



ARKANSAS DEPARTMENT OF HEALTH

# Fluoridation in Arkansas: Protecting our Citizens

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*Handout 1-A*



## History of Fluoride

- Fortification of foods and beverages for the benefit of the public is not uncommon in the United States.
  - Iodized salt
  - Chlorinated drinking water
- Fluoride occurs naturally in water sources.
- Fluoride has been added to public drinking water, including many communities in Arkansas, for the past 70 years.

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## Fluoride Concentration in Public Water Systems

- Recommended level of fluoride is 0.7 ppm.
- This concentration optimizes health/dental benefits while minimizing risk.
- Water treatment certification by the National Sanitation Foundation Standard 60: Drinking Water Chemicals

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## Benefits of Fluoride

- Reduction in cavities
- Cost savings (a savings of \$38 in dental treatment costs for every \$1 invested)
- Typical cost for water system fluoridation is \$1.10/person/year (range from \$0.50 to \$3.00)
  - The average lifetime cost per person to fluoridate a water system is less than the cost of one dental filling.

## Act 197 of 2011

- 70% of water systems subject to the Act are in FULL compliance.
- Progress is being made on almost all of the remaining water systems.
- Approximately 76% (over 2 million people) of Arkansans who are on public water systems now benefit from fluoridation (62% before Act 197).

## Interpreting the Science


- Peer-reviewed Journals
- Sound Science
- Widely Accepted and Endorsed

## Community Water Fluoridation

- >70 years' experience
- >200 million in US on fluoridated water
- >2 million in Arkansas on fluoridated water  
(76% of those who are on public water)

## Dental Fluorosis

- Approximately 10% of children consuming water at the recommended fluoride concentration of 0.7ppm will develop **very mild** dental fluorosis.
- **Very mild** to **mild** fluorosis has no effect on tooth function and may make the tooth enamel more resistant to decay.
- The recommended fluoride concentration of 0.7ppm does **NOT** cause **moderate** or **severe** dental fluorosis.

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## Very Mild Fluorosis



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## Mild Fluorosis



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## Safety FACTS

Concern: **Medical complications**

FACT: There is NO evidence that fluoride causes cancer, fractures, thyroid disease, lowered IQ or any other medical complication at the recommended concentration of 0.7ppm.

Concern: **Warning label on toothpaste**

FACT: Toothpaste has fluoride concentrations of 1000 – 1500ppm (compared with the recommended drinking water concentration of 0.7ppm) and is not intended for ingestion.

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## Fluoridation Chemicals

- The safety of the chemicals used for drinking water fluoridation is ensured by the ADH by requiring that all chemicals used in drinking water treatment be certified in accordance with the **National Sanitation Foundation Standard 60: Drinking Water Chemicals**.
- The National Sanitation Foundation requires that products be analyzed for potential impurities and that any potential impurities be in concentrations that will not result in any drinking water quality safety issue.

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## Local Control

- Poor and vulnerable Arkansans are most affected by low fluoride levels.
- Cost savings to local water operators result in high costs to communities and the State.
- Poor oral health means a loss of productivity, education, and resources; these are all state issues.

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