

Roger Masters, PhD. on Wikipedia

https://en.wikipedia.org/wiki/Roger_Masters

Roger Masters' comment on Toxicology/Safety Studies provided by Dr. Christopher Mackie, MD as proof that Hydrofluorosilicic Acid is safe for Human Consumption.

https://ntp.niehs.nih.gov/ntp/htdocs/chem_background/exsumpdf/fluorosilicates_508.pdf

Posted with permission from Dr. Masters.

This is an old report, limited entirely to the "toxicology" of fluorosilicic acid (H_2SiF_6) or sodium silicofluoride (Na_2SiF_6) as well as sodium fluoride (NaF). That is, this report focused on what happened to each of these three molecules when it's put into water. They report total "hydrolysis" (or "dissociation"), which means: $\text{H}_2\text{SiF}_6 + \text{H}_2\text{O} \implies \text{H}_2 + \text{Si} + \text{F}_6 + \text{H}_2\text{O}$. That report confirmed the ASSUMPTION made when use of silicofluorides was initiated. Reason: it was known that sodium fluoride split into its components ($\text{NaF} + \text{H}_2\text{O} \implies \text{Na} + \text{F} + \text{H}_2\text{O}$). If one fluoride compound should split up that way, they all should. Right?

Recent research did find that the H_2SiF_6 split into $\text{H}_2 + \text{Si} + \text{F}_6$. Then someone else claimed that after splitting, the original molecule reformed. The point. THAT ALL SEEMS TO BE IRRELEVANT. The question is, what happens TO THE WATER after the fluorosilicic acid (or sodium fluorosilicate) is added. This is the question raised in 1999 by the late Myron J. Coplan, the former Vice President of Albany Chemical Corp who was involved in the Manhattan Project's work to dispose of fluorosilicic acid as "WATER FLUORIDATION" (to hide its use to split uranium from the other elements in phosphate rock back in 1942, when this was our only source of uranium for enrichment to make the first A-bomb). And quite understandably, this was all TOP SECRET. It had never been written up publicly or even discussed until Mike Coplan realized in 1999 that it was no longer a relevant secret and decided it was time to study whether using silicofluoride compounds instead of sodium fluoride was safe. He asked me to work with him, but we never focused on the origin of water fluoridation: the issue is that since silicofluorides were NEVER studied for safety (understandable since the process was TOP SECRET), in the 21st century it was time to publish studies of the safety of water after it was treated with either H_2SiF_6 , Na_2SiF_6 , or NaF . And while others were measuring lead levels "at the faucet," our work focused on the behavioral effects on both children and adults.

The reason is that where a silicofluoride is added to water, the lead level at the faucets goes way up. The lead can leach from lead solder in old pipes, old lead water pipes in town systems, lead in copper water meters or copper pipes, and other sources of lead, especially in old houses where lead paint was used almost everywhere. Our research focused on the effects on children, since I'd been at a scientific meeting in California where a chemist named Everett "Red" Hodges reported on high blood lead levels in a violent criminal. So it made sense to see if there is a higher blood lead where silicofluorides are used -- and if so, whether there would also be a higher rate of violent crime in communities that use fluorosilicic acid or sodium silicofluoride (instead of sodium fluoride) for water fluoridation. It turns out 90% of water fluoridation in the U.S. now uses one of the two silicofluorides (probably because it's easier and cheaper for large cities to use the silicofluorides than sodium fluoride). Testing our hypothesis, our statistical studies (some using data from all of the 3141 U.S. counties with data available) show that where silicofluorides are in public water, there's more violent crime as well as higher blood lead (but NOT more property crime) in many big cities. In addition, other research revealed that high blood lead results in lower activity of the neurotransmitter dopamine, key for learning and self control. As a result, we checked effects for learning results (standardized test scores), and found them lower where silicofluorides are in use. Then we looked at cocaine use, and found it's higher where silicofluorides are in use. For all of these tests, we "controlled" for effects of socio-economic and demographic factors, using statistical techniques like multiple regressions, factor analysis, and analysis of variance to see if the "REAL" cause was something else, or -- more important -- whether different things are involved in the behavior problems we were considering.

It was no surprise that -- of course -- evidence showed that poverty, low education, ethnicity, and population density ALL have their own contributions to behavioral problems in our cities. There's no one magic bullet. But there is a problem of the sort that I discovered (to my discomfort) when, while in high school, there was an occasion when I drank scotch AND bourbon on the same night. I'd been told by my father "don't mix your drinks." He had good advice, and you DON'T need to test it as I did. Next morning, I felt as though someone had deposited an axe in my brain.

And this lesson not only taught me something about NEVER mixing two kinds of alcohol. It also taught me to pay attention to the way different factors can COMBINE to have effects that neither one has alone, and these differences can be exceptionally dangerous to society (especially because

both scientific researchers and government officials so often work on one thing at a time.

The point? The chemistry of the brain influences behavior, and multiple factors have separate influences on your brain, although there are cases where the combination of two things has more explosive effects than either separately. Lead has an effect on lowering educational success and lead has an effect increasing rates of violent crime -- but the combination of lead and educational failure is worse than either alone. And this is the basis of a major national problem that continues to escape attention.

American Blacks tend to be lactose intolerant (for reasons too long to explain). People who are lactose intolerant are more likely to absorb lead from environmental exposure. This was easy to test by comparing blood lead levels in whites, Hispanics, and Blacks in the same communities: Blacks always had highest blood lead, then Hispanics, then Whites. Well, since lead is also associated with educational deficits, substance abuse, and violent crime, not only are the harmful effects of toxins like lead and silicofluorides much worse when they are combined, but then the greater vulnerability of Blacks helps explain persistent ethnic differences that have not been entirely removed by "Special Education" courses.

There are plenty of other examples we've had in the news where our research explains things that puzzled journalists and pundits. A good example that's been in the news recently is Detroit, whose water is treated with fluorosilicic acid, and not only had high blood lead levels in children but ranked #1 the top 10 violent cities in the U.S. And of course, you may remember that Flint, Michigan was right behind Detroit. Well, Flint has the same problems and it has exactly the same water! That is, the large regional water system on Lake Erie serves both Detroit and Flint.

Moreover, Flint's population is 40% Black, and these two cities have lots of pollution left over from the auto manufacturing plants. Little wonder there are huge problems in both communities.

My frustration: I tried to communicate to officials and water plant managers the hypothesis that just STOPPING THE USE OF FLUOROSILICIC ACID WOULD HELP REDUCE THEIR PROBLEMS. Well, like many novel ideas, mine had no effect.

Seventeen years of publication (see bibliography), peer reviewed articles, with many in major scientific journals (e.g., two articles in NEUROTOXICOLOGY, one of the world's leading journals in this field) and yet NO political reaction. But tonight, when I read your emails, I decided to write up this experience

in the hope that some of you might be interested and willing to consider the possibility that getting a major city to STOP using fluorosilicic acid or sodium silicofluoride (supposedly good for children's teeth, but there's ZERO scientific evidence that swallowing a fluoride compound helps your teeth the way brushing your teeth with a toothpaste containing sodium fluoride does.

With best wishes to you all: good health and success in your efforts to improve things in the world,

Roger Masters.