Citizens for Safe Drinking Water • References

1. Color photographs of "Very Mild" dental fluorosis.

   Illustrates the injurious effect of Dental Fluorosis; has statistics and classification criteria.

2. Graham J et al. Highlights in North American Litigation During the Twentieth Century on Artificial Fluoridation of Public Water Supplies. *Journal of Land Use & Environmental Law*; 14: 195-248, Spring 1999.

3. Preface. Public Health Goal for FLUORIDE in Drinking Water. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. December 1997.

   Standards for drinking water – protecting all individuals in the population from adverse effects, with a margin of safety that is protective over an entire lifetime.

4. Populations That Are Unusually Susceptible. *Fluorides, Hydrogen Fluoride, and Fluorine*: A Toxicological Profile by the U.S. Dept. of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR) TP-91/17, p 112, Sec. 2.7 (Health Impacts), April 1993.

   "Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds."

5. National Institute of Diabetes and Digestive and Kidney Diseases, U.S. Dept. of Health & Human Services. Letter to W. Silko. January 4, 1991.

   Fluoride levels in water are set according to normal consumption of water.

6. How Might I Be Exposed to Fluorine, Hydrogen Fluoride, or Fluorides? *Fluorides, Hydrogen Fluoride, and Fluorine*: A Toxicological Profile by the U.S. Dept. of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR) TP-91/17, pp. 3-4, Section 1.2, Paragraph 7. April 1993.

   Water fluoridation goal of delivering 1 mg of fluoride to a child per day has already been achieved in non fluoridated regions (p. 4).

7. Summary – Estimated daily fluoride intake of children. Review of Fluoride Benefits and Risks, U.S. Department of Health and Human Services; Table 10 p. 16, 1991.

   Estimates daily intake of children in a non fluoridated city is 0.95 to 2.3 mg/day; in a fluoridated city, 0.90 to 3.6 mg/day. Estimated daily intake of adults in a non fluoridated city is 0.88 to 2.2 mg/day and in a fluoridated city 1.58 to 6.6 mg/day.

8. Stannard JG et al. Fluoride levels and fluoride contamination of fruit juices. *Journal of Clinical Pediatric Dentistry*; 16: 38-40, 1991.

   Fluoride levels ranged from o.15 to 6.80 mg/L. 42% had more than 1ppm of fluoride.

9. Kiritsy MC et al. Assessing fluoride concentrations of juices and juice-flavored drinks. *Journal of the American Dental Association*; 127: 895-901, 1996.

Results of fluoride analyzation for 532 juices and juice drinks; fluoride ion concentration ranged from 0.02 to 2.80 parts per million.

10. Heilman JR et al. Fluoride concentrations of infant foods. *Journal of the American Dental Association*; 128: 857-63, 1997.

Analyzing the fluoride concentrations of 238 commercially available infants foods; fluoride concentrations ranged from 0.01 to 8.38 micrograms per gram, (ppm).

11. Heilman JR et al. Assessing fluoride levels of carbonated soft drinks. *Journal of the American Dental Association*; 130: 1593-99, 1999.

Examined the fluoride levels of 332 soft drinks; the fluoride levels of the products ranged from 0.02 to 1.28 ppm.

12. Burgstahler AW et al. Fluoride in California wines and raisins. *Fluoride*; 30: 142-46, 1997.

The water-extractable fluoride content of five brands of California raisins varied from 0.83 to 5.20 ppm (mean 2.71 ppm); elevated fluoride levels appear to result from pesticide use of cryolite (Na_3AlF_6) in the vineyards.

13. a. Sequoia Analytical, Redwood City CA, May 1998.
    b. Expert Chemical Analysis, Inc., San Diego CA, June 1998.
    c. Jupiter Environmental Laboratories, Inc., Jupiter FL, June 1998.
    d. Analytica Alaska Inc., Juneau AK, September 1998.
    e. Northwest Testing Laboratories, Portland OR, July 1960.
    f. U.S. Environmental Protection Agency (EPA) Pesticide Tolerance for residues of the insecticidal fluorine compounds cryolite and/or synthetic cryolite (sodium aluminum fluoride). Effective Dec. 5, 1997 to Nov. 21, 2001.
    g. U.S. EPA proposed tolerances for residues of cryolite and/or synthetic cryolite. Aug, 1997.

Laboratory results of fluoride content from wide variety of foods and beverages,concentrations in widely consumed foods suggest there is no segment of the population that is deprived of access to fluoride in dosages equal to or exceeding the amounts intended for delivery through fluoridation.

14. Featherstone JDB. The science and practice of caries prevention. Cover Story, *Journal of the American Dental Association*; 131: 887-899. July 2000.

Fluorides protective mechanism derives from topical application not in digestion. "Even when the outer enamel has higher fluoride levels, such as 1000 ppm, it does not measurably withstand acid-induced dissolution any better than enamel with lower levels of fluoride."

15. Featherstone JDF. Prevention and reversal of dental caries: role of low level fluoride. *Community Dentistry and Oral Epidemiology*; 27: 31-40, 1999.

The culmination of scientific evidence shows that, "The level of fluoride incorporated into dental material by systemic ingestion is insufficient to play a significant role in caries prevention."

16. Achievements in Public Health, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries. Centers for Disease Control and Prevention, *Morbidity and Mortality Weekly Report*. 48: 933-940, October 22, 1999.

Description of the physiological mechanism by which fluoride acts topically, rather than systemically.

17. Lilienthal B et al. Investigations of the anti-enzymatic action of fluoride at the enamel surface. *Journal of Dental Research*; 35: 189-196, April 1956.

Results of the current investigations do not support an anti-enzymatic effect of fluoride as a mechanism of inhibition of dental caries.

18. Cheyne VD. Influence of fluorine in mottled teeth on dental caries. *Proceedings of the Society for Experimental Biology and Medicine*; 67: 149-151. January-April, 1948.

Animal study what influence fluorine or fluoridated teeth have on protection against caries, normal saliva without fluoride exposure was proven to be seven more times more protective than fluoride exposure without saliva.

19. Carlos JP. Comments on Fluoride. *The Journal of Pedodontics*; 135-6, Winter 1983.

In 1970 a European cariologist of great reputation stated that the mechanism of action of fluoride against caries was entirely topical. "Now twelve years later, each year since then the evidence has continued to accumulate to support the hypothesis that the anti-caries mechanism of fluoride is mainly a topical one."

20. Diesendorf M et al. New evidence on fluoridation. *Australian and New Zealand Journal of Public Health*; 21; 187-90, 1997.

Review of scientific literature discussing new evidence on the negligible benefit from ingesting fluoride.

21. Riordan PJ. Fluoride supplements for young children: an analysis of the literature focusing on benefits and risks. *Community Dentistry and Oral Epidemiology*; 27: 72-83, 1999.

Analysis of methodology in early (1940-1970) clinical trials and recent (1980- 1999) studies with fluoride supplementation –71 references. "There does not seem to be scientific evidence to support the widespread use of fluoride supplements by young children, even in the absence of fluoride in the water."

22. Wang NJ et al. Fluoride supplements and caries in a non-fluoridated child population. *Community Dentistry and Oral Epidemiology*; 27: 117-23, 1999.

In Norway there is no water fluoridation and little naturally occurring fluoride. There has been a continuous decline in caries experience of Norwegian schoolchildren since the early 1970's The principal effect on permanent teeth is presumed to be topical and post-eruptive.

23. Ziegelbecker R et al. WHO data on dental caries and natural water fluoride levels. *Fluoride*; 26: 263-6, 1993.

"Data collected in 1987 from World Health Organization data banks contradict earlier reports of an inverse relationship between dental caries prevalence and drinking water fluoride levels."

24. Yiamouyiannis JA. Water fluoridation and tooth decay: Results from the 1986-1987 National Survey of U.S. Schoolchildren; *Fluoride*; 23: 55-67, April 1990.

Data analyzed (tables, figures) from dental examinations in 84 areas throughout the United States, from areas fluoridated for 17 years and more, never been fluoridated or partially fluoridated. Only among 5-year-old children were decay rates significantly lower in fluoridated areas than in non-fluoridated areas; however, it must be noted that this difference disappeared after two years, probably as the result of a scientifically recognized delay in eruption of permanent teeth in children exposed to fluoridation.

25. Colquhoun J. Child dental Health differences in New Zealand. *Community Health Studies;* X1: 85-90, plus two page postscript, 1987.

Reports: Data collected on 80,000 children by the School Dental Service suggest that decay rates of children 6 to 13 years are not closely related to the presence or absence of water fluoridation, and the census information suggests that decay rates could be related to socio-economic factors.

26. Ziegelbecker R. Fluoridated water and teeth. *Fluoride*; 14:123-28, July 1981.

"The prevalence of dental caries in children aged 12-14 from 136 communities with naturally occurring fluoride of 0.15 to 5.8 ppm fluoride shows no relationship with the concentration of fluoride."

27. Kumar JV et al. Recommendations for Fluoride Use in Children. *New York State Dental Journal*; 40-47, February 1998.

1998 review of the fifty year experience of the two original New York cities chosen for comparison in tooth decay rates: "Among 7-14 year old lifelong residents of fluoridated Newberg, New York, mean number of decayed, missing and filled permanent teeth exceeded that of non fluoridated Kingston, New York."

28. Diesendorf M. The mystery of declining tooth decay. *Nature*; 322: 125-129, July 10, 1986.

Reporting: "Large temporal reductions in tooth decay, which cannot be attributed to fluoridation, have been observed in both unfluoridated and fluoridated areas of at least eight developed countries over the past thirty years".

29. De Liefde B. The decline of caries in New Zealand over the past 40 years. *New Zealand Dental Journal*; 94: 109-113, September 1998.

Reports of the decline in caries in New Zealand over the past 40 years.

30. Steelink C. Fluoridation controversy. *Chemical & Engineering News*; Letters, July 27, 1992.

Tucson, Arizona, data of dental screenings for 26,000 elementary school children was reviewed; the incidence of tooth decay was plotted versus fluoride content in the local water, a positive correlation was revealed, i.e., the more fluoride a child drank, the more cavities appeared in the teeth.

31. Kunzel W et al. Caries Prevalence after Cessation of Water Fluoridation in La Salud, Cuba. *Caries Research*; 34: 20-25, 2000.

Report, "In 1979, following the cessation of drinking water fluoridation, DMFT and DMFS values remained low for the 6-9 year olds, appeared to decrease for the 10-11 year olds, significantly decreased in the 12-13 olds, while the percentage of caries-free children increased up to 55.2%.

32. Seppa L et al. Caries frequency in permanent teeth before and after discontinuation of water fluoridation in Kuopio, Finland. *Community Dentistry and Oral Epidemiology*; 26: 256-62, 1998.

Report: In 1998 on caries frequency in permanent teeth before and after discontinuation of water fluoridation in Kuopio, Finland, "In spite of discontinued water fluoridation, no indication of an increasing trend of caries could be found in Kuopio."

33. Seppa L et al. Caries in the primary dentition, after discontinuation of water fluoridation, among children receiving comprehensive dental care. *Community Dentistry and Oral Epidemiology;* 28: 281-8, 2000.

"Despite discontinuation of water fluoridation , no increases of caries frequency in primary teeth was observed in Kuopio within a three year period."

34. Burt BA et al. The effects of a break in water fluoridation on the development of dental caries and fluorosis. *Journal of Dental Research*; 79(2) 761-769, 2000.

Summerized results: "It was concluded that…the break had little effect on caries…"

35. Black GV et al. Mottled Teeth: An endemic developmental imperfection of the enamel of the teeth heretofore unknown in the literature of dentistry. *The Dental Cosmos*; LVIII(2) 129-136, 1916.

"Mottled teeth can be seen by the naked eye, microscopic and histologic." "When not stained with brown or yellow, they are a ghastly opaque white that comes prominently into notice whenever the lips are opened, which materially injures the expression of the countenance of the individual. When this opaque color is mingled with spots of brown, or a very large proportion of brown, the injury is still greater…One does not have to search for it, for it is continually forcing itself on the attention of the stranger by its persistent prominence…(I)t is a deformity for life. The only escape from the deformity is by the placing of crowns, and possibly bridges or artificial dentures later in life… Every degree of injury, from solidly brown front teeth to the white flecking here and there, is represented.

36. Dental Fluorosis Classification and Criteria by H.T. Dean – 1942. *Review of Fluoride Benefits and Risks.* Department of Health and Human Services, Public Health Service. B-2, February 1991.

The most commonly used method, Dean's 1942 Community Fluorosis Index guarantees under-reporting of the incidence of dental fluorosis by establishing the classification of severity of fluorosis by the second most severely effected tooth, eliminating any scoring of partially erupted teeth regardless of visible confirmation of effect, and not reporting the incidence of the visible display of fluorosis on one tooth.

37. Heller KE et al. Dental caries and dental fluorosis at varying water fluoride concentrations. *Journal of Public Health Dentistry*; 57(3): 136-143, Summer 1997.

According to the report, the incidence of serious fluorosis (two teeth or more) in fluoridated communities was more than double that of non fluoridated communities.

38. Ismail AI et al. Fluoride supplements and fluorosis: a meta-analysis. *Community Dentistry and Oral Epidemiology*; 27: 48-56, 1999.

A meta-analysis in which a total of 14 studies were found in the dental literature that were adequate enough to allow a quantitative estimation of the risk of developing dental fluorosis in users of fluoride supplements; a qualitative review of the studies found a consistent and strong association between the use of fluoride supplements and dental fluorosis.

39. Lalumandier JA et al. The prevalence and risk factors of fluorosis among patients in a pediatric dental practice. *Pediatric Dentistry*; 17(1): 19-25. 1995.

Seven hundred eight (708) patients aged 5-19 years in a pediatric practice in North Carolina were selected …..the finding that three of four (75%) patients in this practice had fluorosis is striking. Of the 708 children, 4.6% presented with TSIF scores of 4 or greater…

40. Warren JJ et al. Fluorosis of the primary dentition: what does it mean for permanent teeth? Cover Story, *Journal of the American Dental Association*; 130: 347-356. March 1999.

Association of different water fluoride levels in certain areas, also Sweden and United Kingdom with percentage of primary-tooth fluorosis and development of fluorosis in permanent incisors.

41. Pendrys DG. Risk of fluorosis in a fluoridated population: Implications for the dentist and hygienist. Cover Story, *Journal of the American Dental Association*; 126: 1617-1624, December 1995.

Reports that the prevalence of enamel fluorosis has increased in optimally fluoridated areas in recent years. The findings suggest that dental practitioners could have an important impact on reducing the prevalence of enamel fluorosis by guiding the public toward the most appropriate use of fluoride products.

42. Levy SM et al. Infants' fluoride ingestion from water, supplements and dentifrice. Cover Story, *Journal of the American Dental Association*; 126: 1625-1632, December 1995.

Longitudinal study of fluoride intake in infants from birth to 9 months of age. The article concluded that intake from water, supplements and detifrice (i.e. total exposure from all sources) exceeded the recommended "optimal intake."

43. Risk factors in dental fluorosis. *Health Effects of Ingested Fluoride*, Committee on Toxicology, National Research Council; p. 44, 1993.

Data suggested that dental fluorosis is more prevalent among African- Americans than among other races or ethnic groups in the same community: Russel (1962), Butler et al. (1985), Williams and Zwemer (1990), and Manji et al. (1986).

44. Russell AL. Dental fluorosis in Grand Rapids during the seventeenth year of fluoridation. *Journal of the American Dental Association*; 65: 608-12, 1962.

In Grand Rapids, Michigan (the first city to be fluoridated in the U.S.), 7.1 percent of white children with continuous residence, and 15.9 percent of African-American children with the same history, showed one of the positive signs of fluorosis.

45. Butler WJ et al. Prevalence of dental mottling in school-aged lifetime residents of 16 Texas communities. *American Journal of Public Health*; 75: 1408-12, 1985.

…substantial differences in the prevalence of mottling among communities with the same fluoride level. …..Both race and air conditioning were individual-level predictors of mottling…..total dissolved solids and zinc were water quality variables. Table of prevalence: Risk factors to predict mottling, and observed mottling.

46. Williams JE et al. Community water fluoride levels, preschool dietary patterns, and the occurrence of fluoride enamel opacities. *Journal of Public Health Dentistry*; 50: 276-81, 1990.

Three hundred seventy four (374) 12-14 year old life-long residents were examined to determine modifies tooth surface index of fluorosis, in city (Augusta, GA) fluoridated at levels of 0.9 to 1.2 ppm and county (Richmond County, GA) fluoridated at levels which fluctuated between 0.2 to0.9 ppm. 81% of the city children had fluorosis ranging from very mild to moderate-severe.

47. Manji F et al. Enamel changes in two low-fluoride areas of Kenya. *Caries Research*; 20: 371-80, 1986.

Surprisingly high prevalence and severity of opaque enamel changes in the permanent dentition of 317 children. Tea is consumed from approximately 12-24 months of age about every 2nd day in this study area.

48. Canadian Dental Association (CDA) Statement on Fluoridation: Considerations Regarding Fluoride Supplementation. Approved by Resolution 2000.06, CDA Board of Governors, March, 2000.

The CDA revised its recommendations for controlled-dose fluoride. "The availability of fluorides from variety of sources…dentist needs to take into account… this is particularly true of children under the age of 6, where exposure to more fluoride than is required simply to prevent dental caries can cause dental fluorosis."

49. Intervention: Fluoride Supplementation. *Journal of the American Dental Association;* 126: 19-Supplement, June 1995.

In 1994, the American Dental Association, Council on Scientific Affairs revised recommendations for controlled-dose fluoride in a non fluoridated community due to increased incidence of dental fluorosis and increased fluoride exposures from non-water sources. The recommendations were revised as follows: Birth to 6 month, none; 6 months to 3 years, 0.25 mg/day i.e.. the equivalent of one cup of fluoridated water. 3 years to 6 years, 0.50 mg/day i.e. the equivalent of two cups of fluoridated water. 6 years to 16 years, 1.00 mg/day i.e. 4 cups of fluoridated water. Limitations: Prescribing professionals must obtain a thorough fluoride history and evaluate all sources of fluoride.

50. Fluoride Supplementation for Children: Interim Policy Recommendations (RE9511). American Academy of Pediatrics. *Pediatrics*; 95(5): May 1998.

The American Academy of Pediatrics, Committee on Nutrition, republished their revised recommendations for controlled dose fluoride: "Existing recommendations have recently been reassessed because of what seems to be an increased incidence of dental fluorosis in children living in the United States. Fluoride supplementation is no longer recommended from birth, and doses have been decreased during the first 6 years of life: 6 months to 3 years, 0.25 mg/day; 3 years to 6 years, 0.50 mg/day; and 6 years to 16 years, 1.0 mg/day.

51. Gray AS. Fluoridation: Time for a new base line? *Journal of the Canadian Dental Association*; No. 10: 763-765, 1987.

Review of current findings in British Columbia and other locals that DMF rates in children are falling drastically…Recent reports indicate that today, 83 percent of all caries in North American children are pit and fissure type caries; pit and fissure cavities aren't considered to be preventable by fluorides, they are prevented by sealants.

52. Seholle RH. Preserving the perfect tooth. Editorial. *Journal of the American Dental Association*; 108: 448, March 1984.

It is estimated that 84% of the caries experience in the 5 to 17 year-old population involves tooth surfaces with pits and fissures; although fluorides cannot be expected appreciably to reduce our incidence of caries on these surfaces, sealants can.

53. Toward Improving the Oral Health of Americans: an Overview of Oral Health Status, Resources, and Care Delivery. Oral Health Coordinating Committee, Public Health Service. *Public Health Reports*; 108(6): 657-672, Nov-Dec 1983.

Statistics about oral health in different age, income and ethnic populations including costs for treatment. "Fluoridation and the use of other fluorides have been successful in decreasing the prevalence of dental cries on the smooth surfaces of the teeth. Unfortunately, these efforts have much less effect on dental caries that occur in the pits and fissures of teeth, particularly on the biting surfaces of teeth where more than 85 percent of dental caries now occur."

54. Dental Sealants. Testimony of Dr. Harald Loe, Director of the National Institute of Dental Research. Hearings: Subcommittee of the Committee on Appropriations, House of Representatives. P. 677, March 8, 1984.

"Let me begin by saying that fluorides are most effective in preventing decay on the smooth surfaces of teeth. However, the chewing surfaces of posterior teeth are not smooth. They have crevices and pits and it is our experience that fluorides don't really get access to these pitted areas. Today these are the tooth surfaces that are most prone to develop cavities."

55. Seal Out Dental Decay. Dental Progress: Facts from the National Institute of Dental Research. Marshall Independent, Marshall, Minnesota. May 28, 1992.

"Nearly 90 percent of cavities in school children occur in the surfaces of teeth with vulnerable pits and grooves, where fluoride is least effective."

56. Raloff J. Dental study upsets the accepted wisdom. *Science News*; 125(1) p.7 January 7, 1984.

The National Preventive Dentistry focused on four caries-prevention techniques beginning 1977 with 30,000 children and describes the need for sealants, "... a plastic-like coating applied to the chewing surfaces of back teeth and to pits or fissures on the sides of teeth (these surfaces are most prone to decay and ones which fluorides cannot protect adequately)...

57. Treating caries as an infectious disease. *Journal of the American Dental Association*; 126: 2-24 Supplement, June 1995.

"Dental caries in the permanent dentition of children is found predominantly on surfaces with pits and fissures." The scientific literature has suggested for many years that a risk based assessment of an individual patient's caries history and status is an important prerequisite for appropriate preventative or treatment actions.

58. McKay FS. The establishment of a definite relation between enamel that is defective in its structure, as mottled enamel, and the liability to decay. *The Dental Cosmos*; LXXI(8): 747-755, August 1929.

"Regardless of the degree or perfection of calcification of the enamel of the teeth examined, the decays as found are practically limited to the pits and fissures..."

59. Dilley GJ et al. Prolonged Nursing Habit: A Profile of Patients and Their Families. *Journal of Dentistry for Children*; 102-108, March-April, 1980.

Fluoride, in concentrations found in fluoridated water, is not effective in preventing baby bottle tooth decay.

60. Kelly M et al. The Prevalence of Baby Bottle Tooth Decay Among Two Native American Populations. *Journal of Public Health Dentistry*; 47: 94-97, 1987.

Regardless of water fluoridation, study participants had baby bottle tooth decay in high percentages.

61. Kong D. City to launch battle against dental 'crisis'. Boston Globe, Nov 27, 1999.

Although fluoridated in 1978, Boston's students have almost four times more untreated cavities than the national average.

62. Duperon DF. Early Childhood Caries: A Continuing Dilemma. *California Dental Association Journal*; 23: 15-25, 1995.

The primary precipitating factor in baby bottle tooth decay is prolonged use of the breast or bottle past 9 to 12 months of age.

63. Barnes GP et al. Ethnicity, Location, Age, and Fluoridation Factors in Baby Bottle Tooth Decay and Caries Prevalence of Head Start Children. *Public Health Reports*; 107: 167-73, 1992.

Children attending Head Start Centers were tested for age, ethnicity, location, and fluoridation factors; their baby bottle tooth decay and caries prevalence had no significant differences based on fluoride status.

64. Watson MR et al. Caries conditions among 2-5 year-old immigrant Latino children related to parents' oral health knowledge, opinions and practices. *Community Dentistry and Oral Epidemiology*; 27: 8-15, 1999.

This study, in fluoridated Washington D.C., shows 47% of children having experienced dental caries in their primary teeth and correlates it with the oral health knowledge, opinions and practices of their parents.

65. Weinstein P et al. Mexican-American parents with children at risk for baby bottle tooth decay: Pilot study at a migrant farmworkers clinic. *Journal of Dentistry for Children;* 376-83, Sept-Oct, 1992.

Mexican-American parents had a regimen of putting fluoride drops in their children's bottles once a day, but 37 of 125 still developed baby bottle tooth decay.

66. Tang JMW et al. Dental Caries Prevalence and Treatment Levels in Arizona Preschool Children. *Public Health Reports*; 112: 319-29, 1997.

Through surveys of Head Start children in Arizona, artificial fluoridation was shown ineffective to prevent tooth decay when children were compared in non-fluoridated communities.

67. Johnsen DC et al. Background comparisons of pre-3 1/2 year old children with nursing caries in four practice settings. *Pediatric Dentistry*; 6: 50-54, 1984.

A study conducted within private practices in four geographically different, major cities (one unfluoridated) were compared for many factors, and nursing caries was noted to be related to parental overindulgence or lack of control.

68. Von Burg MM et al. Baby Bottle Tooth Decay: A Concern for All Mothers. *Pediatric Nursing*; 21: 515-519, 1995.

"Data from Head Start surveys shows that the prevalence of baby bottle tooth decay is about three times the national average among poor urban children, even in communities with a fluoridated water supply."

69. O'Sullivan DM et al. Dental Caries Prevalence and Treatment among Navajo Preschool Children. *Journal of Public Health Dentistry*; 54: 139-44, 1994.

Navajo preschool children living on fluoridated reservations demonstrated early caries onset and high caries prevalence.

70. Febres C et al. Parental awareness, habits, and social factors and their relationship to baby bottle tooth decay. *Pediatric Dentistry*; 19: 22-27, 1997.

In fluoridated Houston Texas, Febres shows that parental awareness, habits and social factors are related to baby bottle tooth decay.

71. Blen M et al. Dental caries in children under age three attending a university clinic. *Pediatric Dentistry*; 21: 261-64, 1999.

In a study of 369 children who were treated at the University of Texas- Houston Health Center (Houston is fluoridated), 56% between 2 and 3 years old had decay. Among the 3 year olds, 46% had more than three decayed teeth.The children without decay were weaned from the bottle at an average age of 10 months. Those with severe decay were weaned at 16.9 months.

72. Tsubouchi J et al. A study of dental caries and risk factors among Native American infants. *Journal of Dentistry for Children*; 283-87, July-August, 1995.

Tulalip Indian infants in Marysville, Washington: children using the bottle were significantly associated with having caries compared to those not using the bottle: 63.9 percent vs. 29.3 percent respectively.

73. Kelly JV. Letter to David Kessler, Commissioner, U.S. Food and Drug Administration. June 3, 1993. (Paragraphs 114 and 115 refer to three additional items of correspondence dated June 7, 1993, June 8, 1993, and Feb. 21, 1997.

Correspondence between John Kelly of the New Jersey Assembly and David Kessler of the Food and Drug Administration regarding fluoride supplements for children: "...there are no studies to demonstrate either the safety or effectiveness of these drugs, which FDA classifies as unapproved new drugs. I am therefore requesting that the public interest be served and the products be removed from the market immediately."

74. Kelly, JV. Facsimile to Frank Fazzari, Prescription Drug Compliance Branch, FDA, June 7, 1993.
Fazzari F. Letter to Assemblyman John V Kelly, June 8, 1993.
Fazzari F. Letter to Assemblyman John V Kelly, Feb. 21, 1997.
Kelly JV. Letter to Jane Henney, Commissioner, U.S. Food and Drug Administration. October 26, 2000.

Correspondence between John Kelly of the New Jersey Assembly and Jane Henry of the FDA; petitioning for the removal of fluoride supplement products due to concerns about safety and effectiveness.

75. Simonin P et al. Comparative Toxicity of Inorganic Fluorides. Table 7-1. Toxicite brute des derives fluores. *C.R.Seances Soc. Biol. Fil.,* 124:133-134, 1937. Fluoridation:The Great Dilemma. Waldbott et al. Coronado Press, Inc., 1978.

The products used within fluoridation programs rate much higher in toxicity than naturally-occuring calcium fluoride.

76. Simonin P et al. Lethal Dose of Fluorides in Adult Guinea Pigs. Table 7-2. Toxicite brute des derives fluores. *C.R.Seances Soc. Biol. Fil.,* 124:133-134, 1937. Fluoridation:The Great Dilemma. Waldbott et al. Coronado Press, Inc., 1978.

A comparison of lethal doses of fluorides in guinea pigs demonstrates that the products used for fluoridation are at least twenty times more lethal than calcium fluoride.

77. Fox JC, EPA Assistant Administrator. Letter of response to Congressman Ken Calvert, June 23, 1999.

In a response to Ken Calvert, Chairman, Subcommittee on Energy and The Environment, U.S. House of Representatives, Washington, the EPA wrote: "In collecting data for a fact sheet, EPA was not able to identify chronic studies for these [fluoridation] chemicals."

78. Sensenbrenner FJ, Chairman, House Committee On Science. Letter to Maureen Jones, December 13, 1999.

Congressman Sensenbrenner responded in a letter to Maureen Jones, dated December 13, 1999: "I am sorry to say that the EPA's answers were extremely insufficient, and as such, the investigation will continue."

79. Hazan S, General Manager, NSF Drinking Water Additives. Letter of response to Congressman Ken Calvert, July 7, 2000.

No studies on silicofluorides have been submitted to the National Sanitation Foundation – a self-regulating organization that provides testing and standards for the products that are used in water treatment.– under the Confidential Business Information protection.

79. Arsenic at 1.66 ppb

Arsenic is the most common contaminant found in hydrofluosilicic acid, with after-dilution levels reaching as high as 1.66 parts per billion in the water.

80. Hirzy JW. Statement of Dr. J. William Hirzy, National Treasury Employees Union Chapter 280, Before the Subcommittee on Wildlife, Fisheries and Drinking Water, United States Senate. June 29, 2000.

Dr. Hirzy reiterated evidence of increased levels of lead found in children's blood when silicofluorides are used in public water systems.

Gosselin RE. Clinical Toxicology of Commercial Products, Fifth Edition. 1984.

Fluoride is slightly less toxic than arsenic and more toxic than lead.

EPA/NSF Standard 60, U.S. EPA National Primary Drinking Water Standards.

The maximum contaminant level for lead is 15 parts per billion (ppb) and 5 ppb for arsenic; yet the maximum contaminant level for fluoride has been established by U.S. EPA at 4000 ppb.

81. Koplan JP, Director, Centers for Disease Control. Letter of response to Congressman Ken Calvert, August 8, 2000.

The CDC admits the harm posed by hydrofluorosilicic acid or other silicofluorides saying "it does not offer guidance in situations where intervention to reduce a particular health risk would increase another health risk at the same time."

82. Proceedings, Fourth Annual Conference of State Dental Directors with The Public Health Service and The Children's Bureau. Federal Security Building, Washington, D. C. June 6-8, 1951.

"Now, in regard to toxicity – I noticed that Dr. Bain used the term , 'adding sodium fluoride.' We never do that. That is rat poison. You add fluorides..."

83. Taylor A. Sodium Fluoride in the Drinking Water of Mice. *Dental Digest*; 170-172, April 1954.

Cancer-prone mice drinking fluoridated water at 1 and 10 ppm, introduced as NaF, had statistically significant shorter life spans than mice drinking distilled water.

84. Taylor A et al. Effect of Sodium Fluoride on Tumor Growth. *Proceedings of the Society for Experimental Biology and Medicine*;119: 252-255, May—August-September, 1965 (inclusive).

Mice with implanted tumors, drinking fluoridated water at 1 ppm, introduced as NaF, had and average increase in tumor growth of 15%; mice drinking fluoridated water at 2 ppm had and average increase in tumor growth of 27%, compared to control mice drinking distilled water.

85. Jones CA et al. Sodium fluoride promotes morphological transformation of Syrian hamster embryo cells. *Carcinogenesis*; 9(12): 2279-84, 1988.

Sodium fluoride can enhance the frequency of morphologically transformed cell clones, even when the sodium fluoride treatment was delayed for days after carcinogen treatment.

86. Emsley J et al. An Unexpectedly Strong Hydrogen Bond: Ab Initio Calculations and Spectroscopic Studies of Amide-Fluoride Systems. *Journal of the American Chemical Society*; 103(1): 24-28, 1981.

The fluoride ion has a strong potential for binding with DNA, explaining why it could cause genetic damage, birth defects, allergic responses and cancer.

87. Edwards SL et al. The Crystal Structure of Fluoride-inhibited Cytochrome c Peroxidase. *The Journal of Biological Chemistry*; 259(21): 12984-88, 1984.

Fluoride binding induced significant perturbations in the enzyme structure of cytochrome c peroxidase, altering the shape of the active site and altering the enzyme's activity.

88. Mohamed AH et al. Cytological Effects of Sodium Fluoride On Mice. *Fluoride*; 15(3): 110-118, July 1982.

Against controls drinking distilled water, male mice drinking water fluoridated from 1 to 200 ppm, introduced as NaF, suffered extensive breaking of chromosomes and other chromosomal abnormalities in bone marrow and testes.

89. Tsutsui T et al. Cytotoxicity, chromosome aberrations and unscheduled DNA synthesis in cultured human diploid fibroblasts induced by sodium fluoride. *Mutation Research*; 129: 193-198, 1984.

Sodium fluoride causes DNA damage in human diploid fibroblasts in culture.

90. Tsutsui T et al. Induction of unscheduled DNA synthesis in cultured human oral keratinocytes by sodium fluoride. *Mutation Research*; 140: 43-48, 1984.

Sodium fluoride causes DNA damage in cultured human oral keratinocytes.

91. Tsutsui T et al. Sodium Fluoride-induced Morphological and Neoplastic Transformation, Chromosome Aberrations, Sister Chromatid Exchanges, and Unscheduled DNA Synthesis in Cultured Syrian Hamster Embryo Cells. *Cancer Research*; 44: 938-941, March 1984.

Sodium fluoride is genotoxic and capable of inducing neoplastic transformation of Syrian hamster embryo cells in culture.

92. Editorial Essay. Jord Jauncey and Justice Flaherty: Opposing Views On The Fluoridation-Cancer Link. *Fluoride*; 17(2): 63-71, April 1984.

Description applies to #93 and #94 also. An evaluation of massive epidemiological data among 20 large American cities from 1940 to 1968 demonstrates an increase in human cancer mortality on the order of 300 excess cancer deaths per year per 1,000,000 persons after 15-20 years of exposure to artificial fluoridation of public water supplies.

93. Burk D. Statement of Dean Burk, National Cancer Institute, 1939-1974 (RET.) Before The Environmental Protection Agency's Hearing June 17-18, 1985 On EPA's Proposed Rulemaking On Fluoride National Primary Drinking Water Regulations. (As printed in the Federal Register, Part II, May 14, 1985, 40 C FR)

94. Graham JR et al. A Current Restatement and Continuing Reappraisal Concerning Demographic Variables in American Time-Trend Studies on Water Fluoridation and Human Cancer. *Proceedings of the Pennsylvania Academy of Science;* 61(2): 138-146, 1987.

95. Bucher JR et al. Results and Conclusions of the National Toxicology Program's Rodent Carcinogenicity Studies with Sodium Fluoride. *Int. J. Cancer*; 48: 733-737, 1991.

A fluoride-related statistically significant dose-response trend of osteosarcomas within the bone in male rats was observed.

96. Marcus WL., Senior Science Advisor Criteria & Standards Division, Office of Drinking Water, U.S. EPA. Memorandum to Alan Hais, Acting Director Criteria & Standards Division, Office of Drinking Water, U.S. EPA. May 1, 1990.

Dr. William Marcus, U.S. EPA Senior Science Advisor, requested an independent board of pathologists to re-examine Battelle's slides and review cancer findings. Dr. Marcus was subsequently fired, and ultimately won a whistleblower lawsuit when the Court determined that EPA had acted in retaliation for his request.

97. Cohn PD. A Brief Report on the Association of Drinking Water Fluoridation and the Incidence of Osteosarcoma Among Young Males. New Jersey Department of Environmental Protection and Energy and the New Jersey Department of Health. November 8, 1992.

This demonstrates a positive relationship between water fluoridation and osteosarcomas within the bone in men.

98. Yiamouyiannis JA. Fluoridation and Cancer: The Biology and Epidemiology of Bone and Oral Cancer Related To Fluoridation. *Fluoride*: 26(2): 83-96, 1993.

This shows a positive relationship between water fluoridation and osteosarcomas within the bone in men, as well as an increase in oral cancers.

99. Genotoxicity of Fluoride. Appendix H. *Review of Fluoride, Benefits and Risks*. Department of Health and Human Services, Public Health Service, February 1991.

Fluoride can cause chromosome aberrations in cultured rodent and human cells.

Hoover RN et al. Fluoridation of Drinking Water and Subsequent Cancer Incidence and Mortality. Appendix E. *Review of Fluoride, Benefits and Risks*. Department of Health and Human Services, Public Health Service, February 1991.

100. Spittle B. Psychopharmacology of fluoride: a review. *International Clinical Psychopharmacology*; 9: 79-82, 1994.

Study suggests possible mechanisms where fluoride affects brain function, inhibiting cortical adenylyl cyclase activity and increasing phosphoinositide hydrolysis.

101. Mullenix PJ et al. Neurotoxicity of Sodium Fluoride in Rats. *Neuro-toxicology and Teratology*; 17(2): 169-177, 1995.

Animals exposed to fluoride prenatally during certain gestation periods became permanently hyperactive, while animals exposed after birth displayed behavior that layman term "the rat version of couch potato."

102. Kay AR et al. Intracellular Fluoride Alters the Kinetic Properties of Calcium Currents Facilitating the Investigation of Synaptic Events in Hippocampal Neurons. *The Journal of Neuroscience*; 6(10): 2915-20, October 1986.

Intracellular fluoride alters the kinetic properties of calcium currents, facilitating the investigation of synaptic events in the hippocampal neurons.

103. Strunecka A et al. Pharmacological and Toxicological Effects of Alumino-fluoride Complexes. *Fluoride*; 32(4): 230-242, 1999.

Aluminofluoride complexes have pharmacological and toxicological effects that suggest a strong and potential danger for living organisms, including humans.

104. Guan Z-Z et al. Influence of Chronic Fluorosis on Membrane Lipids in Rat Brain. *Neurotoxicology and Teratology*; 20(5): 537-542, 1998.

Brain membrane lipids in rats were decreased by fluoride treatment; the protein content of the brain with fluorosis decreased.

105. Luke JA. Effects of fluoride on the physiology of the pineal gland in the Mongolian gerbil. *Fluoride*; 31(3): August 1998.

Fluoride inhibits the pineal gland melatonin synthesis in the immature gerbil, accelerating the onset of puberty.

105. Luke JA. Effect of Fluoride on the Physiology of the Pineal Gland. *Caries Research*; 28: 204, 1994.

106. Hilleboe HE et al. Newburgh-Kingston caries-fluorine study: final report. *The Journal of the American Dental Association;* 52: 290-325, March 1956.

The mean age of onset of menstruation in fluoridated Newburgh was 12 years, 0 months; in non-fluoridated uton the mean age was 12 years, 5 months.

107. Varner JA et al. Chronic administration of aluminum-fluoride or sodium-fluoride to rats in drinking water: alterations in neuronal and cerebrovascular integrity. *Brain Research*; 784: 284-298, 1998.

Administration of fluoridated water to rats resulted in increased aluminum concentration and morphological changes in brain tissue similar to those seen in Alzheimer's disease.

108. Isaacson RL et al. Toxin-Induced Blood Vessel Inclusions Caused by the Chronic Administration of Aluminum and Sodium Fluoride and Their Implications for Dementia. *Annals of the New York Academy of Sciences*; 825: 153-166, October 15, 1997.

The bioavailability of aluminum in the rat brain is enhanced by low doses of fluoride.

109. Kanaho Y et al. Mechanism of Inhibition of Transducin GTPase Activity by Fluoride and Aluminum. *The Journal of Biological Chemistry*; 260(21): 11493-7, September 25, 1985.

Fluoride inhibits GTP-GDP exchange, a biochemical reaction important in vision.

110. Lu Y et al. Effect of High-Fluoride Water On Intelligence In Children. *Fluoride*; 33(2): 74-78, 2000.

I.Q. scores were ten points lower in children drinking fluoridated water (3.15 ppm) compared to children drinking minimally fluoridated water (0.37 ppm).

111. Li XS et al. Effect of Fluoride Exposure On Intelligence In Children. *Fluoride*; 28(4): 189-192, 1995.

The intelligence quotient (I.Q.) of children living in areas with a medium or severe prevalence of fluorosis was lower than that of children living in areas with only slight or no fluorosis.

112. Zhao LB et al. Effect of a High Fluoride Water Supply on Children's Intelligence. *Fluoride*; 29(4): 190-192, November 1996.

Children consuming water with 4.12 ppm fluoride had a significantly lower I.Q. compared to children consuming water with 0.91 ppm fluoride.

113. Hirzy JW. Letter to Jeff Green, Citizens for Safe Drinking Water. July 2, 1997.

J. William Hirzy, Ph.D., Sr. Vice-President of the union that consists of and represents all of the scientists, lawyers, engineers and other professionals at EPA headquarters in Washington DC, announced, "Our members' review ofthe body of evidence over the last eleven years, including animal and human epidemiology studies, indicate a causal link between fluoride/fluoridation and cancer, genetic damage, neurological impairment, and bone pathology, we conclude that the health and welfare of the public is not served by the addition of this substance to the public water supply."

114. Kennedy D et al. Public Health Goal for Ingested Fluoride. *Fluoride*; 31(3): 170, 1998.

Current human fluoride exposure in fluoridated communities is greater than the calculated public health good for ingested fluoride.

115. Chlebna-Sokol D et al. Bone structure assessment on radiographs of distal radial metaphysis in children with dental fluorosis. *Fluoride*; 26(1): 37-44, 1993.

Fluoride has a stronger influence on bone development in younger children and appears to lower the metabolic turn-over in bone.

116. Skeletal Fluorosis. *Health Effects of Ingested Fluoride*. Committee on Toxicology, National Research Council. National Academy Press. p.59, 1993.

Crippling skeletal fluorosis might occur in people who have ingested 10 to 20 mg of fluoride per day for 10 to 20 years; bone ash fluoride concentrations correlated to stages of skeletal fluorosis..

Roholm K. *Fluoride intoxication: a clinical-hygienic study with a review of the literature and some experimental investigations*. H.K. Lewis Ltd London, 1937.

117. Preclinical and clinical stages of human skeletal fluorosis and correlation of bone ash fluoride concentration. *Review of Fluoride, Benefits and Risks*. Dept. of Health and Human Services, Public Health Service. Table 23, February 1991.

Preclinical and stage one skeletal fluorosis is characterized by joint and lower back pain and increasing radiographic density.

118. Riggs BL et al. Effect of fluoride treatment on the fracture rate in postmenopausal women with osteoporosis. *The New England Journal of Medicine;* 322(12): 802-809, 1990.

In this study, the fluoride-calcium regimen was not effective treatment for postmenopausal osteoporosis.

119. Lindsay R. Fluoride and Bone – Quality versus Quality. Editorial. *The New England Journal of Medicine*; 322(12): 845-846, 1990.

Although bone density in the lumbar spine increased by approximately 35 percent with doses of 60 mg and 90 mg F on alternate days, the new bone was structurally unsound.

120. Hedlund LR et al. Increased Incidence of Hip Fracture in Osteoporotic Women Treated with Sodium Fluoride. *Journal of Bone and Mineral Research*; 4(2): 223-225, 1989.

Postmenopausal osteoporotic women receiving 50 mg of sodium fluoride per day had 10 times the number of hip fractures as women in the non-fluoride group.

121. Sogaard CH et al. Marked Decrease in Trabecular Bone Quality After Five Years of Sodium Fluoride Therapy – Assessed by Biomechanical Testing of Iliac Crest Bone Biopsies in Osteoporotic Patients. *Bone*; 15(4): 393-399, 1994.

After 5 years of sodium fluoride therapy, a significant reduction of 45% was found in trabecular bone strength and an even more pronounced reduction of 58% was found in trabecular bone quality.

122. Pollner F. FDA Committee Spurns Fluoride. *Medical World News*. p. 25 November 13, 1989.

The Endocrinologic and Metabolic Drugs Advisory Committee of the FDA unanimously determined that fluoride has yet to prove its worth in the treatment of postmenopausal osteoporosis.

123. Sowers MR et al. The relationship of bone mass and fracture history to fluoride and calcium intake: a study of three communities. *American Journal of Clinical Nutrition;* 44: 889-98, 1986.

In this retrospective study, an increased fracture rate was found in both pre- and postmenopausal women relative to their water fluoride exposure..

124. Sowers MR et al. A Prospective Study of Bone Mineral Content and Fracture in Communities with Differential Fluoride Exposure. *American Journal of Epidemiology*; 133(7): 649-660, 1991.

Postmenopausal women residing in a community with 4 ppm fluoride had significantly more fractures than women in a community with 1 ppm fluoride.

125. Jacobsen SJ et al. Regional Variation in the Incidence of Hip Fracture. *Journal of the American Medical Association*; 264(4): 500-502, 1990.

A positive correlation between hip fracture and fluoridation was found using hospital discharge data.

126. Cooper C et al. Water Fluoridation and Hip Fracture. Letters. *Journal of The American Medical Association;* 266(4): 513, 1991.

Upon reexamination of data collected in England, a positive correlation was found between fluoride levels and discharge rates for hip fracture.

127. Danielson C et al. Hip Fractures and Fluoridation in Utah's Elderly Population. *Journal of the American Medical Association*; 268(6): 746-748, 1992.

Elderly residents in a fluoridated (1 ppm) Utah community had an increased incidence of hip fracture (27% for women, 41% for men) compared to non-fluoridated communities.

Kleerekoper M. "Please Pass the Roach Poison" Again. Editorial. *Journal of The American Medical Association*; 268(6): 781, 1991.

Kleerekoper summarizes information about hip fractures and calls for reevaluation of fluoridation as a risk factor for hip fracture.

128. Suarez-Almazor ME et al. The Fluoridation of Drinking Water and Hip Fracture Hospitalization Rates in Two Canadian Communities. *American Journal of Public Health*; 83(5): 689-693, 1993.

A comparison of hip fracture hospitalizations between Edmonton (fluoridated) and Calgary (non-fluoridated) showed that, when looking only at the men, there was a statistically significant increase in hip fractures in Edmonton.

129. Jacqmin-Gadda H et al. Fluorine Concentration in Drinking Water and Fractures in the Elderly. Letters. *Journal of The American Medical Association*; 273(10): 775, 1995.

This French study found that persons living in areas with 0.11-1.83 mg/l (ppm) fluoride had 86% more hip fractures than those living in area with 0.05- 0.11 mg/l fluoride.

130. Kurttio P et al. Exposure to Natural Fluoride in Well Water and Hip Fracture: A Cohort Analysis in Finland. *American Journal of Epidemiology*; 150(8): 817-824, 1999.

Increased incidence if hip fracture was found among rural Finnish women 50-64 years old who consumed water with 1.5 ppm or more fluoride.

131. Arnold CM et al. The Effect of Water Fluoridation on the Bone Mineral Density of Young Women. *Canadian Journal of Public Health*; 88(6): 388-391, 1997.

Among women age 18-25 living in a fluoridated area, a greater bone mineral density was found in the lumbar spine.

132. XinDe S et al. The effect of sodium fluoride on the growth and differentiation of human fetal osteoblasts – an in vitro study. *Fluoride*; 21(3): 149-158, 1988.

Fluoride affects not only the morphology of osteoblasts, but also their metabolism.

133. Krook L et al. Fluoride and Alkaline Phosphatase. *Fluoride*; 31(4): 177-182, 1998.

The authors propose that the increased trabecular bone resulting from fluoride represents pathological bone formation by injured osteoblasts and decreased bone resorbtion by resorbing osteocytes and osteoclasts.

134. Singh A et al. Skeletal Fluorosis and its Neurological Complications. *The Lancet*; 197-200, January 28, 1961.

Fluoride-rich water in India is positively coorelated with skeletal fluorosis and compression paraplegia.

135. Whitford GM. The Physiological and Toxicological Characteristics of Fluoride. *Journal of Dental Research*; 69(Spec Iss): 539-549, February 1990.

The severity of dental fluorosis is increasing in both fluoridated and non fluoridated regions in the U.S.

136. Gibson SLM. Effects of fluoride on immune system function. *Complimentary Medical Research*; 6(1): October 1992.

Low concentrations of fluoride (0.5-2.0 ppm) inhibit the functioning of white blood cells.

137. Waldbott GL. Incipient Fluorine Intoxication from Drinking Water. *Acta Medica Scandinavica*; Vol. CLVI, fasc. III, 157-168, 1956.

A description of the signs and symptoms of adverse reactions which may be generated in some people by drinking water containing 1.0 ppm fluoride.

138. Manocha SL et al. Cytochemical response of kidney, liver and nervous system to fluoride ions in drinking water. *Histochemical Journal*; 7: 343-355, 1975.

Morphological and cytochemical studies done on squirrel monkies suggest that fluoride in concentrations as low as 5 ppm interferes to some extent with the intracellular metabolism of the excretory system.

139. Krikker MA., President, The Hemochromatosis Foundation, Albany, New York. Studies raise serious doubts about safety, costs of fluoridation. Letter. Times Union, September 24, 1994.

The author points out that 7.6% of Americans have medical conditions which may compromise kidney function, thus reducing fluoride excretion with the result being increased fluoride intake and retention.

140. Juncos LI et al. Renal Failure and Fluorosis. *Journal of the American Medical Association*; 222(7): 783-785, 1972.

Patients with renal insufficiency and polydipsia develop fluorosis due to increased fluoride intake and retention.

141. Rigalli A et al. Inhibitory Effect of Fluoride on the Secretion of Insulin. *Calcified Tissue International*; 46: 333-338, 1990.

Administration of fluoride to fasting rats and humans inhibited the secretion of insulin resulting in an increased blood sugar.

142. Greenberg LW et al. Nephrogenic Diabetes Insipidus With Fluorosis. *Pediatrics*; 54(3): 320-322, 1974.

Excessive water consumption (1.0 ppm fluoride) by two children with nephrogenic diabetes insipidus resulted in fluorosis.

143. Singer I, and Forrest JN. 1976. Drug-induced states of nephrogenic Diabetes Insipidus. *Kidney Internal.* 10:82-95. (not included)

Laboratory animals induced with diabetes mellitus (NIDD-non insulin-dependent diabetes) demonstrated more vulnerability to fluoride toxicity than non-diabetic animals.

144. Klein H. Dental fluorosis associated with hereditary diabetes insipidus. *Oral Surg.;* 40(6): 736-741, December 1975.

Children with diabetes insipidus developed fluorosis in a community with 0.5 ppm fluoride.

145. Steyn DG. Chronic fluorine poisoning caused by the drinking of subterranean waters containing excessive quantities of fluorine. *The Toxicology of Fluorine*; Symposium, University of Bern 15-17 October 1962.

"... it is clear that the drinking of water containing as little as 1 to 2 parts of fluorine per million parts may in certain circumstances cause serious disturbances of general health and especially in normal thyroid gland function and in normal process of calcium-phosphorus metabolism."

146. Jooste PL et al. Endemic goiter in the absence of iodine deficiency in schoolchildren of the Northern Cape Province of South Africa. *European Journal of Clinical Nutrition*; 53: 8-12, 1999.

Two towns with fluoride levels of 1.7 ppm and 2.6 ppm had increased incidence of goiter. The researchers concluded that the fluoride level in the drinking water acts as a goitrogen and may be responsible for the goitres.

148. Stolc V et al. Effect of Fluoride on the Biogenesis of Thyroid Hormones. *Nature*; 188(4753): 855-856, December 3, 1960.

Fluoride inhibits the enzyme system responsible for the synthesis of thyroxine an 3:5:3'-triiodothyronine.

149. Lin Fa-Fu et al. Lin Fa-Fu; et al (1991).The relationship of a low-iodine and high-fluoride environment to subclinical cretinism in Xinjiang. *Iodine Deficiency Disorder Newsletter*, 7. (3)

Low iodine intake coupled with high fluoride intake contributes to developmental disturbances..

150. Chinoy NJ et al. Transient and Reversible Fluoride Toxicity in Some Soft Tissues of Female Mice. *Fluoride*; 27(4): 205-214, 1994.

Sodium fluoride treatment to mice, rats, rabbits, and guinea pigs caused significant alterations in the structure and function of testis, internal milieu of epididymis, vasdeferens, and also affected the morphology and metabolism of their contained spermatozoa.

151. Sutton PRN. Can Water Fluoridation Increase Orthodontic Problems? *Medical Hypotheses*; 26: 63-64, 1988.

Fluoride may effect the function of bone forming and bone resorbing cells leading to its subnormal development, resulting in the overcrowding of teeth and other orthodontic problems.

152. Villee CA. Birth Defects and Glycolysis. *The New England Journal of Medicine;* 310(4): 254-255, 1984.

Fluoride may lead to birth defects by forming complexes that interfere with enzymes needed in the production of cellular energy.

153. DeEds F. Fluorine in Relation to Bone and Tooth Development. *The Journal of the American Dental Association*; 23: 568-574, April 1936.

This study points to inhibition of enzyme activity such as the inhibitory effect of fluorides in high dilution on lipase, and the inhibition of enzymatic clotting of milk which occurs suddenly and in direct proportion to the amount of fluoride.

154. Whitford GM. Intake and Metabolism of Fluoride. *Advanced Dental Research*; 8(1): 5-14, June 1994.

The author discusses the various sources of fluoride and factors affecting absorption and excretion. This helps one understand why the fluoride content of water may not be a good indicator of total body fluoride.

155. Berry RJ et al. Sodium Fluoride and Cell Growth. Correspondence. *British Medical Journal*; p. 1064, October 26, 1963.

The growth of two types of mammalian cells were inhibited by fluoride concentrations as low as 0.1 ppm.

156. Musculoskeletal Effects. *Fluorides, Hydrogen Fluoride, and Fluorine*: A Toxicological Profile by the U.S. Dept. of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR) TP-91/17, p. 57, April 1993.

Collagen synthesis is defective and elasticity decreased in rats fed fluoride.

157. Holland RI. Fluoride Inhibition of Protein Synthesis. *Cell Biology International Reports;* 3(9): 701-705, December 1997.

The author reports that fluoride inhibits protein synthesis in all the various mammalian cell types investigated to date.

158. Liu K et al. Adverse Effects of Combined Arsenic and Fluoride on Liver and Kidney in Rats. *Fluoride*; 32(4): 243-247, 1999.

The pattern of injury to the kidney and liver is through synergistic direct action, which is an increase over a combination of uncombined arsenic and fluoride exposures.

159. Chan JT et al. (7) Effect of Co-administration of Fluoride and Methyixanthine-containing (caffeine) Beverages on Plasma Fluoride Levels in Rats. *Journal of Dental Research*; 69/Special Issue, February 1990.

Concomitant consumption of fluoride (0.5 ppm) and caffeinated beverages significantly increased the absorption of fluoride.

Chan JT et al. 601 Effect of Dietary Coffee on Plasma Fluoride Levels in Rats. *Journal of Dental Research*; 67: 188, 1988.

160. Masters RD et al. Water Treatment with Silicofluorides and Lead Toxicity. *International Journal of Environmental Studies*; 56: 435-449, 1999.

A sampling of 280,00 children in Massachusetts presented a doubling of the risk of lead levels in children's blood rising above the danger level of 10 micrograms per deciliter when the hazardous wastes from the phosphate fertilizer industry are used for fluoridation.

161 Susheela AK et al. Prevalence of Endemic Fluorosis with Gastrointestinal Manifestations in People Living in Some North-Indian Villages. *Fluoride*; 26(2): 97-104, 1993.

Report on the prevalence of endemic fluorosis with gastrointestinal manifestations, Susheela A K et al. conclude that the occurrence of gastrointestinal complaints – Viz., loss of appetite, nausea, abdominal pain, flatulence, constipation and intermittent diarrhea – is one of the early warning signs of fluoride toxicity and fluorosis.

162 Takahashi K. Fluoride-Linked Down Syndrome Births and Their Estimated Occurrence Due to Water Fluoridation. *Fluoride*; 31(2): 61-73, 1998.

The dose-response line of Down Syndrome birth rates for daily fluoride intake may have no allowable level that does not induce fluoride-linked Down Syndrome births.

163 Turner CH, et al. High fluoride intakes cause osteomalacia and diminished bone strength in rats with renal deficiency. Bone; 19(6):595-601, 1996

Fluoridated water in concentrations equivalent to 3 and 10 ppm in humans caused osteomalacia and reduced bone strength in rats with surgically-induced renal deficiency. Glomular filtration rate was decreased by 68% and plasma BUN was increased fourfold.

164. Vani LM et al. Effects of Fluoride Accumulation on Some Enzymes of brain and Gastrocnemius Muscle of Mice. *Fluoride*; 33(1): 17-26, 2000.

This laboratory animal study shows that brain and muscle are significantlyaffected by fluoride with inhibition of enzymes associated with free-radical metabolism, energy production and transfer, membrane transport, and synaptic transmission.

165. Massler M et al. Relation of endemic dental fluorosis to malnutrition. *The Journal of the American Dental Association*; 44: 156-165, February 1952.

Report that there is general agreement in the scientific literature that calcium deficiency does increase the severity of the manifestations of fluoride intoxication. Also concludes that an adequate diet high in calcium is a protective measure against excessive severity of mottling of the enamel.

166 Sutro CJ. Changes in the teeth and bone in chronic fluoride poisoning. *Archives of Pathology*; 159-173, Jan-June, 1935.

Examining changes in the teeth and bone in chronic fluoride poisoning; the skeletal system of rats on the low-calcium plus sodium fluoride diet showed a marked generalized osteoporosis.

167. Kick CH et al. Fluorine in Animal Nutrition. *Bulletin 558*. Ohio Agricultural Experiment Station. pp 53 & 61, November 1935.

Report showed that approximately 30 per cent of the fluorine ingested as "untreated " rock phosphate, sodium fluosilicate, and sodium fluoride was retained in the body.

168. Burkhart JM et al. Effect of variations in calcium intake on the skeleton of fluoride-fed kittens. *Journal of Laboratory & Clinical Medicine*; 72(6): 943-950, December 1968.

Study demonstrated that elevated levels of calcium in the diet are capable of preventing osteomalacic effects of high levels of fluoride.

169. Background Information on Lactose and Milk Intolerance. A Statement of the Food and Nutrition Board, National Research Council. National Academy of Sciences, May 1972.

A statement that provides insight into the populations that are predisposed to calcium deficiencies.

170. Knowler WC et al. Diabetes Mellitus in the Pima Indians: Incidence, Risk Factors and Pathogenesis. *Diabetes/Metabolism Reviews*; 6(1): 1-27, Feb 1990.

Identifying the causes and mechanisms of the major physiologic abnormalities leading to non-insulin-dependent diabetes.

171. Stern MP et al. Type II Diabetes and its Complications in Mexican Americans. *Diabetes/Metabolism Reviews*; 6(1): 29-45, Feb 1990.

Chronic vascular complications of diabetes, which are responsible for most of the increased morbidity of diabetic persons. Fluoride interferes with insulin secretion and could hasten the onset of diabetes. Fluoride ingestion would further impact the renal and kidney functions of this at suseptible class.

172. Harris MI et al. Noninsulin-Dependent Diabetes Mellitus in Black and White Americans. *Diabetes/Metabolism Reviews*; 6(1): 71-90, Feb 1990.

This protected class would be subject to a disparate incidence of fluoride-related complications