



## Fluoride in Drinking Water

The positive impact of fluoride in the prevention of dental cavities can be traced to the early 1900s when a dentist discovered that a water supply naturally high in fluoride decreased the occurrence of cavities in his patients. Subsequent studies in the 1930s found that a very small amount of fluoride (one part per million) was optimal for the prevention of cavities without causing mottled enamel on the teeth.

In 1945, fluoride was first added to a public water supply when the City of Grand Rapids began the practice. Since then, many large cities and public water suppliers have adopted the practice of adding fluoride because of the positive benefits of preventing tooth decay.

For over five decades, the American Dental Association has continued to endorse fluoridation of community water supplies as a safe and effective measure for preventing tooth decay, and the Center for Disease Control (CDC) has stated that, "Community water fluoridation is safe and effective in preventing tooth decay, and has been identified by the CDC as one of 10 great public health achievements of the 20th century."

Community water fluoridation remains the model for dental disease prevention, saving Americans billions of dollars every year. Studies have shown that fluoridated water strengthens children's teeth as they form and repairs early stages of decay. In adults, it prevents root cavities. The American Water Works Association advocates the addition of fluoride in public drinking water systems for these reasons.

WaterOne started adding fluoride to its treated water in 1967 after voters in its service area passed a referendum to do so. State and Federal standards limit fluoride to a maximum of 4.0 mg/L (parts per million). WaterOne maintains a fluoride level of 0.7 mg/L, which is well below established standards, and within the range recently recommended by the American Dental Association. Approximately 0.2—0.4 mg/L of this amount is naturally occurring.

The amount of fluoride added during the water treatment process is strictly regulated and closely monitored. Fluoride levels are monitored continuously around the clock, every day of the year, to insure compliance with state and federal standards. WaterOne is required by law to notify the public if it exceeds the state or federal standard. The utility has never exceeded the established standard for Fluoride.

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In spite of the proven benefits of fluoride in drinking water, there continues to be a longstanding debate on this practice. Fluoride is considered a poison in large doses but research shows that toxic levels would not be achieved by drinking fluoridated water that is within established standards. Scientists continue to collect data to determine the toxicity of fluoride in drinking water.

As a member of the Water Research Foundation, WaterOne supports research that is being conducted on water quality and health issues related to drinking water. The utility also monitors research conducted by recognized scientific organizations which, to date, have provided quantitative evidence that the positive benefits of fluoridated water continue to outweigh the suggested negative impacts.