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DOES WATER FLUORIDATION CAUSE HEART DISEASE?

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Recently, there was an article published in a journal for nuclear imaging and diagnostics research that discussed a study showing an apparent l between fluoride and coronary artery disease.[i] The study results were: "The coronary fluoride uptake value in patients with cardiovascular eve was significantly higher than in patients without cardiovascular events." The conclusion was: "An increased fluoride uptake in coronary arteries be associated with an increased cardiovascular risk."

The results and conclusion statements caused a flurry of excitement on social media and discussion lists engaged in activism to end fluoridatio public drinking water.[ii] The abstract was circulated and cited as strong evidence that fluoride causes arterial calcification and water fluoridatior now scientifically fingered by mainstream medicine as causing heart disease.

However, the article was about something else entirely. Fluoride was not discussed as a cause of calcifications in the arteries, but as a means finding them.

"Fluoride uptake" had been mistaken as "fluoride intake". The false assumption was made that "sodium fluoride" accumulation in the arteries ca from drinking artificially fluoridated water. But the study had used *radioactive* sodium fluoride – a nuclear imaging drug, not a drinking water che

Also, the type of fluoride most often added to drinking water for fluoridation in Canada is not sodium fluoride, but an industrial waste chemical, hydrofluorosilicic acid.[iii]

The article actually described the results of "whole-body sodium [^{18}F]fluoride PET/CT studies" which are diagnostic procedures using injected radioactive fluoride tracers and scans that pinpoint where the tracer accumulates. They were not studies measuring accumulated fluoride dama from drinking water or any other source to diseased coronary vessels. The tracer [^{18}F] is a short-lived radioactive fluoride isotope that is strongl attracted to calcium in arterial plaque. It is injected to a vein and flies through the blood until it finds the calcium cluster. The radioactive emissio from those plaque locations with clusters of [^{18}F] stuck to clusters of calcifications can be counted by the scanner, and correlated to the degree severity of each patient's heart disease. The dose of radiation received by the patient is minimal.

The patients' fluoride intakes from food, water, and medications were not assessed; their blood and urine fluoride levels were not measured. Th article did not correlate current or past accumulated fluoride intake with heart disease at all.

But the fact that people working to end fluoridation thought they had found solid, ethical science on health harm from water fluoridation begs an question. Does fluoride harden our arteries the way it is claimed to harden teeth?

Is there scientific evidence that increased fluoride intake from artificial water fluoridation contributes to heart disease?

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The scientific evidence both past and current is quite convincing that any chronically increased fluoride intake, whether from natural source or p health policy, is not beneficial to the heart. Increased fluoride accumulation in bones corresponds to increased calcification of arteries and accompanying heart disease.[iv]

The 2006 U.S. National Research Council science panel report, a scientific review on the toxicology of fluoride in drinking water produced for th EPA, found that heart disease with elevated cholesterol was a secondary effect of suppressed thyroid function due to as little as 2 milligrams of fluoride per day if dietary intake of iodine and other nutrients is deficient. At water fluoridation levels of 0.7 mg. per liter of water, recommended Health Canada, this amount of fluoride is easily exceeded daily with normal consumption and use of tap water for cooking and beverages.[v]

Selenium and iodine deficiencies, when accompanied by increased fluoride intake from water, result in fatal heart disease in adults under age 4 syndrome is known as Keshan Disease and affects over thirty million Chinese people.[vi]

Recently published studies[vii] on residents of a Turkish mountain village whose well water had high levels of naturally occurring fluoride (above milligram per liter) did show that those with higher fluoride blood and urine levels and who had been diagnosed with systemic chronic fluoride poisoning suffered severe heart disease and calcifications of the aorta at a young age (under 35 years). “The elastic properties of ascending ao impaired, and left ventricular diastolic and global dysfunctions are evident, in patients with endemic fluorosis.”

If high intake of naturally occurring fluoride from calcium fluoride in the bedrock of the aquifer causes crippling heart disease by age 30 in reside drinking well water in a poor Turkish village, and causes Keshan Disease in selenium-deficient Chinese people by age 40, can increased fluoric intake from artificial fluoridation cause heart disease by age 60 in residents of Canada’s fluoridated cities who are eating a poor diet low in iodin selenium?

Case reports from the early years of fluoridation would seem to indicate so.[viii]

If we really want to “make death wait” as the television ads ominously advise, should we be taking a strong stance against added fluoride in our drinking water as we do against the addition of other heart-harming substances in our food supply such as partially hydrogenated oils, trans fats high fructose corn sweeteners?

Fluoride: nutrient or pollutant?

Public Health authorities often defend water fluoridation as a beneficial policy by stating that fluoride is a nutrient mineral, that it occurs naturally fluoridation of water is no different than iodine added to salt, B vitamins to flour or fortification of dairy foods with vitamin D.

However, iodine is naturally present in traditionally harvested sea salt. Mined salt lacks it. Synthetic B vitamins replace what is lost in removing bran but whole grain flour contains the natural B vitamins and needs no fortification. The milk of pastured cows has plenty of natural vitamin D because the cows get sunshine. Dairy cows that are confined inside barns eating dry feed produce milk deficient in vitamin D. Surface fresh wa does not naturally contain the high level of fluoride recommended for fluoridation, and certainly not from added industrial waste hydrofluorosilici

To qualify as a nutrient, fluoride would have to contribute calories for energy, contribute to optimal tissue growth, organ functions, structures an maintenance of life and health; be required as a co-factor for enzymes or vitamins; provide anti-oxidation protection; or be essential for body metabolism, growth, reproduction, and normal development of the fetus and child. To qualify as a secondary nutrient (e.g. dietary fibre), fluoride have to be necessary for intestinal microflora to synthesize other nutrients.

Fluoride does none of these.

A single nutrient should not be overtly antagonistic to other nutrients or cause other nutrient deficiency symptoms if increased. However, increa fluoride intake can rob calcium from bones, deplete antioxidants, and cause relative deficiencies in iodine, minerals and vitamins that are impor heart health.[ix]

Fluoride is found in foods, usually in trace amounts – along with other naturally occurring but unavoidable non-nutrients such as aluminum. But neither aluminum nor fluoride is needed for maintaining good health or feeding intestinal microflora. Fluoride (like aluminum) is inescapable fro grocery foods in quantities ranging from nuisance to toxic due to processing, industrial pollution and agricultural fertilizer and chemicals.

Animal studies do not show evidence that fluoride is a nutrient. Fluoride, whether in its naturally occurring calcium salt or whether as a fluoride-releasing chemical added to feed or water, does not qualify as any type of nutrient or mineral or beneficial substance at all.[x]

But Canadian Environmental Protection Agency (CEPA) regulates fluoride as an environmental pollutant and source water contaminant. In part CEPA designates the chemical that is used in water fluoridation as a Class 1 pollutant substance, “persistent”, “toxic”, “bio-accumulative” and “hazardous”.

Are public health authorities unaware that fluoride is regulated as an environmental pollutant?

The natural occurrence of fluoride in high concentration as gas and particles in ash from volcanic eruptions can be harmful and even lethal to cr and livestock, as recent eruptions in Iceland have shown. Farmers who were interviewed said, “The risk is of fluoride poisoning if they breathe c too much. The fluoride in the [Iceland volcanic] ash creates acid in the animals’ stomachs, corroding the intestines and causing hemorrhages. It binds with calcium in the blood stream, and after heavy exposure over a period of days makes bones frail, even causing teeth to crumble.”[xi]

Smog from coal-fired power plants is estimated to cause thousands of premature deaths in North America from heart disease every year. What people know is that fluoride gas and particles are emitted into air pollution by the burning of coal, making up a significant part of smog. Breathin

smog can raise the fluoride concentration in blood, urine and saliva to the same level as consuming a high intake of fluoridated water, triggering calcium depletion and oxidative stress that can bring on a heart attack weeks or months later.[xii]

If science shows that breathing air polluted with industrial source fluoride can harden the arteries, it is logical to conclude that drinking water pol with industrial source fluoride will do the same.

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[ii] http://cof-cof.ca

[iii] http://ffo-olf.org/hydrofluorosilicicAcidSpecifications.html

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[vi] http://www.fluoridealert.org/Alert/China/China-to-relocate-64,000-villagers-from-areas-plag.aspx

[vii] Varol E, Akcay S, Ersoy IH, Ozaydin M, Koroglu BK, Varol S. Aortic Elasticity is Impaired in Patients with Endemic Fluorosis. Biological Tra Element Research 2010;133(2):122-7.

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[xi] http://news.yahoo.com/s/ap/20100418/ap_on_re_eu/eu_iceland_volcano_farmers

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