

Q&A: Infants & Fluoridated Water

1. Why do children need fluoride?

Fluoride is an important mineral for young children. As a child's teeth begin to form, fluoride strengthens the enamel to make it resistant to tooth decay. Later, after teeth are in the mouth, fluoride helps to reverse early signs of decay.¹ This is how children benefit from drinking fluoridated water. Fluoride exists naturally in water, and "fluoridation" is simply adjusting fluoride to the optimal level for preventing tooth decay.

2. I read something on the Internet suggesting that infants shouldn't be exposed to fluoride. What's this all about?

In recent years, questions have been raised about the use of fluoridated water to prepare infant formula. Some of these questions have come from groups like the Fluoride Action Network, which has a much broader agenda—to prevent Americans of all ages from having access to fluoridated water through their public water systems. The Fluoride Action Network wrongly claimed that the American Dental Association (ADA) recommends "that children under 12 months of age should not consume fluoridated water."² In fact, the ADA concludes that "it is safe to use fluoridated water to mix infant formula" and encourages parents to discuss any questions they may have with their dentists and pediatricians.³



3. What is dental fluorosis and will fluoridated water increase the odds that an infant will later develop this condition?

Although using fluoridated water to prepare infant formula might increase the chance that a child develops dental fluorosis, nearly all instances of fluorosis are mild, cosmetic condition. Fluorosis usually appears as very faint white streaks on teeth. For examples of what mild fluorosis looks like, go to this web page: <http://www.ada.org/5576.aspx?currentTab=1>. In fact, the ADA reports that often "the effect is so subtle that, usually only a dental expert would notice it during an examination."⁴ It does not cause pain, nor does it affect the function or health of the teeth.⁵ And once a child reaches age 8, they cannot develop dental fluorosis.⁶



4. Is fluoridated water the reason why the rate of dental fluorosis among children has increased?

Experts point to a different reason. Officials at the Centers for Disease Control and Prevention believe the rise in fluorosis is due mainly to children who swallow fluoride-containing toothpaste when they brush their teeth.⁷ Researchers at Oregon State University also point to the swallowing of fluoride toothpaste as a key factor in excess fluoride intake by kids.⁸ This is why parents of children under the age of 6 are advised to supervise their kids' tooth-brushing and apply only a pea-sized amount of toothpaste to the toothbrush.⁹

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5. I heard somewhere that leading medical and dental organizations recommend that parents *not* use fluoridated water for infant formula. Is that true?

No, it is not true. The American Academy of Pediatrics recommends that infants be breast-fed, but this guidance is based on the fact that breast milk provides more optimal nutrition. A 2010 study found that nearly all cases of dental fluorosis from formula were mild and concluded that “no general recommendations to avoid use of fluoridated water in reconstituting infant formula are warranted.”¹⁰ 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.”¹¹

6. What options do parents have if they prefer not to use fluoridated water for infant formula?

Parents or caregivers have three simple alternatives for feeding an infant.¹² First, they can breast-feed their infants, which is what the American Academy of Pediatrics generally recommends.¹³ Second, they can use bottled or purified water that contains no fluoride. Third, they can use a ready-to-feed formula that does not require water to be added.

Sources:

¹ “Fluoride and Infant Formula: Frequently Asked Questions (FAQ),” American Dental Association, <http://www.ada.org/4052.aspx#reconstitute>, (accessed April 12, 2011).

² “Health Effects: Fluoride Warnings for Infants,” Fluoride Action Network, <http://www.fluoridealert.org/health/infant/> (accessed April 26, 2011).

³ “Fluoride and Infant Formula: Frequently Asked Questions (FAQ),” American Dental Association, <http://www.ada.org/4052.aspx#reconstitute>, (accessed April 12, 2011).

⁴ “Oral Health Topics: Fluorosis,” American Dental Association, accessed May 3, 2011 at <http://www.ada.org/5576.aspx?currentTab=1>.

⁵ “Oral Health Topics: Fluorosis,” American Dental Association; O. Chankanka, S. Levy et al. “A Literature Review of Aesthetic Perceptions of Dental Fluorosis and Relationships With Psychosocial Aspects/Oral Health-Related Quality of Life,” *Community Dental and Oral Epidemiology* (2010), Vol. 38, 97-109, accessed on May 3 at <http://www.ncbi.nlm.nih.gov/pubmed/20002631>. (Note: The co-authors noted that dental fluorosis “is not a condition that causes pain or has clinical symptoms.”)

⁶ “Oral Health Initiative: Example of Fluorosis,” American Academy of Pediatrics, <http://www.aap.org/oralhealth/cme/page45.htm> (accessed April 26, 2011).

⁷ Timothy W. Martin, “Government Advises Less Fluoride in Water,” *The Wall Street Journal* (January 8, 2011), <http://online.wsj.com/article/SB10001424052748704739504576068162146159004.html> (accessed May 6, 2011).

⁸ “Micronutrient Information Center: Fluoride,” Linus Pauling Institute, Oregon State University, <http://lpi.oregonstate.edu/infocenter/minerals/fluoride/> (accessed April 6, 2011).

⁹ “Using Fluoride to Prevent and Control Tooth Decay in the United States,” U.S. Centers for Disease Control and Prevention, http://www.cdc.gov/fluoridation/fact_sheets/fl_caries.htm (accessed May 6, 2011); Linus Pauling Institute, Oregon State University.

¹⁰ “Substantial consumption of fluoride increases chance of mild fluorosis,” a news release by the American Dental Association (October 2010), <http://www.ada.org/4940.aspx> (accessed April 6, 2011).

¹¹ “Substantial consumption of fluoride increases chance of mild fluorosis,” a news release by the American Dental Association (October 2010), <http://www.ada.org/4940.aspx> (accessed April 6, 2011).

¹² These alternatives are enumerated in a 2007 article in the *Journal of the American Dental Association*. See: “Infants, Formula and Fluoride,” *Journal of the American Dental Association* (January 2007), Vol. 138, 132, http://www.ada.org/sections/scienceAndResearch/pdfs/patient_70.pdf (accessed May 3, 2011).

¹³ “Policy Statement: Breastfeeding and the Use of Human Milk,” *Pediatrics*, (February 2005), Vol. 115, No. 2, 496-506, <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;115/2/496> (accessed May 5, 2011).