

# **FLUORIDATION — WHY THE CONTROVERSY?**

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**Current Information for  
Public Officials,  
Health Professionals and  
Concerned Citizens**

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*Controversy surrounding the fluoridation experiment has persisted for half a century. Japan and all of continental Europe have rejected the idea for reasons of safety and medical ethics. Experiments in poor countries produced such harmful results that they were quickly halted. Why does fluoridation continue to receive vigorous government and professional backing in the English-speaking nations?*

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## Fluoride Facts in Brief

- Fluoride has never received FDA approval and does not meet the legal requirements of safety and effectiveness necessary for such approval.
- Fluoride is a pharmacologically active substance unrelated to water purification. There is no possibility of obtaining individual informed consent for medication with this experimental drug when it is placed in a public water system. For these reasons, fluoridation violates the Nuremberg Code of medical ethics and human rights.
- In over 50 years of testing, it has never been demonstrated that fluoride is effective in preventing tooth decay.
- A world wide decline in human tooth decay has occurred at the same rate in populations exposed to elevated fluoride levels and in populations not exposed to elevated fluoride levels. This spontaneous decline in tooth decay has been superstitiously attributed to fluoride.
- Fluoride is an accumulative protoplasmic poison rated at or above the toxicity of lead.



☆ **LEAD Toxicity Rating: 3-4**☆ **FLUORIDE Toxicity Rating: 4**

**3 = moderately toxic    4 = very toxic** (Clinical Toxicology of Commercial Products, 5th Ed., 1984)

## Under U.S. Law

(administered by U.S. Environmental Protection Agency)

- maximum allowable **LEAD** in drinking water: **0.015mg./liter**
- maximum allowable **FLUORIDE** in drinking water: **4.0 mg./liter \***  
\* over 350 times the permitted lead level

- Medical research shows that hip fracture rates are 20-40% higher in localities with fluoridated water.
- Epidemiological analysis shows that bone cancer rates in young males are 80-600% higher in fluoridated localities.
- The fluoride dose prescribed by doctors and the dose administered without prescription to everyone in community drinking water is EXPECTED to cause dental fluorosis in 10% of children. Actual Public Health Service figures show that 30% of children in fluoridated localities have dental fluorosis, and 10% of children in **non-fluoridated** areas now have fluorosis.
- Fluorosis is malformation of tooth enamel characterized by discoloration and brittleness.
- Since there is no limitation or monitoring of the use of fluoridated water in food processing, many processed foods contain high concentrations of fluoride.
- Concentrations of fluoride in toothpaste are 500-1500 parts per million. This fluoride is absorbed through the lining of the mouth and deposited in the body like ingested fluoride. One to two tooth brushings can yield a dose of 1 milligram fluoride.
- Ingested fluoride is deposited in bones as well as teeth. X-rays show abnormal bone structure in children with dental fluorosis.
- Fluorides are used in the biochemistry laboratory to stop enzyme activity. Fluorides have the same effect on enzyme activity in the human body.
- The chemicals injected into public water supplies to elevate fluoride levels are raw industrial waste. The chemicals most commonly used are sodium silicofluoride and hydrofluosilicic acid, toxic by-products of phosphate fertilizer production.
- Fluoridated water increases corrosion and leaching of lead from water mains and plumbing.
- Fluoride levels in the sewer effluent of fluoridated water systems are not monitored or controlled. It has been shown that fish are killed by fluoride emissions at and below the levels probably emitted in sewer effluent.



# REEXAMINATION OF FLUORIDATION ISSUES

## Review and Documentation of Evidence

By Janet Nagel, Ed.D.

A ten-month investigation by a New Jersey legislator found that **no federal agency can produce any scientific proof of fluoride safety or effectiveness**. At the same time, evidence of fluoride harm is increasingly coming to light, in spite of a concerted effort by fluoridation promoters to keep this evidence from public view.

The purpose of this report is to summarize and document the scientific, political and ethical challenges to the widely-held American belief that fluoridation of community drinking water is a desirable public amenity.

## What Is "Fluoride"?

A fluoride is **any chemical compound which contains the element FLUORINE**. Fluorine is "a nonmetallic halogen element that is isolated as a pale yellowish flammable irritating toxic diatomic gas." (*Webster's Ninth New Collegiate Dictionary*, 1991.) Fluorine combines with other elements more readily than any other chemical element. Fluorine compounds — or **fluorides** — are used commercially in pesticides, aluminum smelting, etching metals and glass, aerosol propellants and refrigerants. ("Fluorine," *Word Book Encyclopedia*, Vol. 7, p. 270, c. 1986; *Chemicals of Special Concern in Washington State*, Washington State Department of Ecology, July 1992, p. V-66.) In medicine, fluorides are used in chemotherapy, psychiatric drugs, and anesthesia.

In the 1940's and 50's, a vigorous corporate and government promotional campaign convinced large numbers of people that fluorides reduced susceptibility to tooth decay. Today over ninety percent of all toothpaste sold in the U.S. contains high concentrations of intentionally added fluorine compounds. Close to sixty percent of the U.S. population consumes water containing 1.0 to 4.0 parts per million (ppm) fluorides. Nearly all major U.S. cities, and many smaller ones, intentionally add fluorine compounds to their water supplies. (*Fluoridation Census 1985*, U.S. Public Health Service, Centers for Disease Control.)

In some areas of the U.S. and other parts of the world, well water contains calcium fluoride and magnesium fluoride. Fifty some years ago, studies of the dental deformities caused by these endemic fluorides led to the hypothesis that ingestion of fluorides reduced susceptibility to tooth decay. The belief in fluoride as a tooth decay remedy persists despite the fact that H. Trendley Dean, D.D.S., **its original promoter, admitted 40 years ago, under oath, that his data purporting to prove the fluoridation hypothesis were not valid**. (H. Trendley Dean: *Proceedings, City of Oroville vs. Public Utilities Commission of the State of California*, Oroville, California, October 20-21, 1955.)

The fluorine compounds most commonly added to public drinking water are **hydrofluosilicic acid** (a liquid) and **sodium silicofluoride** (a powder). (*Fluoridation Census 1985*, U.S. Public Health Service, Centers for Disease Control.) These compounds are **toxic waste products** of phosphate fertilizer production. They are added to public drinking water, with no refinement, directly from



fertilizer plants. ("AWWA Standard for Sodium Silicofluoride" and "AWWA Standard for Hydrofluosilicic Acid", American Water Works Association, July 1, 1989; "Fluoride: Commie Plot or Capitalist Ploy?" by Joel Griffiths, *Covert Action*, Fall 1992, pp. 26-30+.)

**Sodium fluoride**, the hazardous waste product of aluminum manufacture, is also used in water fluoridation, but less frequently. Sodium fluoride is the fluorine compound usually given to children in tablet or liquid form and is commonly added to toothpastes in concentrations of 500-1500 ppm.

## Responsibility of Public Officials

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Federal and state law place responsibility for decisions about intentional fluoridation of community water supplies squarely on the shoulders of local jurisdictions. The federal Safe Drinking Water Act states: "No national primary drinking water regulation may require the addition of any substance for preventive health care purposes unrelated to contamination of drinking water." (U.S. Code Title 42 — The Public Health and Welfare, Section 300g. Part B — Public Water Systems, Para. (b)(11), 1988. p. 518

Most states do not mandate fluoridation but allow municipalities and other entities to do so. In light of current evidence of fluoride hazards such as those cited further on in this report, some experts question whether continued fluoridation of public water supplies is grounds for criminal prosecution of local governments and elected officials. ("State Officials Can Be Sued, Held Liable for On-Job Acts, Supreme Court Rules" by Lyle Denniston, *The Baltimore Sun*, November 6, 1991)

## Violation of Civil Liberties

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**Mass Medication:** It is not possible to claim that addition of pharmacologically active fluorine compounds to drinking water is not medication and at the same time claim that it reduces tooth decay. No one disputes the fact that consumption of fluorine compounds in water at the approximate rate of 1.0 ppm (the level advocated by fluoridation promoters) produces changes in the structure of tooth enamel and bone. This is a physiological effect caused by the fluorides.

Some medical and dental authorities hold the **OPINION** that these physiological changes are desirable. Other medical and dental authorities view these physiological changes as **undesirable**. (*Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* by Brian Martin, State University of New York Press, 1991; "Fluoridation of Water" by Bette Hileman, *Chemical and Engineering News*, August 1, 1988.)

**Clearly, individuals must retain the right to decide whether or not to undergo fluoride treatment.**

Because daily water consumption varies widely from individual to individual, depending on such factors as age, occupation and diet, there is no control of individual fluoride dosage. Furthermore, fluoride is administered without the knowledge or consent of many who depend on public water supplies. Administration of this medication via public water supplies is an obvious violation of the Nuremberg Code of medical ethics.



**Adverse Effects on the Health of Persons:** The U.S. Environmental Protection Agency (EPA) is responsible for setting the Maximum Contaminant Level (MCL) for fluorides and various other toxins in water (e.g., lead, copper, arsenic). The federal Safe Drinking Water Act requires that the EPA set MCLs "at the level at which no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety." (U.S. Code, Title 42 — The Public Health and Welfare, Section 300g, Part B — Public Water Systems, Para. (b)(4), 1988, p. 517.) This means that it is **illegal to weigh "risks vs. benefits" when considering drinking water additives and contaminants.**

Since 1990, a bitter controversy has smoldered within the EPA over the MCL for fluoride. Because of the mounting evidence of health dangers from fluoridated water, **EPA toxicologists have been urging a revision of the EPA standards for fluorides in drinking water.** To date, EPA administrators have rejected these warnings and have taken unjustified disciplinary action against the scientists who have spoken out. ("EPA Toxicologist Fights Firing in Rift Over Water Fluoridation" by Clark Hallas, *The Pittsburgh Press*, March 29, 1992; "EPA Told to Reinstate Whistle-Blower," *Associated Press*, *The Washington Post*, December 9, 1992; "Whistle-Blower Clears the Air" by Gary Lee, *The Washington Post*, March 1, 1994.)

To put this dispute into perspective, on December 7, 1992, the new EPA Lead and Copper Rule went into effect. It sets the MCL for lead at 0.015 ppm, with a goal of 0.0 ppm. Fluoride falls into the same high toxicity range as lead; and, like lead, fluoride is an accumulative poison. (*Clinical Toxicology of Commercial Products*, 5th Ed. by Robert E. Gosselin, M.D., Ph.D. and others, Baltimore: Williams & Wilkins, 1984.) Nevertheless, the MCL currently set by the EPA for fluoride is 4.0 ppm — over 350 times the permissible lead level.

## Absence of FDA Approval

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In June 1993, New Jersey State Assemblyman John V. Kelly announced his alarming discovery that fluoride has never been approved as a prescription drug. Kelly's investigation revealed that neither the U.S. Food and Drug Administration (FDA) nor the National Institute of Dental Research (NIDR) nor the American Academy of Pediatric Dentistry has proof of fluoride safety and effectiveness as required by law for FDA approval. Although virtually every American is exposed to daily treatment with this medication, the official FDA classification for fluoride is **unapproved new drug**. ("Kelly Seeks FDA Ban on Fluoride Supplement" by Guy Sterling, *Trenton Star Ledger*, June 4, 1993; Letter to U.S. FDA Commissioner David Kessler by John V. Kelly, June 3, 1993.)

**This means that fluoride prescribed by doctors and dentists is illegal. It also means that fluoridation of public water supplies is medical experimentation.**

## Propaganda vs. Science

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Because EPA scientists refused to back down on their insistence that the MCL for fluoride should be reduced, the EPA contracted with the National Academy of Sciences (NAS), a private agency, to review the fluoride MCL of 4.0 ppm. The NAS formed a seven-member National Research Council (NRC)



subcommittee dominated by long-time fluoridation promoters from the NIDR. Although a number of researchers have published evidence of harm from fluoridation, not one of them was asked to participate in the work of the subcommittee.

At the same time that this NIDR-dominated subcommittee was evaluating the safety of water containing 1.0 - 4.0 ppm fluoride, the NIDR was informing New Jersey Assemblyman Kelly that it could not produce any research demonstrating either the safety or the effectiveness of prescription fluoride in doses of the same magnitude as those administered in fluoridated water.

Research completed in 1989 by the National Toxicology Program (NTP), an agency of the U.S. Public Health Service, found a statistically significant dose-related increase of osteosarcoma (bone cancer) in male rats. Thyroid and liver cancers were also found. (National Toxicology Program Fluoride/Cancer Study of Rats and Mice, Maurer et al., *Journal of the National Cancer Institute*, vol. 82, pp. 1118-26, 1990.)

In spite of this finding, the NRC subcommittee had the temerity to claim that available laboratory data do not demonstrate a carcinogenic effect of fluoride on animals. (Press Release on Drinking Water Fluoridation from the National Academy of Sciences, August 16, 1993.) In equally cavalier fashion, the subcommittee discounted all of the substantial body of evidence of fluoridation harm, a portion of which is summarized in the following section.

Robert Carton, Ph.D., a former EPA environmental scientist, called this NAS report "propaganda masquerading as science." (Press Release from Truth About Fluoride, Inc., Box 219, Buckeystown, MD 21717, August 19, 1993) J. William Hirzy, Ph.D., President of National Federation of Federal Employees Local 2050, which represents EPA Headquarters scientists, expressed concern that **"the cycle of producing only politically acceptable science on fluoride" is continuing.**

Hirzy noted that the NRC subcommittee admitted that water fluoridated at 4.0 ppm can produce severe dental fluorosis, a recognized adverse health effect. This fact alone should compel abandonment of the current fluoride standard. Instead, the committee concluded that 4.0 ppm is "appropriate as an interim standard."

Hirzy observed, "This one example points out ...why **EPA chose to once again contract out the job of assessing fluoride risks, rather than give the job to sworn-to-duty Civil Service scientists. An honest assessment of risks might lead to publicity that could damage the Public Health Service's long standing program of trying to convince Americans to fluoridate all public water supplies.**" (Press Release from National Federation of Federal Employees Local 2050, Tel. 202-260-2383, August 18, 1993.)

Indeed, the 1993 NAS report is just one in a long series of official reports which attempt to dismiss clear evidence of fluoride dangers to humans. (See "Fluoride: Commie Plot or Capitalist Ploy?" by Joel Griffiths, *Covert Action*, Fall 1992, pp. 26-30+.) Again in 1994, a report from the U.S. Department of Health and Human Services falsely asserts that fluoridation is safe and clinically effective. ("For a Healthy Nation, Returns on Investment in Public Health," U.S Department of Human Services, August 2, 1994, cited in *ADA News*, August 15, 1994, pp. 1+.)



## Mounting Evidence of Harm

**Bone Fractures:** Four major studies reported since 1990 in the *Journal of the American Medical Association* and elsewhere show significantly more hip fractures among senior citizens living in areas with elevated fluoride levels in drinking water. The most carefully controlled of these studies found **41% more hip fractures among men and 27% more hip fractures among women** in Brigham City, Utah, where water is intentionally fluoridated to 1.0 ppm. ("Hip Fractures and Fluoridation in Utah's Elderly Population" by Christa Danielson, M.D. and others, *Journal of the American Medical Association*, Aug. 12, 1992, pp. 746-48; "Water Fluoridation and Hip Fracture" by C. Cooper and others, *Journal of the American Medical Association*, July 24, 1991, p. 513; "Regional Variation in the Incidence of Hip Fracture" by S. J. Jacobsen and others, *Journal of the American Medical Association*, July 25, 1990, pp. 500-02; "A Prospective Study of Bone Mineral Content and Fracture in Communities with Differential Fluoride Exposure" MaryFran Sowers and others, *American Journal of Epidemiology*, April 1, 1992, pp. 649-60.)

**Cancer:** In 1990, the U.S. Public Health Service reported the NTP study of laboratory animals in which 5 of 80 male rats developed cancer after receiving fluoride in doses equivalent to 20 years of human exposure to fluoridated water. (National Toxicology Program Technical Report on the toxicology and carcinogenesis studies of sodium fluoride in F344/N rats and B6C3F1 mice. NTP TR 393, NIH Pub. No. 90-2848, 1990.)

In 1992, the New Jersey State Department of Health released the results of a study which found **six times more bone cancer among males under the age of 20** living in communities with fluoridated water. ("A Brief Report on the Association of Drinking Water Fluoridation and the Incidence of Osteosarcoma Among Young Males" by Perry D. Cohn, Ph.D. M.P.H. Environmental Health Service, New Jersey Department of Health, Nov. 8, 1992.)

In 1990, National Cancer Institute statistics showed a 79% increase in bone cancers in males under the age of 20, for the period 1981-87 over the period 1973-80, in the Seattle metropolitan area and in the state of Iowa. (*Cancer Statistics Review, 1973-1987*, National Cancer Institute, NIH publication No. 90-2789, 1989.) The Seattle and Iowa findings were originally discounted because cancer incidence did not appear to correlate with total years of exposure to fluoridated water. (*Review of Fluoride Benefits and Risks*, U. S. Public Health Service, 1991, pp. 79-81.) The data from New Jersey indicate that increased cancer incidence is associated with exposure to fluoridated water at the time of the adolescent growth spurt.

**Dental Fluorosis:** U.S. Public Health Service statistics indicate that **30% of children are afflicted with fluorosis** in areas where water supplies have elevated fluoride levels. (*Review of Fluoride Benefits and Risks*, U.S. Public Health Service, February 1991, P. 53.) Fluorosis appears as chalky white spots or patches on the teeth. It is permanent malformation of tooth enamel and is associated with alterations in bone growth.

A recent study in Europe looked at X-rays of children with dental fluorosis and children who did not have fluorosis. The bone structure of the children with fluorosis was different from that of the normal children. The largest deviations from normal were seen in younger children and boys. ("Bone Structure Assessment on Radiograms of Distal Radial Metaphysis in Children with Dental Fluorosis" by Chlebens-Sokol and others, *Fluoride*, Journal of the International Society for Fluoride Research, January 1993, pp. 37-44.)



**Damage to Immune System:** Fluorides react with hydrogen bonds in biological molecules to form hydrogenfluoride bonds. This reaction distorts the hydrogen bonding responsible for normal configuration of proteins and enzyme activity. It is therefore not surprising that **fluorides have adverse physiological effects on many aspects of body functioning.** Research now reveals harmful effects of fluorides at levels once believed to be safe.

The immune system is the first line of defense against bacteria, viruses and other parasites, as well as from the spontaneous generation of potentially cancerous cells. Any agent which reduces the ability of the immune system to function efficiently will tend to reduce the resistance of the population to infection and will increase susceptibility to cancer and immune depressed states such as post-viral fatigue syndrome and AIDS. ("Effects of Fluoride on Immune System Function" by Sheila L.M. Gibson, M.D., *Complimentary Medical Research*, October 1992, pp. 111-113.)

Over the past 20 to 30 years, there has been a substantial and unexplained rise in a number of conditions such as allergy, auto-immune diseases and post-viral fatigue syndrome. The common factor in these conditions is an alteration in the efficiency of the immune system. This alteration coincides with the widespread introduction of fluoride into public water supplies and the food chain.

**Accidental Poisonings and Deaths Due to Equipment Failure:** Because of fluoride's toxicity and corrosiveness, equipment failure and human error cause accidental poisonings and deaths on a regular basis. These incidents receive little or no press coverage, due to lack of awareness on the part of the media and the natural desire of those responsible to suppress information in order to avoid publicity.

In 1992, a man died in the village of Hooper Bay, Alaska, and 296 people were poisoned, when the fluoride feed mechanism malfunctioned on one of the community's two wells. ("Hooper Bay Waterborne Outbreak — Fluoride, Final Report" Alaska Department of Health and Social Services, April 12, 1993; "Mass Fluoride Poisoning Blamed on Pump, Government" by David Hulen, *Tacoma Morning News Tribune*, July 2, 1992.)

On July 16, 1993, three kidney dialysis patients died at the University of Chicago Hospitals when a water filter failed to remove the fluoride in Chicago's drinking water before it was used in the dialysis procedure. Six other patients suffered acute reactions after undergoing dialysis with the fluoridated water. ("Fluoride Blamed in 3 Deaths" by Gary Wisby, *Chicago Sun-Times*, July 31, 1993.) Death from acute fluoride poisoning occurs quickly, so the failure was detected before more patients were injured.

In Middletown, Maryland on November 16, 1993, lethal levels of 70 ppm fluoride were found in that city's drinking water. ("Middletown, Maryland Halts Fluoridation After Toxic Spill in Water Supply," *The Fluoride Report*, December 1993; "Water not for drinking; fluoride levels too high" by M. Eliassen, *The Frederick [MD] Post*, November 17, 1993).

**Fluoride Hypersensitivity:** Some people experience serious intolerance reactions, such as gastrointestinal symptoms, ulceration of mucus membranes and skin rashes, when exposed to fluoride in water or toothpaste. The existence of fluoride hypersensitivity was meticulously documented by George L. Waldbott, M.D. in his book, *Fluoridation: The Great Dilemma*, published in 1978. In addition, it is well known that fluoridated water is detrimental to individuals with medical conditions such as kidney disease and diabetes.



## Multiple Exposures to Fluoride

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According to the Centers for Disease Control, well over half the population of the U.S. depends on water supplies with endemic or intentionally added fluorides. (*Fluoridation Census 1985*, U.S. Public Health Service, Centers for Disease Control.)

Moreover, because there is no control of the use of fluoridated water in food processing, and because of the nearly universal use of highly fluoridated dentifrices (fluorides are absorbed through the mucus membranes of the mouth), virtually all Americans are likely to be exposed to fluorides in amounts exceeding the once advocated 1.0 milligram per day. People residing in fluoridated areas may be exposed to 5.0 milligrams per day or more. Dental fluorosis is now occurring in at least 10% of children living in non-fluoridated localities. (*Review of Fluoride Benefits and Risks*, U.S. Public Health Service, Feb 1991, pp. 16-17.)

## Illusion of Benefit

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***The observed world-wide decline in tooth decay over the past four decades has occurred at the same rate in areas that are not fluoridated as in areas that are.*** ("The Mystery of Declining Tooth Decay" by Mark Diesendorf. *Nature*, July 10, 1986, pp. 125-29.)

The many studies purporting to demonstrate reduced tooth decay in fluoridated areas typically offer statistics from fluoridated communities without adequate comparison to control groups. Other flaws in design or analysis are evident, such as failure to establish baseline data or inappropriate statistical manipulation. ("The Fluoridation Controversy: Which Side is Science On?" A commentary by Edward Groth, III in *Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* by Brian Martin, State University of New York Press, 1991.)

Furthermore, dental caries (tooth decay) is diagnosed by subjective evaluation of dentists. On the average, dentists show a variation of about 20% in the diagnosis of caries — both different dentists examining the same patient on the same occasion, and the same dentist examining the same patient on different occasions. In 1991, the best claim that could be made was a 20% reduction in tooth decay among children in fluoridated areas. (*Review of Fluoride Benefits and Risks*, U.S. Public Health Service, February 1991, p. 26.)

Given the current incidence of tooth decay, a 20% reduction meant less than one cavity per child. It did not take into account the fact that fluoride tends to delay tooth eruption, which postpones possible tooth decay. In a given age group, fluoridated children may have fewer cavities because they have newer or fewer teeth.

After 20 years of fluoridation, Seattle, Washington authorities reported a dental care crisis there in 1992. ("Demand Taxes Clinics Serving the Poor" by Elaine Porterfield, *Tacoma Morning News Tribune*, March 30, 1992.) The same year, a study in Tucson, Arizona found that children who drank fluoridated water actually had **more** cavities than children who drank non-fluoridated water. One researcher observed, **"...a large population of poor children is getting no benefit from optimum fluoride in the water, while at the same time being denied dental health care from**



**other sources.**" ("Fluoridation Controversy" by Cornelius Steelink, Ph.D. in *Chemical and Engineering News*, July 27, 1992, p. 2.)

When all the data is considered, we see that tooth decay rates correlate inversely with family income rather than with exposure to fluoride.

The U.S. Public Health Service persists in citing the H. Trendley Dean data as justification for fluoridation, despite the fact that those data were twice shown in court to be false: once in 1955 and again in 1960. (*Review of Fluoride Benefits and Risks*, U.S. Public Health Service, 1991, pp. 19, 51; H. Trendley Dean: Proceedings, City of Oroville vs. Public Utilities Commission of the State of California, Oroville, California, October 20-21, 1955 and H. Trendley Dean: Proceedings, Injunction Suit, Chicago Citizens vs. City of Chicago, May 13, 1960.)

Repeated comparisons of tooth decay rates between fluoridated Newburgh, New York and non-fluoridated Kingston, New York fail to show any benefit from fluoridation. ("Trends in dental fluorosis and dental caries prevalences in Newburgh and Kingston, N.Y." by V. K. Kumar and others in *American Journal of Public Health*, May 1989; Report on dental comparison of school children of Kingston and Newburgh, N.Y. by J. A. Forst, Bureau of Health Services, October 26, 1954.)

In 1987, Alan S. Gray, D.D.S., FRCD(C), Director of the Division of Dental Health Services for the British Columbia Ministry of Health, called for a reassessment of fluoridation when he found that tooth decay rates in British Columbia — where only 11% of the population used fluoridated water — were lower than tooth decay rates in other Canadian provinces with fluoridation rates of 40-70%. ("Fluoridation — Time for A New Baseline?" by A. S. Gray in *Journal of the Canadian Dental Association*, October 1987.)

In December 1993, a Canadian Dental Association **panel concluded that ingested fluoride does not in fact, prevent tooth decay.** This panel also found that exposure of young children to fluoride places them at risk for dental fluorosis. ("Appropriate uses of fluorides for children: guidelines from the Canadian Workshop on the Evaluation of Current Recommendations Concerning Fluorides" by D. Christopher Clark, D.D.S., M.P.H., in *Canadian Medical Association Journal*, 1993:149 (12), December 15, 1993.)

That nearly all physicians, dentists and other members of the dominant health professions have come to hold such uncritical faith in fluoride as a tooth decay remedy raises serious questions about the content and quality of their training as scientists and practitioners. That so many professional leaders and government officials have been willing to falsify or obscure scientific data in their zeal to maintain the fluoridation pretense raises concerns that are even more far-reaching.

## Costs of Fluoridation

In a typical city, people consume less than 1% of all the water that passes through the public water system. The rest of the water is used for washing, toilet flushing, industry, gardening, and so on. Even when many found it reasonable to believe that fluorides reduced tooth decay, fluoridation of public water supplies was an extremely costly way to deliver 1.0 milligram fluoride per day to the target population of children from birth to age 12.



For example, the annual projected cost for water fluoridation chemicals alone for the city of Tacoma, Washington in 1992 was \$125,000. (C.R. Myrick, Water Quality Coordinator, City of Tacoma, Telephone conversation with Wini Silko, citizen of Tacoma, November 15, 1991.) By contrast, the cost of fluoride tablets and drops for all children aged 12 and under in Tacoma would have been less than \$25,000 (based on a cost of \$1.20 per thousand 1.0 milligram tablets).

This comparison does not take into account the capital and labor costs of fluoridation or the substantial hidden costs, which include corrosion of water mains and plumbing, environmental pollution and degradation of the health of the general population.

Fluorides are so highly corrosive that they cannot be contained in metal or glass. Even at dilutions of 1.0 ppm, fluorides increase corrosion rates and cause leaching of lead and other metals from plumbing. In the first half of 1992, Tacoma, Washington failed to meet EPA standards for lead contamination in its water. When equipment failure forced a halt to fluoridation of Tacoma's water supply, tests showed a nearly 50% drop in lead contamination. (Letter to Michael Heath, Washington State Department of Health, from C.R. Myrick, Water Quality Coordinator, City of Tacoma, December 2, 1992.) In February 1994, Thurmont, Maryland reported a similar drop in lead levels when fluoridation was halted there. ("lead levels in Thurmont water drop" by Julia Robb in *The Frederick [MD] Post*, February 3, 1994.)

***When a claimed 20% decrease in tooth decay is compared to a 600% increase in bone cancer or a 41% increase in hip fractures, when the cost of a tooth filling is compared to the cost of a hip fracture or cancer treatment, it is obvious that the human and economic costs of fluoridation are staggering.***

## Environmental Pollution

In the 1930's, fluoride in industrial emissions was regarded as a major pollutant. In 1965, President Lyndon Johnson's Science Advisory Commission identified fluoride as one of the nation's four major environmental pollutants. ("Total Fluoride Exposure," a program prepared by Elise Jerard for the NY Municipal Broadcasting System, September 1968.) While the U.S. Surgeon General agreed that the matter deserved attention, no action was taken.

Since the advent of the fluoride-for-tooth decay doctrine, little has been heard of ongoing environmental damage from fluoride emissions. Official attention to the problem has been cursory at best. The vast quantities of fluorides added to public water supplies pass through the distribution system and into the environment without any limitation or monitoring.

***Laws controlling the disposal of toxic wastes do not permit the industries creating these fluorides to release them into the environment. However, the "laundering" process of fluoridation allows these same toxins to be spread indiscriminately on lawns and gardens, incorporated into processed foods, and released by the ton into water and air, in sewer effluent and sludge.***

The environmental impact of fluorides in sewer effluent has been consistently ignored. A study of salmonids in the lower Columbia River for the period 1982-86 is one of several which document devastating effects of fluoride emissions at and below the levels found in sewage effluent from fluoridated water systems. ("Evidence of Fluoride Effects on Salmon Passage at John Day Dam, Columbia River, 1982-



1986" by David M. Damkaer and Douglas B. Dey in *North American Journal of Fisheries Management* 9:154-162, 1989.)

## Tyranny in the Land of the Free

**The original promotion of fluoridation as a remedy for tooth decay was funded by the aluminum industry.** Andrew Mellon, former Chairman of the Aluminum Corporation of America (ALCOA), was Secretary of the Treasury when the U.S. Public Health Service was an agency of the Treasury Department. The research purporting to demonstrate fluoride effectiveness and safety was funded by ALCOA, Reynolds Metals, and other heavy fluoride emitters. ("Fluoridation: Commie Plot or Capitalist Ploy?" by Joel Griffiths. *Covert Action*, Fall 1992.)

The Public Health Service recognizes that all Americans are exposed to a minimum of 1.0 milligram of fluoride per day, and that water fluoridation can increase exposure to as much as 5.0 milligrams or more per day. The Public Health Service has also called for further study of the genotoxicity and mutagenicity of fluorides.

Nonetheless, the Public Health Service continues to aggressively promote fluoridation of all public water supplies in the U.S. with a goal of 75% by the year 2000. With clear disregard for U.S. law and the Nuremberg Code, it spells out this policy in its *Review of Fluoride Benefits and Risks*, released in February 1991.

In 1977, a Congressional inquiry found that the Public Health Service had never conducted appropriate tests for the safety of fluoridation. Congress created the National Toxicology Program (NTP) to conduct tests of fluoride, and other possible health hazards, and placed this agency within the Public Health Service.

The NTP took twelve years to complete a two-year study of fluoride. EPA toxicologists and other scientists who reviewed the NTP research upon its release in 1989 found the experiments to be inadequately designed. They also criticized manipulation of the resulting data so that the link to cancer was downplayed. Despite these moves to obscure the facts, the NTP could not avoid a finding of an "equivocal" relationship between fluoride and cancer, meaning that it is a possible cause. ("Another flap over fluoride" by Judith Randal, *The Lancet*, Feb. 3, 1990; "More about fluoride" by J. B. Sibbison, *The Lancet*, Sept. 22, 1990.)

This finding should have resulted in immediate action by the EPA to reduce the MCL for fluoride by a factor of 10: from 4.0 ppm to 0.4 ppm. This would have made it impossible to continue fluoridation at 1.0 ppm, the level claimed to be "optimal" by the Public Health Service. To date, the EPA administrator has refused to take this action.

By 1978, when George Waldbott's *Fluoridation: The Great Dilemma* was published, independent research in the U.S. and Europe had produced clear evidence of harm to certain persons drinking water fluoridated to 1.0 ppm. Nonetheless, a 1988 administrative decision in the EPA **raised** the MCL for fluoride from 2.0 ppm to 4.0 ppm, in order to relieve certain water suppliers of the burden of removing excess endemic fluorides from their water. Removing fluoride from water is expensive. In most cases it requires distillation or reverse osmosis filtration. Charcoal filters used to remove chlorine and other substances from water do not remove fluorine compounds.



New Jersey Assemblyman John Kelly's revelation that fluoride has never received FDA approval is a matter of concern for every American. The **news blackout** of his press conference on June 3, 1993 has been nearly total.

This is one of the more recent instances of censorship of reports of fluoride hazards. The major health professions organizations — American Medical Association, American Dental Association, American Public Health Association and others — actively participate in **censorship of research data and censure of dissenting scientists and practitioners**. ("Is Science Censored?" by Sharon Begley, *Newsweek*, September 14, 1992, p. 63; "Fluoridation and the Close-Mouthed Press" by Jim Sibbison, *Columbia Journalism Review*, May-June 1989; *Scientific Knowledge in Controversy: The Social Dynamics of the Fluoridation Debate* by Brian Martin, State University of New York Press, 1991.)

Federal, state and local public funds are routinely spent to promote citizen and voter acceptance of fluoridation. Forced fluoride treatment via public drinking water is based on nothing more than unsubstantiated assertions by a handful of hireling "professionals." For far too long these false assertions have been uncritically accepted by overworked and overly trusting health practitioners and legislators. Profluoridation propaganda continues to proclaim success, but the facts reveal disastrous failure.

**The facts documented here are not complicated or obscure. Only those who choose to ignore them will miss the point: Intentional fluoridation of public water supplies is promoted and conducted with blatant disregard for fiscal and environmental responsibility and arrogant contempt for medical ethics, the Nuremberg Code, and the requirements of the U.S. Safe Drinking Water Act. Fluoridation is a gross violation of the public trust and of the human rights fundamental to a free society.**

## Is Fluoridation Scientifically Defensible?

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By John R. Lee, M.D.

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**Therefore, fluoridation of community water supplies is a failed concept and should be abandoned.**

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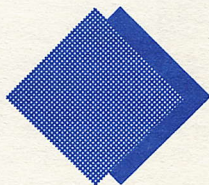
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*I know that most men, including those at ease with problems of the greatest complexity, can seldom accept even the simplest and most obvious truth if it be such as would oblige them to admit the falsity of conclusions which they have delighted in explaining to colleagues, which they have proudly taught to others, and which they have woven, thread by thread, into the fabric of their lives.*

— Leo Tolstoy

*One of the striking differences between a cat and a lie is that a cat has only nine lives.*

— Mark Twain



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