall under the FDA's jurisdiction. The FDA does oversee bottled water.



MYTH #3: Fluoride is not approved by the FDA.

TRUTH

- ▶ The national standard concentration of fluoride in drinking water is 0.7 parts per million, and the EPA determined any fluoride concentration below 4.0 parts per million is completely safe with no health risks.



MYTH #3: Fluoride is not approved by the FDA.

MORE INFORMATION...

- ▶ [U.S. Food and Drug Administration](#)
- ▶ [U.S. Environmental Protection Agency](#)



MYTH #4:

**Water fluoridation causes
serious health complications.**



MYTH #4: Water fluoridation causes serious health complications.

TRUTH

- ▶ This issue has been studied extensively, and the practice of water fluoridation continues to be safe with no unwanted health effects other than a potential increased chance of mild dental fluorosis.



MYTH #4: Water fluoridation causes serious health complications.

TRUTH

- ▶ The recommended concentration of fluoride in water (0.7 parts per million) is safe for everyone.



MYTH #4: Water fluoridation causes serious health complications.

BACKGROUND

- ▶ The safety and effectiveness of fluoride at levels used in community water fluoridation have been thoroughly reviewed by multinational scientific and public health organizations (U.S., Canada, Australia, New Zealand, Great Britain, and the World Health Organization) using evidence-based reviews and expert panels.
- ▶ In 2006, the National Research Council (NRC) conducted an extensive, multiyear review of fluoride in drinking water. The resulting report provides the most comprehensive summary of unwanted effects from fluoride in drinking water. The NRC review focused on potential adverse effects of naturally occurring fluoride at 2-4 mg/L, a level notably higher than the level recommended for community water fluoridation (0.7 mg/L). Even at these higher concentrations, the NRC panel found substantial evidence only for an increased likelihood of severe dental fluorosis and noted that severe fluorosis remains near zero in communities where the level of fluoride in drinking water is less than 2 mg/L.



MYTH #4: Water fluoridation causes serious health complications.

BACKGROUND, CONT.

- ▶ Many studies linking to potential health problems have fluoridation levels well above the EPA maximum of 4 parts per million and often do not include **CONFOUNDING** factors.
- ▶ The 2015 U.S. Public Health Service (PHS) recommendation for the optimal concentration of fluoride in water addressed each of the following issues: dental fluorosis, bone fractures and skeletal fluorosis, carcinogenicity, IQ and other neurological effects, endocrine disruption, effectiveness of water fluoridation in preventing tooth decay, cost-effectiveness, and the ethics of water fluoridation. The PHS recommendation balances protection from developing cavities against the possible development of dental fluorosis.



MYTH #4: Water fluoridation causes serious health complications.

MORE INFORMATION...

- ▶ [Campaign for Dental Health](#)
- ▶ [Fluoride in Drinking Water: A Scientific Review of EPA's Standards](#) (National Research Council)
- ▶ [Public Health Service Recommendation for Fluoride Concentration in Drinking Water for Prevention of Dental Caries](#) (U.S. Public Health Service)
- ▶ [Centers for Disease Control and Prevention](#)



MYTH #5:

Most other developed countries reject water fluoridation.



MYTH #5: Most other countries reject water fluoridation.

TRUTH

- ▶ Adding fluoride to community water sources is not always feasible in other countries due to challenging terrain and decentralized water systems, but throughout Europe many countries fluoridate their salt or milk instead to achieve the same effect.



MYTH #5: Most other countries reject water fluoridation.

TRUTH

- ▶ Some countries also have optimal or higher levels of naturally-occurring fluoride in their water supplies, so they do not need to add fluoride.



MYTH #5: Most other countries reject water fluoridation.

MORE INFORMATION...

- ▶ [Campaign for Dental Health](#)



MYTH #6:
**Water fluoridation is too
expensive.**



MYTH #6: Water fluoridation is too expensive.

TRUTH

- ▶ Water fluoridation actually saves money for both families and communities by preventing cavities.



MYTH #6: Water fluoridation is too expensive.

TRUTH

- ▶ The return on investment increases with community size, but even small communities save money through water fluoridation.



MYTH #6: Water fluoridation is too expensive.

TRUTH

- ▶ On average, a community saves \$20 for every dollar it invests in water fluoridation.



MYTH #6: Water fluoridation is too expensive.

MORE INFORMATION...

- ▶ [Centers for Disease Control and Prevention](#)
- ▶ [Campaign for Dental Health](#)



MYTH #7:
Water fluoridation
infringes on personal
choice.



MYTH #7: Water fluoridation infringes on personal choice.

TRUTH

- ▶ Fluoride exists naturally in most water supplies, so fluoride-free water is generally not even an option. Community water fluoridation regulates the concentration of fluoride for maximum cavity prevention.



MYTH #7: Water fluoridation infringes on personal choice.

TRUTH

- ▶ Often, voters themselves decide whether to adopt community water fluoridation.



MYTH #7: Water fluoridation infringes on personal choice.

TRUTH

- ▶ Court systems in the United States have thoroughly reviewed legal challenges to community water fluoridation. Given the vast public health benefits of fluoridation, the courts do not consider fluoridation ordinances an issue of individual rights.



MORE INFORMATION...

- ▶ [American Public Health Association](#)
- ▶ [Campaign for Dental Health](#)