

memo

DATE: January 5, 2022
TO: WIC Coordinators and LA Staff
FROM: Carole Kelnhofer, Training Coordinator
SUBJECT: Fluoridated Water- Topic of the Month

Fluoride is a natural mineral that is found in soil, water, and air. Research has shown that fluoride is effective in preventing tooth decay. However, most community water systems (CWS) did not contain enough natural fluoride to be effective. The process of fluoridation was designed to aid in the prevention of tooth decay by adjusting the natural levels of fluoride in community water systems. The American Dental Association (ADA) reports that water fluoridation is effective in reducing tooth decay by at least 25% in both children and adults.

How much fluoride is in our water?

The United States Environmental Protection Agency (EPA) sets standards and regulates our CWS under the Safe Drinking Water Act (SDWA). For more information, refer to the [Understanding the Safe Water Drinking Act](#). The process of fluoridating water is completed by adding the necessary amount of fluoride needed to achieve the “recommended optimal level” of **0.7 milligrams per liter (mg/L)**. To do this, the CWS is first tested to determine the natural fluoride level and the appropriate amount of fluoride that needs to be added. Once added, the water is retested to ensure the accurate level has been reached.

By Minnesota law, all municipal CWS must provide water with fluoride levels of .5 - .9 mg/L.

- Look up your county in [My Water’s Fluoride: Minnesota](#) to find out about fluoridation in specific Minnesota communities.

How does fluoridation help?

Fluoride is especially important for children during early tooth development. Fluoride helps by forming a protective layer on teeth that can slowly rebuild tooth enamel damaged by plaque and bacteria. This protection decreases the occurrence of tooth decay.

Fluoridated water mixes with saliva to expose the teeth to **low levels of fluoride** throughout the day. It is a cost-effective way to protect teeth when combined with regular dental care. Some of the many benefits are shared below.

- Protects everyone, especially those who do not have access to adequate dental care.
- Requires no habit change to get the benefits.
- Reduces cavities and the need for fillings or removal of teeth.
- It’s free and there is no access to care needed to get the benefit.

How much fluoride do children need?

- **Infants under 6 months of age**
 - Generally, do not need to have a fluoridated water source.
- **Over 6 months of age**
 - Drinking small amounts of tap water throughout the day combined with regular daily brushing is adequate to prevent tooth decay.

[Good Oral Health Starts Early](#); children can be at risk for cavities once the first tooth appears. Using a fluoridated water source may assist in prevention!

See below for the Minnesota risk codes associated with lack of fluoride.

MN Risk Code 411K: Routinely not providing dietary supplements recognized as essential by national public health policy

- Infants 6 months+ ingesting < 0.25 mg fluoride daily when water supply contains less than 0.3 ppm fluoride

MN Risk Code 425H: Routinely not providing dietary supplements recognized as essential by national public health policy

- Children < 36 months of age less than 0.25 mg fluoride daily when water supply contains < 0.3 ppm fluoride
- Children 36-60 months of age less than 0.50 mg fluoride daily when water supply contains < 0.3 ppm fluoride

What water should I use with infant formula?

In terms of general water safety, community water sources are generally safe to use for mixing formula. If there is concern about the safety of the community water supply, participants may choose to collect the water cold, boil for 1 minute, and cool to room temperature before mixing with the formula.

There has been some concern behind the use of fluoridated water when mixing with formula. Most infant formulas also contain a low level of fluoride, and when mixed with a fluoridated water source, there **may be a mild risk** of dental fluorosis. Dental fluorosis is rare and unless severe, does not affect dental function. If parents notice faint white markings on their child's teeth, encourage them to talk to their healthcare provider or dental professional.

Before baby's first tooth erupts, some parents choose to use bottled or purified water to mix with formula. For those situations, choosing a water that is low in fluoride and is purified or has been through reverse osmosis is best. Once the infant develops teeth it is best to switch to fluoridated tap water. However, if bottled water is still the choice, then fluoridated Nursery water is a good option.

What about bottled water?

Many people choose to consume bottled water over tap. Most bottled waters do not contain fluoride. However, because fluoride occurs naturally, the source used when bottling may provide low levels of fluoride. Bottled water is regulated by the US Food and Drug Administration (FDA) under the Food, Drug, and Cosmetic Act (FD&C) to ensure it is produced in

safe and sanitary conditions. The FDA describes bottled water as fit for human consumption when sealed with no added ingredients other than acceptable microbial agents.

[Bottled Water: Questions and Answers](#) (MDH) is a fact sheet that can be shared with participants asking about bottled water and is available in multiple languages.

What if I have well water?

Many natural water sources have a small amount of fluoride. In terms of general safety, well water should be tested. Testing is recommended before and during pregnancy to ensure that it does not pose a risk to the fetus or developing child's health. Well water should not be used to mix infant formula if it has not been tested.

See [Well Testing, Results, and Options](#) for more information about recommended tests. Some county environmental services and public health agencies provide water testing. If local services are not available, the Minnesota Department of Health provides a list of [Accredited Labs in Minnesota Accepting Samples from Private Well Owners \(PDF\)](#).

When a participant shares that they use well water, encourage them to discuss potential risks with their health care provider.

What do participants need to know?

Stick with the facts. Share the evidence-based information that support the benefits of fluoridated water. Let participants know that fluoride is a natural mineral and not a medicine, the effectiveness and safety of fluoridation has been demonstrated by years of research, and its use has been endorsed by leading health and medical organizations.

Encourage participants to consult with their health care provider or dental professional if they still have concern. You may also choose to share resources like the ones below.

- [Fluoridation FAQs](#) (ADA)
- [Fluoride for Children: FAQs](#) (AAP)
- [Safe Drinking Water For Your Baby](#) (MDH)

Recommendation for healthy gums and teeth:

- Eat healthy meals and snacks.
- Drink plain tap water every day.
- Practice daily dental care.
- Attend routine dental visits.
- Limit intake of sweetened beverages.
- Limit intake of sugary or gummy snacks and other candies.

Continue to share future topic suggestions with Carole.Kelnhofner@state.mn.us.

Resources:

[The use of fluoride in infants and children](#) (Paediatr Child Health)

[The Debate Over Fluoridated Water](#) (American Academy of Pediatrics)

[Fluoride and Infant Formula](#) (Fluoride Science)

[Infant Formula](#) (Center for Disease Control and Prevention)

[Fluoride and Dental Caries](#) (Fluoride Science)

References- Complete Listing of Hyperlinks:

[Understanding the Safe Water Drinking Act](https://www.epa.gov/sites/default/files/2015-04/documents/epa816f04030.pdf) (https://www.epa.gov/sites/default/files/2015-04/documents/epa816f04030.pdf)

[My Water's Fluoride: Minnesota](#)

(https://nccd.cdc.gov/doh_mwf/default/CountyList.aspx?state=Minnesota&stateid=27&stateabbr=MN&reportLevel=2)

[Good Oral Health Starts Early](https://www.healthychildren.org/English/healthy-living/oral-health/Pages/Brushing-Up-on-Oral-Health-Never-Too-Early-to-Start.aspx) (https://www.healthychildren.org/English/healthy-living/oral-health/Pages/Brushing-Up-on-Oral-Health-Never-Too-Early-to-Start.aspx)

[Bottled Water: Questions and Answers](#)

(https://www.health.state.mn.us/communities/environment/water/factsheet/bottledwater.html)

[Well Testing, Results, and Options](http://www.health.state.mn.us/welltesting) (http://www.health.state.mn.us/welltesting)

[Accredited Labs in Minnesota Accepting Samples from Private Well Owners](#)

(https://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/labmap.pdf)

[Fluoridation FAQs](https://www.ada.org/resources/community-initiatives/fluoride-in-water/fluoridation-faqs) (https://www.ada.org/resources/community-initiatives/fluoride-in-water/fluoridation-faqs)

[Fluoride for Children: FAQs](https://www.healthychildren.org/English/healthy-living/oral-health/Pages/FAQ-Fluoride-and-Children.aspx?_gl=1*1cg7eic*_ga*MTQyOTc2NzExLjE2Mzc3OTA2NjE.*_ga_FD9D3XZVQQ*MTYzODIzMTg3MS4xLjEuMTYzODIzMTkxNS4w&_ga=2.165286331.501724812.1638231872-142976711.1637790661) (https://www.healthychildren.org/English/healthy-living/oral-health/Pages/FAQ-Fluoride-and-

Children.aspx?_gl=1*1cg7eic*_ga*MTQyOTc2NzExLjE2Mzc3OTA2NjE.*_ga_FD9D3XZVQQ*MTYzODIzMTg3MS4xLjEuMTYzODIzMTkxNS4w&_ga=2.165286331.501724812.1638231872-142976711.1637790661)

[Safe Drinking Water For Your Baby](#)

(https://www.health.state.mn.us/communities/environment/water/wells/waterquality/safebaby.html)

[The use of fluoride in infants and children](#)

(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2798610/)

[The Debate Over Fluoridated Water](https://ilikemyteeth.org/fluoridation/) (https://ilikemyteeth.org/fluoridation/)

[Fluoride and Infant Formula](https://fluorideexposed.org/fluoridescience/fluoride-infant-formula) (https://fluorideexposed.org/fluoridescience/fluoride-infant-formula)

[Infant Formula](https://www.cdc.gov/fluoridation/faqs/infant-formula.html?web=1&wdLOR=cE5AD0792-947E-4D5B-9D1C-39511AE1172F) (https://www.cdc.gov/fluoridation/faqs/infant-

formula.html?web=1&wdLOR=cE5AD0792-947E-4D5B-9D1C-39511AE1172F)

[Fluoride and Dental Caries](https://fluorideexposed.org/fluoridescience/fluoride-and-dental-caries) (https://fluorideexposed.org/fluoridescience/fluoride-and-dental-caries)

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