

FLUORIDE

Fluorine is a chemical element. It is the most reactive of all elements and therefore does not occur in nature as free fluorine. Fluorine most commonly occurs in nature as the mineral fluorspar, or calcium fluoride (CaF). Fluoride is a compound consisting of fluorine and one or more other elements or other chemical compound. Fluoride in the form added to drinking water is not a prepared medicine or drug.

Travis County Water Control and Improvement District No.17 (WCID 17) adds fluoride to treated drinking water as a public health initiative for the prevention of dental caries (cavities). Tooth decay is an infectious disease costing families hundreds of dollars per year until fluoridation of drinking water was adopted as a common public health practice. Today, dental decay is almost unheard of in areas receiving municipal grade drinking water. If you are under the age of 50 years, you have probably never had a tooth cavity. Older people may well remember the common occurrence of cavities as a child or teen. The reduction of dental caries in the U.S. national population is considered one of the ten most important public health achievements of the twentieth century.

WCID 17 has fluoridated its treated water since 1987, and upgraded facilities in 2005 with a grant from the Texas Department of Health. The District adds fluoride to its treated water in the form of fluorosilicic acid (H_2SiF_6 , sometimes called hydrofluoric acid). While fluorosilicic acid is a toxic and hazardous material, District personnel are trained and licensed to handle it in accordance with Texas state law and regulations. Plant operators regularly receive training that includes all aspects of handling and use of H_2SiF_6 and other such hazardous materials (chlorine, ammonia, chlorine dioxide, etc.). All safety facilities required by the Occupational Safety and Health Administration (OSHA) including emergency shower/wash down/ eye-flushing stations are present at all District treatment plants.

Public health officials now recommend maintaining a fluoride concentration of 0.7 parts per million, and WCID 17 will adjust its fluoridation to this level. In August 2010 WCID 17 received an Excellence of Service Award from the Texas Department of Health and the U.S. Centers for Disease Control (CDC) for maintaining a consistent fluoride level in treated drinking water. Excessive fluoride intake, such as resulting from use of highly mineralized well water may result in a condition called dental fluoridosis, recognized by the appearance of white spotting of dental enamel. Because of infants' high fluid intake in proportion to their body weight, infants may exceed recommended intake levels if tap water is used to prepare formula. CDC recommends use of distilled, deionized or demineralized water in preparing infant formula. If you have questions in this regard you should consult your family pediatrician.

Institutions recommending the fluoridation of drinking water for prevention of dental caries (tooth decay) include.

U. S. Public Health Service

U. S. Department of Health and Human Services

U.S. Centers for Disease Control

U. S. Environmental Protection Agency

American Medical Association

American Dental Association

National Academy of Physicians and Surgeons

National Research Council

Texas Department of Health

Travis County Health Department

American Water Works Association recommends drinking water fluoridation as a best management practice.

– For more comprehensive information WCID 17 recommends visiting

http://www.cdc.gov/fluoridation/fact_sheets/cwf_qa.htm