Safety

Drinking water safety is defined and determined by federal, state, and local regulations. The main federal law that ensures the quality of Americans' drinking water is the Safe Drinking Water Act (SDWA). Under SDWA, the U.S. Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers that implement those standards.

CDC promotes effective public health practices, such as community water fluoridation. It is not CDC's task to determine what levels of fluoride in water are safe, yet our understanding about the safety of fluoridation is guided by federal regulations, comprehensive reviews by expert panels, and individual studies.

- **Scientific Reviews about Fluoridation Safety**

  Discovery of the decay-preventing effects of naturally occurring fluoride in water led to the start of community water fluoridation in 1945. For more than 65 years, water fluoridation has undergone extensive scientific studies and reviews to assess its public health benefits and risks.

  For many years, panels of experts from different health and scientific fields have provided strong evidence that water fluoridation is safe and effective. See **Scientific Reviews: Assessing the Weight of the Evidence** (safety/systematic.htm) for more details.

- **National Academy of Sciences on Fluoride in Drinking Water**

  The National Academy of Sciences, including its National Research Council (NRC), has considered the health effects of fluoride in drinking water on several occasions. Additional information on the NRC and its reports can be found on **National Academy of Sciences (NAS) on Fluoride in Drinking Water** (safety/nas.htm) .

  Additional information on the NRC report including a ***Report in Brief*** *(http://dels.nas.edu/Materials/Report-In-Brief/4775-Fluoride)* * and how to order copies of the full report is available at **The National Academies** (http://www.national-academies.org/) .*

- **Dental Fluorosis** (safety/dental_fluorosis.htm)

  The proper amount of fluoride helps prevent and control tooth decay. Fluoride ingested during tooth development can also result in a range of changes in tooth enamel. Because dental fluorosis is a condition that occurs when teeth are forming, only children aged 8 years old or younger are at risk. Children older than 8 years, adolescents, and adults are not susceptible to dental fluorosis.

  Dental fluorosis occurs among some people in all communities, even in communities that do not fluoridate or have a low natural concentration of fluoride in their drinking water. Everyone is

encouraged to know what steps can be taken to reduce the occurrence of dental fluorosis.

- **Overview: Infant Formula and Fluorosis** (safety/infant_formula.htm)

  The proper amount of fluoride at all stages of life helps prevent and control tooth decay. Recent studies have raised the possibility that mixing infant formula with fluoridated water, particularly for infants exclusively on a formula diet during the first year of life, may play a more important role in dental fluorosis development than was previously understood.

- **Health Effects and Environmental Impact** (safety/health_effects.htm)

The safety of fluoride in drinking water at levels recommended for preventing tooth decay has been affirmed by numerous scientific and professional groups. Scientists have found a lack of evidence to show an association between water fluoridation and a negative impact on people, plants, or animals.

- **Fluoridation Additives** (fact_sheets/engineering/wfadditives.htm)

  Three additives—sodium fluoride, sodium fluorosilicate, and fluorosilicic acid—may be used to adjust the natural fluoride levels in water to concentrations that prevent or control tooth decay.

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