



Artificial Water Fluoridation

No Golden Years for the Elderly

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The question that we all ask of ourselves is, “What condition will I be in when I reach old age?”

We accept that our physiology will begin to fade with the years, but we envision for ourselves a life graced with a reasonable level of vitality. We cling to a crossed-finger hope that we will be the ones to side-step many of the conditions and diseases that we see affecting the elderly.

The reasonable among us realize that our own life-choices and actions will greatly determine our health and our quality of life in those years after sixty five. What we have less control of are the practices and actions of others that affect us.

Artificial water fluoridation is one of those practices. Ostensibly introduced as a public health measure to reduce the number of dental cavities among whole population groups, the practice got underway without any rigorous toxicology studies or completed clinical trials.

Fluoridation was a population health experiment from the outset. Considered by its public health authors to be ‘proven’ safe and effective, water fluoridation was spared the requisite legitimate scientific examination, and was then widely promoted.

The missing scientific examination was, fortunately, undertaken by impartial researchers. Their findings paint a completely different picture of the safety of fluoridation chemicals, and of the claimed health benefits of ingesting them for many years.

There is substantial credible evidence that water fluoridation will undermine the chances of surviving into old age with a sound body and a sharp mind.

The Boomers

The Baby Boomer generation will, for the most part, turn 65 in a few years. The percentage of elderly in the population will grow markedly from that point.

The number of Ontario seniors aged 65 and over is projected to more than double from 1.9 million in 2011 to become 4.2 million by 2036. The percentage of elderly in the province by year 2036 is expected to be close to 24%, or one in four. 1



Stated simply, in a little more than 20 years, a quarter of the province's population will be 65 or older.

With that projected increase in numbers, the 'age-related' problems that commonly affect the elderly will soon enough begin to place massive stress on the provincial and municipal health care systems, and on the families of the elderly.

What if many of the age-related ailments that we have grown so accepting of have nothing to do with *normal* aging?

This is no ordinary generation entering its golden years. The birth of all those Boomers near-exactly coincides with the introduction of artificial water fluoridation. This is the first generation reaching old age that has been the life-long target of health authorities bent on administering a daily dose of fluoride medication in communal drinking water supplies.

The 2006 National Research Council of the Academy of Sciences report on Fluoride in Drinking Water designated kidney patients, diabetics, **seniors** and babies as 'susceptible sub-populations' that are especially vulnerable to harm from ingested fluorides.

Increased bone fractures in the elderly

The elderly are at increased risk of bone fracture injury because of the long-term bio-accumulation of fluoride in their bones.

Fluoride seeks out calcium in the body, and there are great calcium reserves in the skeletal system. Most of the fluoride in the body, about 99%, is contained in bone. 2

Where water is fluoridated, bones are high in fluoride by old age. Studies based upon autopsies of deceased elderly have revealed as much as 8000 ppm/kg fluoride in bone ash. 3

Fluoride will seriously weaken the bone structure of elderly. The action of fluoride causes the bone to lose elasticity, the tensile strength required to resist bending fractures. 4

The elderly (and their families) live in fear of falling because falls often result in incapacitating bone fractures, with hip fractures being among the most serious. Hip fractures are devastating for the elderly. Up to 36% of the elderly with hip fractures are dead within a year. 5

There is solid evidence that hip fractures increase significantly in fluoridated communities. Increases appear to range from 40-100%, depending on the age of the subjects. 6

Fluoride, cancer and the elderly

As a result of water fluoridation entire communities, not just the elderly, may face more cancers than would otherwise be the case.

It is well-known that fluoride is mutagenic. It has the ability to corrupt cell function. Many mutagens are also carcinogens. 13

Research indicates that fluoride enables, promotes or is an outright cause of cancers. 8

In 1990, the US Public Health Service's National Toxicology Program conducted a well-designed study that showed sodium fluoride to cause cancer *at cumulative doses comparable to those ingested by humans over a number of years.* 7

The risk of developing cancer increases dramatically with age. Indications are that 88% of new cases of cancer will occur in people over the age of 50. 9 Approximately 40% of Canadians will develop cancer in their lifetime. 9

These are *not* acceptable figures. A 2-out-of-5 chance of developing cancer is not a normal expectation of aging. *Something* is causative of that outcome, and many believe the staggering increase of synthetic chemicals created and introduced since WWII is to blame. 10

Dr. Dean Burk, Ph.D., 34 years at the National Cancer Institute and former Chief chemist and head of National Cancer Institute Research, believed that the growth of cancers was linked to abrupt environmental change. He was convinced artificial water fluoridation was one of those abrupt changes.

He stated, "In point of fact, fluoride causes more human cancer death, and causes it faster, than any other chemical." 11

Dr. Burke was not alone in that belief. 12

Bone cancer (osteosarcoma)

Fluoride's particular affinity for the calcium reserves in bone explains its link to bone cancers.

Fluoride is a 'mitogen' - meaning it can stimulate the proliferation of bone-forming cells called 'osteoblasts'. Osteosarcoma is a cancer caused by an *abnormal* proliferation of osteoblasts. 13

As mentioned earlier, the elderly who have consumed fluoridated water throughout their lives can have remarkably high concentrations of fluoride in their bones.

Bone cancer appears to have two peaks, first in adolescence (15 to 19) and second with the onset of old age (50+). 14

Osteosarcoma was more common in men aged 60+ than women of the same age group in most countries. 14 For some reason, Canadian men aged 75+ have a strikingly higher incidence of bone cancer, better than double the norm in other countries. 14

In 1992, Dr. Paul Cohn conducted a thorough peer-reviewed large human population study for the State Board of Health in New Jersey. He found that males aged 10 -19 were nearly *7 times* more likely to get bone cancer if they lived in a fluoridated community than if they lived in a non-fluoridated community. 15

The *general population* in Cohn's fluoridated study area was *5 times* as likely to develop bone cancer. *General population* would include the elderly. 15

In 2006, Dr. Elise Bassin, a dental researcher affiliated with Harvard University, established that adolescent males living in fluoridated communities had a *7.2 times* greater chance of developing bone cancer than males of the same age group in non-fluoridating communities. Her findings closely mirrored the Cohn study results from 14 years earlier.

Dr. Bassin's study joins other studies that show cancers to be active in the areas of the body where fluoride accumulates. 16

Thyroid disease: poor prognosis for the aged

In 1955, a report in the New England Journal of Medicine indicated a 400 percent increase in thyroid cancer in San Francisco since that city began fluoridating its drinking water just 5 years earlier. 17

Fluoride is well-known to interfere with the functioning of the thyroid gland. The thyroid gland produces vital hormones which control metabolism. An impaired thyroid will lead to diminished mental and physical ability. 18

Fluoride displaces iodine in the thyroid, greatly depressing thyroid function and rendering a person *hypothyroid* from iodine deficiency. 19

With age comes a progressively greater accumulation of fluoride in the body. Inevitably, this points to the elderly as being particularly affected by hypothyroidism.

Hypothyroidism has become epidemic on the North American continent. One out of three is likely to suffer from it by mid-life. Those affected can become overly-tired, cold-sensitive, overweight, and depressed. They often endure arthritis-like symptoms, hair loss, infertility, atherosclerosis (hardening of the arteries) and periods of prolonged illness. 20

In the elderly, thyroid disease is very common. At autopsy, finding a "normal thyroid gland" is rare, testifying to the incredible high prevalence of thyroid disorders among the elderly. 21

Fluoride and aging

If the human body were likened to an engine, the engine management module would be the body's enzymes. All of the thousands of complex chemical reactions necessary to maintain normal bodily functions depend on the miraculous coordination and performance of enzymes. Fluoride throws that engine completely out of tune. Fluoride is a powerful enzyme poison. 22

Austrian researchers proved in the 1970s that **as little as 1 ppm** fluoride concentration can disrupt DNA repair enzymes by 50%.

When DNA can't repair damaged cells, we get old ... *fast*. 23

Fluoride ages the body, mainly by causing distortion of the chemical structure of the enzyme. When enzymes become chemically altered, they can't do their jobs. This results in the markers of old age: collagen breakdown, eczema, tissue damage, skin wrinkling, and genetic damage. Enzyme corruption also causes the immune system to perform 'like the immune system of an old person'. 24

By its corruption of enzymes, fluoride robs the body of its natural ability to fend off external pathogens. Fighting infection is a battle often lost by the elderly.

According to the Institute of Medicine, "There appears to be a direct relationship between increasing age and susceptibility to infections. Factors that may contribute to the predisposition of the elderly to infections include impaired immune function." 25

Water fluoridation and Alzheimer's

The Boomer generation has been tagged with a second nickname, 'Generation Alzheimer's'. 26

Alzheimer's has become the defining disease of this post-WWII generation.

"Alzheimer's is a tragic epidemic that has no survivors. Not a single one," says Harry Johns, president and CEO of the Alzheimer's Association. "It is as much a thief as a killer. Alzheimer's will darken the long-awaited retirement years of the one out of eight baby boomers who will develop it". 27

That 'one out of eight' projection, points to an estimated 10 million baby boomers expected to develop Alzheimer's Disease in the United States alone. 27

Far from simply an old person's disease, Alzheimer's appears now to be affecting people in their 40's and 50's. Known as 'early-onset Alzheimer's', it is estimated that more than 200,000 Americans have the early beginnings of this disease. Victims of early onset Alzheimer's can suffer dementia that ranges from mild to severe. 28

Why this generation? Why did Alzheimer's spike so suddenly across a single generation?

What was so different in that immediate time period after the Second World War?

Look to water fluoridation. Water fluoridation was just getting underway as the war ended.

As a never-seen-before program of fluoride mass medication using communal drinking water supplies, it was perhaps the one thing that could immediately, physically and permanently affect so many newborns across this continent.

Fluoridation became the official policy of the US Public Health Services in 1951, and by 1960, 50 million Americans had fluoridated water in their homes. 29

Aluminum accumulation in brain tissue has long been linked to Alzheimer's Disease. Recent studies have shown that fluoride enables aluminum to enter the brain, and accumulate in brain tissue. 30

Fluoride *plus* aluminum work in synergy to create in the brain what appear to be Alzheimer's-like symptoms. 30

Without the presence of fluoride, aluminum would not pass the 'blood-brain barrier', the brain's natural defense against harmful chemicals. 30

Aluminum is often present in finished drinking water. Aluminum salts are the preferred water industry treatment chemicals used to help clarify raw intake water. Invariably, trace amounts of aluminum remain in the finished drinking water.

Unfortunately, it is chemically impossible for fluorine *not* to combine with aluminum when the two encounter each other. 31 The formation of fluoride compounds is basic chemistry. The fluorine ion is the most chemically reactive and electronegative of all the elements. 32

An aluminum atom has three extra electrons in its valence shell. The fluorine ion will bind to any atom with a spare electron. Not hard to understand, and foolish to deny.

That union will form an 'alumino-fluoride complex' as soon as fluorine ion is added to the finished water at the plant. Alumino-fluoride complex is neurotoxic. 33

It is, therefore, a near-certainty that fetuses, babies, children, adolescents, adults and the elderly will ingest alumino-fluoride neurotoxins for as many years as they consume fluoridated water.

The toxic synergy between fluoride and aluminum is established. 30 Alzheimer's-like symptoms appear to be the fallout of that synergy.

Conclusions

A life well-spent and a rest well-earned is what we optimistically hope for ourselves and our loved ones. It is a hope that, if life is fair, should come to pass. Instead, we are witness to the extraordinary plight of the very first fluoride generation, burdened with unusual illness and frailty as they enter their old age.

The Golden Years await us all, but there is no reward if we cannot maintain some vitality to enable enjoyment of those years.

The numbers of reasonably robust, clear-minded elders is shrinking. Too many suffer physical and mental impairments that leave them unable to live and thrive independently

What we see, instead, is a rich and prospering elder care industry, and a health care system that is taxed to the limit to tend to the numbers of sick, diseased and disabled elderly.

Did water fluoridation cause all of the above? The best answer would be no. However, too many studies indicate that water fluoridation may have played a big role in the surprising frailty of those now entering their 'golden years'.

Water fluoridation's singular role is to introduce the fluorine ion into the body. Fluorine is an enzyme poison, a hormone manipulator, a bone corrupter, a mutagen, a mitogen, and a very likely promoter of cancer.

The human body was not meant to ingest the fluorine ion. It has no use for, or defense against, fluorine. The Baby Boomer generation is adequate testament to that truth.

About the author:

Sheldon Thomas is the founder of 'Clear Water Legacy' (www.clearwaterlegacy.com), and a former Manager of Water Distribution for the City of Hamilton, Ontario.

References

1. Ontario Ministry of Finance, Ontario Population Projections Update for years 2011 – 2036, based on the 2006 census, announced Spring, 2011

2. Fluoride in Drinking Water: A Scientific Review of EPA's Standards (2006)

3. Kaj Roholm's 1937 study on phases of skeletal fluorosis

4. SØGAARD CH et al. (1994) Marked decrease in trabecular bone quality after five years of sodium fluoride therapy-assessed by biomechanical testing of iliac crest bone biopsies in osteoporetic patients Bone 15 (4), 393-399 Jul/Aug

A 1994 report by P. Fratzl et al in the Journal of Bone & Mineral Research described abnormal bone mineralization after fluoride treatments.

5. <http://www.ncbi.nlm.nih.gov/pubmed/19421703> Link provided by Dr. Hardy Limeback, retired professor of dentistry and former head of Preventive Dentistry at the Faculty of Dentistry, University of Toronto

6. Fluoride (Vol. 26 No. 4, pages 274-277, 1993). All studies of fracture rates relative to long-term fluoridation exposure indicate a significant increase in fracture risk from fluoridation. For women in their seventh decade who have been exposed to life-long fluoridation, the risk of hip fracture is approximately doubled. The risk increases with fluoride concentration at all levels over 0.11 ppm. Increased bone and connective tissue injuries of US youngsters should alert us to the probability that our high fluoride environment is adversely affecting our youngsters as well as our elderly. / John R Lee, MD, is the former director of the Marin Medical Society in California and the author of Optimal Health Guidelines, Optimal Fluoridation and Gilbert's Disease and Fluoride Toxicity.

Three notable studies, all published in the Journal of the American Medical Association, showed a relationship between water fluoridation and increased hip fractures. These were major studies on large populations :

JACOBSEN SJ GOLDBERG J MILES TP BRODY JA STIERS W & RIMM AA (1990) Regional variation in the incidence of hip fracture: US white women 65 years and older. J American Medical Assoc 264, (4) 500-502, Jul 25th

COOPER C WICKHAM CAC BARKER DIR & JACOBSEN SJ (1991) Water fluoridation and hip fracture J American Medical Assoc 266 (4), 513 July 24/31

JACQUMIN-GADDA H COMMENGES D DARTIGUES J-F (1995) Fluorine concentration in drinking water and fractures in the elderly J American Medical Assoc 273 (10), 775-776

1992, C. Danielson et al reported that the risk of hip fracture was approximately 30% higher for women and 40% higher for men in fluoridated communities. Among women at age 75, the risk was about twice as high in fluoridated communities. "'Hip Fractures and Fluoridation in Utah's Elderly Population,' a study by C. Danielson et al [Journal of the American Medical Association, August 12, 1992, 268:746-8], compared the incidence of femoral neck fractures in a community with long-standing water fluoridation (to 1 ppm) with the incidence in two communities without water fluoridation (less than 0.3 ppm). The findings of this report support other epidemiologic studies suggesting that fluoride increases the risk of hip fracture."

- Journal of the American Medical Association

An Australian review of scientific literature in 1997 revealed there is strong evidence that fluoride disrupts bone structure, increasing prevalence of hip fractures, skeletal fluorosis, and osteosarcomas / Australian and New

Zealand Journal of Public Health, 1997

A French study found an 86% increase in hip fracture rates amongst elderly French people living in regions with fluoride in the water (i.e. nearly double the normal rate).

7. NTP TECHNICAL REPORT (1990) Toxicology and Carcinogenesis Studies of Sodium Fluoride in F344/N Rats and B6C3F1 Mice, NTP TR 393 (Draft), National Toxicology Program, US Dept of Health & Human Services: Washington, DC, 106pp + 370pp of appendices

Mohamed AH, Chandler ME. (1982). 'Cytological effects of sodium fluoride on mice'. Fluoride 15: 110-18.
"Cytological studies on bone marrow cell chromosomes and spermatocytes showed that 1-200 ppm F (as sodium fluoride) was able to induce chromosomal changes in a dose-dependent manner. The frequency of the induced chromosomal damage was significantly higher in each treatment than in the controls. The observed abnormalities included translocations, dicentrics, ring chromosomes, and bridges plus fragments, or fragments by themselves. There was a significant correlation between the amount of fluoride in the body ash and the frequency of the chromosomal abnormalities."

Voroshilin SI, et al. (1973). 'Cytogenetic effect of inorganic fluorine compounds on human and animal cells in vivo and in vitro'. Genetika 9: 115-120.

"On the grounds of the results obtained during our experiments F compounds are able to produce certain changes in chromosomes from somatic cells of animals treated in vivo by them... Most of the aberrations observed in the case of bone marrow cells were chromatid-type aberrations... [W]e entertain the opinion that the main damage to chromosomes during our experiments with F compounds also took part during the S-phase... [T]hese data enable us to consider as sufficiently established the conclusion that inorganic fluorine compounds may present a mutagenic danger to human beings."

Taylor A, Taylor NC. (1965). 'Effect of sodium fluoride on tumor growth'. Proceedings of the Society for Experimental Biology and Medicine 119:252-255. "In 54 tests involving 991 mice bearing transplanted tumors and 58 tests including 1817 tumor-bearing eggs, data were obtained which indicated a statistically significant acceleration of tumor tissue growth in association with comparatively low levels of NaF."

8. 1990 Dr. William Marcus, an EPA senior science advisor and toxicologist, maintained that, "fluoride is a carcinogen by any standard that we use. I believe EPA should act immediately to protect the public, not just on the cancer data, but on the evidence of bone fractures, arthritis, mutagenicity, and other effects."

9. Canadian Cancer Statistics 2011 / 'Cancer in Quebec and in Canada: Fast Facts', May 18, 2011

10. Generations at Risk: Reproductive Health and the Environment by Ted Schettler, M.D., Gina Solomon, M.D., Maria Valenti, and Annette Huddle, 1999, MIT Press, Cambridge, MA.

Living Downstream: A Scientist's Personal Investigation of Cancer and the Environment by Sandra Steingraber, 1998, Vintage Books: New York.

11. Dean Burk -- Congressional Record 21 July 1976

12. The link between fluoridation and cancer has been established by several investigators. The best way of summarizing the evidence is to refer to the evidence given in open court against the Director of Public Health State of Illinois, et al. over a period of ten weeks during this past spring. Drs. Dean Burk and John Yiamouyiannis presented the findings of one of the largest and most sophisticated epidemiological studies in modern science, covering the fluoridation-cancer experience of 18 million Americans over 30 years. There were controls for known

and unknown variables, including geographic, demographic, environmental, and dietary factors; consideration of periods before and after the introduction of fluoridation in the experimental cities; double-blind design to control for bias; an objective and manageable index of time trends studied; together with elaborate adjustments for age, race, and sex by direct and indirect methods. A significant increase in cancer deaths in humans was associated with the introduction¹ of fluoridation. The data show that 10,000 to 30,000 Americans die of cancer each year due to the effects of fluoridation.

Dr. John Yiamouyiannis was, until his death in the fall of 2000, the world's leading authority on the biological effects of fluoride. His formal education included a B.S. in biochemistry from the University of Chicago and a Ph.D in biochemistry from the University of Rhode Island.

After a year of postdoctoral research at Western Reserve University Medical School, Yiamouyiannis went on to become biochemical editor at Chemical Abstracts Service, the world's largest chemical information center. It was at Chemical Abstracts Service, where Yiamouyiannis became interested in the damaging effects of fluoride.

13. Submission to CA OEHHA on prioritizing 38 potential carcinogens for review "Fluoride and Osteosarcoma" by Dr. Paul Connett. May 4, 2009.

14. Int. J. Cancer: 125, 229–234 (2009) 'International osteosarcoma incidence patterns in children and adolescents, middle ages and elderly persons' / Lisa Mirabello¹, Rebecca J. Troisi^{2,3} and Sharon A. Savage^{1*}

15. COHN PD (1992) An epidemiologic report on drinking water and fluoridation Trenton, NJ: State of New Jersey, Dept. of Health

16. Revisiting the Fluoride-Osteosarcoma connection in the context of Elise Bassin's findings: Part I, by Dr. Paul Connett, Chris Neurath and Michael Connett / Submitted to the NRC review panel on the Toxicology of Fluoride in Water, March 2, 2005

17. Gladys Caldwell and Philip Zanfagna, MD, in their 1974 book 'Fluoridation and Truth Decay'

18. 'The Effects of Fluoride on The Thyroid Gland' by Dr Barry Durrant-Peatfield MBBS LRCP MRCS Medical Advisor to Thyroid UK. He has been a medical practitioner for over forty years specializing in metabolic disorders during which time he became a leading authority in the UK for thyroid and adrenal management.

19. Dr. Barry Durrant-Peatfield, ' The Effects of Fluoride on the Thyroid Gland'

Goldemberg, L. La Semana Med. 28:628 (1921), cited in Wilson RH, DeEds F. "The Synergistic Action of Thyroid on Fluoride Toxicity" Endocrinology 26:851 (1940).

20. 'Hypothyroidism Type 2: The Epidemic' / Mark Starr M.D. Board certified by the American Board of Pain Medicine and the Arizona State Board of Homeopathic Medical Examiners

21. Fleischmann A, Hardmeier T (1999) A normal thyroid gland upon autopsy: a relatively uncommon finding. Schweiz Med Wochenschr 129:873-882 37.

22. Dr. James B. Sumner, Director of Enzyme Chemistry, Department of Biochemistry and Nutrition, Cornell University; Nobel Prize winner for his work in field of enzyme chemistry / "Everybody knows fluorine and fluorides are very poisonous substances and we use them in enzyme chemistry to poison enzymes, those vital agents in the

body. That is the reason things are poisoned, because the enzymes are poisoned and that is why animals and plants die."

23. Wolfgang Klein, et al., "DNA Repair and Environmental Substances," Zeitschrift für Angewandte Rader und Klimaheilkunde, Volume 24, No. 3, pp. 218-223 (1977).

Wolfgang Klein, et al., "Biochemical Research on the Action of Sodium Fluoride on Mammalian Cells. The Effect on Biosynthesis of Nucleic Acid and Proteins on Mouse Spleen Cells in vivo Studies," Report of the Austrian Society of Atomic Energy, Seibersdorf Research Center, No. 2355, pp. 1-10 (1974).

Wolfgang Klein, et al., "DNA Repair and Environmental Substances," Report of the Austrian Society of Atomic Energy, Seibersdorf Research Center, No. 2613

24. John Yiamouyiannis, Ph.D., Biochemistry and By John R. Lee, M.D. 'Fluoride - The Aging Factor' /

"The prime physiological effect of fluoride is enzyme inhibition; it does this by forming hydrogen bonds with amides which comprise the operative chemical structure of enzymes; it therefore disrupts collagen synthesis which results in dental fluorosis as well as damaged cartilage, ligaments, bone, skin, arteries and other elements of connective tissue in a manner identical with aging. Furthermore, this fluoride-induced enzyme inhibition interferes with our immune system so that it "not only causes the immune system to act like the immune system of an 'old' person, it causes autoimmune damage to the entire body and accelerates the aging process of that body." And, finally, fluoride interferes with DNA repair, damages chromosomes, and induces higher cancer death rates yet another morbid characteristic of aging."

25. Institute of Medicine, 'The Second Fifty Years: Promoting Health and Preventing Disability', (1992), pg 65, Risk Factor for Infection in the Elderly.

26. 'Generation Alzheimer's' / Alzheimer's Association National Office, 225 N. Michigan Ave., Fl. 17, Chicago, IL 60601

27. Alzheimer's Association Public Policy Division, 1212 New York Avenue, NW., Suite 800 Washington, DC 20005-6105

28. Alzheimer's Association, alz.org, 'Younger/Early Onset Alzheimer's and Dementia'

29. Lennon MA. 'One in a million: the first community trial of water fluoridation'. Bull World Health Organ. 2006;84(9):759-60.

30. Dr. Julie A. Varner, EPA neurotoxicologist, Binghamton University, Binghamton, N.Y., Karl F. Jensen, William Horvath, Robert L. Isaacson, Brain Research, Vol.784:1998, Elsevier Science. / 'Chronic administration of aluminum-fluoride or sodium-fluoride to rats in drinking water: alterations in neuronal and cerebrovascular integrity'. An animal study links low levels of fluoride in water to brain damage [Brain Res. 784, 284 (1998)]. "Fluoride in water may complex with the aluminum in food and enable it to cross the blood-brain barrier. Both treated groups also suffered neural injury and showed increased deposits of β -amyloid protein in the brain, similar to those seen in humans with Alzheimer's disease. While the small amount of AIF₃...required for neurotoxic effects is surprising, perhaps even more surprising are the neurotoxic effects of NaF at 2.1 ppm."

Following the Varner, et al aluminium fluoride studies in which 80% of the experimental rats died before the end of the experiment the United States Environmental Protection Agency was sufficiently alarmed to push the National Toxicology Program (NTP) to do further research.

Varner and associates appear to have found TOXIC SYNERGISTIC ACTION between FLUORIDE and ALUMINIUM in drinking water. This has now been made a part of PUBLIC RECORD in the US FEDERAL REGISTER as of December 4, 2000. The National Institute of Environmental Health Sciences concurs with the EPA and has formally called for NTP to commission studies.

For the first time, synergistic action is officially acknowledged, along with the fact that FLUORIDE in the water COMBINES WITH OTHER MINERALS.

31. ALUMINUM TRIFLUORIDE / Fluorine can also bond with aluminum. Aluminum has three extra electrons and will easily let the Fluorine ion use them. Since Aluminum has three, that means three Fluorines can bond. They make the formula AlF_3 , also known as Aluminum trifluoride.

32. Lenntech BV Water Treatment Solutions, Rotterdam The Netherlands.
Fluorine reacts so readily with almost any substance it contacts that chemists were not successful in isolating pure fluorine until 1886, although its existence in compounds had been known for many years.

33. Varner, Horvath et al. 1994; Varner, Jensen et al. 1998

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