

# “Fluoride is fluoride”

## What are the facts regarding the fluoridation substance

**Fluoride is not added to water supplies.** The public water fluoridation choices include hydrofluosilicic acid ( $\text{H}_2\text{SiF}_6$ ), sodium fluoride ( $\text{NaF}$ ) and sodium silicofluoride ( $\text{Na}_2\text{SiF}_6$ ). Each industrial grade fluoridation substance requires a substance-specific infrastructure. These substances are not the pharmaceutical “fluoride” dispensed nor is it the “fluoride” found in toothpaste or mouth rinses

“Hydrofluosilicic acid is manufactured by two different processes...the largest production of the acid is a byproduct of phosphate fertilizer manufacture.” CDC Water Fluoridation A Manual For Engineers pg 15

**Some of the contaminants reported as present in fluorine bearing substances hydrofluosilicic acid and other silicofluorides used in fluoridation programs include** *arsenic, barium, beryllium, cadmium, chromium, crystalline silica, fluorine, hydrogen fluoride, iron, iodine, lead, lead 210, mercury, phosphorous, polonium 210, radon 222, selenium, silica and silver*

**Some specific agents used or present in phosphate/hydrofluosilicic acid processing include;** *oil based de foamers, dioxins, polymers, petroleum products, naphthalene, chlorides, sulfides and synspar*

Fluoride is the term used, and sometimes misused by laymen and scientists to indicate a wide array of substances containing the element fluorine. The fluorine atom is the most reactive of all the non-metal atoms. Fluorine ( $\text{F}_2$ ) is an extremely reactive, poisonous and corrosive gas. It reacts with every other element except two noble gases (helium and neon). Except for some emissions from volcanoes, fluorine gas does not occur freely in nature. As the lowest molecular-weighted halogen, fluorine displaces the other halogens, such as iodine, which is essential to thyroid and other body functions.

Fluoride in its various forms is used to etch glass, ceramics and computer chips; separate uranium isotopes; crack petroleum products; make ceramics more porous; inhibit the fermentation in breweries and wineries; polish aluminum; refine almost all metals and is used in rocket fuels and household rust removers. It is one of the world’s most widely used insecticides and pesticides. The most commonly used fumigant for termites is sulfuryl fluoride (Vikane). 3M recently announced the withdrawal of Scotchgard from the market despite its \$320 million in annual sales after finding that the fluorine-based chemical lingers in the environment for years and is found widely in the bloodstreams of people around the world. Fluoride is used in many psychotropic drugs and the majority of generally used anesthetics (Halothane), in some cases for its toxic properties, in others for its ability to potentiate. Prozac (fluoxetine). Phen-Fen (fenfluramine, the diet drug removed from the market for heart valve damage), and Rohypnol (Roofies, the date rape drug) are three fluoride-based products seen in the news recently, and each of these three fluoride-based products are intended to affect the chemical activity of the brain as Selective Serotonin Reuptake Inhibitors - the chemical that transmits messages from one neuron to another.

“In 1999, 5 companies operated 10 plants that processed phosphate rock for the production of phosphoric acid and produced 69,200 t of byproduct fluorosilicic acid and sold or used 69,100 t of byproduct fluorosilicic acid at a value of about \$9.47 million.... fluorosilicic acid is a byproduct of the phosphate fertilizer industry and is not manufactured for itself alone...” Fluorspar 1999 by M. Michael Miller, USGS Fluorspar Commodity Specialist

## The Employee/Subset At Risk

“Fluoride remains a safe compound when maintained at the optimal level in water supplies to distribution systems however an operator might be exposed to excessive levels if the proper procedures are not followed or if the equipment malfunctions. Thus the use of personal protective equipment (PPE) is required when fluoride compounds are handled or when maintenance of equipment is performed. The employer should develop a written program regarding the use of PPE. **The water supply industry has a high incident of unintentional injury compared with other industries in the United States.**” CDC MMWR report Engineering and Administrative Recommendations for Water Fluoridation Morbidity and Mortality Reports Sept 29, 1995 Vol 44 RR-13 <http://www.cdc.gov/mmwr/PDF/rr/rr4413>.

- A Toxicological Profile by the US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR0 TP-91/17 page 112, Sec 2.7 (Health Impacts) April 1993 states “**Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluorine and its compounds.** These populations include the elderly, people with deficiencies of calcium, magnesium, and/or vitamin C and people with cardiovascular and kidney problems. Poor nutrition increases the incidence and severity of dental fluorosis. Recent studies suggest the practice of fluoridating public water supplies could place the elderly at increased risk of hip fractures. Fluoride is contraindicated for individuals with thyroid problems. Recent studies suggest individuals with kidney (renal) dysfunction should avoid fluorides. Impaired renal clearance of fluoride has also been found in people with diabetes mellitus and cardiac insufficiency. It also inhibits energy metabolism through the tricarboxylic acid cycle by blocking the entry of pyruvate and fatty acids and by inhibiting succinic, dehydrogenase.
- A substantial body of evidence (both animal and human) currently exists suggesting that fluoride may cause osteosarcoma, a rare and deadly cancer of the bone.
- A policy statement from the FDA states “**Fluoride when used in the diagnosis, cure, mitigation, treatment or prevention of disease in man or animal, is a drug that is subject to FDA regulation.** No New Drug Applications have ever been approved or rejected for fluoride drugs meant for ingestion.”
- In a letter dated November 16, 2000, the EPA states “**To answer your first question on whether we have in our possession empirical scientific data on the effects of fluosilicic acid or sodium silicofluoride on health and behavior, our answer is no.**”
- **The EPA headquarters of scientists oppose fluoridation and have taken an official position against the practice saying** “ NTEU Chapter 280 and its individual Executive Board members have signed on to the following Statement of Concern about the science of fluoridation. The goal is to stimulate a Congressional hearing on this national policy, which has not been aired before Congress and the public since 1978. **Since 1978, a wealth of peer reviewed literature has been published on the carcinogenic, genotoxic and neurotoxic effects of fluoride, as well as on the efficacy of fluoridation.** We believe that a full, open debate on the merits of the science underpinning fluoridation - and EPA's drinking water standards - is long overdue.”
- Friday, August 5th 2005, **the majority of the EPA's Unions** requested that the EPA direct the Office of Water to issue an Advanced Notice of Proposed Rulemaking setting the maximum contaminant level goal for fluoride at zero, in accordance with Agency policy for all likely or known human carcinogens.