

The chemicals used to fluoridate water are not pharmaceutical grade. Instead, they largely come from the wet scrubbing systems of the phosphate fertilizer industry or the toxic byproduct of the Aluminum Industry. These chemicals (90% of which are sodium fluorosilicate and fluorosilicic acid), are classified hazardous wastes contaminated with various impurities. Recent testing by the National Sanitation Foundation suggest that the levels of arsenic in these silicon fluorides are relatively high (up to 1.6 ppb after dilution into public water) and of potential concern (NSF 2000 and Wang 2000). Arsenic is a known human carcinogen for which there is no safe level. This one contaminant alone could be increasing cancer rates – and unnecessarily so.

Since the 1960s, the government has recommended fluoride levels between 0.7 and 1.2 milligrams per liter in the nation's drinking water. Touted as an excellent cavity blocker, fluoride has been praised for its alleged power to prevent tooth decay and boost oral health. Research has now revealed that fluoride, the very substance that is supposed to prevent tooth decay, actually does nothing to prevent against cavities. In fact, vitamin D has been found to be significantly more effective in cavity prevention without the extreme side effects.

Healthy adult kidneys excrete 50 to 60% of the fluoride they ingest each day (Marier & Rose 1971). The remainder accumulates in the body, largely in calcifying tissues such as the bones and pineal gland (Luke 1997, 2001). Infants and children excrete less fluoride from their kidneys and take up to 80% of ingested fluoride into their bones (Ekstrand 1994). The fluoride concentration in bone steadily increases over a lifetime (NRC 2006).

Fluoride can interfere with the genetic apparatus of bone cells in several ways; it has been shown to be mutagenic, cause chromosome damage, and interfere with the enzymes involved with DNA repair in both cell and tissue studies (Tsutsui 1984; Caspary 1987; Kishi 1993; Mihashi 1996; Zhang 2009). In addition to cell and tissue studies, a correlation between fluoride exposure and chromosome damage in humans has also been reported (Sheth 1994; Wu 1995; Meng 1997; Joseph 2000).

As well, Published in the January edition of the journal Nuclear Medicine Communications, the research highlights the fact that mass fluoride exposure may be to blame for the cardiovascular disease epidemic that takes more lives each year than cancer. In 2008, cardiovascular killed 17 million people.

Over 24 studies have unanimously concluded that fluoride negatively impacts cognitive function. In addition to these 24 studies focusing on cognition, over 100 animal studies have linked fluoride to an increase in male infertility, diabetes, and a whole host of other health problems. In the latest study on cognition, published in *Environmental Health Perspectives*, a publication of the National Institute of Environmental Health Sciences, it was found that that 28% of the children who lived in an area where fluoride levels were low achieved the highest test scores. This means that the children exposed to less fluoride scored normal or advanced, while only 8% of fluoridated children did the same.

The latest edition of the peer-reviewed medical journal, Brain Research, (vol.784:1998), reveals that aluminum-induced neural degeneration in rats is greatly enhanced when the animals were fed low doses of fluoride. The presence of fluoride enhanced and therefore facilitated the bio-availability of aluminum (Al) causing more aluminum to cross the blood-brain barrier and become deposited in the brain. The aluminum level in the brains of the fluoride-treated group was double that of the controls.

<http://www.actionpa.org/fluoride/aluminum.html>

Past Studies Show that when fluoridation ceases so do cavities (5)

- *Cavity rates decreased six years after fluoridation was stopped in Kupio, Finland.*
- *Seven years after fluoridation ended in LaSalud, Cuba, cavity-free children increased dramatically*
- *Following the cessation of water fluoridation in the East German cities, Chemnitz and Plauen, a significant fall in caries prevalence was observed.*
- *After fluoridation ended in the East German cities, Spremberg and Zittau, cavities in 12-year-olds significantly decreased*

- *During an 11-month fluoridation break in Durham, NC, cavity rates remained stable but dental fluorosis declined in children born during that period*

In British Columbia, Canada, "the prevalence of caries decreased over time in the fluoridation-ended community while remaining unchanged in the fluoridated community."

□ **Black and Hispanic children are more vulnerable to fluoride's toxicity.** According to the CDC's national survey of dental fluorosis, black and Mexican-American children have significantly higher rates of dental fluorosis than white children (Beltran-Aguilar 2005, Table 23). The recognition that minority children appear to be more vulnerable to toxic effects of fluoride, combined with the fact that low-income families are less able to avoid drinking fluoridated water, has prompted prominent leaders in the environmental-justice movement to oppose mandatory fluoridation in Georgia. In a statement issued in May 2011, the Rev. Andrew Young, a colleague of Martin Luther King, Jr., and former Mayor of Atlanta and former US Ambassador to the United Nations, stated:

"I am most deeply concerned for poor families who have babies: if they cannot afford unfluoridated water for their babies' milk formula, do their babies not count? Of course they do. This is an issue of fairness, civil rights, and compassion..... I formerly was a strong believer in the benefits of water fluoridation for preventing cavities. But many things that we began to do 50 or more years ago we now no longer do, because we have learned further information that changes our practices and policies. So it is with fluoridation." (see: <http://www2.fluoridealert.org/Alert/United-States/Georgia/Atlanta-Civil-Rights-Leaders-Callfor-Halt-to-Water-Fluoridation>)